Kea Messages Manual

Release 2.7.5

Internet Systems Consortium

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Kea is an open source implementation of the Dynamic Host Configuration Protocol (DHCP) servers, developed and maintained by Internet Systems Consortium (ISC).

This is the reference guide for Kea version 2.7.5. Links to the most up-to-date version of this document (in PDF, HTML, and plain text formats), along with other useful information about Kea, can be found in ISC's Knowledgebase.

Please note that in the messages below, the percent sign (`%`) followed by a number is used to indicate a placeholder for data that is provided by the Kea code during its operation.

CHAPTER

ONE

ALLOC

1.1 ALLOC_ENGINE_IGNORING_UNSUITABLE_GLOBAL_ADDRESS

```
%1: ignoring globally reserved address %2, it falls outside %3
```

Logged at debug log level 40. This debug message is issued when the allocation engine determines that the globally reserved address falls outside the selected subnet or shared-network. The server should ignore the reserved address and attempt a dynamic allocation.

1.2 ALLOC_ENGINE_IGNORING_UNSUITABLE_GLOBAL_ADDRESS6

```
%1: ignoring globally reserved address %2, it falls outside %3
```

Logged at debug log level 40. This debug message is issued when the allocation engine determines that the globally reserved address falls outside the selected subnet or shared-network. The server should ignore the reserved address and attempt a dynamic allocation.

1.3 ALLOC_ENGINE_LEASE_RECLAIMED

```
successfully reclaimed lease %1
```

Logged at debug log level 40. This debug message is logged when the allocation engine successfully reclaims a lease. The lease is now available for assignment.

1.4 ALLOC_ENGINE_V4_ALLOC_ERROR

```
%1: error during attempt to allocate an IPv4 address: %2
```

An error occurred during an attempt to allocate an IPv4 address, the reason for the failure being contained in the message. The server will return a message to the client refusing a lease. The first argument includes the client identification information.

1.5 ALLOC_ENGINE_V4_ALLOC_FAIL

```
%1: failed to allocate an IPv4 address after %2 attempt(s)
```

This is an old warning message issued when the allocation engine fails to allocate a lease for a client. This message includes a number of lease allocation attempts that the engine made before giving up. If the number of attempts is 0 because the engine was unable to use any of the address pools for the particular client, this message is not logged. Even though, several more detailed logs precede this message, it was left for backward compatibility. This message may indicate that your address pool is too small for the number of clients you are trying to service and should be expanded. Alternatively, if the you know that the number of concurrently active clients is less than the addresses you have available, you may want to consider reducing the lease lifetime. This way, addresses allocated to clients that are no longer active on the network will become available sooner.

1.6 ALLOC_ENGINE_V4_ALLOC_FAIL_CLASSES

```
%1: Failed to allocate an IPv4 address for client with classes: %2
```

This warning message is printed when Kea failed to allocate an address and the client's packet belongs to one or more classes. There may be several reasons why a lease was not assigned. One of them may be a case when all pools require packet to belong to certain classes and the incoming packet didn't belong to any of them. Another case where this information may be useful is to point out that the pool reserved to a given class has ran out of addresses. When you see this message, you may consider checking your pool size and your classification definitions.

1.7 ALLOC_ENGINE_V4_ALLOC_FAIL_NO_POOLS

```
%1: no pools were available for the address allocation
```

This warning message is issued when the allocation engine fails to allocate a lease because it could not use any configured pools for the particular client. It is also possible that all of the subnets from which the allocation engine attempted to assign an address lack address pools. In this case, it should be considered misconfiguration if an operator expects that some clients should be assigned dynamic addresses. A subnet may lack any pools only when all clients should be assigned reserved IP addresses. Suppose the subnets connected to a shared network or a single subnet to which the client belongs have pools configured. In that case, this message is an indication that none of the pools could be used for the client because the client does not belong to appropriate client classes.

1.8 ALLOC_ENGINE_V4_ALLOC_FAIL_SHARED_NETWORK

```
%1: failed to allocate an IPv4 address in the shared network %2: %3 subnets have no␣
↪available addresses, %4 subnets have no matching pools
```

This warning message is issued when the allocation engine fails to allocate a lease for a client connected to a shared network. The shared network should contain at least one subnet, but typically it aggregates multiple subnets. This log message indicates that the allocation engine could not find and allocate any suitable lease in any of the subnets within the shared network. The first argument includes the client identification information. The second argument specifies the shared network name. The remaining two arguments provide additional information useful for debugging why the allocation engine could not assign a lease. The allocation engine tries to allocate addresses from different subnets in the shared network, and it may fail for some subnets because there are no leases available in those subnets or the free leases are reserved to other clients. The number of such subnets is specified in the third argument. For other subnets the allocation may fail because their pools may not be available to the particular client. These pools are guarded by client classes that the client does not belong to. The fourth argument specifies the number of such subnets. By looking at the values in the third and fourth argument, an operator can identify the situations when there are no addresses left in some of the pools. He or she can also identify a client classification misconfigurations causing some clients to be refused the service.

1.9 ALLOC_ENGINE_V4_ALLOC_FAIL_SUBNET

```
%1: failed to allocate an IPv4 lease in the subnet %2, subnet-id %3, shared network %4
```

This warning message is issued when the allocation engine fails to allocate a lease for a client connected to a subnet. The first argument includes the client identification information. The second and third arguments identify the subnet. The fourth argument specifies the shared network, if the subnet belongs to a shared network. There are many reasons for failing lease allocations. One of them may be the pools exhaustion or existing reservations for the free leases. However, in some cases, the allocation engine may fail to find a suitable pool for the client when the pools are only available to certain client classes, but the requesting client does not belong to them. Further log messages provide more information to distinguish between these different cases.

1.10 ALLOC_ENGINE_V4_DECLINED_RECOVERED

```
IPv4 address %1 was recovered after %2 seconds of probation-period
```

This informational message indicates that the specified address was reported as duplicate (client sent DECLINE) and the server marked this address as unavailable for a period of time. This time now has elapsed and the address has been returned to the available pool. This step concludes the decline recovery process.

1.11 ALLOC_ENGINE_V4_DISCOVER_ADDRESS_CONFLICT

```
%1: conflicting reservation for address %2 with existing lease %3
```

This warning message is issued when the DHCP server finds that the address reserved for the client can't be offered because this address is currently allocated to another client. The server will try to allocate a different address to the client to use until the conflict is resolved. The first argument includes the client identification information.

1.12 ALLOC_ENGINE_V4_DISCOVER_HR

```
client %1 sending DHCPDISCOVER has reservation for the address %2
```

Logged at debug log level 40. This message is issued when the allocation engine determines that the client sending the DHCPDISCOVER has a reservation for the specified address. The allocation engine will try to offer this address to the client.

1.13 ALLOC_ENGINE_V4_LEASES_RECLAMATION_COMPLETE

```
reclaimed %1 leases in %2
```

Logged at debug log level 40. This debug message is logged when the allocation engine completes reclamation of a set of expired leases. The maximum number of leases to be reclaimed in a single pass of the lease reclamation routine is configurable using 'max-reclaim-leases' parameter. However, the number of reclaimed leases may also be limited by the timeout value, configured with 'max-reclaim-time'. The message includes the number of reclaimed leases and the total time.

1.14 ALLOC_ENGINE_V4_LEASES_RECLAMATION_FAILED

```
reclamation of expired leases failed: %1
```

This error message is issued when the reclamation of the expired leases failed. The error message is displayed.

1.15 ALLOC_ENGINE_V4_LEASES_RECLAMATION_SLOW

```
expired leases still exist after %1 reclamations
```

This warning message is issued when the server has been unable to reclaim all expired leases in a specified number of consecutive attempts. This indicates that the value of "reclaim-timer-wait-time" may be too high. However, if this is just a short burst of leases' expirations the value does not have to be modified and the server should deal with this in subsequent reclamation attempts. If this is a result of a permanent increase of the server load, the value of "reclaim-timer-wait-time" should be decreased, or the values of "max-reclaim-leases" and "max-reclaim-time" should be increased to allow processing more leases in a single cycle. Alternatively, these values may be set to 0 to remove the limitations on the number of leases and duration. However, this may result in longer periods of server's unresponsiveness to DHCP packets, while it processes the expired leases.

1.16 ALLOC_ENGINE_V4_LEASES_RECLAMATION_START

```
starting reclamation of expired leases (limit = %1 leases or %2 milliseconds)
```

Logged at debug log level 40. This debug message is issued when the allocation engine starts the reclamation of the expired leases. The maximum number of leases to be reclaimed and the timeout is included in the message. If any of these values is 0, it means "unlimited".

1.17 ALLOC_ENGINE_V4_LEASES_RECLAMATION_TIMEOUT

```
timeout of %1 ms reached while reclaiming IPv4 leases
```

Logged at debug log level 40. This debug message is issued when the allocation engine hits the timeout for performing reclamation of the expired leases. The reclamation will now be interrupted and all leases which haven't been reclaimed, because of the timeout, will be reclaimed when the next scheduled reclamation is started. The argument is the timeout value expressed in milliseconds.

1.18 ALLOC_ENGINE_V4_LEASE_RECLAIM

```
%1: reclaiming expired lease for address %2
```

Logged at debug log level 40. This debug message is issued when the server begins reclamation of the expired DHCPv4 lease. The first argument specifies the client identification information. The second argument holds the leased IPv4 address.

1.19 ALLOC_ENGINE_V4_LEASE_RECLAMATION_FAILED

```
failed to reclaim the lease %1: %2
```

This error message is logged when the allocation engine fails to reclaim an expired lease. The reason for the failure is included in the message. The error may be triggered in the lease expiration hook or while performing the operation on the lease database.

1.20 ALLOC_ENGINE_V4_NO_MORE_EXPIRED_LEASES

```
all expired leases have been reclaimed
```

Logged at debug log level 40. This debug message is issued when the server reclaims all expired DHCPv4 leases in the database.

1.21 ALLOC_ENGINE_V4_OFFER_EXISTING_LEASE

```
allocation engine will try to offer existing lease to the client %1
```

Logged at debug log level 40. This message is issued when the allocation engine determines that the client has a lease in the lease database, it doesn't have reservation for any other lease, and the leased address is not reserved for any other client. The allocation engine will try to offer the same lease to the client.

1.22 ALLOC_ENGINE_V4_OFFER_NEW_LEASE

```
allocation engine will try to offer new lease to the client %1
```

Logged at debug log level 40. This message is issued when the allocation engine will try to offer a new lease to the client. This is the case when the client doesn't have any existing lease, it has no reservation or the existing or reserved address is leased to another client. Also, the client didn't specify a hint, or the address in the hint is in use.

1.23 ALLOC_ENGINE_V4_OFFER_REQUESTED_LEASE

```
allocation engine will try to offer requested lease %1 to the client %2
```

Logged at debug log level 40. This message is issued when the allocation engine will try to offer the lease specified in the hint. This situation may occur when: (a) client doesn't have any reservations, (b) client has reservation but the reserved address is leased to another client.

1.24 ALLOC_ENGINE_V4_RECLAIMED_LEASES_DELETE

```
begin deletion of reclaimed leases expired more than %1 seconds ago
```

Logged at debug log level 40. This debug message is issued when the allocation engine begins deletion of the reclaimed leases which have expired more than a specified number of seconds ago. This operation is triggered periodically according to the "flush-reclaimed-timer-wait-time" parameter. The "hold-reclaimed-time" parameter defines a number of seconds for which the leases are stored before they are removed.

1.25 ALLOC_ENGINE_V4_RECLAIMED_LEASES_DELETE_COMPLETE

```
successfully deleted %1 expired-reclaimed leases
```

Logged at debug log level 40. This debug message is issued when the server successfully deletes "expired-reclaimed" leases from the lease database. The number of deleted leases is included in the log message.

1.26 ALLOC_ENGINE_V4_RECLAIMED_LEASES_DELETE_FAILED

```
deletion of expired-reclaimed leases failed: %1
```

This error message is issued when the deletion of "expired-reclaimed" leases from the database failed. The error message is appended to the log message.

1.27 ALLOC_ENGINE_V4_REQUEST_ADDRESS_RESERVED

```
%1: requested address %2 is reserved
```

Logged at debug log level 40. This message is issued when the allocation engine refused to allocate address requested by the client because this address is reserved for another client. The first argument includes the client identification information.

1.28 ALLOC_ENGINE_V4_REQUEST_ALLOC_REQUESTED

```
%1: trying to allocate requested address %2
```

Logged at debug log level 40. This message is issued when the allocation engine is trying to allocate (or reuse an expired) address which has been requested by the client. The first argument includes the client identification information.

1.29 ALLOC_ENGINE_V4_REQUEST_EXTEND_LEASE

```
%1: extending lifetime of the lease for address %2
```

Logged at debug log level 40. This message is issued when the allocation engine determines that the client already has a lease whose lifetime can be extended, and which can be returned to the client. The first argument includes the client identification information.

1.30 ALLOC_ENGINE_V4_REQUEST_INVALID

```
client %1 having a reservation for address %2 is requesting invalid address %3
```

Logged at debug log level 40. This message is logged when the client, having a reservation for one address, is requesting a different address. The client is only allowed to do this when the reserved address is in use by another client. However, the allocation engine has determined that the reserved address is available and the client should request the reserved address.

1.31 ALLOC_ENGINE_V4_REQUEST_IN_USE

```
%1: requested address %2 is in use
```

Logged at debug log level 40. This message is issued when the client is requesting or has a reservation for an address which is in use. The first argument includes the client identification information.

1.32 ALLOC_ENGINE_V4_REQUEST_OUT_OF_POOL

```
client %1, which doesn't have a reservation, requested address %2 out of the dynamic pool
```

Logged at debug log level 40. This message is issued when the client has requested allocation of the address which doesn't belong to any address pool from which addresses are dynamically allocated. The client also doesn't have reservation for this address. This address could only be allocated if the client had reservation for it.

1.33 ALLOC_ENGINE_V4_REQUEST_PICK_ADDRESS

```
client %1 hasn't specified an address - picking available address from the pool
```

Logged at debug log level 40. This message is logged when the client hasn't specified any preferred address (the client should always do it, but Kea tries to be forgiving). The allocation engine will try to pick an available address from the dynamic pool and allocate it to the client.

1.34 ALLOC_ENGINE_V4_REQUEST_REMOVE_LEASE

```
%1: removing previous client's lease %2
```

Logged at debug log level 40. This message is logged when the allocation engine removes previous lease for the client because the client has been allocated new one.

1.35 ALLOC_ENGINE_V4_REQUEST_USE_HR

```
client %1 hasn't requested specific address, using reserved address %2
```

Logged at debug log level 40. This message is issued when the client is not requesting any specific address but the allocation engine has determined that there is a reservation for this client. The allocation engine will try to allocate the reserved address.

1.36 ALLOC_ENGINE_V4_REUSE_EXPIRED_LEASE_DATA

```
%1: reusing expired lease, updated lease information: %2
```

Logged at debug log level 55. This message is logged when the allocation engine is reusing an existing lease. The details of the updated lease are printed. The first argument includes the client identification information.

1.37 ALLOC_ENGINE_V6_ALLOC_ERROR

```
%1: error during attempt to allocate an IPv6 address: %2
```

An error occurred during an attempt to allocate an IPv6 address, the reason for the failure being contained in the message. The server will return a message to the client refusing a lease. The first argument includes the client identification information.

1.38 ALLOC_ENGINE_V6_ALLOC_FAIL

```
%1: failed to allocate an IPv6 lease after %2 attempt(s)
```

This is an old warning message issued when the allocation engine fails to allocate a lease for a client. This message includes a number of lease allocation attempts that the engine made before giving up. If the number of attempts is 0 because the engine was unable to use any of the pools for the particular client, this message is not logged. Even though, several more detailed logs precede this message, it was left for backward compatibility. This message may indicate that your pool is too small for the number of clients you are trying to service and should be expanded. Alternatively, if the you know that the number of concurrently active clients is less than the leases you have available, you may want to consider reducing the lease lifetime. This way, leases allocated to clients that are no longer active on the network will become available sooner.

1.39 ALLOC_ENGINE_V6_ALLOC_FAIL_CLASSES

```
%1: Failed to allocate an IPv6 address for client with classes: %2
```

This warning message is printed when Kea failed to allocate an address and the client's packet belongs to one or more classes. There may be several reasons why a lease was not assigned. One of them may be a case when all pools require packet to belong to certain classes and the incoming packet didn't belong to any of them. Another case where this information may be useful is to point out that the pool reserved to a given class has ran out of addresses. When you see this message, you may consider checking your pool size and your classification definitions.

1.40 ALLOC_ENGINE_V6_ALLOC_FAIL_NO_POOLS

```
%1: no pools were available for the lease allocation
```

This warning message is issued when the allocation engine fails to allocate a lease because it could not use any configured pools for the particular client. It is also possible that all of the subnets from which the allocation engine attempted to assign an address lack address pools. In this case, it should be considered misconfiguration if an operator expects that some clients should be assigned dynamic addresses. A subnet may lack any pools only when all clients should be assigned reserved leases. Suppose the subnets connected to a shared network or a single subnet to which the client belongs have pools configured. In that case, this message is an indication that none of the pools could be used for the client because the client does not belong to appropriate client classes.

1.41 ALLOC_ENGINE_V6_ALLOC_FAIL_SHARED_NETWORK

```
%1: failed to allocate a lease in the shared network %2: %3 subnets have no available␣
↪leases, %4 subnets have no matching pools
```

This warning message is issued when the allocation engine fails to allocate a lease for a client connected to a shared network. The shared network should contain at least one subnet, but typically it aggregates multiple subnets. This log message indicates that the allocation engine could not find and allocate any suitable lease in any of the subnets within the shared network. The first argument includes the client identification information. The second argument specifies the shared network name. The remaining two arguments provide additional information useful for debugging why the allocation engine could not assign a lease. The allocation engine tries to allocate leases from different subnets in the shared network, and it may fail for some subnets because there are no leases available in those subnets or the free leases are reserved to other clients. The number of such subnets is specified in the third argument. For other subnets the allocation may fail because their pools may not be available to the particular client. These pools are guarded by client classes that the client does not belong to. The fourth argument specifies the number of such subnets. By looking at the values in the third and fourth argument, an operator can identify the situations when there are no leases left in some of the pools. He or she can also identify client classification misconfigurations causing some clients to be refused the service.

1.42 ALLOC_ENGINE_V6_ALLOC_FAIL_SUBNET

```
%1: failed to allocate an IPv6 lease in the subnet %2, subnet-id %3, shared network %4
```

This warning message is issued when the allocation engine fails to allocate a lease for a client connected to a subnet. The first argument includes the client identification information. The second and third arguments identify the subnet. The fourth argument specifies the shared network, if the subnet belongs to a shared network. There are many reasons for failing lease allocations. One of them may be the pools exhaustion or existing reservations for the free leases. However, in some cases, the allocation engine may fail to find a suitable pool for the client when the pools are only available to certain client classes, but the requesting client does not belong to them. Further log messages provide more information to distinguish between these different cases.

1.43 ALLOC_ENGINE_V6_ALLOC_HR_LEASE_EXISTS

```
%1: lease type %2 for reserved address/prefix %3 already exists
```

Logged at debug log level 40. This debug message is issued when the allocation engine determines that the lease for the IPv6 address or prefix has already been allocated for the client and the client can continue using it. The first argument includes the client identification information.

1.44 ALLOC_ENGINE_V6_ALLOC_LEASES_HR

```
leases and static reservations found for client %1
```

Logged at debug log level 40. This message is logged when the allocation engine is in the process of allocating leases for the client, it found existing leases and static reservations for the client. The allocation engine will verify if existing leases match reservations. Those leases that are reserved for other clients and those that are not reserved for the client will be removed. All leases matching the reservations will be renewed and returned.

1.45 ALLOC_ENGINE_V6_ALLOC_LEASES_NO_HR

```
no reservations found but leases exist for client %1
```

Logged at debug log level 40. This message is logged when the allocation engine is in the process if allocating leases for the client, there are no static reservations, but lease(s) exist for the client. The allocation engine will remove leases which are reserved for other clients, and return all remaining leases to the client.

1.46 ALLOC_ENGINE_V6_ALLOC_NO_LEASES_HR

```
no leases found but reservations exist for client %1
```

Logged at debug log level 40. This message is logged when the allocation engine is in the process of allocating leases for the client. It hasn't found any existing leases for this client, but the client appears to have static reservations. The allocation engine will try to allocate the reserved resources for the client.

1.47 ALLOC_ENGINE_V6_ALLOC_NO_V6_HR

```
%1: unable to allocate reserved leases - no IPv6 reservations
```

Logged at debug log level 40. This message is logged when the allocation engine determines that the client has no IPv6 reservations and thus the allocation engine will have to try to allocate allocating leases from the dynamic pool or stop the allocation process if none can be allocated. The first argument includes the client identification information.

1.48 ALLOC_ENGINE_V6_ALLOC_UNRESERVED

```
no static reservations available - trying to dynamically allocate leases for client %1
```

Logged at debug log level 40. This debug message is issued when the allocation engine will attempt to allocate leases from the dynamic pools. This may be due to one of (a) there are no reservations for this client, (b) there are reservations for the client but they are not usable because the addresses are in use by another client or (c) we had a reserved lease but that has now been allocated to another client.

1.49 ALLOC_ENGINE_V6_CALCULATED_PREFERRED_LIFETIME

```
%1: using a calculated preferred-lifetime of %2
```

Logged at debug log level 40. This debug message indicates that the preferred-lifetime being returned to the client is defaulting to 62.5% of the valid-lifetime. This may occur if either the preferred-lifetime has not been explicitly configured, or the configured value is larger than the valid-lifetime. The arguments detail the client and the preferred-lifetime that will be used.

1.50 ALLOC_ENGINE_V6_DECLINED_RECOVERED

```
IPv6 address %1 was recovered after %2 seconds of probation-period
```

This informational message indicates that the specified address was reported as duplicate (client sent DECLINE) and the server marked this address as unavailable for a period of time. This time now has elapsed and the address has been returned to the available pool. This step concludes the decline recovery process.

1.51 ALLOC_ENGINE_V6_EXPIRED_HINT_RESERVED

```
%1: expired lease for the client's hint %2 is reserved for another client
```

Logged at debug log level 40. This message is logged when the allocation engine finds that the expired lease for the client's hint can't be reused because it is reserved for another client. The first argument includes the client identification information.

1.52 ALLOC_ENGINE_V6_EXTEND_ALLOC_UNRESERVED

```
allocate new (unreserved) leases for the renewing client %1
```

Logged at debug log level 40. This debug message is issued when the allocation engine is trying to allocate new leases for the renewing client because it was unable to renew any of the existing client's leases, e.g. because leases are reserved for another client or for any other reason.

1.53 ALLOC_ENGINE_V6_EXTEND_ERROR

```
%1: allocation engine experienced error with attempting to extend lease lifetime: %2
```

This error message indicates that an error was experienced during Renew or Rebind processing. Additional explanation is provided with this message. Depending on its nature, manual intervention may be required to continue processing messages from this particular client; other clients will be unaffected. The first argument includes the client identification information.

1.54 ALLOC_ENGINE_V6_EXTEND_LEASE

```
%1: extending lifetime of the lease type %2, address %3
```

Logged at debug log level 50. This debug message is issued when the allocation engine is trying to extend lifetime of the lease. The first argument includes the client identification information.

1.55 ALLOC_ENGINE_V6_EXTEND_LEASE_DATA

```
%1: detailed information about the lease being extended: %2
```

Logged at debug log level 55. This debug message prints detailed information about the lease which lifetime is being extended (renew or rebind). The first argument includes the client identification information.

1.56 ALLOC_ENGINE_V6_EXTEND_NEW_LEASE_DATA

```
%1: new lease information for the lease being extended: %2
```

Logged at debug log level 55. This debug message prints updated information about the lease to be extended. If the lease update is successful, the information printed by this message will be stored in the database. The first argument includes the client identification information.

1.57 ALLOC_ENGINE_V6_HINT_RESERVED

```
%1: lease for the client's hint %2 is reserved for another client
```

Logged at debug log level 40. This message is logged when the allocation engine cannot allocate the lease using the client's hint because the lease for this hint is reserved for another client. The first argument includes the client identification information.

1.58 ALLOC_ENGINE_V6_HR_ADDR_GRANTED

```
reserved address %1 was assigned to client %2
```

This informational message signals that the specified client was assigned the address reserved for it.

1.59 ALLOC_ENGINE_V6_HR_PREFIX_GRANTED

```
reserved prefix %1/%2 was assigned to client %3
```

This informational message signals that the specified client was assigned the prefix reserved for it.

1.60 ALLOC_ENGINE_V6_LEASES_RECLAMATION_COMPLETE

```
reclaimed %1 leases in %2
```

Logged at debug log level 40. This debug message is logged when the allocation engine completes reclamation of a set of expired leases. The maximum number of leases to be reclaimed in a single pass of the lease reclamation routine is configurable using 'max-reclaim-leases' parameter. However, the number of reclaimed leases may also be limited by the timeout value, configured with 'max-reclaim-time'. The message includes the number of reclaimed leases and the total time.

1.61 ALLOC_ENGINE_V6_LEASES_RECLAMATION_FAILED

```
reclamation of expired leases failed: %1
```

This error message is issued when the reclamation of the expired leases failed. The error message is displayed.

1.62 ALLOC_ENGINE_V6_LEASES_RECLAMATION_SLOW

```
expired leases still exist after %1 reclamations
```

This warning message is issued when the server has been unable to reclaim all expired leases in a specified number of consecutive attempts. This indicates that the value of "reclaim-timer-wait-time" may be too high. However, if this is just a short burst of leases' expirations the value does not have to be modified and the server should deal with this in subsequent reclamation attempts. If this is a result of a permanent increase of the server load, the value of "reclaim-timer-wait-time" should be decreased, or the values of "max-reclaim-leases" and "max-reclaim-time" should be increased to allow processing more leases in a single cycle. Alternatively, these values may be set to 0 to remove the limitations on the number of leases and duration. However, this may result in longer periods of server's unresponsiveness to DHCP packets, while it processes the expired leases.

1.63 ALLOC_ENGINE_V6_LEASES_RECLAMATION_START

```
starting reclamation of expired leases (limit = %1 leases or %2 milliseconds)
```

Logged at debug log level 40. This debug message is issued when the allocation engine starts the reclamation of the expired leases. The maximum number of leases to be reclaimed and the timeout is included in the message. If any of these values is 0, it means "unlimited".

1.64 ALLOC_ENGINE_V6_LEASES_RECLAMATION_TIMEOUT

```
timeout of %1 ms reached while reclaiming IPv6 leases
```

Logged at debug log level 40. This debug message is issued when the allocation engine hits the timeout for performing reclamation of the expired leases. The reclamation will now be interrupted and all leases which haven't been reclaimed, because of the timeout, will be reclaimed when the next scheduled reclamation is started. The argument is the timeout value expressed in milliseconds.

1.65 ALLOC_ENGINE_V6_LEASE_RECLAIM

```
%1: reclaiming expired lease for prefix %2/%3
```

Logged at debug log level 40. This debug message is issued when the server begins reclamation of the expired DHCPv6 lease. The reclaimed lease may either be an address lease or delegated prefix. The first argument provides the client identification information. The other arguments specify the prefix and the prefix length for the lease. The prefix length for address lease is equal to 128.

1.66 ALLOC_ENGINE_V6_LEASE_RECLAMATION_FAILED

```
failed to reclaim the lease %1: %2
```

This error message is logged when the allocation engine fails to reclaim an expired lease. The reason for the failure is included in the message. The error may be triggered in the lease expiration hook or while performing the operation on the lease database.

1.67 ALLOC_ENGINE_V6_NO_MORE_EXPIRED_LEASES

```
all expired leases have been reclaimed
```

Logged at debug log level 40. This debug message is issued when the server reclaims all expired DHCPv6 leases in the database.

1.68 ALLOC_ENGINE_V6_RECLAIMED_LEASES_DELETE

```
begin deletion of reclaimed leases expired more than %1 seconds ago
```

Logged at debug log level 40. This debug message is issued when the allocation engine begins deletion of the reclaimed leases which have expired more than a specified number of seconds ago. This operation is triggered periodically according to the "flush-reclaimed-timer-wait-time" parameter. The "hold-reclaimed-time" parameter defines a number of seconds for which the leases are stored before they are removed.

1.69 ALLOC_ENGINE_V6_RECLAIMED_LEASES_DELETE_COMPLETE

```
successfully deleted %1 expired-reclaimed leases
```

Logged at debug log level 40. This debug message is issued when the server successfully deletes "expired-reclaimed" leases from the lease database. The number of deleted leases is included in the log message.

1.70 ALLOC_ENGINE_V6_RECLAIMED_LEASES_DELETE_FAILED

```
deletion of expired-reclaimed leases failed: %1
```

This error message is issued when the deletion of "expired-reclaimed" leases from the database failed. The error message is appended to the log message.

1.71 ALLOC_ENGINE_V6_RENEW_HR

```
allocating leases reserved for the client %1 as a result of Renew
```

Logged at debug log level 40. This debug message is issued when the allocation engine tries to allocate reserved leases for the client sending a Renew message. The server will also remove any leases that the client is trying to renew that are not reserved for the client.

1.72 ALLOC_ENGINE_V6_RENEW_REMOVE_RESERVED

```
%1: checking if existing client's leases are reserved for another client
```

Logged at debug log level 40. This message is logged when the allocation engine finds leases for the client and will check if these leases are reserved for another client. If they are, they will not be renewed for the client requesting their renewal. The first argument includes the client identification information.

1.73 ALLOC_ENGINE_V6_REUSE_EXPIRED_LEASE_DATA

```
%1: reusing expired lease, updated lease information: %2
```

Logged at debug log level 55. This message is logged when the allocation engine is reusing an existing lease. The details of the updated lease are printed. The first argument includes the client identification information.

1.74 ALLOC_ENGINE_V6_REVOKED_ADDR_LEASE

```
%1: address %2 was revoked from client %3 as it is reserved for client %4
```

This informational message is an indication that the specified IPv6 address was used by client A but it is now reserved for client B. Client A has been told to stop using it so that it can be leased to client B. This is a normal occurrence during conflict resolution, which can occur in cases such as the system administrator adding a reservation for an address that is currently in use by another client. The server will fully recover from this situation, but clients will change their addresses.

1.75 ALLOC_ENGINE_V6_REVOKED_PREFIX_LEASE

```
%1: prefix %2/%3 was revoked from client %4 as it is reserved for client %5
```

This informational message is an indication that the specified IPv6 prefix was used by client A but it is now reserved for client B. Client A has been told to stop using it so that it can be leased to client B. This is a normal occurrence during conflict resolution, which can occur in cases such as the system administrator adding a reservation for an address that is currently in use by another client. The server will fully recover from this situation, but clients will change their prefixes.

1.76 ALLOC_ENGINE_V6_REVOKED_SHARED_ADDR_LEASE

```
%1: address %2 was revoked from client %3 as it is reserved for %4 other clients
```

This informational message is an indication that the specified IPv6 address was used by client A but it is now reserved for multiple other clients. Client A has been told to stop using it so that it can be leased to one of the clients having the reservation for it. This is a normal occurrence during conflict resolution, which can occur in cases such as the system administrator adding reservations for an address that is currently in use by another client. The server will fully recover from this situation, but clients will change their addresses.

CHAPTER

TWO

ASIODNS

2.1 ASIODNS_FETCH_COMPLETED

```
upstream fetch to %1(%2) has now completed
```

Logged at debug log level 70. A debug message, this records that the upstream fetch (a query made by the resolver on behalf of its client) to the specified address has completed.

2.2 ASIODNS_FETCH_STOPPED

```
upstream fetch to %1(%2) has been stopped
```

Logged at debug log level 40. An external component has requested the halting of an upstream fetch. This is an allowed operation, and the message should only appear if debug is enabled.

2.3 ASIODNS_OPEN_SOCKET

```
error %1 opening %2 socket to %3(%4)
```

The asynchronous I/O code encountered an error when trying to open a socket of the specified protocol in order to send a message to the target address. The number of the system error that caused the problem is given in the message.

2.4 ASIODNS_READ_DATA

```
error %1 reading %2 data from %3(%4)
```

The asynchronous I/O code encountered an error when trying to read data from the specified address on the given protocol. The number of the system error that caused the problem is given in the message.

2.5 ASIODNS_READ_TIMEOUT

```
receive timeout while waiting for data from %1(%2)
```

Logged at debug log level 50. An upstream fetch from the specified address timed out. This may happen for any number of reasons and is most probably a problem at the remote server or a problem on the network. The message will only appear if debug is enabled.

2.6 ASIODNS_SEND_DATA

```
error %1 sending data using %2 to %3(%4)
```

The asynchronous I/O code encountered an error when trying to send data to the specified address on the given protocol. The number of the system error that caused the problem is given in the message.

2.7 ASIODNS_UNKNOWN_ORIGIN

```
unknown origin for ASIO error code %1 (protocol: %2, address %3)
```

An internal consistency check on the origin of a message from the asynchronous I/O module failed. This may indicate an internal error; please submit a bug report.

CHAPTER

THREE

BOOTP

3.1 BOOTP_BOOTP_QUERY

```
recognized a BOOTP query: %1
```

Logged at debug log level 40. This debug message is printed when the BOOTP query was recognized. The BOOTP client class was added and the message type set to DHCPREQUEST. The query client and transaction identification are displayed.

3.2 BOOTP_LOAD

```
Bootp hooks library has been loaded
```

This info message indicates that the Bootp hooks library has been loaded.

3.3 BOOTP_PACKET_OPTIONS_SKIPPED

```
an error unpacking an option, caused subsequent options to be skipped: %1
```

Logged at debug log level 40. A debug message issued when an option failed to unpack correctly, making it impossible to unpack the remaining options in the DHCPv4 query. The server will still attempt to service the packet. The sole argument provides a reason for unpacking error.

3.4 BOOTP_PACKET_PACK

```
%1: preparing on-wire format of the packet to be sent
```

Logged at debug log level 40. This debug message is issued when the server starts preparing the on-wire format of the packet to be sent back to the client. The argument specifies the client and the transaction identification information.

3.5 BOOTP_PACKET_PACK_FAIL

```
%1: preparing on-wire-format of the packet to be sent failed %2
```

This error message is issued when preparing an on-wire format of the packet has failed. The first argument identifies the client and the BOOTP transaction. The second argument includes the error string.

3.6 BOOTP_PACKET_UNPACK_FAILED

```
failed to parse query from %1 to %2, received over interface %3, reason: %4
```

Logged at debug log level 40. This debug message is issued when received DHCPv4 query is malformed and can't be parsed by the buffer4_receive callout. The query will be dropped by the server. The first three arguments specify source IP address, destination IP address and the interface. The last argument provides a reason for failure.

CHAPTER

FOUR

COMMAND

4.1 COMMAND_ACCEPTOR_START

```
Starting to accept connections via unix domain socket bound to %1
```

This informational message is issued when the Kea server starts an acceptor via which it is going to accept new control connections. The acceptor is bound to the endpoint associated with the filename provided as an argument. If starting the acceptor fails, subsequent error messages will provide a reason for failure.

4.2 COMMAND_DEREGISTERED

```
Command %1 deregistered
```

Logged at debug log level 10. This debug message indicates that the daemon stopped supporting specified command. This command can no longer be issued. If the command socket is open and this command is issued, the daemon will not be able to process it.

4.3 COMMAND_EXTENDED_REGISTERED

```
Command %1 registered
```

Logged at debug log level 10. This debug message indicates that the daemon started supporting specified command. The handler for the registered command includes a parameter holding entire command to be processed.

4.4 COMMAND_HTTP_LISTENER_COMMAND_REJECTED

```
Command HTTP listener rejected command '%1' from '%2'
```

Logged at debug log level 10. This debug messages is issued when a command is rejected. Arguments detail the command and the address the request was received from.

4.5 COMMAND_HTTP_LISTENER_STARTED

```
Command HTTP listener started with %1 threads, listening on %2:%3, use TLS: %4
```

Logged at debug log level 10. This debug messages is issued when an HTTP listener has been started to accept connections from Command API clients through which commands can be received and responses sent. Arguments detail the number of threads that the listener is using, the address and port at which it is listening, and if HTTPS/TLS is used or not.

4.6 COMMAND_HTTP_LISTENER_STOPPED

```
Command HTTP listener for %1:%2 stopped.
```

Logged at debug log level 10. This debug messages is issued when the Command HTTP listener, listening at the given address and port, has completed shutdown.

4.7 COMMAND_HTTP_LISTENER_STOPPING

```
Stopping Command HTTP listener for %1:%2
```

Logged at debug log level 10. This debug messages is issued when the Command HTTP listener, listening at the given address and port, has begun to shutdown.

4.8 COMMAND_PROCESS_ERROR1

```
Error while processing command: %1
```

This warning message indicates that the server encountered an error while processing received command. Additional information will be provided, if available. Additional log messages may provide more details.

4.9 COMMAND_PROCESS_ERROR2

```
Error while processing command: %1
```

This warning message indicates that the server encountered an error while processing received command. The difference, compared to COMMAND_PROCESS_ERROR1 is that the initial command was well formed and the error occurred during logic processing, not the command parsing. Additional information will be provided, if available. Additional log messages may provide more details.

4.10 COMMAND_RECEIVED

```
Received command '%1'
```

This informational message indicates that a command was received over command socket. The nature of this command and its possible results will be logged with separate messages.

4.11 COMMAND_REGISTERED

```
Command %1 registered
```

Logged at debug log level 10. This debug message indicates that the daemon started supporting specified command. If the command socket is open, this command can now be issued.

4.12 COMMAND_RESPONSE_ERROR

```
Server failed to generate response for command: %1
```

This error message indicates that the server failed to generate response for specified command. This likely indicates a server logic error, as the server is expected to generate valid responses for all commands, even malformed ones.

4.13 COMMAND_SOCKET_ACCEPT_FAIL

```
Failed to accept incoming connection on command socket %1: %2
```

This error indicates that the server detected incoming connection and executed accept system call on said socket, but this call returned an error. Additional information may be provided by the system as second parameter.

4.14 COMMAND_SOCKET_CLOSED_BY_FOREIGN_HOST

```
Closed command socket %1 by foreign host, %2
```

This is an information message indicating that the command connection has been closed by a command control client, and whether any partially read data was discarded.

4.15 COMMAND_SOCKET_CONNECTION_CANCEL_FAIL

```
Failed to cancel read operation on socket %1: %2
```

This error message is issued to indicate an error to cancel asynchronous read of the control command over the control socket. The cancel operation is performed when the timeout occurs during communication with a client. The error message includes details about the reason for failure.

4.16 COMMAND_SOCKET_CONNECTION_CLOSED

```
Closed socket %1 for existing command connection
```

Logged at debug log level 10. This is a debug message indicating that the socket created for handling client's connection is closed. This usually means that the client disconnected, but may also mean a timeout.

4.17 COMMAND_SOCKET_CONNECTION_CLOSE_FAIL

```
Failed to close command connection: %1
```

This error message is issued when an error occurred when closing a command connection and/or removing it from the connections pool. The detailed error is provided as an argument.

4.18 COMMAND_SOCKET_CONNECTION_OPENED

```
Opened socket %1 for incoming command connection
```

Logged at debug log level 10. This is a debug message indicating that a new incoming command connection was detected and a dedicated socket was opened for that connection.

4.19 COMMAND_SOCKET_CONNECTION_SHUTDOWN_FAIL

```
Encountered error %1 while trying to gracefully shutdown socket
```

This message indicates an error while trying to gracefully shutdown command connection. The type of the error is included in the message.

4.20 COMMAND_SOCKET_CONNECTION_TIMEOUT

```
Timeout occurred for connection over socket %1
```

This is an informational message that indicates that the timeout has occurred for one of the command channel connections. The response sent by the server indicates a timeout and is then closed.

4.21 COMMAND_SOCKET_READ

```
Received %1 bytes over command socket %2
```

Logged at debug log level 10. This debug message indicates that specified number of bytes was received over command socket identified by specified file descriptor.

4.22 COMMAND_SOCKET_READ_FAIL

```
Encountered error %1 while reading from command socket %2
```

This error message indicates that an error was encountered while reading from command socket.

4.23 COMMAND_SOCKET_WRITE

```
Sent response of %1 bytes (%2 bytes left to send) over command socket %3
```

Logged at debug log level 10. This debug message indicates that the specified number of bytes was sent over command socket identifier by the specified file descriptor.

4.24 COMMAND_SOCKET_WRITE_FAIL

```
Error while writing to command socket %1 : %2
```

This error message indicates that an error was encountered while attempting to send a response to the command socket.

4.25 COMMAND_WATCH_SOCKET_CLEAR_ERROR

```
watch socket failed to clear: %1
```

This error message is issued when the command manager was unable to reset the ready status after completing a send. This is a programmatic error that should be reported. The command manager may or may not continue to operate correctly.

4.26 COMMAND_WATCH_SOCKET_CLOSE_ERROR

```
watch socket failed to close: %1
```

This error message is issued when command manager attempted to close the socket used for indicating the ready status for send operations. This should not have any negative impact on the operation of the command manager as it happens when the connection is being terminated.

4.27 COMMAND_WATCH_SOCKET_MARK_READY_ERROR

```
watch socket failed to mark ready: %1
```

This error message is issued when the command manager was unable to set ready status after scheduling asynchronous send. This is programmatic error that should be reported. The command manager may or may not continue to operate correctly.

CHAPTER

FIVE

CTRL

5.1 CTRL_AGENT_COMMAND_FORWARDED

```
command %1 successfully forwarded to the service %2 from remote address %3
```

This informational message is issued when the CA successfully forwards the control message to the specified Kea service and receives a response.

5.2 CTRL_AGENT_COMMAND_FORWARD_BEGIN

```
begin forwarding command %1 to service %2
```

Logged at debug log level 10. This debug message is issued when the Control Agent starts forwarding a received command to one of the Kea servers.

5.3 CTRL_AGENT_COMMAND_FORWARD_FAILED

```
failed forwarding command %1: %2
```

Logged at debug log level 10. This debug message is issued when the Control Agent failed forwarding a received command to one of the Kea servers. The second argument provides the details of the error.

5.4 CTRL_AGENT_COMMAND_RECEIVED

```
command %1 received from remote address %2
```

This informational message is issued when the CA receives a control message, whether it is destined to the control agent itself, or to be forwarded on.

5.5 CTRL_AGENT_CONFIG_CHECK_FAIL

```
Control Agent configuration check failed: %1
```

This error message indicates that the CA had failed configuration check. Details are provided. Additional details may be available in earlier log entries, possibly on lower levels.

5.6 CTRL_AGENT_CONFIG_FAIL

```
Control Agent configuration failed: %1
```

This error message indicates that the CA had failed configuration attempt. Details are provided. Additional details may be available in earlier log entries, possibly on lower levels.

5.7 CTRL_AGENT_CONFIG_SYNTAX_WARNING

```
Control Agent configuration syntax warning: %1
```

This warning message indicates that the CA configuration had a minor syntax error. The error was displayed and the configuration parsing resumed.

5.8 CTRL_AGENT_FAILED

```
application experienced a fatal error: %1
```

This is a fatal error message issued when the Control Agent application encounters an unrecoverable error from within the event loop.

5.9 CTRL_AGENT_HTTPS_SERVICE_REUSED

```
reused HTTPS service bound to address %1:%2
```

This informational message indicates that the server has reused existing HTTPS service on the specified address and port. Note that any change in the TLS setup was ignored.

5.10 CTRL_AGENT_HTTPS_SERVICE_STARTED

```
HTTPS service bound to address %1:%2
```

This informational message indicates that the server has started HTTPS service on the specified address and port. All control commands should be sent to this address and port over a TLS channel.

5.11 CTRL_AGENT_HTTP_SERVICE_REUSED

```
reused HTTP service bound to address %1:%2
```

This informational message indicates that the server has reused existing HTTPS service on the specified address and port.

5.12 CTRL_AGENT_HTTP_SERVICE_STARTED

```
HTTP service bound to address %1:%2
```

This informational message indicates that the server has started HTTP service on the specified address and port. All control commands should be sent to this address and port.

5.13 CTRL_AGENT_RUN_EXIT

```
application is exiting the event loop
```

Logged at debug log level 0. This is a debug message issued when the Control Agent exits its event loop.

CHAPTER

SIX

DATABASE

6.1 DATABASE_INVALID_ACCESS

```
invalid database access string: %1
```

This is logged when an attempt has been made to parse a database access string and the attempt ended in error. The access string in question - which should be of the form 'keyword=value keyword=value...' is included in the message.

6.2 DATABASE_MYSQL_COMMIT

```
committing to MySQL database
```

The code has issued a commit call. All outstanding transactions will be committed to the database. Note that depending on the MySQL settings, the committal may not include a write to disk.

6.3 DATABASE_MYSQL_FATAL_ERROR

```
Unrecoverable MySQL error occurred: %1 for <%2>, reason: %3 (error code: %4).
```

An error message indicating that communication with the MySQL database server has been lost. If automatic recovery has been enabled, then the server will attempt to recover connectivity. If not, then the server will exit with a non-zero exit code. The cause of such an error is most likely a network issue or the MySQL server has gone down.

6.4 DATABASE_MYSQL_INITIALIZE_SCHEMA

```
Initializing the MySQL schema with command: %1.
```

This is logged before running the kea-admin command to automatically initialize the schema from Kea after getting the schema version initially failed. The full kea-admin command is shown.

6.5 DATABASE_MYSQL_ROLLBACK

```
rolling back MySQL database
```

The code has issued a rollback call. All outstanding transaction will be rolled back and not committed to the database.

6.6 DATABASE_MYSQL_START_TRANSACTION

```
starting new MySQL transaction
```

A debug message issued when a new MySQL transaction is being started. This message is typically not issued when inserting data into a single table because the server doesn't explicitly start transactions in this case. This message is issued when data is inserted into multiple tables with multiple INSERT statements and there may be a need to rollback the whole transaction if any of these INSERT statements fail.

6.7 DATABASE_PGSQL_COMMIT

```
committing to PostgreSQL database
```

The code has issued a commit call. All outstanding transactions will be committed to the database. Note that depending on the PostgreSQL settings, the committal may not include a write to disk.

6.8 DATABASE_PGSQL_CREATE_SAVEPOINT

```
creating a new PostgreSQL savepoint: %1
```

The code is issuing a call to create a savepoint within the current transaction. Database modifications made up to this point will be preserved should a subsequent call to rollback to this savepoint occurs prior to the transaction being committed.

6.9 DATABASE_PGSQL_DEALLOC_ERROR

```
An error occurred deallocating SQL statements while closing the PostgreSQL lease␣
↪database: %1
```

This is an error message issued when a DHCP server (either V4 or V6) experienced and error freeing database SQL resources as part of closing its connection to the PostgreSQL database. The connection is closed as part of normal server shutdown. This error is most likely a programmatic issue that is highly unlikely to occur or negatively impact server operation.

6.10 DATABASE_PGSQL_FATAL_ERROR

```
Unrecoverable PostgreSQL error occurred: Statement: <%1>, reason: %2 (error code: %3).
```

An error message indicating that communication with the PostgreSQL database server has been lost. If automatic recovery has been enabled, then the server will attempt to recover the connectivity. If not, then the server will exit with a non-zero exit code. The cause of such an error is most likely a network issue or the PostgreSQL server has gone down.

6.11 DATABASE_PGSQL_INITIALIZE_SCHEMA

```
Initializing the PostgreSQL schema with command: %1.
```

This is logged before running the kea-admin command to automatically initialize the schema from Kea after getting the schema version initially failed. The full kea-admin command is shown.

6.12 DATABASE_PGSQL_ROLLBACK

```
rolling back PostgreSQL database
```

The code has issued a rollback call. All outstanding transaction will be rolled back and not committed to the database.

6.13 DATABASE_PGSQL_ROLLBACK_SAVEPOINT

```
rolling back PostgreSQL database to savepoint: $1
```

The code is issuing a call to rollback to the given savepoint. Any database modifications that were made after the savepoint was created will be rolled back and not committed to the database.

6.14 DATABASE_PGSQL_START_TRANSACTION

```
starting a new PostgreSQL transaction
```

A debug message issued when a new PostgreSQL transaction is being started. This message is typically not issued when inserting data into a single table because the server doesn't explicitly start transactions in this case. This message is issued when data is inserted into multiple tables with multiple INSERT statements and there may be a need to rollback the whole transaction if any of these INSERT statements fail.

6.15 DATABASE_PGSQL_TCP_USER_TIMEOUT_UNSUPPORTED

```
tcp_user_timeout is not supported in this PostgreSQL version
```

This warning message is issued when a user has configured the tcp_user_timeout parameter in the connection to the PostgreSQL database but the installed database does not support this parameter. It is supported by the PostgreSQL version 12 or later. The parameter setting will be ignored.

6.16 DATABASE_TO_JSON_BOOLEAN_ERROR

```
Internal logic error: invalid boolean value found in database connection parameters: %1=
↪%2
```

This error message is printed when conversion to JSON of the internal state is requested, but the connection string contains a boolean parameter with invalid value. It is a programming error. The software will continue operation, but the returned JSON data will be syntactically valid, but incomplete. The culprit parameter will not be converted.

6.17 DATABASE_TO_JSON_INTEGER_ERROR

```
Internal logic error: invalid integer value found in database connection parameters: %1=
↪%2
```

This error message is printed when conversion to JSON of the internal state is requested, but the connection string contains the integer parameter with a wrong value. It is a programming error. The software will continue operation, but the returned JSON data will be syntactically valid, but incomplete. The culprit parameter will not be converted.

CHAPTER

SEVEN

DCTL

7.1 DCTL_ALREADY_RUNNING

```
%1 already running? %2
```

This is an error message that occurs when a module encounters a pre-existing PID file which contains the PID of a running process. This most likely indicates an attempt to start a second instance of a module using the same configuration file. It is possible, though unlikely, that the PID file is a remnant left behind by a server crash or power failure and the PID it contains refers to a process other than Kea process. In such an event, it would be necessary to manually remove the PID file. The first argument is the process name, the second contains the PID and PID file.

7.2 DCTL_CFG_FILE_RELOAD_ERROR

```
configuration reload failed: %1, reverting to current configuration.
```

This is an error message indicating that the application attempted to reload its configuration from file and encountered an error. This is likely due to invalid content in the configuration file. The application should continue to operate under its current configuration.

7.3 DCTL_CFG_FILE_RELOAD_SIGNAL_RECVD

```
OS signal %1 received, reloading configuration from file: %2
```

This is an informational message indicating the application has received a signal instructing it to reload its configuration from file.

7.4 DCTL_CONFIG_CHECK_COMPLETE

```
server has completed configuration check: %1, result: %2
```

This is an informational message announcing the successful processing of a new configuration check is complete. The result of that check is printed. This informational message is printed when configuration check is requested.

7.5 DCTL_CONFIG_COMPLETE

```
server has completed configuration: %1
```

This is an informational message announcing the successful processing of a new configuration. It is output during server startup, and when an updated configuration is committed by the administrator. Additional information may be provided.

7.6 DCTL_CONFIG_DEPRECATED

```
server configuration includes a deprecated object: %1
```

This error message is issued when the configuration includes a deprecated object (i.e. a top level element) which will be ignored.

7.7 DCTL_CONFIG_FETCH

```
Fetching configuration data from config backends.
```

This is an informational message emitted when the Kea server is about to begin retrieving configuration data from one or more configuration backends.

7.8 DCTL_CONFIG_FILE_LOAD_FAIL

```
%1 reason: %2
```

This fatal error message indicates that the application attempted to load its initial configuration from file and has failed. The service will exit.

7.9 DCTL_CONFIG_START

```
parsing new configuration: %1
```

Logged at debug log level 10. A debug message indicating that the application process has received an updated configuration and has passed it to its configuration manager for parsing.

7.10 DCTL_DB_OPEN_CONNECTION_WITH_RETRY_FAILED

```
Failed to connect to database: %1 with error: %2
```

This is an informational message issued when the server failed to connect to the configuration database. The operation started a retry to connect procedure. The database access string with password redacted is logged, along with the error and details for the reconnect procedure.

7.11 DCTL_DEPRECATED_OUTPUT_OPTIONS

```
The output_options parameter is deprecated. Use output-options parameter instead.
```

This warning message is displayed when deprecated output_options is used instead of output-options.

7.12 DCTL_DEVELOPMENT_VERSION

```
This software is a development branch of Kea. It is not recommended for production use.
```

This warning message is displayed when the version is a development (vs stable) one: the second number of the version is odd.

7.13 DCTL_INIT_PROCESS

```
%1 initializing the application
```

Logged at debug log level 0. This debug message is issued just before the controller attempts to create and initialize its application instance.

7.14 DCTL_INIT_PROCESS_FAIL

```
%1 application initialization failed: %2
```

This error message is issued if the controller could not initialize the application and will exit.

7.15 DCTL_NOT_RUNNING

```
%1 application instance is not running
```

A warning message is issued when an attempt is made to shut down the application when it is not running.

7.16 DCTL_OPEN_CONFIG_DB

```
Opening configuration database: %1
```

This message is printed when the Kea server is attempting to open a configuration database. The database access string with password redacted is logged.

7.17 DCTL_PARSER_FAIL

```
Parser error: %1
```

On receipt of a new configuration, the server failed to create a parser to decode the contents of the named configuration element, or the creation succeeded but the parsing actions and committal of changes failed. The reason for the failure is given in the message.

7.18 DCTL_PID_FILE_ERROR

```
%1 could not create a PID file: %2
```

This is an error message that occurs when the server is unable to create its PID file. The log message should contain details sufficient to determine the underlying cause. The most likely culprits are that some portion of the pathname does not exist or a permissions issue. The default path is determined by --localstatedir or --runstatedir configure parameters but may be overridden by setting environment variable, KEA_PIDFILE_DIR. The first argument is the process name.

7.19 DCTL_PROCESS_FAILED

```
%1 application execution failed: %2
```

The controller has encountered a fatal error while running the application and is terminating. The reason for the failure is included in the message.

7.20 DCTL_RUN_PROCESS

```
%1 starting application event loop
```

Logged at debug log level 0. This debug message is issued just before the controller invokes the application run method.

7.21 DCTL_SHUTDOWN

```
%1 has shut down, pid: %2, version: %3
```

Logged at debug log level 0. This is an informational message indicating that the service has shut down. The argument specifies a name of the service.

7.22 DCTL_SHUTDOWN_SIGNAL_RECVD

```
OS signal %1 received, starting shutdown
```

Logged at debug log level 0. This is a debug message indicating the application has received a signal instructing it to shutdown.

7.23 DCTL_STANDALONE

```
%1 skipping message queue, running standalone
```

Logged at debug log level 0. This is a debug message indicating that the controller is running in the application in standalone mode. This means it will not connected to the Kea message queue. Standalone mode is only useful during program development, and should not be used in a production environment.

7.24 DCTL_STARTING

```
%1 starting, pid: %2, version: %3 (%4)
```

This is an informational message issued when controller for the service first starts. Version is also reported.

7.25 DCTL_UNLOAD_LIBRARIES_ERROR

```
error unloading hooks libraries during shutdown: %1
```

This error message indicates that during shutdown, unloading hooks libraries failed to close them. If the list of libraries is empty it is a programmatic error in the server code. If it is not empty it could be a programmatic error in one of the hooks libraries which could lead to a crash during finalization.

CHAPTER

EIGHT

DHCP4

8.1 DHCP4_ADDITIONAL_CLASS_EVAL_ERROR

```
%1: Expression '%2' evaluated to %3
```

This error message indicates that a problem was encountered while evaluating the expression of an additional client class. A description of the problem is printed.

8.2 DHCP4_ADDITIONAL_CLASS_EVAL_RESULT

```
%1: Expression '%2' evaluated to %3
```

Logged at debug log level 50. This debug message indicates that the expression of an additional client class has been successfully evaluated. The client class name and the result value of the evaluation are printed.

8.3 DHCP4_ADDITIONAL_CLASS_NO_TEST

```
additional class %1 has no test expression, adding it to client's classes unconditionally
```

Logged at debug log level 40. This debug message informs that a class was listed for additional evaluation but its definition does not include a test expression to evaluate. The class is unconditionally added to the query.

8.4 DHCP4_ADDITIONAL_CLASS_UNDEFINED

```
additional class %1 has no definition
```

Logged at debug log level 40. This debug message informs that a class is listed for additional evaluation but has no definition. The class is ignored.

8.5 DHCP4_ALREADY_RUNNING

```
%1 already running? %2
```

This is an error message that occurs when the DHCPv4 server encounters a pre-existing PID file which contains the PID of a running process. This most likely indicates an attempt to start a second instance of the server using the same configuration file. It is possible, though unlikely that the PID file is a remnant left behind by a server crash or power failure and the PID it contains refers to a process other than the server. In such an event, it would be necessary to manually remove the PID file. The first argument is the DHCPv4 process name, the second contains the PID and PID file.

8.6 DHCP4_BUFFER_RECEIVED

```
received buffer from %1:%2 to %3:%4 over interface %5
```

Logged at debug log level 40. This debug message is logged when the server has received a packet over the socket. When the message is logged the contents of the received packet hasn't been parsed yet. The only available information is the interface and the source and destination IPv4 addresses/ports.

8.7 DHCP4_BUFFER_RECEIVE_FAIL

```
error on attempt to receive packet: %1
```

The DHCPv4 server tried to receive a packet but an error occurred during this attempt. The reason for the error is included in the message.

8.8 DHCP4_BUFFER_UNPACK

```
parsing buffer received from %1 to %2 over interface %3
```

Logged at debug log level 50. This debug message is issued when the server starts parsing the received buffer holding the DHCPv4 message. The arguments specify the source and destination IPv4 addresses as well as the interface over which the buffer has been received.

8.9 DHCP4_BUFFER_WAIT_SIGNAL

```
signal received while waiting for next packet
```

Logged at debug log level 50. This debug message is issued when the server was waiting for the packet, but the wait has been interrupted by the signal received by the process. The signal will be handled before the server starts waiting for next packets.

8.10 DHCP4_CB_ON_DEMAND_FETCH_UPDATES_FAIL

```
error on demand attempt to fetch configuration updates from the configuration␣
↪backend(s): %1
```

This error message is issued when the server attempted to fetch configuration updates from the database and this on demand attempt failed. The sole argument which is returned to the config-backend-pull command caller too contains the reason for failure.

8.11 DHCP4_CB_PERIODIC_FETCH_UPDATES_FAIL

```
error on periodic attempt to fetch configuration updates from the configuration␣
↪backend(s): %1
```

This error message is issued when the server attempted to fetch configuration updates from the database and this periodic attempt failed. The server will re-try according to the configured value of the config-fetch-wait-time parameter. The sole argument contains the reason for failure.

8.12 DHCP4_CB_PERIODIC_FETCH_UPDATES_RETRIES_EXHAUSTED

```
maximum number of configuration fetch attempts: 10, has been exhausted without success
```

This error indicates that the server has made a number of unsuccessful periodic attempts to fetch configuration updates from a configuration backend. The server will continue to operate but won't make any further attempts to fetch configuration updates. The administrator must fix the configuration in the database and reload (or restart) the server.

8.13 DHCP4_CLASSES_ASSIGNED

```
%1: client packet has been assigned on %2 message to the following classes: %3
```

Logged at debug log level 40. This debug message informs that incoming packet has been assigned to specified classes. This is a normal behavior and indicates successful operation. The first argument specifies the client and transaction identification information. The second argument specifies the DHCPv4 message type. The third argument includes all classes to which the packet has been assigned.

8.14 DHCP4_CLASSES_ASSIGNED_AFTER_SUBNET_SELECTION

```
%1: client packet has been assigned to the following classes: %2
```

Logged at debug log level 40. This debug message informs that incoming packet has been assigned to specified classes. This is a normal behavior and indicates successful operation. The first argument specifies the client and transaction identification information. The second argument includes all classes to which the packet has been assigned.

8.15 DHCP4_CLASS_ASSIGNED

```
%1: client packet has been assigned to the following class: %2
```

Logged at debug log level 40. This debug message informs that incoming packet has been assigned to specified class. This is a normal behavior and indicates successful operation. The first argument specifies the client and transaction identification information. The second argument includes the new class to which the packet has been assigned.

8.16 DHCP4_CLASS_UNCONFIGURED

```
%1: client packet belongs to an unconfigured class: %2
```

Logged at debug log level 40. This debug message informs that incoming packet belongs to a class which cannot be found in the configuration. Either a hook written before the classification was added to Kea is used, or class naming is inconsistent.

8.17 DHCP4_CLIENTID_IGNORED_FOR_LEASES

```
%1: not using client identifier for lease allocation for subnet %2
```

Logged at debug log level 50. This debug message is issued when the server is processing the DHCPv4 message for which client identifier will not be used when allocating new lease or renewing existing lease. The server is explicitly configured to not use client identifier to lookup existing leases for the client and will not record client identifier in the lease database. This mode of operation is useful when clients don't use stable client identifiers, e.g. multi stage booting. The first argument includes the client and transaction identification information. The second argument specifies the identifier of the subnet where the client is connected and for which this mode of operation is configured on the server.

8.18 DHCP4_CLIENT_FQDN_DATA

```
%1: Client sent FQDN option: %2
```

Logged at debug log level 55. This debug message includes the detailed information extracted from the Client FQDN option sent in the query. The first argument includes the client and transaction identification information. The second argument specifies the detailed information about the FQDN option received by the server.

8.19 DHCP4_CLIENT_FQDN_PROCESS

```
%1: processing Client FQDN option
```

Logged at debug log level 50. This debug message is issued when the server starts processing the Client FQDN option sent in the client's query. The argument includes the client and transaction identification information.

8.20 DHCP4_CLIENT_HOSTNAME_DATA

```
%1: client sent Hostname option: %2
```

Logged at debug log level 55. This debug message includes the detailed information extracted from the Hostname option sent in the query. The first argument includes the client and transaction identification information. The second argument specifies the hostname carried in the Hostname option sent by the client.

8.21 DHCP4_CLIENT_HOSTNAME_MALFORMED

```
%1: client hostname option malformed: %2
```

Logged at debug log level 50. This debug message is issued when the DHCP server was unable to process the the hostname option sent by the client because the content is malformed. The first argument includes the client and transaction identification information. The second argument contains a description of the data error.

8.22 DHCP4_CLIENT_HOSTNAME_PROCESS

```
%1: processing client's Hostname option
```

Logged at debug log level 50. This debug message is issued when the server starts processing the Hostname option sent in the client's query. The argument includes the client and transaction identification information.

8.23 DHCP4_CLIENT_NAME_PROC_FAIL

```
%1: failed to process the fqdn or hostname sent by a client: %2
```

Logged at debug log level 55. This debug message is issued when the DHCP server was unable to process the FQDN or Hostname option sent by a client. This is likely because the client's name was malformed or due to internal server error. The first argument contains the client and transaction identification information. The second argument holds the detailed description of the error.

8.24 DHCP4_CONFIG_COMPLETE

```
DHCPv4 server has completed configuration: %1
```

This is an informational message announcing the successful processing of a new configuration. It is output during server startup, and when an updated configuration is committed by the administrator. Additional information may be provided.

8.25 DHCP4_CONFIG_LOAD_FAIL

```
configuration error using file: %1, reason: %2
```

This error message indicates that the DHCPv4 configuration has failed. If this is an initial configuration (during server's startup) the server will fail to start. If this is a dynamic reconfiguration attempt the server will continue to use an old configuration.

8.26 DHCP4_CONFIG_PACKET_QUEUE

```
DHCPv4 packet queue info after configuration: %1
```

This informational message is emitted during DHCPv4 server configuration, immediately after configuring the DHCPv4 packet queue. The information shown depends upon the packet queue type selected.

8.27 DHCP4_CONFIG_RECEIVED

```
received configuration %1
```

Logged at debug log level 10. A debug message listing the configuration received by the DHCPv4 server. The source of that configuration depends on used configuration backend.

8.28 DHCP4_CONFIG_START

```
DHCPv4 server is processing the following configuration: %1
```

Logged at debug log level 10. This is a debug message that is issued every time the server receives a configuration. That happens at start up and also when a server configuration change is committed by the administrator.

8.29 DHCP4_CONFIG_SYNTAX_WARNING

```
configuration syntax warning: %1
```

This warning message indicates that the DHCPv4 configuration had a minor syntax error. The error was displayed and the configuration parsing resumed.

8.30 DHCP4_CONFIG_UNRECOVERABLE_ERROR

```
DHCPv4 server new configuration failed with an error which cannot be recovered
```

This fatal error message is issued when a new configuration raised an error which cannot be recovered. A correct configuration must be applied as soon as possible as the server is no longer working. The configuration can be fixed in several ways. If the control channel is open, config-set with a valid configuration can be used. Alternatively, the original config file on disk could be fixed and SIGHUP signal could be sent (or the config-reload command issued). Finally, the server could be restarted completely.

8.31 DHCP4_CONFIG_UNSUPPORTED_OBJECT

```
DHCPv4 server configuration includes an unsupported object: %1
```

This error message is issued when the configuration includes an unsupported object (i.e. a top level element).

8.32 DHCP4_DB_RECONNECT_DISABLED

```
database reconnect is disabled: max-reconnect-tries %1, reconnect-wait-time %2
```

This is an informational message indicating that connectivity to either the lease or host database or both and that automatic reconnect is not enabled.

8.33 DHCP4_DB_RECONNECT_FAILED

```
maximum number of database reconnect attempts: %1, has been exhausted without success
```

This error indicates that the server failed to reconnect to the lease and/or host database(s) after making the maximum configured number of reconnect attempts. This might cause the server to shut down as specified in the configuration. Loss of connectivity is typically a network or database server issue.

8.34 DHCP4_DB_RECONNECT_LOST_CONNECTION

```
database connection lost.
```

This info message indicates that the connection has been lost and the dhcp service might have been disabled, as specified in the configuration, in order to try to recover the connection.

8.35 DHCP4_DB_RECONNECT_NO_DB_CTL

```
unexpected error in database reconnect
```

This is an error message indicating a programmatic error that should not occur. It prohibits the server from attempting to reconnect to its databases if connectivity is lost, and the server exits. This error should be reported.

8.36 DHCP4_DB_RECONNECT_SUCCEEDED

```
database connection recovered.
```

This info message indicates that the connection has been recovered and the dhcp service has been restored.

8.37 DHCP4_DDNS_REQUEST_SEND_FAILED

```
failed sending a request to kea-dhcp-ddns, error: %1,  ncr: %2
```

This error message indicates that DHCP4 server attempted to send a DDNS update request to the DHCP-DDNS server. This is most likely a configuration or networking error.

8.38 DHCP4_DECLINE_FAIL

```
%1: error on decline lease for address %2: %3
```

This error message indicates that the software failed to decline a lease from the lease database due to an error during a database operation. The first argument includes the client and the transaction identification information. The second argument holds the IPv4 address which decline was attempted. The last one contains the reason for failure.

8.39 DHCP4_DECLINE_LEASE

```
Received DHCPDECLINE for addr %1 from client %2. The lease will be unavailable for %3␣
↪seconds.
```

This informational message is printed when a client received an address, but discovered that it is being used by some other device and notified the server by sending a DHCPDECLINE message. The server checked that this address really was leased to the client and marked this address as unusable for a certain amount of time. This message may indicate a misconfiguration in a network, as there is either a buggy client or more likely a device that is using an address that it is not supposed to. The server will fully recover from this situation, but if the underlying problem of a misconfigured or rogue device is not solved, this address may be declined again in the future.

8.40 DHCP4_DECLINE_LEASE_MISMATCH

```
Received DHCPDECLINE for addr %1 from client %2, but the data doesn't match: received␣
↪hwaddr: %3, lease hwaddr: %4, received client-id: %5, lease client-id: %6
```

This informational message means that a client attempted to report his address as declined (i.e. used by unknown entity). The server has information about a lease for that address, but the client's hardware address or client identifier does not match the server's stored information. The client's request will be ignored.

8.41 DHCP4_DECLINE_LEASE_NOT_FOUND

```
Received DHCPDECLINE for addr %1 from client %2, but no such lease found.
```

This warning message indicates that a client reported that his address was detected as a duplicate (i.e. another device in the network is using this address). However, the server does not have a record for this address. This may indicate a client's error or a server's purged database.

8.42 DHCP4_DEFERRED_OPTION_MISSING

```
%1: cannot find deferred option code %2 in the query
```

Logged at debug log level 50. This debug message is printed when a deferred option cannot be found in the query.

8.43 DHCP4_DEFERRED_OPTION_UNPACK_FAIL

```
%1: An error unpacking the deferred option %2: %3
```

Logged at debug log level 50. A debug message issued when deferred unpacking of an option failed, making it to be left unpacked in the packet. The first argument is the option code, the second the error.

8.44 DHCP4_DEVELOPMENT_VERSION

```
This software is a development branch of Kea. It is not recommended for production use.
```

This warning message is displayed when the version is a development (vs stable) one: the second number of the version is odd.

8.45 DHCP4_DHCP4O6_BAD_PACKET

```
%1: received malformed DHCPv4o6 packet: %2
```

Logged at debug log level 50. A malformed DHCPv4o6 packet was received.

8.46 DHCP4_DHCP4O6_HOOK_SUBNET4_SELECT_DROP

```
%1: packet was dropped, because a callout set the next step to 'drop'
```

Logged at debug log level 40. This debug message is printed when a callout installed on the subnet4_select hook point sets the next step to 'drop' value. For this particular hook point, the setting to that value instructs the server to drop the received packet. The argument specifies the client and transaction identification information.

8.47 DHCP4_DHCP4O6_HOOK_SUBNET4_SELECT_SKIP

```
%1: no subnet was selected, because a callout set the next skip flag
```

Logged at debug log level 40. This debug message is printed when a callout installed on the subnet4_select hook point sets the next step to SKIP value. For this particular hook point, the setting of the flag instructs the server not to choose a subnet, an action that severely limits further processing; the server will be only able to offer global options - no addresses will be assigned. The argument specifies the client and transaction identification information.

8.48 DHCP4_DHCP4O6_PACKET_RECEIVED

```
received DHCPv4o6 packet from DHCPv4 server (type %1) for %2 on interface %3
```

Logged at debug log level 40. This debug message is printed when the server is receiving a DHCPv4o6 from the DHCPv4 server over inter-process communication.

8.49 DHCP4_DHCP4O6_PACKET_SEND

```
%1: trying to send packet %2 (type %3) to %4 port %5 on interface %6 encapsulating %7:
↪%8 (type %9)
```

Logged at debug log level 40. The arguments specify the client identification information (HW address and client identifier), DHCPv6 message name and type, source IPv6 address and port, and interface name, DHCPv4 client identification, message name and type.

8.50 DHCP4_DHCP4O6_PACKET_SEND_FAIL

```
%1: failed to send DHCPv4o6 packet: %2
```

This error is output if the IPv4 DHCP server fails to send an DHCPv4o6 message to the IPv6 DHCP server. The reason for the error is included in the message.

8.51 DHCP4_DHCP4O6_RECEIVE_FAIL

```
failed to receive DHCPv4o6: %1
```

Logged at debug log level 50. This debug message indicates the inter-process communication with the DHCPv6 server failed. The reason for the error is included in the message.

8.52 DHCP4_DHCP4O6_RECEIVING

```
receiving DHCPv4o6 packet from DHCPv6 server
```

Logged at debug log level 50. This debug message is printed when the server is receiving a DHCPv4o6 from the DHCPv6 server over inter-process communication socket.

8.53 DHCP4_DHCP4O6_RESPONSE_DATA

```
%1: responding with packet %2 (type %3), packet details: %4
```

Logged at debug log level 55. A debug message including the detailed data about the packet being sent to the DHCPv6 server to be forwarded to the client. The first argument contains the client and the transaction identification information. The second and third argument contains the packet name and type respectively. The fourth argument contains detailed packet information.

8.54 DHCP4_DHCP4O6_SUBNET_DATA

```
%1: the selected subnet details: %2
```

Logged at debug log level 55. This debug message includes the details of the subnet selected for the client. The first argument includes the client and the transaction identification information. The second arguments includes the subnet details.

8.55 DHCP4_DHCP4O6_SUBNET_SELECTED

```
%1: the subnet with ID %2 was selected for client assignments
```

Logged at debug log level 45. This is a debug message noting the selection of a subnet to be used for address and option assignment. Subnet selection is one of the early steps in the processing of incoming client message. The first argument includes the client and the transaction identification information. The second argument holds the selected subnet id.

8.56 DHCP4_DHCP4O6_SUBNET_SELECTION_FAILED

```
%1: failed to select subnet for the client
```

Logged at debug log level 50. This debug message indicates that the server failed to select the subnet for the client which has sent a message to the server. The server will not be able to offer any lease to the client and will drop its message if the received message was DHCPDISCOVER, and will send DHCPNAK if the received message was DHCPREQUEST. The argument includes the client and the transaction identification information.

8.57 DHCP4_DISCOVER

```
%1: server is processing DHCPDISCOVER with hint=%2
```

Logged at debug log level 50. This is a debug message that indicates the processing of a received DHCPDISCOVER message. The first argument contains the client and the transaction identification information. The second argument may hold the hint for the server about the address that the client would like to have allocated. If there is no hint, the argument should provide the text indicating that the hint hasn't been sent.

8.58 DHCP4_DYNAMIC_RECONFIGURATION

```
initiate server reconfiguration using file: %1, after receiving SIGHUP signal or config-
↪reload command
```

This is the info message logged when the DHCPv4 server starts reconfiguration as a result of receiving SIGHUP signal or config-reload command.

8.59 DHCP4_DYNAMIC_RECONFIGURATION_FAIL

```
dynamic server reconfiguration failed with file: %1
```

This is a fatal error message logged when the dynamic reconfiguration of the DHCP server failed.

8.60 DHCP4_DYNAMIC_RECONFIGURATION_SUCCESS

```
dynamic server reconfiguration succeeded with file: %1
```

This is info message logged when the dynamic reconfiguration of the DHCP server succeeded.

8.61 DHCP4_EMPTY_HOSTNAME

```
%1: received empty hostname from the client, skipping processing of this option
```

Logged at debug log level 50. This debug message is issued when the server received an empty Hostname option from a client. Server does not process empty Hostname options and therefore option is skipped. The argument holds the client and transaction identification information.

8.62 DHCP4_FLEX_ID

```
%1: flexible identifier generated for incoming packet: %2
```

Logged at debug log level 40. This debug message is printed when host reservation type is set to flexible identifier and the expression specified in its configuration generated (was evaluated to) an identifier for incoming packet. This debug message is mainly intended as a debugging assistance for flexible identifier.

8.63 DHCP4_GENERATE_FQDN

```
%1: client did not send a FQDN or hostname; FQDN will be generated for the client
```

Logged at debug log level 55. This debug message is issued when the server did not receive a Hostname option from the client and hostname generation is enabled. This provides a means to create DNS entries for unsophisticated clients.

8.64 DHCP4_HOOK_BUFFER_RCVD_DROP

```
received buffer from %1 to %2 over interface %3 was dropped because a callout set the␣
↪drop flag
```

Logged at debug log level 15. This debug message is printed when a callout installed on buffer4_receive hook point set the drop flag. For this particular hook point, the setting of the flag by a callout instructs the server to drop the packet. The arguments specify the source and destination IPv4 address as well as the name of the interface over which the buffer has been received.

8.65 DHCP4_HOOK_BUFFER_RCVD_SKIP

```
received buffer from %1 to %2 over interface %3 is not parsed because a callout set the␣
↪next step to SKIP.
```

Logged at debug log level 50. This debug message is printed when a callout installed on buffer4_receive hook point set the next step to SKIP. For this particular hook point, this value set by a callout instructs the server to not parse the buffer because it was already parsed by the hook. The arguments specify the source and destination IPv4 address as well as the name of the interface over which the buffer has been received.

8.66 DHCP4_HOOK_BUFFER_SEND_SKIP

```
%1: prepared response is dropped because a callout set the next step to SKIP.
```

Logged at debug log level 40. This debug message is printed when a callout installed on buffer4_send hook point set the next step to SKIP. For this particular hook point, the SKIP value set by a callout instructs the server to drop the packet. Server completed all the processing (e.g. may have assigned, updated or released leases), but the response will not be send to the client.

8.67 DHCP4_HOOK_DDNS_UPDATE

```
A hook has updated the DDNS parameters: hostname %1=>%2, forward update %3=>%4, reverse␣
↪update %5=>%6
```

Logged at debug log level 15. This message indicates that there was a hook called on ddns4_update hook point and that hook updated the DDNS update parameters: hostname, or whether to conduct forward (A record) or reverse (PTR record) DDNS updates.

8.68 DHCP4_HOOK_DECLINE_SKIP

```
Decline4 hook callouts set status to DROP, ignoring packet.
```

Logged at debug log level 15. This message indicates that the server received DHCPDECLINE message, it was verified to be correct and matching server's lease information. The server called hooks for decline4 hook point and one of the callouts set next step status to DROP. The server will now abort processing of the packet as if it was never received. The lease will continue to be assigned to this client.

8.69 DHCP4_HOOK_LEASE4_OFFER_ARGUMENT_MISSING

```
hook callouts did not set an argument as expected %1 for %2
```

This error message is printed when none of the callouts installed on the lease4_offer hook point set an expected argument in the callout status. This is a programming error in the installed hook libraries. Details of the argument and the query in process at the time are provided log arguments.

8.70 DHCP4_HOOK_LEASE4_OFFER_DROP

```
%1: packet is dropped, because a callout set the next step to DROP
```

This debug message is printed when a callout installed on the lease4_offer hook point sets the next step to DROP.

8.71 DHCP4_HOOK_LEASE4_OFFER_PARK

```
%1: packet is parked, because a callout set the next step to PARK
```

This debug message is printed when a callout installed on the lease4_offer hook point sets the next step to PARK.

8.72 DHCP4_HOOK_LEASE4_OFFER_PARKING_LOT_FULL

```
The parked-packet-limit %1, has been reached, dropping query: %2
```

This debug message occurs when the parking lot used to hold client queries while the hook library work for them completes has reached or exceeded the limit set by the parked-packet-limit global parameter. This can occur when kea-dhcp4 is using hook libraries (e.g. ping-check) that implement the "lease4_offer" callout and client queries are arriving faster than those callouts can fulfill them.

8.73 DHCP4_HOOK_LEASE4_RELEASE_SKIP

```
%1: lease was not released because a callout set the next step to SKIP
```

Logged at debug log level 15. This debug message is printed when a callout installed on lease4_release hook point set the next step status to SKIP. For this particular hook point, the value set by a callout instructs the server to not release a lease.

8.74 DHCP4_HOOK_LEASES4_COMMITTED_DROP

```
%1: packet is dropped, because a callout set the next step to DROP
```

This debug message is printed when a callout installed on the leases4_committed hook point sets the next step to DROP.

8.75 DHCP4_HOOK_LEASES4_COMMITTED_PARK

```
%1: packet is parked, because a callout set the next step to PARK
```

This debug message is printed when a callout installed on the leases4_committed hook point sets the next step to PARK.

8.76 DHCP4_HOOK_LEASES4_COMMITTED_PARKING_LOT_FULL

```
The parked-packet-limit %1, has been reached, dropping query: %2
```

This debug message occurs when the parking lot used to hold client queries while the hook library work for them completes has reached or exceeded the limit set by the parked-packet-limit global parameter. This can occur when kea-dhcp4 is using hook libraries (e.g. HA) that implement the "leases4-committed" callout and client queries are arriving faster than those callouts can fulfill them.

8.77 DHCP4_HOOK_PACKET_RCVD_SKIP

```
%1: packet is dropped, because a callout set the next step to SKIP
```

Logged at debug log level 40. This debug message is printed when a callout installed on the pkt4_receive hook point sets the next step to SKIP. For this particular hook point, the value setting of the flag instructs the server to drop the packet.

8.78 DHCP4_HOOK_PACKET_SEND_DROP

```
%1: prepared DHCPv4 response was not sent because a callout set the next ste to DROP
```

Logged at debug log level 15. This debug message is printed when a callout installed on the pkt4_send hook point set the next step to DROP. For this particular hook point, the setting of the value by a callout instructs the server to drop the packet. This effectively means that the client will not get any response, even though the server processed client's request and acted on it (e.g. possibly allocated a lease). The argument specifies the client and transaction identification information.

8.79 DHCP4_HOOK_PACKET_SEND_SKIP

```
%1: prepared response is not sent, because a callout set the next stp to SKIP
```

Logged at debug log level 40. This debug message is printed when a callout installed on the pkt4_send hook point sets the next step to SKIP. For this particular hook point, this setting instructs the server to drop the packet. This means that the client will not get any response, even though the server processed client's request and acted on it (e.g. possibly allocated a lease).

8.80 DHCP4_HOOK_SUBNET4_SELECT_4O6_PARKING_LOT_FULL

```
The parked-packet-limit %1, has been reached, dropping query: %2
```

Logged at debug log level 15. This debug message occurs when the parking lot used to hold client queries while the hook library work for them completes has reached or exceeded the limit set by the parked-packet-limit global parameter. This can occur when kea-dhcp4 is using hook libraries (e.g. radius) that implement the "subnet4_select" callout and DHCP4O6 client queries are arriving faster than those callouts can fulfill them.

8.81 DHCP4_HOOK_SUBNET4_SELECT_DROP

```
%1: packet was dropped, because a callout set the next step to 'drop'
```

Logged at debug log level 40. This debug message is printed when a callout installed on the subnet4_select hook point sets the next step to 'drop' value. For this particular hook point, the setting to that value instructs the server to drop the received packet. The argument specifies the client and transaction identification information.

8.82 DHCP4_HOOK_SUBNET4_SELECT_PARK

```
%1: packet was parked
```

Logged at debug log level 40. This debug message is printed when a callout installed on the subnet4_select hook point set the park flag. The argument holds the client and transaction identification information.

8.83 DHCP4_HOOK_SUBNET4_SELECT_PARKING_LOT_FULL

```
The parked-packet-limit %1, has been reached, dropping query: %2
```

Logged at debug log level 15. This debug message occurs when the parking lot used to hold client queries while the hook library work for them completes has reached or exceeded the limit set by the parked-packet-limit global parameter. This can occur when kea-dhcp4 is using hook libraries (e.g. radius) that implement the "subnet4_select" callout and client queries are arriving faster than those callouts can fulfill them.

8.84 DHCP4_HOOK_SUBNET4_SELECT_SKIP

```
%1: no subnet was selected, because a callout set the next skip flag
```

Logged at debug log level 40. This debug message is printed when a callout installed on the subnet4_select hook point sets the next step to SKIP value. For this particular hook point, the setting of the flag instructs the server not to choose a subnet, an action that severely limits further processing; the server will be only able to offer global options - no addresses will be assigned. The argument specifies the client and transaction identification information.

8.85 DHCP4_HOOK_SUBNET6_SELECT_PARKING_LOT_FULL

```
The parked-packet-limit %1, has been reached, dropping query: %2
```

Logged at debug log level 15. This debug message occurs when the parking lot used to hold client queries while the hook library work for them completes has reached or exceeded the limit set by the parked-packet-limit global parameter. This can occur when kea-dhcp4 is using hook libraries (e.g. radius) that implement the "subnet6_select" callout and client queries are arriving faster than those callouts can fulfill them.

8.86 DHCP4_INFORM_DIRECT_REPLY

```
%1: DHCPACK in reply to the DHCPINFORM will be sent directly to %2 over %3
```

Logged at debug log level 50. This debug message is issued when the DHCPACK will be sent directly to the client, rather than via a relay. The first argument contains the client and transaction identification information. The second argument contains the client's IPv4 address to which the response will be sent. The third argument contains the local interface name.

8.87 DHCP4_INIT_FAIL

```
failed to initialize Kea server: %1
```

The server has failed to initialize. This may be because the configuration was not successful, or it encountered any other critical error on startup. Attached error message provides more details about the issue.

8.88 DHCP4_INIT_REBOOT

```
%1: client is in INIT-REBOOT state and requests address %2
```

This informational message is issued when the client is in the INIT-REBOOT state and is requesting an IPv4 address it is using to be allocated for it. The first argument includes the client and transaction identification information. The second argument specifies the requested IPv4 address.

8.89 DHCP4_LEASE_ALLOC

```
%1: lease %2 has been allocated for %3 seconds
```

This informational message indicates that the server successfully granted a lease in response to client's DHCPREQUEST message. The lease information will be sent to the client in the DHCPACK message. The first argument contains the client and the transaction identification information. The second argument contains the allocated IPv4 address. The third argument is the validity lifetime.

8.90 DHCP4_LEASE_OFFER

```
%1: lease %2 will be offered
```

This informational message indicates that the server has found the lease to be offered to the client. It is up to the client to choose one server out of those which offered leases and continue allocation with that server. The first argument specifies the client and the transaction identification information. The second argument specifies the IPv4 address to be offered.

8.91 DHCP4_LEASE_REUSE

```
%1: lease %2 has been reused for %3 seconds
```

This informational message indicates that the server successfully reused a lease in response to client's message. The lease information will be sent to the client in the DHCPACK message. The first argument contains the client and the transaction identification information. The second argument contains the allocated IPv4 address. The third argument is the validity lifetime.

8.92 DHCP4_MULTI_THREADING_INFO

```
enabled: %1, number of threads: %2, queue size: %3
```

This is a message listing some information about the multi-threading parameters with which the server is running.

8.93 DHCP4_NCR_CREATION_FAILED

```
%1: failed to generate name change requests for DNS: %2
```

This message indicates that server was unable to generate NameChangeRequests which should be sent to the kea-dhcp_ddns module to create new DNS records for the lease being acquired or to update existing records for the renewed lease. The first argument contains the client and transaction identification information. The second argument includes the reason for the failure.

8.94 DHCP4_NOT_RUNNING

```
DHCPv4 server is not running
```

A warning message is issued when an attempt is made to shut down the DHCPv4 server but it is not running.

8.95 DHCP4_NO_LEASE_INIT_REBOOT

```
%1: no lease for address %2 requested by INIT-REBOOT client
```

Logged at debug log level 50. This debug message is issued when the client being in the INIT-REBOOT state requested an IPv4 address but this client is unknown. The server will not respond. The first argument includes the client and the transaction id identification information. The second argument includes the IPv4 address requested by the client.

8.96 DHCP4_OPEN_SOCKET

```
opening service sockets on port %1
```

Logged at debug log level 0. A debug message issued during startup, this indicates that the DHCPv4 server is about to open sockets on the specified port.

8.97 DHCP4_OPEN_SOCKETS_FAILED

```
maximum number of open service sockets attempts: %1, has been exhausted without success
```

This error indicates that the server failed to bind service sockets after making the maximum configured number of reconnect attempts. This might cause the server to shut down as specified in the configuration.

8.98 DHCP4_OPEN_SOCKETS_NO_RECONNECT_CTL

```
unexpected error in bind service sockets.
```

This is an error message indicating a programmatic error that should not occur. It prohibits the server from attempting to bind to its service sockets if they are unavailable, and the server exits. This error should be reported.

8.99 DHCP4_PACKET_DROP_0001

```
%1: failed to parse packet from %2 to %3, received over interface %4, reason: %5, %6
```

Logged at debug log level 15. The DHCPv4 server has received a packet that it is unable to interpret. The reason why the packet is invalid is included in the message.

8.100 DHCP4_PACKET_DROP_0002

```
%1, from interface %2: no suitable subnet configured for a direct client
```

Logged at debug log level 15. This info message is logged when received a message from a directly connected client but there is no suitable subnet configured for the interface on which this message has been received. The IPv4 address assigned on this interface must belong to one of the configured subnets. Otherwise received message is dropped.

8.101 DHCP4_PACKET_DROP_0003

```
%1, from interface %2: it contains a foreign server identifier
```

Logged at debug log level 15. This debug message is issued when received DHCPv4 message is dropped because it is addressed to a different server, i.e. a server identifier held by this message doesn't match the identifier used by our server. The arguments of this message hold the name of the transaction id and interface on which the message has been received.

8.102 DHCP4_PACKET_DROP_0004

```
%1, from interface %2: missing msg-type option
```

Logged at debug log level 15. This is a debug message informing that incoming DHCPv4 packet did not have mandatory DHCP message type option and thus was dropped. The arguments specify the client and transaction identification information, as well as the interface on which the message has been received.

8.103 DHCP4_PACKET_DROP_0005

```
%1: unrecognized type %2 in option 53
```

Logged at debug log level 15. This debug message indicates that the message type carried in DHCPv4 option 53 is unrecognized by the server. The valid message types are listed on the IANA website: http://www.iana.org/assignments/bootp-dhcp-parameters/bootp-dhcp-parameters.xhtml#message-type-53. The message will not be processed by the server. The arguments specify the client and transaction identification information, as well as the received message type.

8.104 DHCP4_PACKET_DROP_0006

```
%1: unsupported DHCPv4 message type %2
```

Logged at debug log level 15. This debug message indicates that the message type carried in DHCPv4 option 53 is valid but the message will not be processed by the server. This includes messages being normally sent by the server to the client, such as DHCPOFFER, DHCPACK, DHCPNAK etc. The first argument specifies the client and transaction identification information. The second argument specifies the message type.

8.105 DHCP4_PACKET_DROP_0007

```
%1: failed to process packet: %2
```

Logged at debug log level 15. This is a general catch-all message indicating that the processing of a received packet failed. The reason is given in the message. The server will not send a response but will instead ignore the packet. The first argument contains the client and transaction identification information. The second argument includes the details of the error.

8.106 DHCP4_PACKET_DROP_0008

```
%1: DHCP service is globally disabled
```

Logged at debug log level 15. This debug message is issued when a packet is dropped because the DHCP service has been temporarily disabled. This affects all received DHCP packets. The service may be enabled by the "dhcp-enable" control command or automatically after a specified amount of time since receiving "dhcp-disable" command.

8.107 DHCP4_PACKET_DROP_0009

```
%1: Option 53 missing (no DHCP message type), is this a BOOTP packet?
```

Logged at debug log level 15. This debug message is issued when a packet is dropped because it did contain option 53 and thus has no DHCP message type. The most likely explanation is that it was BOOTP packet.

8.108 DHCP4_PACKET_DROP_0010

```
dropped as member of the special class 'DROP': %1, %2
```

Logged at debug log level 15. This debug message is emitted when an incoming packet was classified into the special class 'DROP' and dropped. The packet details are displayed.

8.109 DHCP4_PACKET_DROP_0011

```
dropped as sent by the same client than a packet being processed by another thread:␣
↪dropped %1, %2 by thread %3 as duplicate of %4, %5 processed by %6
```

Logged at debug log level 15. Currently multi-threading processing avoids races between packets sent by a client using the same client id option by dropping new packets until processing is finished. Packet details and thread identifiers are included for both packets in this warning message.

8.110 DHCP4_PACKET_DROP_0012

```
dropped as sent by the same client than a packet being processed by another thread:␣
↪dropped %1, %2 by thread %3 as duplicate of %4, %5 processed by %6
```

Logged at debug log level 15. Currently multi-threading processing avoids races between packets sent by a client using the same hardware address by dropping new packets until processing is finished. Packet details and thread identifiers are included for both packets in this warning message.

8.111 DHCP4_PACKET_DROP_0013

```
dropped as member of the special class 'DROP' after host reservation lookup: %1, %2
```

Logged at debug log level 15. This debug message is emitted when an incoming packet was classified after host reservation lookup into the special class 'DROP' and dropped. The packet details are displayed.

8.112 DHCP4_PACKET_DROP_0014

```
dropped as member of the special class 'DROP' after early global host reservations␣
↪lookup: %1, %2
```

Logged at debug log level 15. This debug message is emitted when an incoming packet was classified after early global host reservations lookup into the special class 'DROP' and dropped. The packet details are displayed.

8.113 DHCP4_PACKET_NAK_0001

```
%1: failed to select a subnet for incoming packet, src %2, type %3
```

This error message is output when a packet was received from a subnet for which the DHCPv4 server has not been configured. The most probable cause is a misconfiguration of the server. The first argument contains the client and transaction identification information. The second argument contains the source IPv4 address of the packet. The third argument contains the name of the received packet.

8.114 DHCP4_PACKET_NAK_0002

```
%1: invalid address %2 requested by INIT-REBOOT
```

Logged at debug log level 50. This debug message is issued when the client being in the INIT-REBOOT state requested an IPv4 address which is not assigned to him. The server will respond to this client with DHCPNAK. The first argument contains the client and the transaction identification information. The second arguments holds the IPv4 address requested by the client.

8.115 DHCP4_PACKET_NAK_0003

```
%1: failed to advertise a lease, client sent ciaddr %2, requested-ip-address %3
```

Logged at debug log level 50. This message indicates that the server has failed to offer a lease to the specified client after receiving a DISCOVER message from it. There are many possible reasons for such a failure. The first argument contains the client and the transaction identification information. The second argument contains the IPv4 address in the ciaddr field. The third argument contains the IPv4 address in the requested-ip-address option (if present).

8.116 DHCP4_PACKET_NAK_0004

```
%1: failed to grant a lease, client sent ciaddr %2, requested-ip-address %3
```

Logged at debug log level 50. This message indicates that the server failed to grant a lease to the specified client after receiving a REQUEST message from it. There are many possible reasons for such a failure. Additional messages will indicate the reason. The first argument contains the client and the transaction identification information. The second argument contains the IPv4 address in the ciaddr field. The third argument contains the IPv4 address in the requested-ip-address option (if present).

8.117 DHCP4_PACKET_OPTIONS_SKIPPED

```
%1: An error unpacking an option, caused subsequent options to be skipped: %2
```

Logged at debug log level 50. A debug message issued when an option failed to unpack correctly, making it impossible to unpack the remaining options in the packet. The server will server will still attempt to service the packet.

8.118 DHCP4_PACKET_PACK

```
%1: preparing on-wire format of the packet to be sent
```

Logged at debug log level 50. This debug message is issued when the server starts preparing the on-wire format of the packet to be sent back to the client. The argument specifies the client and the transaction identification information.

8.119 DHCP4_PACKET_PACK_FAIL

```
%1: preparing on-wire-format of the packet to be sent failed %2
```

This error message is issued when preparing an on-wire format of the packet has failed. The first argument identifies the client and the DHCP transaction. The second argument includes the error string.

8.120 DHCP4_PACKET_PROCESS_EXCEPTION

```
%1: exception occurred during packet processing
```

This error message indicates that a non-standard exception was raised during packet processing that was not caught by other, more specific exception handlers. This packet will be dropped and the server will continue operation.

8.121 DHCP4_PACKET_PROCESS_EXCEPTION_MAIN

```
exception occurred during packet processing
```

This error message indicates that a non-standard exception was raised during packet processing that was not caught by other, more specific exception handlers. This packet will be dropped and the server will continue operation. This error message may appear in main server processing loop.

8.122 DHCP4_PACKET_PROCESS_STD_EXCEPTION

```
%1: exception occurred during packet processing: %2
```

This error message indicates that a standard exception was raised during packet processing that was not caught by other, more specific exception handlers. This packet will be dropped and the server will continue operation.

8.123 DHCP4_PACKET_PROCESS_STD_EXCEPTION_MAIN

```
exception occurred during packet processing: %1
```

This error message indicates that a standard exception was raised during packet processing that was not caught by other, more specific exception handlers. This packet will be dropped and the server will continue operation. This error message may appear in main server processing loop.

8.124 DHCP4_PACKET_QUEUE_FULL

```
multi-threading packet queue is full
```

Logged at debug log level 40. A debug message noting that the multi-threading packet queue is full so the oldest packet of the queue was dropped to make room for the received one.

8.125 DHCP4_PACKET_RECEIVED

```
%1: %2 (type %3) received from %4 to %5 on interface %6
```

An INFO message noting that the server has received the specified type of packet on the specified interface. The first argument specifies the client and transaction identification information. The second and third argument specify the name of the DHCPv4 message and its numeric type respectively. The remaining arguments specify the source IPv4 address, destination IPv4 address and the name of the interface on which the message has been received.

8.126 DHCP4_PACKET_SEND

```
%1: trying to send packet %2 (type %3) from %4:%5 to %6:%7 on interface %8
```

An INFO message noting that the server is attempting to send the specified type of packet. The arguments specify the client identification information (HW address and client identifier), DHCP message name and type, source IPv4 address and port, destination IPv4 address and port and the interface name. This debug message is issued when the server is trying to send the response to the client. When the server is using an UDP socket to send the packet there are cases when this operation may be unsuccessful and no error message will be displayed. One such situation occurs when the server is unicasting the response to the 'ciaddr' of a DHCPINFORM message. This often requires broadcasting an ARP message to obtain the link layer address of the unicast destination. If broadcast ARP messages are blocked in the network, according to the firewall policy, the ARP message will not cause a response. Consequently, the response to the DHCPINFORM will not be sent. Since the ARP communication is under the OS control, Kea is not notified about the drop of the packet which it is trying to send and it has no means to display an error message.

8.127 DHCP4_PACKET_SEND_FAIL

```
%1: failed to send DHCPv4 packet: %2
```

This error is output if the DHCPv4 server fails to send an assembled DHCP message to a client. The first argument includes the client and the transaction identification information. The second argument includes the reason for failure.

8.128 DHCP4_PARSER_COMMIT_EXCEPTION

```
parser failed to commit changes
```

On receipt of message containing details to a change of the DHCPv4 server configuration, a set of parsers were successfully created, but one of them failed to commit its changes due to a low-level system exception being raised. Additional messages may be output indicating the reason.

8.129 DHCP4_PARSER_COMMIT_FAIL

```
parser failed to commit changes: %1
```

On receipt of message containing details to a change of the DHCPv4 server configuration, a set of parsers were successfully created, but one of them failed to commit its changes. The reason for the failure is given in the message.

8.130 DHCP4_PARSER_EXCEPTION

```
failed to create or run parser for configuration element %1
```

On receipt of message containing details to a change of its configuration, the DHCPv4 server failed to create a parser to decode the contents of the named configuration element, or the creation succeeded but the parsing actions and committal of changes failed. The message has been output in response to a non-Kea exception being raised. Additional messages may give further information.

8.131 DHCP4_PARSER_FAIL

```
failed to create or run parser for configuration element %1: %2
```

On receipt of message containing details to a change of its configuration, the DHCPv4 server failed to create a parser to decode the contents of the named configuration element, or the creation succeeded but the parsing actions and committal of changes failed. The reason for the failure is given in the message.

8.132 DHCP4_POST_ALLOCATION_NAME_UPDATE_FAIL

```
%1: failed to update hostname %2 in a lease after address allocation: %3
```

This message indicates the failure when trying to update the lease and/or options in the server's response with the hostname generated by the server or reserved for the client belonging to a shared network. The latter is the case when the server dynamically switches to another subnet (than initially selected for allocation) from the same shared network.

8.133 DHCP4_QUERY_DATA

```
%1, packet details: %2
```

Logged at debug log level 55. A debug message printing the details of the received packet. The first argument includes the client and the transaction identification information.

8.134 DHCP4_QUERY_LABEL

```
received query: %1
```

This information message indicates that a query was received. It displays the client and the transaction identification information.

8.135 DHCP4_RECLAIM_EXPIRED_LEASES_FAIL

```
failed to reclaim expired leases: %1
```

This error message indicates that the reclaim expired leases operation failed and provides the cause of failure.

8.136 DHCP4_RECOVERED_STASHED_RELAY_AGENT_INFO

```
recovered for query %1 relay agent option from lease %2: %3
```

Logged at debug log level 55. This debug message indicates that agent options were stashed in the lease for the client address of the request and were recovered. The first argument includes the request information, the second the client address and the last argument the content of the dhcp-agent-options option.

8.137 DHCP4_RELEASE

```
%1: address %2 was released properly.
```

Logged at debug log level 50. This informational message indicates that an address was released properly. It is a normal operation during client shutdown. The first argument includes the client and transaction identification information. The second argument includes the released IPv4 address.

8.138 DHCP4_RELEASE_DELETED

```
%1: address %2 was deleted on release.
```

This informational message indicates that an address was deleted on release. It is a normal operation during client shutdown. The first argument includes the client and transaction identification information. The second argument includes the released IPv4 address.

8.139 DHCP4_RELEASE_EXCEPTION

```
%1: while trying to release address %2 an exception occurred: %3
```

This message is output when an error was encountered during an attempt to process a DHCPRELEASE message. The error will not affect the client, which does not expect any response from the server for DHCPRELEASE messages. Depending on the nature of problem, it may affect future server operation. The first argument includes the client and the transaction identification information. The second argument includes the IPv4 address which release was attempted. The last argument includes the detailed error description.

8.140 DHCP4_RELEASE_EXPIRED

```
%1: address %2 expired on release.
```

This informational message indicates that an address expired on release. It is a normal operation during client shutdown. The first argument includes the client and transaction identification information. The second argument includes the released IPv4 address.

8.141 DHCP4_RELEASE_FAIL

```
%1: failed to remove lease for address %2
```

Logged at debug log level 50. This error message indicates that the software failed to remove a lease from the lease database. It is probably due to an error during a database operation: resolution will most likely require administrator intervention (e.g. check if DHCP process has sufficient privileges to update the database). It may also be triggered if a lease was manually removed from the database during RELEASE message processing. The first argument includes the client and the transaction identification information. The second argument holds the IPv4 address which release was attempted.

8.142 DHCP4_RELEASE_FAIL_NO_LEASE

```
%1: client is trying to release non-existing lease %2
```

Logged at debug log level 50. This debug message is printed when client attempts to release a lease, but no such lease is known to the server. The first argument contains the client and transaction identification information. The second argument contains the IPv4 address which the client is trying to release.

8.143 DHCP4_RELEASE_FAIL_WRONG_CLIENT

```
%1: client is trying to release the lease %2 which belongs to a different client
```

Logged at debug log level 50. This debug message is issued when a client is trying to release the lease for the address which is currently used by another client, i.e. the 'client identifier' or 'chaddr' doesn't match between the client and the lease. The first argument includes the client and the transaction identification information. The second argument specifies the leased address.

8.144 DHCP4_REQUEST

```
%1: server is processing DHCPREQUEST with hint=%2
```

Logged at debug log level 50. This is a debug message that indicates the processing of a received DHCPREQUEST message. The first argument contains the client and the transaction identification information. The second argument may hold the hint for the server about the address that the client would like to have allocated. If there is no hint, the argument should provide the text indicating that the hint hasn't been sent.

8.145 DHCP4_RESERVATIONS_LOOKUP_FIRST_ENABLED

```
Multi-threading is enabled and host reservations lookup is always performed first.
```

This is a message informing that host reservations lookup is performed before lease lookup when multi-threading is enabled overwriting configured value.

8.146 DHCP4_RESERVED_HOSTNAME_ASSIGNED

```
%1: server assigned reserved hostname %2
```

Logged at debug log level 55. This debug message is issued when the server found a hostname reservation for a client and uses this reservation in a hostname option sent back to this client. The reserved hostname is qualified with a value of 'ddns-qualifying-suffix' parameter, if this parameter is specified.

8.147 DHCP4_RESPONSE_DATA

```
%1: responding with packet %2 (type %3), packet details: %4
```

Logged at debug log level 55. A debug message including the detailed data about the packet being sent to the client. The first argument contains the client and the transaction identification information. The second and third argument contains the packet name and type respectively. The fourth argument contains detailed packet information.

8.148 DHCP4_RESPONSE_FQDN_DATA

```
%1: including FQDN option in the server's response: %2
```

Logged at debug log level 55. This debug message is issued when the server is adding the Client FQDN option in its response to the client. The first argument includes the client and transaction identification information. The second argument includes the details of the FQDN option being included. Note that the name carried in the FQDN option may be modified by the server when the lease is acquired for the client.

8.149 DHCP4_RESPONSE_HOSTNAME_DATA

```
%1: including Hostname option in the server's response: %2
```

Logged at debug log level 55. This debug message is issued when the server is adding the Hostname option in its response to the client. The first argument includes the client and transaction identification information. The second argument includes the details of the FQDN option being included. Note that the name carried in the Hostname option may be modified by the server when the lease is acquired for the client.

8.150 DHCP4_RESPONSE_HOSTNAME_GENERATE

```
%1: server has generated hostname %2 for the client
```

Logged at debug log level 50. This debug message includes the auto-generated hostname which will be used for the client which message is processed. Hostnames may need to be generated when required by the server's configuration or when the client hasn't supplied its hostname. The first argument includes the client and the transaction identification information. The second argument holds the generated hostname.

8.151 DHCP4_SERVER_FAILED

```
server failed: %1
```

The DHCPv4 server has encountered a fatal error and is terminating. The reason for the failure is included in the message.

8.152 DHCP4_SERVER_INITIATED_DECLINE

```
%1: Lease for addr %2 has been found to be already in use. The lease will be unavailable␣
↪for %3 seconds.
```

This informational message is printed when the server has detected via ICMP ECHO (i.e. ping check) or other means that a lease which should be free to offer is actually in use. This message may indicate a misconfiguration in a network or more likely a device that is using an address that it is not supposed to use. The server will fully recover from this situation, but if the underlying problem of a misconfigured or rogue device is not solved, this address may be declined again in the future.

8.153 DHCP4_SERVER_INITIATED_DECLINE_ADD_FAILED

```
%1: error adding a lease for address %2
```

This error message indicates that the server failed to add a DECLINED lease to the lease store. The first argument includes the client and the transaction identification information. The second argument holds the IPv4 address for which the decline was attempted.

8.154 DHCP4_SERVER_INITIATED_DECLINE_RESOURCE_BUSY

```
%1: error declining a lease for address %2
```

This error message indicates that while one server thread was attempting to mark a lease as DECLINED, it was already locked by another thread. The first argument includes the client and the transaction identification information. The second argument holds the IPv4 address for which the decline was attempted.

8.155 DHCP4_SERVER_INITIATED_DECLINE_UPDATE_FAILED

```
%1: error updating lease for address %2
```

This error message indicates that the server failed to update a lease in the lease store to the DECLINED state. The first argument includes the client and the transaction identification information. The second argument holds the IPv4 address for which the decline was attempted.

8.156 DHCP4_SHUTDOWN

```
server shutdown
```

Logged at debug log level 40. The DHCPv4 server has terminated normally.

8.157 DHCP4_SHUTDOWN_REQUEST

```
shutdown of server requested
```

Logged at debug log level 40. This debug message indicates that a shutdown of the DHCPv4 server has been requested via a call to the 'shutdown' method of the core Dhcpv4Srv object.

8.158 DHCP4_SRV_CONSTRUCT_ERROR

```
error creating Dhcpv4Srv object, reason: %1
```

This error message indicates that during startup, the construction of a core component within the DHCPv4 server (the Dhcpv4 server object) has failed. As a result, the server will exit. The reason for the failure is given within the message.

8.159 DHCP4_SRV_D2STOP_ERROR

```
error stopping IO with DHCP_DDNS during shutdown: %1
```

This error message indicates that during shutdown, an error occurred while stopping IO between the DHCPv4 server and the DHCP_DDNS server. This is probably due to a programmatic error is not likely to impact either server upon restart. The reason for the failure is given within the message.

8.160 DHCP4_SRV_DHCP4O6_ERROR

```
error stopping IO with DHCPv4o6 during shutdown: %1
```

This error message indicates that during shutdown, an error occurred while stopping IO between the DHCPv4 server and the DHCPv4o6 server. This is probably due to a programmatic error is not likely to impact either server upon restart. The reason for the failure is given within the message.

8.161 DHCP4_SRV_UNLOAD_LIBRARIES_ERROR

```
error unloading hooks libraries during shutdown: %1
```

This error message indicates that during shutdown, unloading hooks libraries failed to close them. If the list of libraries is empty it is a programmatic error in the server code. If it is not empty it could be a programmatic error in one of the hooks libraries which could lead to a crash during finalization.

8.162 DHCP4_STARTED

```
Kea DHCPv4 server version %1 started
```

This informational message indicates that the DHCPv4 server has processed all configuration information and is ready to process DHCPv4 packets. The version is also printed.

8.163 DHCP4_STARTING

```
Kea DHCPv4 server version %1 (%2) starting
```

This informational message indicates that the DHCPv4 server has processed any command-line switches and is starting. The version is also printed.

8.164 DHCP4_START_INFO

```
pid: %1, server port: %2, client port: %3, verbose: %4
```

Logged at debug log level 0. This is a debug message issued during the DHCPv4 server startup. It lists some information about the parameters with which the server is running.

8.165 DHCP4_SUBNET_DATA

```
%1: the selected subnet details: %2
```

Logged at debug log level 55. This debug message includes the details of the subnet selected for the client. The first argument includes the client and the transaction identification information. The second arguments includes the subnet details.

8.166 DHCP4_SUBNET_DYNAMICALLY_CHANGED

```
%1: changed selected subnet %2 to subnet %3 from shared network %4 for client assignments
```

Logged at debug log level 45. This debug message indicates that the server is using another subnet than initially selected for client assignments. This newly selected subnet belongs to the same shared network as the original subnet. Some reasons why the new subnet was selected include: address pool exhaustion in the original subnet or the fact that the new subnet includes some static reservations for this client.

8.167 DHCP4_SUBNET_SELECTED

```
%1: the subnet with ID %2 was selected for client assignments
```

Logged at debug log level 45. This is a debug message noting the selection of a subnet to be used for address and option assignment. Subnet selection is one of the early steps in the processing of incoming client message. The first argument includes the client and the transaction identification information. The second argument holds the selected subnet id.

8.168 DHCP4_SUBNET_SELECTION_FAILED

```
%1: failed to select subnet for the client
```

Logged at debug log level 50. This debug message indicates that the server failed to select the subnet for the client which has sent a message to the server. The server will not be able to offer any lease to the client and will drop its message if the received message was DHCPDISCOVER, and will send DHCPNAK if the received message was DHCPREQUEST. The argument includes the client and the transaction identification information.

8.169 DHCP4_TESTING_MODE_SEND_TO_SOURCE_ENABLED

```
All packets will be send to source address of an incoming packet - use only for testing
```

This message is printed then KEA_TEST_SEND_RESPONSES_TO_SOURCE environment variable is set. It's causing Kea to send packets to source address of incoming packet. Usable just in testing environment to simulate multiple subnet traffic from single source.

8.170 DHCP4_UNKNOWN_ADDRESS_REQUESTED

```
%1: client requested an unknown address, client sent ciaddr %2, requested-ip-address %3
```

Logged at debug log level 50. This message indicates that the client requested an address that does not belong to any dynamic pools managed by this server. The first argument contains the client and the transaction identification information. The second argument contains the IPv4 address in the ciaddr field. The third argument contains the IPv4 address in the requested-ip-address option (if present).

8.171 DHCP4_V6_ONLY_PREFERRED_MISSING_IN_ACK

```
v6-only-preferred option missing in 0.0.0.0 reply to query: %1
```

An DHCPACK for the 0.0.0.0 address was generated for a client requesting the v6-only-preferred (108) option but the option is not in the response as expected: the erroneous response is dropped, the request query is displayed.

CHAPTER

NINE

DHCP6

9.1 DHCP6_ADDITIONAL_CLASS_EVAL_ERROR

```
%1: Expression '%2' evaluated to %3
```

This error message indicates that a problem was encountered while evaluating the expression of an additional client class. A description of the problem is printed.

9.2 DHCP6_ADDITIONAL_CLASS_EVAL_RESULT

```
%1: Expression '%2' evaluated to %3
```

Logged at debug log level 50. This debug message indicates that the expression of an additional client class has been successfully evaluated. The client class name and the result value of the evaluation are printed.

9.3 DHCP6_ADDITIONAL_CLASS_NO_TEST

```
additional class %1 has no test expression, adding it to client's classes unconditionally
```

Logged at debug log level 40. This debug message informs that a class was listed for additional evaluation but its definition does not include a test expression to evaluate. The class is unconditionally added to the query.

9.4 DHCP6_ADDITIONAL_CLASS_UNDEFINED

```
additional class %1 has no definition
```

Logged at debug log level 40. This debug message informs that a class is listed for additional evaluation but has no definition. The class is ignored.

9.5 DHCP6_ADD_GLOBAL_STATUS_CODE

```
%1: adding Status Code to DHCPv6 packet: %2
```

Logged at debug log level 50. This message is logged when the server is adding the top-level Status Code option. The first argument includes the client and the transaction identification information. The second argument includes the details of the status code.

9.6 DHCP6_ADD_STATUS_CODE_FOR_IA

```
%1: adding Status Code to IA with iaid=%2: %3
```

Logged at debug log level 50. This message is logged when the server is adding the Status Code option to an IA. The first argument includes the client and the transaction identification information. The second argument specifies the IAID. The third argument includes the details of the status code.

9.7 DHCP6_ALREADY_RUNNING

```
%1 already running? %2
```

This is an error message that occurs when the DHCPv6 server encounters a pre-existing PID file which contains the PID of a running process. This most likely indicates an attempt to start a second instance of the server using the same configuration file. It is possible, though unlikely that the PID file is a remnant left behind by a server crash or power failure and the PID it contains refers to a process other than the server. In such an event, it would be necessary to manually remove the PID file. The first argument is the DHCPv6 process name, the second contains the PID and PID file.

9.8 DHCP6_BUFFER_RECEIVED

```
received buffer from %1:%2 to %3:%4 over interface %5
```

Logged at debug log level 40. This debug message is logged when the server has received a packet over the socket. When the message is logged the contents of the received packet hasn't been parsed yet. The only available information is the interface and the source and destination addresses/ports.

9.9 DHCP6_BUFFER_UNPACK

```
parsing buffer received from %1 to %2 over interface %3
```

Logged at debug log level 50. This debug message is issued when the server starts parsing the received buffer holding the DHCPv6 message. The arguments specify the source and destination addresses as well as the interface over which the buffer has been received.

9.10 DHCP6_BUFFER_WAIT_SIGNAL

```
signal received while waiting for next packet
```

Logged at debug log level 50. This debug message is issued when the server was waiting for the packet, but the wait has been interrupted by the signal received by the process. The signal will be handled before the server starts waiting for next packets.

9.11 DHCP6_CB_ON_DEMAND_FETCH_UPDATES_FAIL

```
error on demand attempt to fetch configuration updates from the configuration␣
↪backend(s): %1
```

This error message is issued when the server attempted to fetch configuration updates from the database and this on demand attempt failed. The sole argument which is returned to the config-backend-pull command caller too contains the reason for failure.

9.12 DHCP6_CB_PERIODIC_FETCH_UPDATES_FAIL

```
error on periodic attempt to fetch configuration updates from the configuration␣
↪backend(s): %1
```

This error message is issued when the server attempted to fetch configuration updates from the database and this periodic attempt failed. The server will re-try according to the configured value of the config-fetch-wait-time parameter. The sole argument contains the reason for failure.

9.13 DHCP6_CB_PERIODIC_FETCH_UPDATES_RETRIES_EXHAUSTED

```
maximum number of configuration fetch attempts: 10, has been exhausted without success
```

This error indicates that the server has made a number of unsuccessful periodic attempts to fetch configuration updates from a configuration backend. The server will continue to operate but won't make any further attempts to fetch configuration updates. The administrator must fix the configuration in the database and reload (or restart) the server.

9.14 DHCP6_CLASSES_ASSIGNED

```
%1: client packet has been assigned on %2 message to the following classes: %3
```

Logged at debug log level 40. This debug message informs that incoming packet has been assigned to specified classes. This is a normal behavior and indicates successful operation. The first argument specifies the client and transaction identification information. The second argument specifies the DHCPv6 message type. The third argument includes all classes to which the packet has been assigned.

9.15 DHCP6_CLASSES_ASSIGNED_AFTER_SUBNET_SELECTION

```
%1: client packet has been assigned to the following classes: %2
```

Logged at debug log level 40. This debug message informs that incoming packet has been assigned to specified classes. This is a normal behavior and indicates successful operation. The first argument specifies the client and transaction identification information. The second argument includes all classes to which the packet has been assigned.

9.16 DHCP6_CLASS_ASSIGNED

```
%1: client packet has been assigned to the following class: %2
```

Logged at debug log level 40. This debug message informs that incoming packet has been assigned to specified class. This is a normal behavior and indicates successful operation. The first argument specifies the client and transaction identification information. The second argument includes the new class to which the packet has been assigned.

9.17 DHCP6_CLASS_UNCONFIGURED

```
%1: client packet belongs to an unconfigured class: %2
```

Logged at debug log level 40. This debug message informs that incoming packet belongs to a class which cannot be found in the configuration. Either a hook written before the classification was added to Kea is used, or class naming is inconsistent.

9.18 DHCP6_CONFIG_COMPLETE

```
DHCPv6 server has completed configuration: %1
```

This is an informational message announcing the successful processing of a new configuration. it is output during server startup, and when an updated configuration is committed by the administrator. Additional information may be provided.

9.19 DHCP6_CONFIG_LOAD_FAIL

```
configuration error using file: %1, reason: %2
```

This error message indicates that the DHCPv6 configuration has failed. If this is an initial configuration (during server's startup) the server will fail to start. If this is a dynamic reconfiguration attempt the server will continue to use an old configuration.

9.20 DHCP6_CONFIG_PACKET_QUEUE

```
DHCPv6 packet queue info after configuration: %1
```

This informational message is emitted during DHCPv6 server configuration, immediately after configuring the DHCPv6 packet queue. The information shown depends upon the packet queue type selected.

9.21 DHCP6_CONFIG_RECEIVED

```
received configuration: %1
```

Logged at debug log level 10. A debug message listing the configuration received by the DHCPv6 server. The source of that configuration depends on used configuration backend.

9.22 DHCP6_CONFIG_START

```
DHCPv6 server is processing the following configuration: %1
```

Logged at debug log level 10. This is a debug message that is issued every time the server receives a configuration. That happens start up and also when a server configuration change is committed by the administrator.

9.23 DHCP6_CONFIG_SYNTAX_WARNING

```
configuration syntax warning: %1
```

This warning message indicates that the DHCPv6 configuration had a minor syntax error. The error was displayed and the configuration parsing resumed.

9.24 DHCP6_CONFIG_UNRECOVERABLE_ERROR

```
DHCPv6 server new configuration failed with an error which cannot be recovered
```

This fatal error message is issued when a new configuration raised an error which cannot be recovered. A correct configuration must be applied as soon as possible as the server is no longer working. The configuration can be fixed in several ways. If the control channel is open, config-set with a valid configuration can be used. Alternatively, the original config file on disk could be fixed and SIGHUP signal could be sent (or the config-reload command issued). Finally, the server could be restarted completely.

9.25 DHCP6_CONFIG_UNSUPPORTED_OBJECT

```
DHCPv6 server configuration includes an unsupported object: %1
```

This error message is issued when the configuration includes an unsupported object (i.e. a top level element).

9.26 DHCP6_DB_RECONNECT_DISABLED

```
database reconnect is disabled: max-reconnect-tries %1, reconnect-wait-time %2
```

This is an informational message indicating that connectivity to either the lease or host database or both and that automatic reconnect is not enabled.

9.27 DHCP6_DB_RECONNECT_FAILED

```
maximum number of database reconnect attempts: %1, has been exhausted without success
```

This error indicates that the server failed to reconnect to the lease and/or host database(s) after making the maximum configured number of reconnect attempts. This might cause the server to shut down as specified in the configuration. Loss of connectivity is typically a network or database server issue.

9.28 DHCP6_DB_RECONNECT_LOST_CONNECTION

```
database connection lost.
```

This info message indicates that the connection has been lost and the dhcp service might have been disabled, as specified in the configuration, in order to try to recover the connection.

9.29 DHCP6_DB_RECONNECT_NO_DB_CTL

```
unexpected error in database reconnect
```

This is an error message indicating a programmatic error that should not occur. It prohibits the server from attempting to reconnect to its databases if connectivity is lost, and the server exits. This error should be reported.

9.30 DHCP6_DB_RECONNECT_SUCCEEDED

```
database connection recovered.
```

This info message indicates that the connection has been recovered and the dhcp service has been restored.

9.31 DHCP6_DDNS_CREATE_ADD_NAME_CHANGE_REQUEST

```
%1: created name change request: %2
```

Logged at debug log level 50. This debug message is logged when the new NameChangeRequest has been created to perform the DNS Update, which adds new RRs.

9.32 DHCP6_DDNS_FQDN_GENERATED

```
%1: generated FQDN for the client: %2
```

Logged at debug log level 55. This debug message is logged when the server generated FQDN (name) for the client which message is processed. The names may be generated by the server when required by the server's policy or when the client doesn't provide any specific FQDN in its message to the server. The first argument includes the client and transaction identification information. The second argument includes the generated FQDN.

9.33 DHCP6_DDNS_GENERATED_FQDN_UPDATE_FAIL

```
%1: failed to update the lease using address %2, after generating FQDN for a client,␣
↪reason: %3
```

This message indicates the failure when trying to update the lease and/or options in the server's response with the hostname generated by the server from the acquired address. The first argument includes the client and the transaction identification information. The second argument is a leased address. The third argument includes the reason for the failure.

9.34 DHCP6_DDNS_GENERATE_FQDN

```
%1: client did not send a FQDN option; FQDN will be
```

Logged at debug log level 50. generated for the client. This debug message is issued when the server did not receive a FQDN option from the client and client name replacement is enabled. This provides a means to create DNS entries for unsophisticated clients.

9.35 DHCP6_DDNS_RECEIVE_FQDN

```
%1: received DHCPv6 Client FQDN option: %2
```

Logged at debug log level 50. This debug message is logged when server has found the DHCPv6 Client FQDN Option sent by a client and started processing it. The first argument includes the client and transaction identification information. The second argument includes the received FQDN.

9.36 DHCP6_DDNS_REMOVE_OLD_LEASE_FQDN

```
%1: FQDN for a lease: %2 has changed. New values: hostname = %3, reverse mapping = %4,␣
↪forward mapping = %5
```

Logged at debug log level 50. This debug message is logged during lease renewal when an old lease that is no longer being offered has a different FQDN than the renewing lease. Thus the old DNS entries need to be removed. The first argument includes the client and the transaction identification information. The second argument holds the details about the lease for which the FQDN information and/or mappings have changed. The remaining arguments hold the new FQDN information and flags for mappings.

9.37 DHCP6_DDNS_REQUEST_SEND_FAILED

```
failed sending a request to kea-dhcp-ddns, error: %1,  ncr: %2
```

This error message indicates that IPv6 DHCP server failed to send a DDNS update request to the DHCP-DDNS server. This is most likely a configuration or networking error.

9.38 DHCP6_DDNS_RESPONSE_FQDN_DATA

```
%1: including FQDN option in the server's response: %2
```

Logged at debug log level 50. This debug message is issued when the server is adding the Client FQDN option in its response to the client. The first argument includes the client and transaction identification information. The second argument includes the details of the FQDN option being included. Note that the name carried in the FQDN option may be modified by the server when the lease is acquired for the client.

9.39 DHCP6_DECLINE_FAIL

```
%1: error on decline lease for address %2: %3
```

This error message indicates that the software failed to decline a lease from the lease database due to an error during a database operation. The first argument includes the client and the transaction identification information. The second argument holds the IPv6 address which decline was attempted. The last one contains the reason for failure.

9.40 DHCP6_DECLINE_FAIL_DUID_MISMATCH

```
Client %1 sent DECLINE for address %2, but it belongs to client with DUID %3
```

This informational message is printed when a client attempts to decline a lease, but that lease belongs to a different client. The decline request will be rejected.

9.41 DHCP6_DECLINE_FAIL_IAID_MISMATCH

```
Client %1 sent DECLINE for address %2, but used a wrong IAID (%3), instead of expected %4
```

This informational message is printed when a client attempts to decline a lease. The server has a lease for this address, it belongs to this client, but the recorded IAID does not match what client has sent. This means the server will reject this Decline.

9.42 DHCP6_DECLINE_FAIL_LEASE_WITHOUT_DUID

```
Client %1 sent DECLINE for address %2, but the associated lease has no DUID
```

This error condition likely indicates database corruption, as every IPv6 lease is supposed to have a DUID, even if it is an empty one.

9.43 DHCP6_DECLINE_FAIL_NO_LEASE

```
Client %1 sent DECLINE for address %2, but there's no lease for it
```

This informational message is printed when a client tried to decline an address, but the server has no lease for said address. This means that the server's and client's perception of the leases are different. The likely causes of this could be: a confused (e.g. skewed clock) or broken client (e.g. client moved to a different location and didn't notice) or possibly an attack (a rogue client is trying to decline random addresses). The server will inform the client that his decline request was rejected and client should be able to recover from that.

9.44 DHCP6_DECLINE_LEASE

```
Client %1 sent DECLINE for address %2 and the server marked it as declined. The lease␣
↪will be recovered in %3 seconds.
```

This informational message indicates that the client leased an address, but discovered that it is being used by some other device and reported this to the server by sending a Decline message. The server marked the lease as declined. This likely indicates a misconfiguration in the network. Either the server is configured with an incorrect pool or there are devices that have statically assigned addresses that are supposed to be assigned by the DHCP server. Both client (will request a different address) and server (will recover the lease after decline-probation-time elapses) will recover automatically. However, if the underlying problem is not solved, the conditions leading to this message may reappear.

9.45 DHCP6_DECLINE_PROCESS_IA

```
Processing of IA (IAID: %1) from client %2 started.
```

Logged at debug log level 50. This debug message is printed when the server starts processing an IA_NA option received in Decline message. It's expected that the option will contain an address that is being declined. Specific information will be printed in a separate message.

9.46 DHCP6_DEVELOPMENT_VERSION

```
This software is a development branch of Kea. It is not recommended for production use.
```

This warning message is displayed when the version is a development (vs stable) one: the second number of the version is odd.

9.47 DHCP6_DHCP4O6_PACKET_RECEIVED

```
received DHCPv4o6 packet from DHCPv4 server (type %1) for %2 port %3 on interface %4
```

Logged at debug log level 40. This debug message is printed when the server is receiving a DHCPv4o6 from the DHCPv4 server over inter-process communication.

9.48 DHCP6_DHCP4O6_RECEIVE_FAIL

```
failed to receive DHCPv4o6: %1
```

Logged at debug log level 50. This debug message indicates the inter-process communication with the DHCPv4 server failed. The reason for the error is included in the message.

9.49 DHCP6_DHCP4O6_RECEIVING

```
receiving DHCPv4o6 packet from DHCPv4 server
```

Logged at debug log level 50. This debug message is printed when the server is receiving a DHCPv4o6 from the DHCPv4 server over inter-process communication socket.

9.50 DHCP6_DHCP4O6_RESPONSE_DATA

```
%1: responding with packet %2 (type %3), packet details: %4
```

Logged at debug log level 55. A debug message including the detailed data about the packet being sent to the client. The first argument contains the client and the transaction identification information. The second and third argument contains the packet name and type respectively. The fourth argument contains detailed packet information.

9.51 DHCP6_DHCP4O6_SEND_FAIL

```
%1: failed to send DHCPv4o6 packet: %2
```

This error is output if the IPv6 DHCP server fails to send an assembled DHCPv4o6 message to a client. The reason for the error is included in the message.

9.52 DHCP6_DYNAMIC_RECONFIGURATION

```
initiate server reconfiguration using file: %1, after receiving SIGHUP signal or config-
↪reload command
```

This is the info message logged when the DHCPv6 server starts reconfiguration as a result of receiving SIGHUP signal or config-reload command.

9.53 DHCP6_DYNAMIC_RECONFIGURATION_FAIL

```
dynamic server reconfiguration failed with file: %1
```

This is a fatal error message logged when the dynamic reconfiguration of the DHCP server failed.

9.54 DHCP6_DYNAMIC_RECONFIGURATION_SUCCESS

```
dynamic server reconfiguration succeeded with file: %1
```

This is info message logged when the dynamic reconfiguration of the DHCP server succeeded.

9.55 DHCP6_FLEX_ID

```
%1: flexible identifier generated for incoming packet: %2
```

Logged at debug log level 40. This debug message is printed when host reservation type is set to flexible identifier and the expression specified in its configuration generated (was evaluated to) an identifier for incoming packet. This debug message is mainly intended as a debugging assistance for flexible identifier.

9.56 DHCP6_HOOK_BUFFER_RCVD_DROP

```
received buffer from %1 to %2 over interface %3 was dropped because a callout set the␣
↪drop flag
```

Logged at debug log level 15. This debug message is printed when a callout installed on buffer6_receive hook point set the drop flag. For this particular hook point, the setting of the flag by a callout instructs the server to drop the packet. The arguments specify the source and destination address as well as the name of the interface over which the buffer has been received.

9.57 DHCP6_HOOK_BUFFER_RCVD_SKIP

```
received buffer from %1 to %2 over interface %3 is not parsed because a callout set the␣
↪next step to SKIP
```

Logged at debug log level 50. This debug message is printed when a callout installed on buffer6_receive hook point set the next step status to skip. For this particular hook point, this value set by a callout instructs the server to not parse the buffer because it was already parsed by the hook. The arguments specify the source and destination address as well as the name of the interface over which the buffer has been received.

9.58 DHCP6_HOOK_BUFFER_SEND_SKIP

```
%1: prepared DHCPv6 response was dropped because a callout set the next step to SKIP
```

Logged at debug log level 40. This debug message is printed when a callout installed on buffer6_send hook point set the next step to SKIP value. For this particular hook point, the SKIP setting a callout instructs the server to drop the packet. Server completed all the processing (e.g. may have assigned, updated or released leases), but the response will not be send to the client. The argument includes the client and transaction identification information.

9.59 DHCP6_HOOK_DDNS_UPDATE

```
A hook has updated the DDNS parameters: hostname %1=>%2, forward update %3=>%4, reverse␣
↪update %5=>%6
```

Logged at debug log level 15. This message indicates that there was a hook called on ddns6_update hook point and that hook updated the DDNS update parameters: hostname, or whether to conduct forward (A record) or reverse (PTR record) DDNS updates.

9.60 DHCP6_HOOK_DECLINE_DROP

```
During Decline processing (client=%1, interface=%2, addr=%3) hook callout set next step␣
↪to DROP, dropping packet.
```

Logged at debug log level 15. This message indicates that the server received DECLINE message, it was verified to be correct and matching server's lease information. The server called hooks for the lease6_decline hook point and one of the callouts set next step status to DROP. The server will now abort processing of the packet as if it was never received. The lease will continue to be assigned to this client.

9.61 DHCP6_HOOK_DECLINE_SKIP

```
During Decline processing (client=%1, interface=%2, addr=%3) hook callout set status to␣
↪SKIP, skipping decline.
```

Logged at debug log level 50. This message indicates that the server received DECLINE message, it was verified to be correct and matching server's lease information. The server called hooks for the lease6_decline hook point and one of the callouts set next step status to SKIP. The server will skip the operation of moving the lease to the declined state and will continue processing the packet. In particular, it will send a REPLY message as if the decline actually took place.

9.62 DHCP6_HOOK_LEASE6_RELEASE_NA_SKIP

```
%1: DHCPv6 address lease was not released because a callout set the next step to SKIP
```

Logged at debug log level 40. This debug message is printed when a callout installed on the lease6_release hook point set the next step to SKIP. For this particular hook point, this setting by a callout instructs the server to not release a lease. If a client requested the release of multiples leases (by sending multiple IA options), the server will retain this particular lease and proceed with other releases as usual. The argument holds the client and transaction identification information.

9.63 DHCP6_HOOK_LEASE6_RELEASE_PD_SKIP

```
%1: prefix lease was not released because a callout set the next step to SKIP
```

Logged at debug log level 40. This debug message is printed when a callout installed on lease6_release hook point set the next step to SKIP value. For this particular hook point, that setting by a callout instructs the server to not release a lease. If client requested release of multiples leases (by sending multiple IA options), the server will retains this particular lease and will proceed with other renewals as usual. The argument holds the client and transaction identification information.

9.64 DHCP6_HOOK_LEASES6_COMMITTED_DROP

```
%1: packet is dropped, because a callout set the next step to DROP
```

Logged at debug log level 15. This debug message is printed when a callout installed on the leases6_committed hook point sets the next step to DROP.

9.65 DHCP6_HOOK_LEASES6_COMMITTED_PARK

```
%1: packet is parked, because a callout set the next step to PARK
```

Logged at debug log level 40. This debug message is printed when a callout installed on the leases6_committed hook point sets the next step to PARK.

9.66 DHCP6_HOOK_LEASES6_PARKING_LOT_FULL

```
The parked-packet-limit %1, has been reached, dropping query: %2
```

Logged at debug log level 15. This debug message occurs when the parking lot used to hold client queries while the hook library work for them completes has reached or exceeded the limit set by the parked-packet-limit global parameter. This can occur when kea-dhcp6 is using hook libraries (e.g. HA) that implement the "leases6-committed" callout and client queries are arriving faster than those callouts can fulfill them.

9.67 DHCP6_HOOK_PACKET_RCVD_SKIP

```
%1: packet is dropped, because a callout set the next step to SKIP
```

Logged at debug log level 40. This debug message is printed when a callout installed on the pkt6_receive hook point sets the next step to SKIP. For this particular hook point, the value setting instructs the server to drop the packet.

9.68 DHCP6_HOOK_PACKET_SEND_DROP

```
%1: prepared DHCPv6 response was not sent because a callout set the next ste to DROP
```

Logged at debug log level 15. This debug message is printed when a callout installed on the pkt6_send hook point set the next step to DROP. For this particular hook point, the setting of the value by a callout instructs the server to drop the packet. This effectively means that the client will not get any response, even though the server processed client's request and acted on it (e.g. possibly allocated a lease). The argument specifies the client and transaction identification information.

9.69 DHCP6_HOOK_PACKET_SEND_SKIP

```
%1: prepared DHCPv6 response is not built because a callout set the next step to SKIP
```

Logged at debug log level 40. This debug message is printed when a callout installed on the pkt6_send hook point set the next step to SKIP. For this particular hook point, the setting of the value by a callout instructs the server to not build the wire data (pack) because it was already done by the book. The argument specifies the client and transaction identification information.

9.70 DHCP6_HOOK_SUBNET6_SELECT_DROP

```
%1: packet was dropped because a callout set the drop flag
```

Logged at debug log level 40. This debug message is printed when a callout installed on the subnet6_select hook point set the drop flag. For this particular hook point, the setting of the flag instructs the server to drop the received packet. The argument holds the client and transaction identification information.

9.71 DHCP6_HOOK_SUBNET6_SELECT_PARK

```
%1: packet was parked
```

Logged at debug log level 40. This debug message is printed when a callout installed on the subnet6_select hook point set the park flag. The argument holds the client and transaction identification information.

9.72 DHCP6_HOOK_SUBNET6_SELECT_SKIP

```
%1: no subnet was selected because a callout set the next step to SKIP
```

Logged at debug log level 40. This debug message is printed when a callout installed on the subnet6_select hook point set the next step to SKIP value. For this particular hook point, the setting of this value instructs the server not to choose a subnet, an action that severely limits further processing; the server will be only able to offer global options - no addresses or prefixes will be assigned. The argument holds the client and transaction identification information.

9.73 DHCP6_INIT_FAIL

```
failed to initialize Kea server: %1
```

The server has failed to establish communication with the rest of Kea, failed to read JSON configuration file or encountered any other critical issue that prevents it from starting up properly. Attached error message provides more details about the issue.

9.74 DHCP6_LEASE_ADVERT

```
%1: lease for address %2 and iaid=%3 will be advertised
```

Logged at debug log level 50. This informational message indicates that the server will advertise an address to the client in the ADVERTISE message. The client will request allocation of this address with the REQUEST message sent in the next message exchange. The first argument includes the client and transaction identification information. The remaining arguments hold the allocated address and IAID.

9.75 DHCP6_LEASE_ADVERT_FAIL

```
%1: failed to advertise an address lease for iaid=%2
```

Logged at debug log level 50. This message indicates that in response to a received SOLICIT, the server failed to advertise a non-temporary lease for a given client. There may be many reasons for such failure. Each failure is logged in a separate log entry. The first argument holds the client and transaction identification information. The second argument holds the IAID.

9.76 DHCP6_LEASE_ALLOC

```
%1: lease for address %2 and iaid=%3 has been allocated for %4 seconds
```

Logged at debug log level 50. This informational message indicates that in response to a client's REQUEST message, the server successfully granted a non-temporary address lease. This is a normal behavior and indicates successful operation. The first argument includes the client and transaction identification information. The remaining arguments hold the allocated address, IAID and validity lifetime.

9.77 DHCP6_LEASE_ALLOC_FAIL

```
%1: failed to grant an address lease for iaid=%2
```

Logged at debug log level 50. This message indicates that in response to a received REQUEST, the server failed to grant a non-temporary address lease for the client. There may be many reasons for such failure. Each failure is logged in a separate log entry. The first argument holds the client and transaction identification information. The second argument holds the IAID.

9.78 DHCP6_LEASE_DATA

```
%1: detailed lease information for iaid=%2: %3
```

Logged at debug log level 55. This debug message is used to print the detailed information about the allocated lease or a lease which will be advertised to the client. The first argument holds the client and the transaction identification information. The second argument holds the IAID. The third argument holds the detailed lease information.

9.79 DHCP6_LEASE_NA_WITHOUT_DUID

```
%1: address lease for address %2 does not have a DUID
```

This error message indicates a database consistency problem. The lease database has an entry indicating that the given address is in use, but the lease does not contain any client identification. This is most likely due to a software error: please raise a bug report. As a temporary workaround, manually remove the lease entry from the database. The first argument includes the client and transaction identification information. The second argument holds the address to be released.

9.80 DHCP6_LEASE_PD_WITHOUT_DUID

```
%1: lease for prefix %2/%3 does not have a DUID
```

This error message indicates a database consistency failure. The lease database has an entry indicating that the given prefix is in use, but the lease does not contain any client identification. This is most likely due to a software error: please raise a bug report. As a temporary workaround, manually remove the lease entry from the database. The first argument includes client and transaction identification information. The second and third argument hold the prefix and the prefix length.

9.81 DHCP6_LEASE_RENEW

```
%1: lease for address %2 and iaid=%3 has been allocated
```

This informational message indicates that in response to a client's REQUEST message, the server successfully renewed a non-temporary address lease. This is a normal behavior and indicates successful operation. The first argument includes the client and transaction identification information. The remaining arguments hold the allocated address and IAID.

9.82 DHCP6_LEASE_REUSE

```
%1: lease for address %2 and iaid=%3 has been reused for %4 seconds
```

This informational message indicates that in response to a client's message, the server successfully reused a non-temporary address lease. This is a normal behavior and indicates successful operation. The first argument includes the client and transaction identification information. The remaining arguments hold the allocated address, IAID and validity lifetime.

9.83 DHCP6_MULTI_THREADING_INFO

```
enabled: %1, number of threads: %2, queue size: %3
```

This is a message listing some information about the multi-threading parameters with which the server is running.

9.84 DHCP6_NOT_RUNNING

```
IPv6 DHCP server is not running
```

A warning message is issued when an attempt is made to shut down the IPv6 DHCP server but it is not running.

9.85 DHCP6_NO_INTERFACES

```
failed to detect any network interfaces
```

During startup the IPv6 DHCP server failed to detect any network interfaces and is therefore shutting down.

9.86 DHCP6_OPEN_SOCKET

```
opening service sockets on port %1
```

Logged at debug log level 0. A debug message issued during startup, this indicates that the IPv6 DHCP server is about to open sockets on the specified port.

9.87 DHCP6_OPEN_SOCKETS_FAILED

```
maximum number of open service sockets attempts: %1, has been exhausted without success
```

This error indicates that the server failed to bind service sockets after making the maximum configured number of reconnect attempts. This might cause the server to shut down as specified in the configuration.

9.88 DHCP6_OPEN_SOCKETS_NO_RECONNECT_CTL

```
unexpected error in bind service sockets.
```

This is an error message indicating a programmatic error that should not occur. It prohibits the server from attempting to bind to its service sockets if they are unavailable, and the server exits. This error should be reported.

9.89 DHCP6_PACKET_DROP_DHCP_DISABLED

```
%1: DHCP service is globally disabled
```

Logged at debug log level 15. This debug message is issued when a packet is dropped because the DHCP service has been temporarily disabled. This affects all received DHCP packets. The service may be enabled by the "dhcp-enable" control command or automatically after a specified amount of time since receiving "dhcp-disable" command.

9.90 DHCP6_PACKET_DROP_DROP_CLASS

```
dropped as member of the special class 'DROP': %1 %2
```

Logged at debug log level 15. This debug message is emitted when an incoming packet was classified into the special class 'DROP' and dropped. The packet details are displayed.

9.91 DHCP6_PACKET_DROP_DROP_CLASS2

```
dropped as member of the special class 'DROP' after host reservation lookup: %1 %2
```

Logged at debug log level 15. This debug message is emitted when an incoming packet was classified after host reservation lookup into the special class 'DROP' and dropped. The packet details are displayed.

9.92 DHCP6_PACKET_DROP_DROP_CLASS_EARLY

```
dropped as member of the special class 'DROP' after early global host reservations␣
↪lookup: %1 %2
```

Logged at debug log level 15. This debug message is emitted when an incoming packet was classified after early global host reservations lookup into the special class 'DROP' and dropped. The packet details are displayed.

9.93 DHCP6_PACKET_DROP_DUPLICATE

```
dropped as sent by the same client than a packet being processed by another thread:␣
↪dropped %1 %2 by thread %3 as duplicate of %4 %5 processed by %6
```

Logged at debug log level 15. Currently multi-threading processing avoids races between packets sent by the same client by dropping new packets until processing is finished. Packet details and thread identifiers are included for both packets in this warning message.

9.94 DHCP6_PACKET_DROP_PARSE_FAIL

```
%1: failed to parse packet from %2 to %3, received over interface %4, reason: %5, %6
```

Logged at debug log level 15. The DHCPv6 server has received a packet that it is unable to interpret. The reason why the packet is invalid is included in the message.

9.95 DHCP6_PACKET_DROP_SERVERID_MISMATCH

```
%1: dropping packet with server identifier: %2, server is using: %3
```

Logged at debug log level 15. A debug message noting that server has received message with server identifier option that not matching server identifier that server is using.

9.96 DHCP6_PACKET_DROP_UNICAST

```
%1: dropping unicast %2 packet as this packet should be sent to multicast
```

Logged at debug log level 15. This debug message is issued when the server drops the unicast packet, because packets of this type must be sent to multicast. The first argument specifies the client and transaction identification information, the second argument specifies packet type.

9.97 DHCP6_PACKET_OPTIONS_SKIPPED

```
%1: An error unpacking an option, caused subsequent options to be skipped: %2
```

Logged at debug log level 50. A debug message issued when an option failed to unpack correctly, making it impossible to unpack the remaining options in the packet. The server will server will still attempt to service the packet.

9.98 DHCP6_PACKET_PROCESS_EXCEPTION

```
%1: exception occurred during packet processing
```

This error message indicates that a non-standard exception was raised during packet processing that was not caught by other, more specific exception handlers. This packet will be dropped and the server will continue operation.

9.99 DHCP6_PACKET_PROCESS_EXCEPTION_MAIN

```
exception occurred during packet processing
```

This error message indicates that a non-standard exception was raised during packet processing that was not caught by other, more specific exception handlers. This packet will be dropped and the server will continue operation. This error message may appear in main server processing loop.

9.100 DHCP6_PACKET_PROCESS_FAIL

```
%1: processing of %2 message received from %3 failed: %4
```

Logged at debug log level 40. This is a general catch-all message indicating that the processing of the specified packet type from the indicated address failed. The reason is given in the message. The server will not send a response but will instead ignore the packet.

9.101 DHCP6_PACKET_PROCESS_STD_EXCEPTION

```
%1: exception occurred during packet processing: %2
```

This error message indicates that a standard exception was raised during packet processing that was not caught by other, more specific exception handlers. This packet will be dropped and the server will continue operation.

9.102 DHCP6_PACKET_PROCESS_STD_EXCEPTION_MAIN

```
exception occurred during packet processing: %1
```

This error message indicates that a standard exception was raised during packet processing that was not caught by other, more specific exception handlers. This packet will be dropped and the server will continue operation. This error message may appear in main server processing loop.

9.103 DHCP6_PACKET_QUEUE_FULL

```
multi-threading packet queue is full
```

Logged at debug log level 40. A debug message noting that the multi-threading packet queue is full so the oldest packet of the queue was dropped to make room for the received one.

9.104 DHCP6_PACKET_RECEIVED

```
%1: %2 (type %3) received from %4 to %5 on interface %6
```

An INFO message noting that the server has received the specified type of packet on the specified interface. The first argument specifies the client and transaction identification information. The second and third argument specify the name of the DHCPv6 message and its numeric type respectively. The remaining arguments specify the source address, destination IP address and the name of the interface on which the message has been received.

9.105 DHCP6_PACKET_RECEIVE_FAIL

```
error on attempt to receive packet: %1
```

The IPv6 DHCP server tried to receive a packet but an error occurred during this attempt. The reason for the error is included in the message.

9.106 DHCP6_PACKET_SEND

```
%1: trying to send packet %2 (type %3) from [%4]:%5 to [%6]:%7 on interface %8
```

An INFO message noting that the server is attempting to send the specified type of packet. The arguments specify the client identification information (HW address and client identifier), DHCP message name and type, source IPv6 address and port, destination IPv6 address and port and the interface name.

9.107 DHCP6_PACKET_SEND_FAIL

```
%1: failed to send DHCPv6 packet: %2
```

This error is output if the IPv6 DHCP server fails to send an assembled DHCP message to a client. The reason for the error is included in the message.

9.108 DHCP6_PACK_FAIL

```
%1: failed to assemble response correctly: %2
```

This error is output if the server failed to assemble the data to be returned to the client into a valid packet. The reason is most likely to be to a programming error: please raise a bug report.

9.109 DHCP6_PARSER_COMMIT_EXCEPTION

```
parser failed to commit changes
```

On receipt of message containing details to a change of the IPv6 DHCP server configuration, a set of parsers were successfully created, but one of them failed to commit its changes due to a low-level system exception being raised. Additional messages may be output indicating the reason.

9.110 DHCP6_PARSER_COMMIT_FAIL

```
parser failed to commit changes: %1
```

On receipt of message containing details to a change of the IPv6 DHCP server configuration, a set of parsers were successfully created, but one of them failed to commit its changes. The reason for the failure is given in the message.

9.111 DHCP6_PARSER_EXCEPTION

```
failed to create or run parser for configuration element %1
```

On receipt of message containing details to a change of its configuration, the IPv6 DHCP server failed to create a parser to decode the contents of the named configuration element, or the creation succeeded but the parsing actions and committal of changes failed. The message has been output in response to a non-Kea exception being raised. Additional messages may give further information. The most likely cause of this is that the specification file for the server (which details the allowable contents of the configuration) is not correct for this version of Kea. This may be the result of an interrupted installation of an update to Kea.

9.112 DHCP6_PARSER_FAIL

```
failed to create or run parser for configuration element %1: %2
```

On receipt of message containing details to a change of its configuration, the IPv6 DHCP server failed to create a parser to decode the contents of the named configuration element, or the creation succeeded but the parsing actions and committal of changes failed. The reason for the failure is given in the message.

9.113 DHCP6_PD_LEASE_ADVERT

```
%1: lease for prefix %2/%3 and iaid=%4 will be advertised
```

Logged at debug log level 50. This informational message indicates that the server will advertise a prefix to the client in the ADVERTISE message. The client will request allocation of this prefix with the REQUEST message sent in the next message exchange. The first argument includes the client and transaction identification information. The remaining arguments hold the allocated prefix, prefix length and IAID.

9.114 DHCP6_PD_LEASE_ADVERT_FAIL

```
%1: failed to advertise a prefix lease for iaid=%2
```

Logged at debug log level 50. This message indicates that in response to a received SOLICIT, the server failed to advertise a prefix lease for a given client. There may be many reasons for such failure. Each failure is logged in a separate log entry. The first argument holds the client and transaction identification information. The second argument holds the IAID.

9.115 DHCP6_PD_LEASE_ALLOC

```
%1: lease for prefix %2/%3 and iaid=%4 has been allocated for %5 seconds
```

Logged at debug log level 50. This informational message indicates that in response to a client's REQUEST message, the server successfully granted a prefix lease. This is a normal behavior and indicates successful operation. The first argument includes the client and transaction identification information. The remaining arguments hold the allocated prefix, prefix length, IAID and validity lifetime.

9.116 DHCP6_PD_LEASE_ALLOC_FAIL

```
%1: failed to grant a prefix lease for iaid=%2
```

Logged at debug log level 50. This message indicates that in response to a received REQUEST, the server failed to grant a prefix lease for the client. There may be many reasons for such failure. Each failure is logged in a separate log entry. The first argument holds the client and transaction identification information. The second argument holds the IAID.

9.117 DHCP6_PD_LEASE_RENEW

```
%1: lease for prefix %2/%3 and iaid=%4 has been allocated
```

This informational message indicates that in response to a client's REQUEST message, the server successfully renewed a prefix lease. This is a normal behavior and indicates successful operation. The first argument includes the client and transaction identification information. The remaining arguments hold the allocated prefix, prefix length and IAID.

9.118 DHCP6_PD_LEASE_REUSE

```
%1: lease for prefix %2/%3 and iaid=%4 has been reused for %5 seconds
```

This informational message indicates that in response to a client's message, the server successfully reused a prefix lease. This is a normal behavior and indicates successful operation. The first argument includes the client and transaction identification information. The remaining arguments hold the allocated prefix, prefix length, IAID and validity lifetime.

9.119 DHCP6_PROCESS_IA_NA_EXTEND

```
%1: extending lease lifetime for IA_NA option with iaid=%2
```

Logged at debug log level 50. This message is logged when the server is starting to extend the lifetime of the address lease associated with the particular IAID. The first argument includes the client and transaction identification information. The second argument contains the IAID.

9.120 DHCP6_PROCESS_IA_NA_RELEASE

```
%1: releasing lease for IA_NA option with iaid=%2
```

Logged at debug log level 50. This message is logged when the server is trying to release the client's as a result of receiving the RELEASE message. The first argument includes the client and transaction identification information. The second argument contains the IAID.

9.121 DHCP6_PROCESS_IA_NA_REQUEST

```
%1: server is processing IA_NA option with iaid=%2 and hint=%3
```

Logged at debug log level 50. This is a debug message that indicates the processing of a received IA_NA option. The first argument contains the client and the transaction identification information. The second argument holds the IAID of the IA_NA option. The third argument may hold the hint for the server about the address that the client would like to have allocated. If there is no hint, the argument should provide the text indicating that the hint hasn't been sent.

9.122 DHCP6_PROCESS_IA_NA_SOLICIT

```
%1: server is processing IA_NA option with iaid=%2 and hint=%3
```

Logged at debug log level 50. This is a debug message that indicates the processing of a received IA_NA option. The first argument contains the client and the transaction identification information. The second argument holds the IAID of the IA_NA option. The third argument may hold the hint for the server about the address that the client would like to have allocated. If there is no hint, the argument should provide the text indicating that the hint hasn't been sent.

9.123 DHCP6_PROCESS_IA_PD_EXTEND

```
%1: extending lease lifetime for IA_PD option with iaid=%2
```

Logged at debug log level 50. This message is logged when the server is starting to extend the lifetime of the prefix lease associated with the particular IAID. The first argument includes the client and transaction identification information. The second argument contains the IAID.

9.124 DHCP6_PROCESS_IA_PD_REQUEST

```
%1: server is processing IA_PD option with iaid=%2 and hint=%3
```

Logged at debug log level 50. This is a debug message that indicates a processing of received IA_PD option. The first argument contains the client and the transaction identification information. The second argument holds the IAID of the IA_PD option. The third argument may hold the hint for the server about the prefix that the client would like to have allocated. If there is no hint, the argument should provide the text indicating that the hint hasn't been sent.

9.125 DHCP6_PROCESS_IA_PD_SOLICIT

```
%1: server is processing IA_PD option with iaid=%2 and hint=%3
```

Logged at debug log level 50. This is a debug message that indicates a processing of received IA_PD option. The first argument contains the client and the transaction identification information. The second argument holds the IAID of the IA_PD option. The third argument may hold the hint for the server about the prefix that the client would like to have allocated. If there is no hint, the argument should provide the text indicating that the hint hasn't been sent.

9.126 DHCP6_QUERY_DATA

```
%1, packet details: %2
```

Logged at debug log level 55. A debug message printing the details of the received packet. The first argument includes the client and the transaction identification information.

9.127 DHCP6_QUERY_LABEL

```
received query: %1
```

This information message indicates that a query was received. It displays the client and the transaction identification information.

9.128 DHCP6_RAPID_COMMIT

```
%1: Rapid Commit option received, following 2-way exchange
```

Logged at debug log level 50. This debug message is issued when the server found a Rapid Commit option in the client's message and 2-way exchanges are supported by the server for the subnet on which the client is connected. The argument specifies the client and transaction identification information.

9.129 DHCP6_RECLAIM_EXPIRED_LEASES_FAIL

```
failed to reclaim expired leases: %1
```

This error message indicates that the reclaim expired leases operation failed and provides the cause of failure.

9.130 DHCP6_RELEASE_NA

```
%1: binding for address %2 and iaid=%3 was released properly
```

This informational message indicates that an address was released properly. It is a normal operation during client shutdown. The first argument includes the client and transaction identification information. The second and third argument hold the released IPv6 address and IAID respectively.

9.131 DHCP6_RELEASE_NA_DELETED

```
%1: binding for address %2 and iaid=%3 was deleted on release
```

This informational message indicates that an address was deleted on release. It is a normal operation during client shutdown. The first argument includes the client and transaction identification information. The second and third argument hold the released IPv6 address and IAID respectively.

9.132 DHCP6_RELEASE_NA_EXPIRED

```
%1: binding for address %2 and iaid=%3 expired on release
```

This informational message indicates that an address expired on release. It is a normal operation during client shutdown. The first argument includes the client and transaction identification information. The second and third argument hold the released IPv6 address and IAID respectively.

9.133 DHCP6_RELEASE_NA_FAIL

```
%1: failed to remove address lease for address %2 and iaid=%3
```

This error message indicates that the software failed to remove an address lease from the lease database. It probably due to an error during a database operation: resolution will most likely require administrator intervention (e.g. check if DHCP process has sufficient privileges to update the database). It may also be triggered if a lease was manually removed from the database during RELEASE message processing. The first argument holds the client and transaction identification information. The second and third argument hold the released address and IAID respectively.

9.134 DHCP6_RELEASE_NA_FAIL_WRONG_DUID

```
%1: client tried to release address %2, but it belongs to another client using duid=%3
```

This warning message indicates that a client tried to release an address that belongs to a different client. This should not happen in normal circumstances and may indicate a misconfiguration of the client. However, since the client releasing the address will stop using it anyway, there is a good chance that the situation will correct itself.

9.135 DHCP6_RELEASE_NA_FAIL_WRONG_IAID

```
%1: client tried to release address %2, but it used wrong IAID (expected %3, but got %4)
```

This warning message indicates that client tried to release an address that does belong to it, but the address was expected to be in a different IA (identity association) container. This probably means that the client's support for multiple addresses is flawed.

9.136 DHCP6_RELEASE_PD

```
%1: prefix %2/%3 for iaid=%4 was released properly
```

This informational message indicates that a prefix was released properly. It is a normal operation during client shutdown. The first argument holds the client and transaction identification information. The second and third argument hold the prefix and its length. The fourth argument holds IAID.

9.137 DHCP6_RELEASE_PD_DELETED

```
%1: prefix %2/%3 for iaid=%4 was deleted on release
```

This informational message indicates that a prefix was deleted on release. It is a normal operation during client shutdown. The first argument holds the client and transaction identification information. The second and third argument hold the prefix and its length. The fourth argument holds IAID.

9.138 DHCP6_RELEASE_PD_EXPIRED

```
%1: prefix %2/%3 for iaid=%4 expired on release
```

This informational message indicates that a prefix expired on release. It is a normal operation during client shutdown. The first argument holds the client and transaction identification information. The second and third argument hold the prefix and its length. The fourth argument holds IAID.

9.139 DHCP6_RELEASE_PD_FAIL

```
%1: failed to release prefix %2/%3 for iaid=%4
```

This error message indicates that the software failed to remove a prefix lease from the lease database. It probably due to an error during a database operation: resolution will most likely require administrator intervention (e.g. check if DHCP process has sufficient privileges to update the database). It may also be triggered if a lease was manually removed from the database during RELEASE message processing. The first argument hold the client and transaction identification information. The second and third argument define the prefix and its length. The fourth argument holds the IAID.

9.140 DHCP6_RELEASE_PD_FAIL_WRONG_DUID

```
%1: client tried to release prefix %2/%3, but it belongs to another client (duid=%4)
```

This warning message indicates that client tried to release a prefix that belongs to a different client. This should not happen in normal circumstances and may indicate a misconfiguration of the client. However, since the client releasing the prefix will stop using it anyway, there is a good chance that the situation will correct itself. The first argument includes the client and the transaction identification information. The second and third argument include the prefix and prefix length. The last argument holds the DUID of the client holding the lease.

9.141 DHCP6_RELEASE_PD_FAIL_WRONG_IAID

```
%1: client tried to release prefix %2/%3, but it used wrong IAID (expected %4, but got
↪%5)
```

This warning message indicates that client tried to release a prefix that does belong to it, but the address was expected to be in a different IA (identity association) container. This probably means that the client's support for multiple prefixes is flawed. The first argument includes the client and transaction identification information. The second and third argument identify the prefix. The fourth and fifth argument hold the expected IAID and IAID found respectively.

9.142 DHCP6_REQUIRED_OPTIONS_CHECK_FAIL

```
%1: %2 message received from %3 failed the following check: %4
```

Logged at debug log level 40. This message indicates that received DHCPv6 packet is invalid. This may be due to a number of reasons, e.g. the mandatory client-id option is missing, the server-id forbidden in that particular type of message is present, there is more than one instance of client-id or server-id present, etc. The exact reason for rejecting the packet is included in the message.

9.143 DHCP6_RESERVATIONS_LOOKUP_FIRST_ENABLED

```
Multi-threading is enabled and host reservations lookup is always performed first.
```

This is a message informing that host reservations lookup is performed before lease lookup when multi-threading is enabled overwriting configured value.

9.144 DHCP6_RESPONSE_DATA

```
%1: responding with packet %2 (type %3), packet details: %4
```

Logged at debug log level 55. A debug message including the detailed data about the packet being sent to the client. The first argument contains the client and the transaction identification information. The second and third argument contains the packet name and type respectively. The fourth argument contains detailed packet information.

9.145 DHCP6_SERVER_FAILED

```
server failed: %1
```

The IPv6 DHCP server has encountered a fatal error and is terminating. The reason for the failure is included in the message.

9.146 DHCP6_SHUTDOWN

```
server shutdown
```

Logged at debug log level 40. The IPv6 DHCP server has terminated normally.

9.147 DHCP6_SHUTDOWN_REQUEST

```
shutdown of server requested
```

Logged at debug log level 40. This debug message indicates that a shutdown of the IPv6 server has been requested via a call to the 'shutdown' method of the core Dhcpv6Srv object.

9.148 DHCP6_SRV_CONSTRUCT_ERROR

```
error creating Dhcpv6Srv object, reason: %1
```

This error message indicates that during startup, the construction of a core component within the IPv6 DHCP server (the Dhcpv6 server object) has failed. As a result, the server will exit. The reason for the failure is given within the message.

9.149 DHCP6_SRV_D2STOP_ERROR

```
error stopping IO with DHCP_DDNS during shutdown: %1
```

This error message indicates that during shutdown, an error occurred while stopping IO between the DHCPv6 server and the DHCP_DDNS server. This is probably due to a programmatic error is not likely to impact either server upon restart. The reason for the failure is given within the message.

9.150 DHCP6_SRV_UNLOAD_LIBRARIES_ERROR

```
error unloading hooks libraries during shutdown: %1
```

This error message indicates that during shutdown, unloading hooks libraries failed to close them. If the list of libraries is empty it is a programmatic error in the server code. If it is not empty it could be a programmatic error in one of the hooks libraries which could lead to a crash during finalization.

9.151 DHCP6_STARTED

```
Kea DHCPv6 server version %1 started
```

This informational message indicates that the IPv6 DHCP server has processed all configuration information and is ready to process DHCPv6 packets. The version is also printed.

9.152 DHCP6_STARTING

```
Kea DHCPv6 server version %1 (%2) starting
```

This informational message indicates that the IPv6 DHCP server has processed any command-line switches and is starting. The version is also printed.

9.153 DHCP6_START_INFO

```
pid: %1, server port: %2, client port: %3, verbose: %4
```

Logged at debug log level 0. This is a debug message issued during the IPv6 DHCP server startup. It lists some information about the parameters with which the server is running.

9.154 DHCP6_SUBNET_DATA

```
%1: the selected subnet details: %2
```

Logged at debug log level 55. This debug message includes the details of the subnet selected for the client. The first argument includes the client and the transaction identification information. The second argument includes the subnet details.

9.155 DHCP6_SUBNET_DYNAMICALLY_CHANGED

```
%1: changed selected subnet %2 to subnet %3 from shared network %4 for client assignments
```

Logged at debug log level 45. This debug message indicates that the server is using another subnet than initially selected for client assignments. This newly selected subnet belongs to the same shared network as the original subnet. Some reasons why the new subnet was selected include: address pool exhaustion in the original subnet or the fact that the new subnet includes some static reservations for this client.

9.156 DHCP6_SUBNET_SELECTED

```
%1: the subnet with ID %2 was selected for client assignments
```

Logged at debug log level 45. This is a debug message noting the selection of a subnet to be used for address and option assignment. Subnet selection is one of the early steps in the processing of incoming client message. The first argument includes the client and the transaction identification information. The second argument holds the selected subnet id.

9.157 DHCP6_SUBNET_SELECTION_FAILED

```
%1: failed to select subnet for the client
```

Logged at debug log level 50. This debug message indicates that the server failed to select the subnet for the client which has sent a message to the server. The cause is likely due to a misconfiguration of the server. The packet processing will continue, but the response will only contain generic configuration and no addresses or prefixes. The argument includes the client and the transaction identification information.

9.158 DHCP6_UNKNOWN_MSG_RECEIVED

```
%1: received unknown message (type %2) on interface %3
```

Logged at debug log level 40. This debug message is printed when server receives a message of unknown type. That could either mean missing functionality or invalid or broken relay or client. The list of formally defined message types is available here: http://www.iana.org/assignments/dhcpv6-parameters.

CHAPTER

TEN

DHCPSRV

10.1 DHCPSRV_CFGMGR_ADD_IFACE

```
listening on interface %1
```

An info message issued when a new interface is being added to the collection of interfaces on which the server listens to DHCP messages.

10.2 DHCPSRV_CFGMGR_ADD_SUBNET4

```
adding subnet %1
```

Logged at debug log level 40. A debug message reported when the DHCP configuration manager is adding the specified IPv4 subnet to its database.

10.3 DHCPSRV_CFGMGR_ADD_SUBNET6

```
adding subnet %1
```

Logged at debug log level 40. A debug message reported when the DHCP configuration manager is adding the specified IPv6 subnet to its database.

10.4 DHCPSRV_CFGMGR_ALL_IFACES_ACTIVE

```
enabling listening on all interfaces
```

Logged at debug log level 40. A debug message issued when the server is being configured to listen on all interfaces.

10.5 DHCPSRV_CFGMGR_CFG_DHCP_DDNS

```
Setting DHCP-DDNS configuration to: %1
```

Logged at debug log level 40. A debug message issued when the server's DHCP-DDNS settings are changed.

10.6 DHCPSRV_CFGMGR_CONFIG4_MERGED

```
Configuration backend data has been merged.
```

This is an informational message emitted when the DHCPv4 server has successfully merged configuration data retrieved from its configuration backends into the current configuration.

10.7 DHCPSRV_CFGMGR_CONFIG6_MERGED

```
Configuration backend data has been merged.
```

This is an informational message emitted when the DHCPv6 server has successfully merged configuration data retrieved from its configuration backends into the current configuration.

10.8 DHCPSRV_CFGMGR_CONFIGURE_SERVERID

```
server configuration includes specification of a server identifier
```

This warning message is issued when the server specified configuration of a server identifier. If this new configuration overrides an existing server identifier, this will affect existing bindings of the clients. Clients will use old server identifier when they renew their bindings. The server will not respond to those renews, and the clients will eventually transition to rebinding state. The server should reassign existing bindings and the clients will subsequently use new server identifier. It is recommended to not modify the server identifier, unless there is a good reason for it, to avoid increased number of renewals and a need for rebinding (increase of multicast traffic, which may be received by multiple servers).

10.9 DHCPSRV_CFGMGR_DEL_SUBNET4

```
IPv4 subnet %1 removed
```

Logged at debug log level 40. This debug message is issued when a subnet is successfully removed from the server configuration. The argument identifies the removed subnet.

10.10 DHCPSRV_CFGMGR_DEL_SUBNET6

```
IPv6 subnet %1 removed
```

Logged at debug log level 40. This debug message is issued when a subnet is successfully removed from the server configuration. The argument identifies the removed subnet.

10.11 DHCPSRV_CFGMGR_FLQ_POPULATE_FREE_ADDRESS_LEASES

```
populating free address leases for the FLQ allocator in subnet %1; it can take a while!
```

This informational message is issued when the server begins building a queue of free address leases for the given subnet. It can take a considerable amount of time, depending on the size of the address pools.

10.12 DHCPSRV_CFGMGR_FLQ_POPULATE_FREE_ADDRESS_LEASES_DONE

```
populated %1 free address leases for the FLQ allocator in subnet %2 in %3
```

This informational message is issued when the server ends building a queue of free address leases for a given subnet. The first argument logs the number of free leases, the second argument logs the subnet, and the third argument logs a duration.

10.13 DHCPSRV_CFGMGR_FLQ_POPULATE_FREE_PREFIX_LEASES

```
populating free prefix leases for the FLQ allocator in subnet %1; it can take a while!
```

This informational message is issued when the server begins building a queue of free leases for the given subnet. It can take a considerable amount of time, depending on the size of the delegated prefix pools.

10.14 DHCPSRV_CFGMGR_FLQ_POPULATE_FREE_PREFIX_LEASES_DONE

```
populated %1 free prefix leases for the FLQ allocator in subnet %2 completed in %3
```

This informational message is issued when the server ends building a queue of free prefix leases for a given subnet. The first argument logs the number of free leases, the second argument logs the subnet, and the third argument logs a duration.

10.15 DHCPSRV_CFGMGR_IPV4_RESERVATIONS_NON_UNIQUE_IGNORED

```
ignoring "ip-reservations-unique" setting because at least one of the host database␣
↪backends does not support non-unique IP reservations in a subnet
```

This warning message is issued when the server failed to use the new setting of the ip-reservations-unique global parameter configured via the configuration backend. Some host database backends used apparently do not support specifying several reservations for the same IP address in a subnet. The administrator should either stop using the backend that does not support this setting or set the value of the ip-reservations-unique to true to resolve the configuration issue.

10.16 DHCPSRV_CFGMGR_IPV6_RESERVATIONS_NON_UNIQUE_IGNORED

```
ignoring "ip-reservations-unique" setting because at least one of the host database␣
↪backends does not support non unique IP reservations in a subnet
```

This warning message is issued when the server failed to use the new setting of the ip-reservations-unique global parameter configured via the configuration backend. Some host database backends used apparently do not support specifying several reservations for the same IP address or delegated prefix in a subnet. The administrator should either stop using the backend that does not support this setting or set the value of the ip-reservations-unique to true to resolve the configuration issue.

10.17 DHCPSRV_CFGMGR_IP_RESERVATIONS_UNIQUE_DUPLICATES_DETEC

```
the "ip-reservations-unique" flag is set to true and multiple reservations for the IP␣
↪address %1 in subnet %2 are not allowed causing error: %3
```

This warning message is issued when the DHCP server is configured to not allow multiple reservations for the same IP address. However, the host database backend contains multiple reservations for the IP address logged as the first argument, in the subnet logged as second argument, causing problems with lease allocation logged as third argument.

10.18 DHCPSRV_CFGMGR_IP_RESERVATIONS_UNIQUE_DUPLICATES_POSSI

```
setting "ip-reservations-unique" from false to true poses a risk that some host backends␣
↪may still contain multiple reservations for the same IP address
```

This warning message is issued when the DHCP server is configured to not allow multiple reservations for the same IP address. However, the host database backends may still contain multiple reservations for the same IP addresses causing problems with lease allocation for certain addresses. Please ensure that all such duplicates are removed.

10.19 DHCPSRV_CFGMGR_NEW_SUBNET4

```
a new subnet has been added to configuration: %1
```

This is an informational message reporting that the configuration has been extended to include the specified IPv4 subnet.

10.20 DHCPSRV_CFGMGR_NEW_SUBNET6

```
a new subnet has been added to configuration: %1
```

This is an informational message reporting that the configuration has been extended to include the specified subnet.

10.21 DHCPSRV_CFGMGR_OPTION_DUPLICATE

```
multiple options with the code: %1 added to the subnet: %2
```

This warning message is issued on an attempt to configure multiple options with the same option code for the particular subnet. Adding multiple options is uncommon for DHCPv6, but it is not prohibited.

10.22 DHCPSRV_CFGMGR_RENEW_GTR_REBIND

```
in %1, the value of renew-timer %2 is greater than the value of rebind-timer %3,␣
↪ignoring renew-timer
```

A warning message that indicates the configured renew-timer is greater than the configured rebind-timer. The server will ignore the renew timer value and send the rebind timer value only. This is considered a non-fatal configuration error.

10.23 DHCPSRV_CFGMGR_SOCKET_RAW_UNSUPPORTED

```
use of raw sockets is unsupported on this OS, UDP sockets will be used
```

This warning message is logged when the user specified that the DHCPv4 server should use the raw sockets to receive the DHCP messages and respond to the clients, but the use of raw sockets is not supported on the particular environment. The raw sockets are useful when the server must respond to the directly connected clients which don't have an address yet. If the raw sockets are not supported by Kea on the particular platform, Kea will fall back to use of the IP/UDP sockets. The responses to the directly connected clients will be broadcast. The responses to relayed clients will be unicast as usual.

10.24 DHCPSRV_CFGMGR_SOCKET_TYPE_DEFAULT

```
"dhcp-socket-type" not specified , using default socket type %1
```

This informational message is logged when the administrator hasn't specified the "dhcp-socket-type" parameter in configuration for interfaces. In such case, the default socket type will be used.

10.25 DHCPSRV_CFGMGR_SOCKET_TYPE_SELECT

```
using socket type %1
```

This informational message is logged when the DHCPv4 server selects the socket type to be used for all sockets that will be opened on the interfaces. Typically, the socket type is specified by the server administrator. If the socket type hasn't been specified, the raw socket will be selected. If the raw socket has been selected but Kea doesn't support the use of raw sockets on the particular OS, it will use an UDP socket instead.

10.26 DHCPSRV_CFGMGR_SUBNET4

```
retrieved subnet %1 for address hint %2
```

Logged at debug log level 40. This is a debug message reporting that the DHCP configuration manager has returned the specified IPv4 subnet when given the address hint specified as the address is within the subnet.

10.27 DHCPSRV_CFGMGR_SUBNET4_ADDR

```
selected subnet %1 for packet received by matching address %2
```

Logged at debug log level 40. This is a debug message reporting that the DHCP configuration manager has returned the specified IPv4 subnet for a received packet. This particular subnet was selected, because an IPv4 address was matched which belonged to that subnet.

10.28 DHCPSRV_CFGMGR_SUBNET4_IFACE

```
selected subnet %1 for packet received over interface %2
```

Logged at debug log level 40. This is a debug message reporting that the DHCP configuration manager has returned the specified IPv4 subnet for a packet received over the given interface. This particular subnet was selected, because it was specified as being directly reachable over the given interface. (see 'interface' parameter in the subnet4 definition).

10.29 DHCPSRV_CFGMGR_SUBNET4_RELAY

```
selected subnet %1, because of matching relay addr %2
```

Logged at debug log level 40. This is a debug message reporting that the DHCP configuration manager has returned the specified IPv4 subnet, because detected relay agent address matches value specified for this subnet.

10.30 DHCPSRV_CFGMGR_SUBNET6

```
retrieved subnet %1 for address hint %2
```

Logged at debug log level 40. This is a debug message reporting that the DHCP configuration manager has returned the specified IPv6 subnet when given the address hint specified as the address is within the subnet.

10.31 DHCPSRV_CFGMGR_SUBNET6_IFACE

```
selected subnet %1 for packet received over interface %2
```

Logged at debug log level 40. This is a debug message reporting that the DHCP configuration manager has returned the specified IPv6 subnet for a packet received over given interface. This particular subnet was selected, because it was specified as being directly reachable over given interface. (see 'interface' parameter in the subnet6 definition).

10.32 DHCPSRV_CFGMGR_SUBNET6_IFACE_ID

```
selected subnet %1 (interface-id match) for incoming packet
```

Logged at debug log level 40. This is a debug message reporting that the DHCP configuration manager has returned the specified IPv6 subnet for a received packet. This particular subnet was selected, because value of interface-id option matched what was configured in the server's interface-id option for that selected subnet6. (see 'interface-id' parameter in the subnet6 definition).

10.33 DHCPSRV_CFGMGR_SUBNET6_RELAY

```
selected subnet %1, because of matching relay addr %2
```

Logged at debug log level 40. This is a debug message reporting that the DHCP configuration manager has returned the specified IPv6 subnet, because detected relay agent address matches value specified for this subnet.

10.34 DHCPSRV_CFGMGR_UNICAST_LINK_LOCAL

```
specified link local address %1 for unicast traffic on interface %2
```

This warning message is logged when user specified a link-local address to receive unicast traffic. The warning message is issued because it is an uncommon use.

10.35 DHCPSRV_CFGMGR_UPDATE_SUBNET4

```
updating subnet %1 (result %2)
```

Logged at debug log level 40. A debug message reported when the DHCP configuration manager is updating the specified IPv4 subnet in its current configuration. Subnet ID and result (expected to be true) are displayed.

10.36 DHCPSRV_CFGMGR_UPDATE_SUBNET6

```
updating subnet %1 (result %2)
```

Logged at debug log level 40. A debug message reported when the DHCP configuration manager is replacing the specified IPv6 subnet in its current configuration. Subnet ID and result (expected to be true) are displayed.

10.37 DHCPSRV_CFGMGR_USE_ADDRESS

```
listening on address %1, on interface %2
```

A message issued when the server is configured to listen on the explicitly specified IP address on the given interface.

10.38 DHCPSRV_CFGMGR_USE_ALLOCATOR

```
using the %1 allocator for %2 leases in subnet %3
```

A message issued when the configuration manager starts using a given allocator for a subnet.

10.39 DHCPSRV_CFGMGR_USE_UNICAST

```
listening on unicast address %1, on interface %2
```

An info message issued when configuring the DHCP server to listen on the unicast address on the specific interface.

10.40 DHCPSRV_CLASS_WITH_ADDITIONAL_AND_LIFETIMES

```
class: %1 has 'only-in-additional-list' true while specifying one or more lease life␣
↪time values. Life time values will be ignored.
```

This warning is emitted whenever a class is configured with 'only-in-addition-list' true as well as specifying one or more lease life time parameters (e.g. 'valid-lifetime', 'preferred-lifetime', or 'offer-lifetime'). Additional list classes are evaluated after lease assignment, thus parameters that would otherwise impact lease life times will have no affect.

10.41 DHCPSRV_CLIENT_CLASS_DEPRECATED

```
The parameter 'client-class' is deprecated. Use 'client-classes' list parameter instead
```

This warning message is emitted when configuration parsing detects the use of the deprecated 'client-class' parameter. It has been replaced by 'client-classes'. Users should migrate to the new list parameter.

10.42 DHCPSRV_CLOSE_DB

```
closing currently open %1 database
```

Logged at debug log level 40. This is a debug message, issued when the DHCP server closes the currently open lease database. It is issued at program shutdown and whenever the database access parameters are changed: in the latter case, the server closes the currently open database, and opens a database using the new parameters.

10.43 DHCPSRV_DDNS_TTL_PERCENT_TOO_SMALL

```
ddns-ttl-percent %1 of lease lifetime %2 is too small, ignoring it
```

Logged at debug log level 55. A debug message issued when the DDNS TTL value calculated using the ddns-ttl-percent is zero. Kea will ignore the value and calculate the DDNS TTL as though ddsn-ttl-percent were not specified. The value of ddns-ttl-percent and the lease lifetime are shown in the message details.

10.44 DHCPSRV_DHCP4O6_RECEIVED_BAD_PACKET

```
received bad DHCPv4o6 packet: %1
```

A bad DHCPv4o6 packet was received.

10.45 DHCPSRV_DHCP_DDNS_ERROR_EXCEPTION

```
error handler for DHCP_DDNS IO generated an expected exception: %1
```

This is an error message that occurs when an attempt to send a request to kea-dhcp-ddns fails there registered error handler threw an uncaught exception. This is a programmatic error which should not occur. By convention, the error handler should not propagate exceptions. Please report this error.

10.46 DHCPSRV_DHCP_DDNS_HANDLER_NULL

```
error handler for DHCP_DDNS IO is not set.
```

This is an error message that occurs when an attempt to send a request to kea-dhcp-ddns fails and there is no registered error handler. This is a programmatic error which should never occur and should be reported.

10.47 DHCPSRV_DHCP_DDNS_NCR_REJECTED

```
NameChangeRequest rejected by the sender: %1, ncr: %2
```

This is an error message indicating that NameChangeSender used to deliver DDNS update requests to kea-dhcp-ddns rejected the request. This most likely cause is the sender's queue has reached maximum capacity. This would imply that requests are being generated faster than they can be delivered.

10.48 DHCPSRV_DHCP_DDNS_NCR_SENT

```
NameChangeRequest sent to kea-dhcp-ddns: %1
```

Logged at debug log level 50. A debug message issued when a NameChangeRequest has been successfully sent to kea-dhcp-ddns.

10.49 DHCPSRV_DHCP_DDNS_SENDER_STARTED

```
NameChangeRequest sender has been started: %1
```

An informational message issued when a communication with kea-dhcp-ddns has been successfully started.

10.50 DHCPSRV_DHCP_DDNS_SENDER_STOPPED

```
NameChangeRequest sender has been stopped.
```

An informational message issued when a communication with kea-dhcp-ddns has been stopped. This normally occurs during reconfiguration and as part of normal shutdown. It may occur if kea-dhcp-ddns communications break down.

10.51 DHCPSRV_DHCP_DDNS_SUSPEND_UPDATES

```
DHCP_DDNS updates are being suspended.
```

This is a warning message indicating the DHCP_DDNS updates have been turned off. This should only occur if IO errors communicating with kea-dhcp-ddns have been experienced. Any such errors should have preceding entries in the log with details. No further attempts to communicate with kea-dhcp-ddns will be made without intervention.

10.52 DHCPSRV_EVAL_ERROR

```
%1: Expression '%2' evaluated to %3
```

This error message indicates that a problem was encountered while evaluating an expression of a client class. A description of the problem is printed.

10.53 DHCPSRV_EVAL_RESULT

```
%1: Expression '%2' evaluated to %3
```

Logged at debug log level 50. This debug message indicates that the expression of a client class has been successfully evaluated. The client class name and the result value of the evaluation are printed.

10.54 DHCPSRV_HOOK_LEASE4_RECOVER_SKIP

```
DHCPv4 lease %1 was not recovered from the declined state because a callout set the skip␣
↪status.
```

Logged at debug log level 40. This debug message is printed when a callout installed on lease4_recover hook point set the next step status to SKIP. For this particular hook point, this indicates that the server should not recover the lease from declined state. The server will leave the lease as it is, in the declined state. The server will attempt to recover it the next time decline recovery procedure takes place.

10.55 DHCPSRV_HOOK_LEASE4_RENEW_SKIP

```
DHCPv4 lease was not renewed because a callout set the skip flag.
```

Logged at debug log level 40. This debug message is printed when a callout installed on lease4_renew hook point set the skip flag. For this particular hook point, the setting of the flag by a callout instructs the server to not renew a lease. The server will use existing lease as it is, without extending its lifetime.

10.56 DHCPSRV_HOOK_LEASE4_SELECT_SKIP

```
Lease4 creation was skipped, because of callout skip flag.
```

Logged at debug log level 40. This debug message is printed when a callout installed on lease4_select hook point sets the skip flag. It means that the server was told that no lease4 should be assigned. The server will not put that lease in its database and the client will get a NAK packet.

10.57 DHCPSRV_HOOK_LEASE6_EXTEND_SKIP

```
DHCPv6 lease lifetime was not extended because a callout set the skip flag for message %1
```

Logged at debug log level 40. This debug message is printed when a callout installed on lease6_renew or the lease6_rebind hook point set the skip flag. For this particular hook point, the setting of the flag by a callout instructs the server to not extend the lifetime for a lease. If the client requested renewal of multiple leases (by sending multiple IA options), the server will skip the renewal of the one in question and will proceed with other renewals as usual.

10.58 DHCPSRV_HOOK_LEASE6_RECOVER_SKIP

```
DHCPv6 lease %1 was not recovered from declined state because a callout set the skip␣
↪status.
```

Logged at debug log level 40. This debug message is printed when a callout installed on lease6_recover hook point set the next step status to SKIP. For this particular hook point, this indicates that the server should not recover the lease from declined state. The server will leave the lease as it is, in the declined state. The server will attempt to recover it the next time decline recovery procedure takes place.

10.59 DHCPSRV_HOOK_LEASE6_SELECT_SKIP

```
Lease6 (non-temporary) creation was skipped, because of callout skip flag.
```

Logged at debug log level 40. This debug message is printed when a callout installed on lease6_select hook point sets the skip flag. It means that the server was told that no lease6 should be assigned. The server will not put that lease in its database and the client will get a NoAddrsAvail for that IA_NA option.

10.60 DHCPSRV_HOST_MGR_DB_OPEN_CONNECTION_WITH_RETRY_FAILEI

```
Failed to connect to database: %1 with error: %2
```

This is an informational message issued when the server failed to connect to the host database. The operation started a retry to connect procedure. The database access string with password redacted is logged, along with the error and details for the reconnect procedure.

10.61 DHCPSRV_LEASE4_EXTENDED_INFO_SANITY_FAIL

```
extended info for lease %1 failed checks (%2)
```

This error message is printed when a lease extended info failed to pass sanity checks. The detail of the found problem was displayed and the extended info deleted from the lease user context.

10.62 DHCPSRV_LEASE4_EXTENDED_INFO_UPGRADED

```
extended info for lease %1 was upgraded
```

Logged at debug log level 40. This debug message is printed when a lease extended info was upgraded.

10.63 DHCPSRV_LEASE6_EXTENDED_INFO_SANITY_FAIL

```
extended info for lease %1 failed checks (%2)
```

This error message is printed when a lease extended info failed to pass sanity checks. The detail of the found problem was displayed and the extended info deleted from the lease user context.

10.64 DHCPSRV_LEASE6_EXTENDED_INFO_UPGRADED

```
extended info for lease %1 was upgraded
```

Logged at debug log level 40. This debug message is printed when a lease extended info was upgraded.

10.65 DHCPSRV_LEASE_MGR_BACKENDS_REGISTERED

```
the following lease backend types are available: %1
```

This informational message lists all possible lease backends that could be used in lease-database.

10.66 DHCPSRV_LEASE_MGR_BACKEND_DEREGISTER

```
deregistered lease backend type: %1
```

Logged at debug log level 40. This debug message is issued when a backend factory was deregistered. It is no longer possible to use lease backend of this type.

10.67 DHCPSRV_LEASE_MGR_BACKEND_REGISTER

```
registered lease backend type: %1
```

Logged at debug log level 40. This debug message is issued when a backend factory was successfully registered. It is now possible to use lease backend of this type.

10.68 DHCPSRV_LEASE_MGR_CALLBACK_EXCEPTION

```
exception occurred in a lease manager callback for callback type %1, subnet id %2, and␣
↪lease %3: %4
```

This warning message is printed when one of the callback functions registered in the lease manager causes an error. The callback functions can serve different purposes and they likely log the detailed error messages. This error message possibly indicates an unhandled error. The first argument indicates a callback type. The second argument prints the subnet id. The third argument prints the lease for which the error has occurred. The last argument prints the error text.

10.69 DHCPSRV_LEASE_MGR_CALLBACK_UNKNOWN_EXCEPTION

```
unknown exception occurred in a lease manager callback for callback type %1, subnet id
↪%2, and lease %3
```

This warning message is printed when one of the callback functions registered in the lease manager causes an unknown error. The callback functions can serve different purposes and they likely log the detailed error messages. This error message possibly indicates an unhandled error. The first argument indicates a callback type. The second argument prints the subnet id. The third argument prints the lease for which the error has occurred. This log message variant contains no error text because it is triggered by an unknown exception.

10.70 DHCPSRV_LEASE_MGR_DB_OPEN_CONNECTION_WITH_RETRY_FAILE

```
Failed to connect to database: %1 with error: %2
```

This is an informational message issued when the server failed to connect to the lease database. The operation started a retry to connect procedure. The database access string with password redacted is logged, along with the error and details for the reconnect procedure.

10.71 DHCPSRV_LEASE_SANITY_FAIL

```
The lease %1 with subnet-id %2 failed subnet-id checks (%3).
```

This warning message is printed when the lease being loaded does not match the configuration. Due to lease-checks value, the lease will be loaded, but it will most likely be unused by Kea, as there is no subnet that matches the IP address associated with the lease.

10.72 DHCPSRV_LEASE_SANITY_FAIL_DISCARD

```
The lease %1 with subnet-id %2 failed subnet-id checks (%3) and was dropped.
```

This warning message is printed when a lease was loaded, but Kea was told (by setting lease-checks parameter) to discard leases with inconsistent data. The lease was discarded, because either there is no subnet configured with matching subnet-id or the address of the lease does not belong to the subnet.

10.73 DHCPSRV_LEASE_SANITY_FIXED

```
The lease %1 with subnet-id %2 failed subnet-id checks, but was corrected to subnet-id
↪%3.
```

This informational message is printed when a lease was loaded, but had incorrect subnet-id value. The lease-checks parameter was set to a value that told Kea to try to correct the problem. There is a matching subnet, so Kea updated subnet-id and loaded the lease successfully.

10.74 DHCPSRV_MEMFILE_ADD_ADDR4

```
adding IPv4 lease with address %1
```

Logged at debug log level 50. A debug message issued when the server is about to add an IPv4 lease with the specified address to the memory file backend database.

10.75 DHCPSRV_MEMFILE_ADD_ADDR6

```
adding IPv6 lease with address %1
```

Logged at debug log level 50. A debug message issued when the server is about to add an IPv6 lease with the specified address to the memory file backend database.

10.76 DHCPSRV_MEMFILE_BEGIN_BUILD_EXTENDED_INFO_TABLES6

```
building extended info tables with %1 sanity check level, tables %2
```

Logged at debug log level 40. A debug message issued when the server is building extended info tables. The extended info sanity check level and the fact tables are enabled or disabled are displayed.

10.77 DHCPSRV_MEMFILE_BEGIN_EXTRACT_EXTENDED_INFO4

```
extract extended info with %1 sanity check level%2
```

Logged at debug log level 40. A debug message issued when the server is extracting extended info. The extended info sanity check level and update in file when requested are displayed.

10.78 DHCPSRV_MEMFILE_BUILD_EXTENDED_INFO_TABLES6

```
building extended info tables saw %1 leases, extended info sanity checks modified %2␣
↪leases and %3 leases were entered into tables
```

Extended info tables build was finished. Some statistics are displayed, the updated in database is returned to the command interface.

10.79 DHCPSRV_MEMFILE_BUILD_EXTENDED_INFO_TABLES6_ERROR

```
building extended info tables got an exception on the lease for %1: %2
```

An error message issued when the server is building extended info tables and receives an exception processing a lease.

10.80 DHCPSRV_MEMFILE_COMMIT

```
committing to memory file database
```

Logged at debug log level 50. The code has issued a commit call. For the memory file database this is a no-op.

10.81 DHCPSRV_MEMFILE_CONVERTING_LEASE_FILES

```
running LFC now to convert lease files to the current schema: %1.%2
```

A warning message issued when the server has detected lease files that need to be either upgraded or downgraded to match the server's schema, and that the server is automatically running the LFC process to perform the conversion. This should only occur the first time the server is launched following a Kea installation upgrade (or downgrade).

10.82 DHCPSRV_MEMFILE_DB

```
opening memory file lease database: %1
```

This informational message is logged when a DHCP server (either V4 or V6) is about to open a memory file lease database. The parameters of the connection including database name and username needed to access it (but not the password if any) are logged.

10.83 DHCPSRV_MEMFILE_DELETE_ADDR4

```
deleting lease for address %1
```

Logged at debug log level 50. A debug message issued when the server is attempting to delete a lease for the specified address from the memory file database for the specified address.

10.84 DHCPSRV_MEMFILE_DELETE_ADDR6

```
deleting lease for address %1
```

Logged at debug log level 50. A debug message issued when the server is attempting to delete a lease for the specified address from the memory file database for the specified address.

10.85 DHCPSRV_MEMFILE_DELETE_EXPIRED_RECLAIMED4

```
deleting reclaimed IPv4 leases that expired more than %1 seconds ago
```

Logged at debug log level 50. A debug message issued when the server is removing reclaimed DHCPv4 leases which have expired longer than a specified period of time. The argument is the amount of time Kea waits after a reclaimed lease expires before considering its removal.

10.86 DHCPSRV_MEMFILE_DELETE_EXPIRED_RECLAIMED6

```
deleting reclaimed IPv6 leases that expired more than %1 seconds ago
```

Logged at debug log level 50. A debug message issued when the server is removing reclaimed DHCPv6 leases which have expired longer than a specified period of time. The argument is the amount of time Kea waits after a reclaimed lease expires before considering its removal.

10.87 DHCPSRV_MEMFILE_DELETE_EXPIRED_RECLAIMED_START

```
starting deletion of %1 expired-reclaimed leases
```

Logged at debug log level 50. A debug message issued when the server has found expired-reclaimed leases to be removed. The number of leases to be removed is logged in the message.

10.88 DHCPSRV_MEMFILE_EXTRACT_EXTENDED_INFO4

```
extracting extended info saw %1 leases, extended info sanity checks modified %2 /␣
↪updated %3 leases and %4 leases have relay or remote id
```

Logged at debug log level 40. Extended info extraction was finished. Some statistics are displayed, the updated in database is returned to the command interface.

10.89 DHCPSRV_MEMFILE_EXTRACT_EXTENDED_INFO4_ERROR

```
extracting extended info got an exception on the lease for %1: %2
```

Logged at debug log level 40. A debug message issued when the server is extracting extended info and receives an exception processing a lease.

10.90 DHCPSRV_MEMFILE_GET4

```
obtaining all IPv4 leases
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain all IPv4 leases from the memory file database.

10.91 DHCPSRV_MEMFILE_GET6

```
obtaining all IPv6 leases
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain all IPv6 leases from the memory file database.

10.92 DHCPSRV_MEMFILE_GET6_DUID

```
obtaining IPv6 leases for DUID %1
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain IPv6 leases from the memory file database for the DUID.

10.93 DHCPSRV_MEMFILE_GET_ADDR4

```
obtaining IPv4 lease for address %1
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain an IPv4 lease from the memory file database for the specified address.

10.94 DHCPSRV_MEMFILE_GET_ADDR6

```
obtaining IPv6 lease for address %1 and lease type %2
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain an IPv6 lease from the memory file database for the specified address.

10.95 DHCPSRV_MEMFILE_GET_CLIENTID

```
obtaining IPv4 leases for client ID %1
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain a set of IPv4 leases from the memory file database for a client with the specified client identification.

10.96 DHCPSRV_MEMFILE_GET_EXPIRED4

```
obtaining maximum %1 of expired IPv4 leases
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain expired IPv4 leases to reclaim them. The maximum number of leases to be retrieved is logged in the message.

10.97 DHCPSRV_MEMFILE_GET_EXPIRED6

```
obtaining maximum %1 of expired IPv6 leases
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain expired IPv6 leases to reclaim them. The maximum number of leases to be retrieved is logged in the message.

10.98 DHCPSRV_MEMFILE_GET_HOSTNAME4

```
obtaining IPv4 leases for hostname %1
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain a set of IPv4 leases from the memory file database for a client with the specified hostname.

10.99 DHCPSRV_MEMFILE_GET_HOSTNAME6

```
obtaining IPv6 leases for hostname %1
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain a set of IPv6 leases from the memory file database for a client with the specified hostname.

10.100 DHCPSRV_MEMFILE_GET_HWADDR

```
obtaining IPv4 leases for hardware address %1
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain a set of IPv4 leases from the memory file database for a client with the specified hardware address.

10.101 DHCPSRV_MEMFILE_GET_IAID_DUID

```
obtaining IPv6 leases for IAID %1 and DUID %2 and lease type %3
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain a set of IPv6 leases from the memory file database for a client with the specified IAID (Identity Association ID) and DUID (DHCP Unique Identifier).

10.102 DHCPSRV_MEMFILE_GET_IAID_SUBID_DUID

```
obtaining IPv6 leases for IAID %1, Subnet ID %2, DUID %3 and lease type %4
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain an IPv6 lease from the memory file database for a client with the specified IAID (Identity Association ID), Subnet ID and DUID (DHCP Unique Identifier).

10.103 DHCPSRV_MEMFILE_GET_PAGE4

```
obtaining at most %1 IPv4 leases starting from address %2
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain a page of leases beginning with the specified address.

10.104 DHCPSRV_MEMFILE_GET_PAGE6

```
obtaining at most %1 IPv6 leases starting from address %2
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain a page of leases beginning with the specified address.

10.105 DHCPSRV_MEMFILE_GET_RELAYID4

```
obtaining at most %1 IPv4 leases starting from address %2 with relay id %3 and cltt␣
↪between %4 and %5
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain a page of IPv4 leases beginning with the specified address with a relay id and client transaction time between start and end dates.

10.106 DHCPSRV_MEMFILE_GET_RELAYID6

```
obtaining at most %1 IPv6 leases starting from address %2 with relay id %3
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain a page of IPv6 leases beginning with the specified address with a relay id.

10.107 DHCPSRV_MEMFILE_GET_REMOTEID4

```
obtaining at most %1 IPv4 leases starting from address %2 with remote id %3 and cltt␣
↪between %4 and %5
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain a page of IPv4 leases beginning with the specified address with a remote id and client transaction time between start and end dates.

10.108 DHCPSRV_MEMFILE_GET_REMOTEID6

```
obtaining at most %1 IPv6 leases starting from address %2 with remote id %3
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain a page of IPv6 leases beginning with the specified address with a remote id.

10.109 DHCPSRV_MEMFILE_GET_SUBID4

```
obtaining IPv4 leases for subnet ID %1
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain all IPv4 leases for a given subnet identifier from the memory file database.

10.110 DHCPSRV_MEMFILE_GET_SUBID6

```
obtaining IPv6 leases for subnet ID %1
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain all IPv6 leases for a given subnet identifier from the memory file database.

10.111 DHCPSRV_MEMFILE_GET_SUBID_CLIENTID

```
obtaining IPv4 lease for subnet ID %1 and client ID %2
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain an IPv4 lease from the memory file database for a client with the specified subnet ID and client ID.

10.112 DHCPSRV_MEMFILE_GET_SUBID_HWADDR

```
obtaining IPv4 lease for subnet ID %1 and hardware address %2
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain an IPv4 lease from the memory file database for a client with the specified subnet ID and hardware address.

10.113 DHCPSRV_MEMFILE_GET_SUBID_PAGE6

```
obtaining at most %1 IPv6 leases starting from address %2 for subnet ID %3
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain a page of IPv6 leases from the memory file database beginning with the specified address for a given subnet identifier.

10.114 DHCPSRV_MEMFILE_LEASE_FILE_LOAD

```
loading leases from file %1
```

An info message issued when the server is about to start reading DHCP leases from the lease file. All leases currently held in the memory will be replaced by those read from the file.

10.115 DHCPSRV_MEMFILE_LEASE_LOAD

```
loading lease %1
```

Logged at debug log level 55. A debug message issued when DHCP lease is being loaded from the file to memory.

10.116 DHCPSRV_MEMFILE_LEASE_LOAD_ROW_ERROR

```
discarding row %1, error: %2
```

An error message issued if the DHCP lease being loaded from the given row of the lease file fails. The log message should contain the specific reason the row was discarded. The server continues loading the remaining data. This may indicate a corrupt lease file.

10.117 DHCPSRV_MEMFILE_LFC_EXECUTE

```
executing Lease File Cleanup using: %1
```

An informational message issued when the memfile lease database backend starts a new process to perform Lease File Cleanup.

10.118 DHCPSRV_MEMFILE_LFC_LEASE_FILE_RENAME_FAIL

```
failed to rename the current lease file %1 to %2, reason: %3
```

An error message logged when the memfile lease database backend fails to move the current lease file to a new file on which the cleanup should be performed. This effectively means that the lease file cleanup does not take place.

10.119 DHCPSRV_MEMFILE_LFC_LEASE_FILE_REOPEN_FAIL

```
failed to reopen lease file %1 after preparing input file for lease file cleanup,␣
↪reason: %2, new leases will not persist!
```

An error message logged when the memfile lease database backend failed to re-open or re-create the lease file after renaming the lease file for lease file cleanup. The server continues to operate but leases do not persist to disk.

10.120 DHCPSRV_MEMFILE_LFC_SETUP

```
setting up the Lease File Cleanup interval to %1 sec
```

An informational message logged when the memfile lease database backend configures the LFC to be executed periodically. The argument holds the interval in seconds in which the LFC will be executed.

10.121 DHCPSRV_MEMFILE_LFC_SPAWN_FAIL

```
lease file cleanup failed to run because kea-lfc process couldn't be spawned
```

This error message is logged when the Kea server fails to run kea-lfc, the program that cleans up the lease file. The server will try again the next time a lease file cleanup is scheduled. Although this message should not appear and the reason why it did investigated, the occasional failure to start the lease file cleanup will not impact operations. Should the failure persist however, the size of the lease file will increase without bound.

10.122 DHCPSRV_MEMFILE_LFC_START

```
starting Lease File Cleanup
```

An informational message issued when the Memfile lease database backend starts the periodic Lease File Cleanup.

10.123 DHCPSRV_MEMFILE_LFC_UNREGISTER_TIMER_FAILED

```
failed to unregister timer 'memfile-lfc': %1
```

Logged at debug log level 40. This debug message is logged when Memfile backend fails to unregister timer used for lease file cleanup scheduling. There are several reasons why this could occur, although the most likely cause is that the system is being shut down and some other component has unregistered the timer. The message includes the reason for this error.

10.124 DHCPSRV_MEMFILE_NEEDS_DOWNGRADING

```
version of lease file: %1 schema is later than version %2
```

A warning message issued when the schema of the lease file loaded by the server is newer than the memfile schema of the server. The server converts the lease data from newer schemas to its schema as it is read, therefore the lease information in use by the server will be correct. Note though, that any data stored in newer schema fields will be dropped. What remains is for the file itself to be rewritten using the current schema.

10.125 DHCPSRV_MEMFILE_NEEDS_UPGRADING

```
version of lease file: %1 schema is earlier than version %2
```

A warning message issued when the schema of the lease file loaded by the server pre-dates the memfile schema of the server. Note that the server converts the lease data from older schemas to the current schema as it is read, therefore the lease information in use by the server will be correct. What remains is for the file itself to be rewritten using the current schema.

10.126 DHCPSRV_MEMFILE_NO_STORAGE

```
running in non-persistent mode, leases will be lost after restart
```

A warning message issued when writes of leases to disk have been disabled in the configuration. This mode is useful for some kinds of performance testing but should not be enabled in normal circumstances. Non-persistence mode is enabled when 'persist4=no persist6=no' parameters are specified in the database access string.

10.127 DHCPSRV_MEMFILE_READ_HWADDR_FAIL

```
failed to read hardware address from lease file: %1
```

A warning message issued when read attempt of the hardware address stored in a disk file failed. The parameter should provide the exact nature of the failure. The database read will continue, but that particular lease will no longer have hardware address associated with it.

10.128 DHCPSRV_MEMFILE_ROLLBACK

```
rolling back memory file database
```

Logged at debug log level 50. The code has issued a rollback call. For the memory file database this is a no-op.

10.129 DHCPSRV_MEMFILE_UPDATE_ADDR4

```
updating IPv4 lease for address %1
```

Logged at debug log level 50. A debug message issued when the server is attempting to update IPv4 lease from the memory file database for the specified address.

10.130 DHCPSRV_MEMFILE_UPDATE_ADDR6

```
updating IPv6 lease for address %1
```

Logged at debug log level 50. A debug message issued when the server is attempting to update IPv6 lease from the memory file database for the specified address.

10.131 DHCPSRV_MEMFILE_WIPE_LEASES4

```
removing all IPv4 leases from subnet %1
```

This informational message is printed when removal of all leases from specified IPv4 subnet is commencing. This is a result of receiving administrative command.

10.132 DHCPSRV_MEMFILE_WIPE_LEASES4_FINISHED

```
removing all IPv4 leases from subnet %1 finished, removed %2 leases
```

This informational message is printed when removal of all leases from a specified IPv4 subnet has finished. The number of removed leases is printed.

10.133 DHCPSRV_MEMFILE_WIPE_LEASES6

```
removing all IPv6 leases from subnet %1
```

This informational message is printed when removal of all leases from specified IPv6 subnet is commencing. This is a result of receiving administrative command.

10.134 DHCPSRV_MEMFILE_WIPE_LEASES6_FINISHED

```
removing all IPv6 leases from subnet %1 finished, removed %2 leases
```

This informational message is printed when removal of all leases from a specified IPv6 subnet has finished. The number of removed leases is printed.

10.135 DHCPSRV_MT_DISABLED_QUEUE_CONTROL

```
disabling dhcp queue control when multi-threading is enabled.
```

This warning message is issued when dhcp queue control is disabled automatically if multi-threading is enabled. These two options are incompatible and can not both be enabled at the same time.

10.136 DHCPSRV_MULTIPLE_RAW_SOCKETS_PER_IFACE

```
current configuration will result in opening multiple broadcast capable sockets on some␣
↪interfaces and some DHCP messages may be duplicated
```

A warning message issued when the current configuration indicates that multiple sockets, capable of receiving broadcast traffic, will be opened on some of the interfaces. It must be noted that this may lead to receiving and processing the same DHCP message multiple times, as it will be received by each socket individually.

10.137 DHCPSRV_NOTYPE_DB

```
no 'type' keyword to determine database backend: %1
```

This is an error message, logged when an attempt has been made to access a database backend, but where no 'type' keyword has been included in the access string. The access string (less any passwords) is included in the message.

10.138 DHCPSRV_NO_SOCKETS_OPEN

```
no interface configured to listen to DHCP traffic
```

This warning message is issued when the current server configuration specifies no interfaces that the server should listen on, or when the specified interfaces are not configured to receive the traffic.

10.139 DHCPSRV_ONLY_IF_REQUIRED_DEPRECATED

```
The parameter 'only-if-required' is deprecated. Use 'only-in-additional-list' instead
```

This warning message is emitted when configuration parsing detects the use of the deprecated 'only-if-required' parameter. It has been replaced by 'only-in-additional-list'. Users should migrate to the new parameter.

10.140 DHCPSRV_OPEN_SOCKET_FAIL

```
failed to open socket: %1
```

A warning message issued when IfaceMgr fails to open and bind a socket. The reason for the failure is appended as an argument of the log message.

10.141 DHCPSRV_QUEUE_NCR

```
%1: Name change request to %2 DNS entry queued: %3
```

Logged at debug log level 55. A debug message which is logged when the NameChangeRequest to add or remove a DNS entries for a particular lease has been queued. The first argument includes the client identification information. The second argument indicates whether the DNS entry is to be added or removed. The third argument carries the details of the NameChangeRequest.

10.142 DHCPSRV_QUEUE_NCR_FAILED

```
%1: queuing %2 name change request failed for lease %3: %4
```

This error message is logged when sending a NameChangeRequest to DHCP DDNS failed. The first argument includes the client identification information. The second argument indicates whether the DNS entry is to be added or removed. The third argument specifies the leased address. The last argument provides the reason for failure.

10.143 DHCPSRV_QUEUE_NCR_SKIP

```
%1: skip queuing name change request for lease: %2
```

Logged at debug log level 50. This debug message is issued when the server decides to not queue the name change request because the lease doesn't include the FQDN, the forward and reverse update is disabled for this lease or the DNS updates are disabled in the configuration. The first argument includes the client identification information. The second argument includes the leased address.

10.144 DHCPSRV_REQUIRE_CLIENT_CLASSES_DEPRECATED

```
The parameter 'require-client-classes' is deprecated. Use 'evaluate-additional-classes'␣
↪instead
```

This warning message is emitted when configuration parsing detects the use of the deprecated 'require-client-classes' parameter. It has been replaced by 'evaluate-additional-classes'. Users should migrate to the new parameter.

10.145 DHCPSRV_SUBNET4O6_SELECT_FAILED

```
Failed to select any subnet for the DHCPv4o6 packet
```

Logged at debug log level 40. A debug message issued when the server was unable to select any subnet for the DHCPv4o6 packet.

10.146 DHCPSRV_SUBNET4_SELECT_BY_ADDRESS_NO_MATCH

```
No subnet matches address: %1
```

Logged at debug log level 40. A debug message issued when the server was unable to select a subnet using the specified address.

10.147 DHCPSRV_SUBNET4_SELECT_BY_INTERFACE_NO_MATCH

```
No subnet matches interface: %1
```

Logged at debug log level 40. A debug message issued when the server was unable to select a subnet using the specified interface name.

10.148 DHCPSRV_SUBNET4_SELECT_BY_RELAY_ADDRESS_NO_MATCH

```
No subnet matches relay address: %1
```

Logged at debug log level 40. A debug message issued when the server was unable to select a subnet using the specified relay address.

10.149 DHCPSRV_SUBNET4_SELECT_NO_RAI_OPTIONS

```
No RAI options found to use for subnet selection.
```

Logged at debug log level 40. A debug message issued by the server when the client query does not include RAI options suitable for use with subnet selection.

10.150 DHCPSRV_SUBNET4_SELECT_NO_RELAY_ADDRESS

```
Relay address (giaddr) in client packet is empty.
```

Logged at debug log level 40. A debug message issued when no relay address was specified to use for subnet selection.

10.151 DHCPSRV_SUBNET4_SELECT_NO_USABLE_ADDRESS

```
No subnet selected because no suitable address to use for subnet selection was found.
```

Logged at debug log level 40. A debug message issued when the server was find a suitable address to use for subnet selection.

10.152 DHCPSRV_SUBNET6_SELECT_BY_ADDRESS_NO_MATCH

```
No subnet matches address: %1
```

Logged at debug log level 40. A debug message issued when the server was unable to select a subnet using the specified address.

10.153 DHCPSRV_SUBNET6_SELECT_BY_INTERFACE_ID_NO_MATCH

```
No subnet matches interface id: %1
```

Logged at debug log level 40. A debug message issued when the server was unable to select a subnet using the specified interface id.

10.154 DHCPSRV_SUBNET6_SELECT_BY_INTERFACE_NO_MATCH

```
No subnet matches interface: %1
```

Logged at debug log level 40. A debug message issued when the server was unable to select a subnet using the specified interface name.

10.155 DHCPSRV_TEMPLATE_EVAL_ERROR

```
%1: Expression '%2' evaluated to %3
```

This error message indicates that a problem was encountered while evaluating an expression of a template client class. A description of the problem is printed.

10.156 DHCPSRV_TEMPLATE_EVAL_RESULT

```
%1: Expression '%2' evaluated to %3
```

Logged at debug log level 50. This debug message indicates that the expression of a template client class has been successfully evaluated. The client class name and the result value of the evaluation are printed.

10.157 DHCPSRV_TIMERMGR_CALLBACK_FAILED

```
running handler for timer %1 caused exception: %2
```

This error message is emitted when the timer elapsed and the operation associated with this timer has thrown an exception. The timer name and the reason for exception is logged.

10.158 DHCPSRV_TIMERMGR_REGISTER_TIMER

```
registering timer: %1, using interval: %2 ms
```

Logged at debug log level 40. A debug message issued when the new interval timer is registered in the Timer Manager. This timer will have a callback function associated with it, and this function will be executed according to the interval specified. The unique name of the timer and the interval at which the callback function will be executed is included in the message.

10.159 DHCPSRV_TIMERMGR_RUN_TIMER_OPERATION

```
running operation for timer: %1
```

Logged at debug log level 50. A debug message issued when the Timer Manager is about to run a periodic operation associated with the given timer. An example of such operation is a periodic cleanup of expired leases. The name of the timer is included in the message.

10.160 DHCPSRV_TIMERMGR_START_TIMER

```
starting timer: %1
```

Logged at debug log level 40. A debug message issued when the registered interval timer is being started. If this operation is successful the timer will periodically execute the operation associated with it. The name of the started timer is included in the message.

10.161 DHCPSRV_TIMERMGR_STOP_TIMER

```
stopping timer: %1
```

Logged at debug log level 40. A debug message issued when the registered interval timer is being stopped. The timer remains registered and can be restarted if necessary. The name of the timer is included in the message.

10.162 DHCPSRV_TIMERMGR_UNREGISTER_ALL_TIMERS

```
unregistering all timers
```

Logged at debug log level 40. A debug message issued when all registered interval timers are being unregistered from the Timer Manager.

10.163 DHCPSRV_TIMERMGR_UNREGISTER_TIMER

```
unregistering timer: %1
```

Logged at debug log level 40. A debug message issued when one of the registered interval timers is unregistered from the Timer Manager. The name of the timer is included in the message.

CHAPTER ELEVEN

DHCP

11.1 DHCP_DDNS_ADD_FAILED

```
DHCP_DDNS Request ID %1: Transaction outcome %2
```

This is an error message issued after DHCP_DDNS attempts to submit DNS mapping entry additions have failed. The precise reason for the failure should be documented in preceding log entries.

11.2 DHCP_DDNS_ADD_SUCCEEDED

```
DHCP_DDNS Request ID %1: successfully added the DNS mapping addition for this request: %2
```

This is an informational message issued after DHCP_DDNS has submitted DNS mapping additions which were received and accepted by an appropriate DNS server.

11.3 DHCP_DDNS_AT_MAX_TRANSACTIONS

```
application has %1 queued requests but has reached maximum number of %2 concurrent␣
↪transactions
```

Logged at debug log level 55. This is a debug message that indicates that the application has DHCP_DDNS requests in the queue but is working as many concurrent requests as allowed.

11.4 DHCP_DDNS_CLEARED_FOR_SHUTDOWN

```
application has met shutdown criteria for shutdown type: %1
```

Logged at debug log level 0. This is a debug message issued when the application has been instructed to shutdown and has met the required criteria to exit.

11.5 DHCP_DDNS_CONFIGURE

```
configuration %1 received: %2
```

Logged at debug log level 40. This is a debug message issued when the DHCP-DDNS application configure method has been invoked.

11.6 DHCP_DDNS_CONFIGURED_CALLOUT_DROP

```
configuration was rejected because a callout set the next step to 'drop': %1
```

This error message indicates that the DHCP-DDNS had failed configuration attempt because the next step of the configured callout was set to 'drop' by a hook library. The error message provided by the hook library is displayed.

11.7 DHCP_DDNS_CONFIG_CHECK_FAIL

```
DHCP-DDNS server configuration check failed: %1
```

This error message indicates that the DHCP-DDNS had failed configuration check. Details are provided. Additional details may be available in earlier log entries, possibly on lower levels.

11.8 DHCP_DDNS_CONFIG_FAIL

```
DHCP-DDNS server configuration failed: %1
```

This error message indicates that the DHCP-DDNS had failed configuration attempt. Details are provided. Additional details may be available in earlier log entries, possibly on lower levels.

11.9 DHCP_DDNS_CONFIG_SYNTAX_WARNING

```
DHCP-DDNS server configuration syntax warning: %1
```

This warning message indicates that the DHCP-DDNS configuration had a minor syntax error. The error was displayed and the configuration parsing resumed.

11.10 DHCP_DDNS_FAILED

```
application experienced a fatal error: %1
```

This is a debug message issued when the DHCP-DDNS application encounters an unrecoverable error from within the event loop.

11.11 DHCP_DDNS_FORWARD_ADD_BAD_DNSCLIENT_STATUS

```
DHCP_DDNS Request ID %1: received an unknown DNSClient status: %2, while adding a␣
↪forward address mapping for FQDN %3 to DNS server %4
```

This is an error message issued when DNSClient returns an unrecognized status while DHCP_DDNS was adding a forward address mapping. The request will be aborted. This is most likely a programmatic issue and should be reported.

11.12 DHCP_DDNS_FORWARD_ADD_BUILD_FAILURE

```
DNS Request ID %1:  update message to add a forward DNS entry could not be constructed␣
↪for this request: %2, reason: %3
```

This is an error message issued when an error occurs attempting to construct the server bound packet requesting a forward address addition. This is due to invalid data contained in the NameChangeRequest. The request will be aborted. This is most likely a configuration issue.

11.13 DHCP_DDNS_FORWARD_ADD_IO_ERROR

```
DHCP_DDNS Request ID %1: encountered an IO error sending a forward mapping add for FQDN
↪%2 to DNS server %3
```

This is an error message issued when a communication error occurs while DHCP_DDNS is carrying out a forward address add. The application will retry against the same server or others as appropriate.

11.14 DHCP_DDNS_FORWARD_ADD_REJECTED

```
DNS Request ID %1: Server, %2, rejected a DNS update request to add the address mapping␣
↪for FQDN, %3, with an RCODE: %4
```

This is an error message issued when an update was rejected by the DNS server it was sent to for the reason given by the RCODE. The rcode values are defined in RFC 2136.

11.15 DHCP_DDNS_FORWARD_ADD_RESP_CORRUPT

```
DHCP_DDNS Request ID %1: received a corrupt response from the DNS server, %2, while␣
↪adding forward address mapping for FQDN, %3
```

This is an error message issued when the response received by DHCP_DDNS, to a update request to add a forward address mapping, is mangled or malformed. The application will retry against the same server or others as appropriate.

11.16 DHCP_DDNS_FORWARD_ADD_TIMEOUT

```
DHCP_DDNS Request ID %1: timed out waiting for a response to forward mapping add for␣
↪FQDN %2 to DNS server %3
```

This is an error message issued when no response is received from the DNS server before exceeding dns-server-timeout while DHCP_DDNS is carrying out a forward address add. The application will retry against the same server or others as appropriate.

11.17 DHCP_DDNS_FORWARD_REMOVE_ADDRS_BAD_DNSCLIENT_STATUS

```
DHCP_DDNS Request ID %1: received an unknown DNSClient status: %2, while removing a␣
↪forward address mapping for FQDN %3 to DNS server %4
```

This is an error message issued when DNSClient returns an unrecognized status while DHCP_DDNS was removing a forward address mapping. The request will be aborted. This is most likely a programmatic issue and should be reported.

11.18 DHCP_DDNS_FORWARD_REMOVE_ADDRS_BUILD_FAILURE

```
DNS Request ID %1: update message to remove a forward DNS Address entry could not be␣
↪constructed for this request: %2, reason: %3
```

This is an error message issued when an error occurs attempting to construct the server bound packet requesting a forward address (A or AAAA) removal. This is due to invalid data contained in the NameChangeRequest. The request will be aborted. This is most likely a configuration issue. */sar/*

11.19 DHCP_DDNS_FORWARD_REMOVE_ADDRS_IO_ERROR

```
DHCP_DDNS Request ID %1: encountered an IO error sending a forward mapping address␣
↪removal for FQDN %2 to DNS server %3
```

This is an error message issued when a communication error occurs while DHCP_DDNS is carrying out a forward address remove. The application will retry against the same server or others as appropriate.

11.20 DHCP_DDNS_FORWARD_REMOVE_ADDRS_REJECTED

```
DNS Request ID %1: Server, %2, rejected a DNS update request to remove the forward␣
↪address mapping for FQDN, %3, with an RCODE: %4
```

This is an error message issued when an update was rejected by the DNS server it was sent to for the reason given by the RCODE. The rcode values are defined in RFC 2136.

11.21 DHCP_DDNS_FORWARD_REMOVE_ADDRS_RESP_CORRUPT

```
DHCP_DDNS Request ID %1: received a corrupt response from the DNS server, %2, while␣
↪removing forward address mapping for FQDN, %3
```

This is an error message issued when the response received by DHCP_DDNS, to a update request to remove a forward address mapping, is mangled or malformed. The application will retry against the same server or others as appropriate.

11.22 DHCP_DDNS_FORWARD_REMOVE_ADDRS_TIMEOUT

```
DHCP_DDNS Request ID %1: timed out waiting for a response to forward mapping address␣
↪removal for FQDN %2 to DNS server %3
```

This is an error message issued when no response is received from the DNS server before exceeding dns-server-timeout while DHCP_DDNS is carrying out a forward mapping address removal. The application will retry against the same server or others as appropriate.

11.23 DHCP_DDNS_FORWARD_REMOVE_RRS_BAD_DNSCLIENT_STATUS

```
DHCP_DDNS Request ID %1: received an unknown DNSClient status: %2, while removing␣
↪forward RRs for FQDN %3 to DNS server %4
```

This is an error message issued when DNSClient returns an unrecognized status while DHCP_DDNS was removing forward RRs. The request will be aborted. This is most likely a programmatic issue and should be reported.

11.24 DHCP_DDNS_FORWARD_REMOVE_RRS_BUILD_FAILURE

```
DNS Request ID %1: update message to remove forward DNS RR entries could not be␣
↪constructed for this request: %2,  reason: %3
```

This is an error message issued when an error occurs attempting to construct the server bound packet requesting forward RR (DHCID RR) removal. This is due to invalid data contained in the NameChangeRequest. The request will be aborted. This is most likely a configuration issue.

11.25 DHCP_DDNS_FORWARD_REMOVE_RRS_IO_ERROR

```
DHCP_DDNS Request ID %1: encountered an IO error sending a forward RR removal for FQDN
↪%2 to DNS server %3
```

This is an error message issued when a communication error occurs while DHCP_DDNS is carrying out a forward RR remove. The application will retry against the same server.

11.26 DHCP_DDNS_FORWARD_REMOVE_RRS_REJECTED

```
DNS Request ID %1: Server, %2, rejected a DNS update request to remove forward RR␣
↪entries for FQDN, %3, with an RCODE: %4
```

This is an error message issued when an update was rejected by the DNS server it was sent to for the reason given by the RCODE. The rcode values are defined in RFC 2136.

11.27 DHCP_DDNS_FORWARD_REMOVE_RRS_RESP_CORRUPT

```
DHCP_DDNS Request ID %1: received a corrupt response from the DNS server, %2, while␣
↪removing forward RRs for FQDN, %3
```

This is an error message issued when the response received by DHCP_DDNS, to a update request to remove forward RRs mapping, is mangled or malformed. The application will retry against the same server or others as appropriate. */sar/*

11.28 DHCP_DDNS_FORWARD_REMOVE_RRS_TIMEOUT

```
DHCP_DDNS Request ID %1: timed out waiting for response to forward RR removal for FQDN
↪%2 to DNS server %3
```

This is an error message issued when no response is received from the DNS server before exceeding dns-server-timeout while DHCP_DDNS is carrying out a forward RR removal. The application will retry against the same server or others as appropriate.

11.29 DHCP_DDNS_FORWARD_REPLACE_BAD_DNSCLIENT_STATUS

```
DHCP_DDNS Request ID %1: received an unknown DNSClient status: %2, while replacing␣
↪forward address mapping for FQDN %3 to DNS server %4
```

This is an error message issued when DNSClient returns an unrecognized status while DHCP_DDNS was replacing a forward address mapping. The request will be aborted. This is most likely a programmatic issue and should be reported.

11.30 DHCP_DDNS_FORWARD_REPLACE_BUILD_FAILURE

```
DNS Request ID %1: update message to replace a forward DNS entry could not be␣
↪constructed from this request: %2, reason: %3
```

This is an error message issued when an error occurs attempting to construct the server bound packet requesting a forward address replacement. This is due to invalid data contained in the NameChangeRequest. The request will be aborted. This is most likely a configuration issue.

11.31 DHCP_DDNS_FORWARD_REPLACE_IO_ERROR

```
DHCP_DDNS Request ID %1: encountered an IO error sending a forward mapping replace for␣
↪FQDN %2 to DNS server %3
```

This is an error message issued when a communication error occurs while DHCP_DDNS is carrying out a forward mapping replace. The application will retry against the same server or others as appropriate.

11.32 DHCP_DDNS_FORWARD_REPLACE_REJECTED

```
DNS Request ID %1: Server, %2, rejected a DNS update request to replace the address␣
↪mapping for FQDN, %3, with an RCODE: %4
```

This is an error message issued when an update was rejected by the DNS server it was sent to for the reason given by the RCODE. The rcode values are defined in RFC 2136.

11.33 DHCP_DDNS_FORWARD_REPLACE_RESP_CORRUPT

```
DHCP_DDNS Request ID %1: received a corrupt response from the DNS server, %2, while␣
↪replacing forward address mapping for FQDN, %3
```

This is an error message issued when the response received by DHCP_DDNS, to a update request to replace a forward address mapping, is mangled or malformed. The application will retry against the same server or others as appropriate.

11.34 DHCP_DDNS_FORWARD_REPLACE_TIMEOUT

```
DHCP_DDNS Request ID %1: timed out waiting for a response to forward mapping replace for␣
↪FQDN %2 to DNS server %3
```

This is an error message issued when no response is received from the DNS server before exceeding dns-server-timeout while DHCP_DDNS is carrying out a forward mapping replace. The application will retry against the same server or others as appropriate.

11.35 DHCP_DDNS_FWD_REQUEST_IGNORED

```
Request ID %1: Forward updates are disabled, the forward portion of request will be␣
↪ignored: %2
```

Logged at debug log level 55. This is a debug message issued when forward DNS updates are disabled and DHCP_DDNS receives an update request containing a forward DNS update. The forward update will not performed.

11.36 DHCP_DDNS_INVALID_NCR

```
application received an invalid DNS update request: %1
```

This is an error message that indicates that an invalid request to update a DNS entry was received by the application. Either the format or the content of the request is incorrect. The request will be ignored.

11.37 DHCP_DDNS_INVALID_RESPONSE

```
received response to DNS Update message is malformed: %1
```

Logged at debug log level 50. This is a debug message issued when the DHCP-DDNS application encountered an error while decoding a response to DNS Update message. Typically, this error will be encountered when a response message is malformed.

11.38 DHCP_DDNS_LISTENING_ON_ALL_INTERFACES

```
the DHCP-DDNS server has been configured to listen on %1. This is an insecure␣
↪configuration supported for testing purposes only
```

This is a warning message issued when the DHCP-DDNS server is configured to listen at either *0.0.0.0* or *::*. It is possible for a malicious attacker to send bogus NameChangeRequests to it and change entries in the DNS. For this reason, listening on all interfaces should only be used when deploying in containers or for testing purposes. A future version of Kea will disable this ability by default.

11.39 DHCP_DDNS_NCR_FLUSH_IO_ERROR

```
DHCP-DDNS Last send before stopping did not complete successfully: %1
```

This is an error message that indicates the DHCP-DDNS client was unable to complete the last send prior to exiting send mode. This is a programmatic error, highly unlikely to occur, and should not impair the application's ability to process requests.

11.40 DHCP_DDNS_NCR_LISTEN_CLOSE_ERROR

```
application encountered an error while closing the listener used to receive␣
↪NameChangeRequests : %1
```

This is an error message that indicates the application was unable to close the listener connection used to receive NameChangeRequests. Closure may occur during the course of error recovery or during normal shutdown procedure. In either case the error is unlikely to impair the application's ability to process requests but it should be reported for analysis.

11.41 DHCP_DDNS_NCR_RECV_NEXT_ERROR

```
application could not initiate the next read following a request receive.
```

This is an error message indicating that NameChangeRequest listener could not start another read after receiving a request. While possible, this is highly unlikely and is probably a programmatic error. The application should recover on its own.

11.42 DHCP_DDNS_NCR_SEND_CLOSE_ERROR

```
DHCP-DDNS client encountered an error while closing the sender connection used to send␣
↪NameChangeRequests: %1
```

This is an error message that indicates the DHCP-DDNS client was unable to close the connection used to send NameChangeRequests. Closure may occur during the course of error recovery or during normal shutdown procedure. In either case the error is unlikely to impair the client's ability to send requests but it should be reported for analysis.

11.43 DHCP_DDNS_NCR_SEND_NEXT_ERROR

```
DHCP-DDNS client could not initiate the next request send following send completion: %1
```

This is an error message indicating that NameChangeRequest sender could not start another send after completing the send of the previous request. While possible, this is highly unlikely and is probably a programmatic error. The application should recover on its own.

11.44 DHCP_DDNS_NCR_UDP_CLEAR_READY_ERROR

```
NCR UDP watch socket failed to clear: %1
```

This is an error message that indicates the application was unable to reset the UDP NCR sender ready status after completing a send. This is programmatic error that should be reported. The application may or may not continue to operate correctly.

11.45 DHCP_DDNS_NCR_UDP_RECV_CANCELED

```
UDP socket receive was canceled while listening for DNS Update requests
```

Logged at debug log level 40. This is a debug message indicating that the listening on a UDP socket for DNS update requests has been canceled. This is a normal part of suspending listening operations.

11.46 DHCP_DDNS_NCR_UDP_RECV_ERROR

```
UDP socket receive error while listening for DNS Update requests: %1
```

This is an error message indicating that an I/O error occurred while listening over a UDP socket for DNS update requests. This could indicate a network connectivity or system resource issue.

11.47 DHCP_DDNS_NCR_UDP_SEND_CANCELED

```
UDP socket send was canceled while sending a DNS Update request to DHCP_DDNS: %1
```

This is an informational message indicating that sending requests via UDP socket to DHCP_DDNS has been interrupted. This is a normal part of suspending send operations.

11.48 DHCP_DDNS_NCR_UDP_SEND_ERROR

```
UDP socket send error while sending a DNS Update request: %1
```

This is an error message indicating that an IO error occurred while sending a DNS update request to DHCP_DDNS over a UDP socket. This could indicate a network connectivity or system resource issue.

11.49 DHCP_DDNS_NOT_ON_LOOPBACK

```
the DHCP-DDNS server has been configured to listen on %1 which is not the local loopback.
↪  This is an insecure configuration supported for testing purposes only
```

This is a warning message issued when the DHCP-DDNS server is configured to listen at an address other than the loopback address (127.0.0.1 or ::1). It is possible for a malicious attacker to send bogus NameChangeRequests to it and change entries in the DNS. For this reason, addresses other than the IPv4 or IPv6 loopback addresses should only be used for testing purposes. A future version of Kea will implement authentication to guard against such attacks.

11.50 DHCP_DDNS_NO_ELIGIBLE_JOBS

```
although there are queued requests, there are pending transactions for each, Queue␣
↪count: %1  Transaction count: %2
```

Logged at debug log level 55. This is a debug message issued when all of the queued requests represent clients for which there is an update already in progress. This may occur under normal operations but should be temporary situation.

11.51 DHCP_DDNS_NO_FWD_MATCH_ERROR

```
Request ID %1: the configured list of forward DDNS domains does not contain a match for:
↪%2  The request has been discarded.
```

This is an error message that indicates that DHCP_DDNS received a request to update the forward DNS information for the given FQDN but for which there are no configured DDNS domains in the DHCP_DDNS configuration. Either the DHCP_DDNS configuration needs to be updated or the source of the FQDN itself should be investigated.

11.52 DHCP_DDNS_NO_MATCH

```
No DNS servers match FQDN %1
```

This is warning message issued when there are no domains in the configuration which match the cited fully qualified domain name (FQDN). The DNS Update request for the FQDN cannot be processed.

11.53 DHCP_DDNS_NO_REV_MATCH_ERROR

```
Request ID %1: the configured list of reverse DDNS domains does not contain a match for:
↪%2  The request has been discarded.
```

This is an error message that indicates that DHCP_DDNS received a request to update the reverse DNS information for the given FQDN but for which there are no configured DDNS domains in the DHCP_DDNS configuration. Either the DHCP_DDNS configuration needs to be updated or the source of the FQDN itself should be investigated.

11.54 DHCP_DDNS_QUEUE_MGR_QUEUE_FULL

```
application request queue has reached maximum number of entries %1
```

This an error message indicating that DHCP-DDNS is receiving DNS update requests faster than they can be processed. This may mean the maximum queue needs to be increased, the DHCP-DDNS clients are simply generating too many requests too quickly, or perhaps upstream DNS servers are experiencing load issues.

11.55 DHCP_DDNS_QUEUE_MGR_QUEUE_RECEIVE

```
Request ID %1: received and queued a request.
```

Logged at debug log level 55. This is an informational message indicating that the NameChangeRequest listener used by DHCP-DDNS to receive a request has received a request and queued it for further processing.

11.56 DHCP_DDNS_QUEUE_MGR_RECONFIGURING

```
application is reconfiguring the queue manager
```

Logged at debug log level 40. This is an informational message indicating that DHCP_DDNS is reconfiguring the queue manager as part of normal startup or in response to a new configuration.

11.57 DHCP_DDNS_QUEUE_MGR_RECOVERING

```
application is attempting to recover from a queue manager IO error
```

This is an informational message indicating that DHCP_DDNS is attempting to restart the queue manager after it suffered an IO error while receiving requests.

11.58 DHCP_DDNS_QUEUE_MGR_RECV_ERROR

```
application's queue manager was notified of a request receive error by its listener.
```

This is an error message indicating that the NameChangeRequest listener used by DHCP-DDNS to receive requests encountered an IO error. There should be corresponding log messages from the listener layer with more details. This may indicate a network connectivity or system resource issue.

11.59 DHCP_DDNS_QUEUE_MGR_RESUME_ERROR

```
application could not restart the queue manager, reason: %1
```

This is an error message indicating that DHCP_DDNS's Queue Manager could not be restarted after stopping due to a full receive queue. This means that the application cannot receive requests. This is most likely due to DHCP_DDNS configuration parameters referring to resources such as an IP address or port, that is no longer unavailable. DHCP_DDNS will attempt to restart the queue manager if given a new configuration.

11.60 DHCP_DDNS_QUEUE_MGR_RESUMING

```
application is resuming listening for requests now that the request queue size has␣
↪reached %1 of a maximum %2 allowed
```

This is an informational message indicating that DHCP_DDNS, which had stopped accepting new requests, has processed enough entries from the receive queue to resume accepting requests.

11.61 DHCP_DDNS_QUEUE_MGR_STARTED

```
application's queue manager has begun listening for requests.
```

Logged at debug log level 0. This is a debug message indicating that DHCP_DDNS's Queue Manager has successfully started and is now listening for NameChangeRequests.

11.62 DHCP_DDNS_QUEUE_MGR_START_ERROR

```
application could not start the queue manager, reason: %1
```

This is an error message indicating that DHCP_DDNS's Queue Manager could not be started. This means that the application cannot receive requests. This is most likely due to DHCP_DDNS configuration parameters referring to resources such as an IP address or port, that are unavailable. DHCP_DDNS will attempt to restart the queue manager if given a new configuration.

11.63 DHCP_DDNS_QUEUE_MGR_STOPPED

```
application's queue manager has stopped listening for requests.
```

Logged at debug log level 40. This is a debug message indicating that DHCP_DDNS's Queue Manager has stopped listening for NameChangeRequests. This may be because of normal event such as reconfiguration or as a result of an error. There should be log messages preceding this one to indicate why it has stopped.

11.64 DHCP_DDNS_QUEUE_MGR_STOPPING

```
application is stopping the queue manager for %1
```

Logged at debug log level 0. This is an informational message indicating that DHCP_DDNS is stopping the queue manager either to reconfigure it or as part of application shutdown.

11.65 DHCP_DDNS_QUEUE_MGR_STOP_ERROR

```
application encountered an error stopping the queue manager: %1
```

This is an error message indicating that DHCP_DDNS encountered an error while trying to stop the queue manager. This error is unlikely to occur or to impair the application's ability to function but it should be reported for analysis.

11.66 DHCP_DDNS_QUEUE_MGR_UNEXPECTED_HANDLER_ERROR

```
application's queue manager request receive handler experienced an unexpected exception
↪%1:
```

This is an error message indicating that an unexpected error occurred within the DHCP_DDNS's Queue Manager request receive completion handler. This is most likely a programmatic issue that should be reported. The application may recover on its own.

11.67 DHCP_DDNS_QUEUE_MGR_UNEXPECTED_STOP

```
application's queue manager receive was
```

aborted unexpectedly while queue manager state is: %1 This is an error message indicating that DHCP_DDNS's Queue Manager request receive was unexpected interrupted. Normally, the read is receive is only interrupted as a normal part of stopping the queue manager. This is most likely a programmatic issue that should be reported.

11.68 DHCP_DDNS_REMOVE_FAILED

```
DHCP_DDNS Request ID %1: Transaction outcome: %2
```

This is an error message issued after DHCP_DDNS attempts to submit DNS mapping entry removals have failed. The precise reason for the failure should be documented in preceding log entries.

11.69 DHCP_DDNS_REMOVE_SUCCEEDED

```
DHCP_DDNS Request ID %1: successfully removed the DNS mapping addition for this request:
↪%2
```

This is an informational message issued after DHCP_DDNS has submitted DNS mapping removals which were received and accepted by an appropriate DNS server.

11.70 DHCP_DDNS_REQUEST_DROPPED

```
Request ID %1: Request contains no enabled update requests and will be dropped: %2
```

Logged at debug log level 55. This is a debug message issued when DHCP_DDNS receives a request which does not contain updates in a direction that is enabled. In other words, if only forward updates are enabled and request is received that asks only for reverse updates then the request is dropped.

11.71 DHCP_DDNS_REVERSE_REMOVE_BAD_DNSCLIENT_STATUS

```
DHCP_DDNS Request ID %1: received an unknown DNSClient status: %2, while removing␣
↪reverse address mapping for FQDN %3 to DNS server %4
```

This is an error message issued when DNSClient returns an unrecognized status while DHCP_DDNS was removing a reverse address mapping. The request will be aborted. This is most likely a programmatic issue and should be reported.

11.72 DHCP_DDNS_REVERSE_REMOVE_BUILD_FAILURE

```
DNS Request ID %1: update message to remove a reverse DNS entry could not be constructed␣
↪from this request: %2,  reason: %3
```

This is an error message issued when an error occurs attempting to construct the server bound packet requesting a reverse PTR removal. This is due to invalid data contained in the NameChangeRequest. The request will be aborted. This is most likely a configuration issue.

11.73 DHCP_DDNS_REVERSE_REMOVE_IO_ERROR

```
DHCP_DDNS Request ID %1: encountered an IO error sending a reverse mapping remove for␣
↪FQDN %2 to DNS server %3
```

This is an error message issued when a communication error occurs while DHCP_DDNS is carrying out a reverse mapping remove. The application will retry against the same server or others as appropriate.

11.74 DHCP_DDNS_REVERSE_REMOVE_REJECTED

```
DNS Request ID %1: Server, %2, rejected a DNS update request to remove the reverse␣
↪mapping for FQDN, %3, with an RCODE: %4
```

This is an error message issued when an update was rejected by the DNS server it was sent to for the reason given by the RCODE. The rcode values are defined in RFC 2136.

11.75 DHCP_DDNS_REVERSE_REMOVE_RESP_CORRUPT

```
DHCP_DDNS Request ID %1: received a corrupt response from the DNS server, %2, while␣
↪removing reverse address mapping for FQDN, %3
```

This is an error message issued when the response received by DHCP_DDNS, to a update request to remove a reverse address, is mangled or malformed. The application will retry against the same server or others as appropriate.

11.76 DHCP_DDNS_REVERSE_REMOVE_TIMEOUT

```
DHCP_DDNS Request ID %1: timed out waiting for a response to reverse mapping remove for␣
↪FQDN %2 to DNS server %3
```

This is an error message issued when no response is received from the DNS server before exceeding dns-server-timeout while DHCP_DDNS is carrying out a reverse mapping remove. The application will retry against the same server or others as appropriate.

11.77 DHCP_DDNS_REVERSE_REPLACE_BAD_DNSCLIENT_STATUS

```
DHCP_DDNS Request ID %1: received an unknown DNSClient status: %2, while replacing␣
↪reverse address mapping for FQDN %3 to DNS server %4
```

This is an error message issued when DNSClient returns an unrecognized status while DHCP_DDNS was replacing a reverse address mapping. The request will be aborted. This is most likely a programmatic issue and should be reported.

11.78 DHCP_DDNS_REVERSE_REPLACE_BUILD_FAILURE

```
DNS Request ID %1: update message to replace a reverse DNS entry could not be␣
↪constructed from this request: %2, reason: %3
```

This is an error message issued when an error occurs attempting to construct the server bound packet requesting a reverse PTR replacement. This is due to invalid data contained in the NameChangeRequest. The request will be aborted. This is most likely a configuration issue.

11.79 DHCP_DDNS_REVERSE_REPLACE_IO_ERROR

```
DHCP_DDNS Request ID %1: encountered an IO error sending a reverse mapping replacement␣
↪for FQDN %2 to DNS server %3
```

This is an error message issued when a communication error occurs while DHCP_DDNS is carrying out a reverse mapping replacement. The application will retry against the same server or others as appropriate.

11.80 DHCP_DDNS_REVERSE_REPLACE_REJECTED

```
DNS Request ID %1: Server, %2, rejected a DNS update request to replace the reverse␣
↪mapping for FQDN, %3, with an RCODE: %4
```

This is an error message issued when an update was rejected by the DNS server it was sent to for the reason given by the RCODE. The rcode values are defined in RFC 2136.

11.81 DHCP_DDNS_REVERSE_REPLACE_RESP_CORRUPT

```
DHCP_DDNS Request ID %1: received a corrupt response from the DNS server, %2, while␣
↪replacing reverse address mapping for FQDN, %3
```

This is an error message issued when the response received by DHCP_DDNS, to a update request to replace a reverse address, is mangled or malformed. The application will retry against the same server or others as appropriate.

11.82 DHCP_DDNS_REVERSE_REPLACE_TIMEOUT

```
DHCP_DDNS Request ID %1: timed out waiting for a response to reverse mapping replacement␣
↪for FQDN %2 to DNS server %3
```

This is an error message issued when no response is received from the DNS server before exceeding dns-server-timeout while DHCP_DDNS is carrying out a reverse mapping replacement. The application will retry against the same server or others as appropriate.

11.83 DHCP_DDNS_REV_REQUEST_IGNORED

```
Request ID %1: Reverse updates are disabled, the reverse portion of request will be␣
↪ignored: %2
```

Logged at debug log level 55. This is a debug message issued when reverse DNS updates are disabled and DHCP_DDNS receives an update request containing a reverse DNS update. The reverse update will not performed.

11.84 DHCP_DDNS_RUN_EXIT

```
application is exiting the event loop
```

Logged at debug log level 0. This is a debug message issued when the DHCP-DDNS server exits its event lo

11.85 DHCP_DDNS_SHUTDOWN_COMMAND

```
application received shutdown command with args: %1
```

Logged at debug log level 0. This is a debug message issued when the application has been instructed to shut down by the controller.

11.86 DHCP_DDNS_STARTED

```
Kea DHCP-DDNS server version %1 started
```

This informational message indicates that the DHCP-DDNS server has processed all configuration information and is ready to begin processing. The version is also printed.

11.87 DHCP_DDNS_STARTING_TRANSACTION

```
Request ID %1:
```

Logged at debug log level 50. This is a debug message issued when DHCP-DDNS has begun a transaction for a given request.

11.88 DHCP_DDNS_STATE_MODEL_UNEXPECTED_ERROR

```
Request ID %1: application encountered an unexpected error while carrying out a␣
↪NameChangeRequest: %2
```

This is error message issued when the application fails to process a NameChangeRequest correctly. Some or all of the DNS updates requested as part of this update did not succeed. This is a programmatic error and should be reported.

11.89 DHCP_DDNS_TRANS_SEND_ERROR

```
Request ID %1: application encountered an unexpected error while attempting to send a␣
↪DNS update: %2
```

This is error message issued when the application is able to construct an update message but the attempt to send it suffered an unexpected error. This is most likely a programmatic error, rather than a communications issue. Some or all of the DNS updates requested as part of this request did not succeed.

11.90 DHCP_DDNS_UDP_SENDER_WATCH_SOCKET_CLOSE_ERROR

```
watch socket failed to close: %1
```

This is an error message that indicates the application was unable to close the inbound or outbound side of a NCR sender's watch socket. While technically possible the error is highly unlikely to occur and should not impair the application's ability to process requests.

11.91 DHCP_DDNS_UNCAUGHT_NCR_RECV_HANDLER_ERROR

```
unexpected exception thrown from the application receive completion handler: %1
```

This is an error message that indicates that an exception was thrown but not caught in the application's request receive completion handler. This is a programmatic error that needs to be reported. Dependent upon the nature of the error the application may or may not continue operating normally.

11.92 DHCP_DDNS_UPDATE_REQUEST_SENT

```
Request ID %1: %2 to server: %3
```

Logged at debug log level 50. This is a debug message issued when DHCP_DDNS sends a DNS request to a DNS server.

CHAPTER

TWELVE

EVAL

12.1 EVAL_DEBUG_AND

```
%1: Popping %2 and %3 pushing %4
```

Logged at debug log level 55. This debug message indicates that two values are popped from the value stack. Then are then combined via logical and and the result is pushed onto the value stack.

12.2 EVAL_DEBUG_BRANCH

```
Branching to %1
```

Logged at debug log level 55. This debug message indicates that an unconditional branch is performed to the displayed target.

12.3 EVAL_DEBUG_CONCAT

```
%1: Popping %2 and %3 pushing %4
```

Logged at debug log level 55. This debug message indicates that the two strings are being popped off of the stack. They are then concatenated and the resulting string is pushed onto the stack. The strings are displayed in hex.

12.4 EVAL_DEBUG_EQUAL

```
%1: Popping %2 and %3 pushing result %4
```

Logged at debug log level 55. This debug message indicates that the two strings are being popped off of the value stack and the result of comparing them is being pushed onto the value stack. The strings are displayed in hex.

12.5 EVAL_DEBUG_HEXSTRING

```
%1: Pushing hex string %2
```

Logged at debug log level 55. This debug message indicates that the given binary string is being pushed onto the value stack. The string is displayed in hex.

12.6 EVAL_DEBUG_IFELSE_FALSE

```
%1: Popping %2 (false) and %3, leaving %4
```

Logged at debug log level 55. This debug message indicates that the condition is false so the iftrue branch value is removed and the ifelse branch value is left on the value stack.

12.7 EVAL_DEBUG_IFELSE_TRUE

```
%1: Popping %2 (true) and %3, leaving %4
```

Logged at debug log level 55. This debug message indicates that the condition is true so the ifelse branch value is removed and the iftrue branch value is left on the value stack.

12.8 EVAL_DEBUG_INT16TOTEXT

```
%1: Pushing Int16 %2
```

Logged at debug log level 55. This debug message indicates that the given address string representation is being pushed onto the value stack. This represents a 16 bit integer.

12.9 EVAL_DEBUG_INT32TOTEXT

```
%1: Pushing Int32 %2
```

Logged at debug log level 55. This debug message indicates that the given address string representation is being pushed onto the value stack. This represents a 32 bit integer.

12.10 EVAL_DEBUG_INT8TOTEXT

```
%1: Pushing Int8 %2
```

Logged at debug log level 55. This debug message indicates that the given address string representation is being pushed onto the value stack. This represents an 8 bit integer.

12.11 EVAL_DEBUG_IPADDRESS

```
%1: Pushing IPAddress %2
```

Logged at debug log level 55. This debug message indicates that the given binary string is being pushed onto the value stack. This represents either an IPv4 or IPv6 address. The string is displayed in hex.

12.12 EVAL_DEBUG_IPADDRESSTOTEXT

```
%1: Pushing IPAddress %2
```

Logged at debug log level 55. This debug message indicates that the given address string representation is being pushed onto the value stack. This represents either an IPv4 or IPv6 address.

12.13 EVAL_DEBUG_LCASE

```
%1: Popping string %2 and pushing converted value to lower case %3
```

Logged at debug log level 55. This debug message indicates that the given string representation is being converted to lower case and pushed onto the value stack.

12.14 EVAL_DEBUG_MATCH

```
Matching '%1' on %2, result %3
```

Logged at debug log level 55. This debug message indicates that the given regular expression was matched with the popped value. The result was pushed onto the value stack.

12.15 EVAL_DEBUG_MATCH_ERROR

```
Matching '%1' on %2 raised an error: %3
```

This error message indicates that an error occurred while evaluating the given regular expression against the popped value.

12.16 EVAL_DEBUG_MEMBER

```
%1: Checking membership of '%2', pushing result %3
```

Logged at debug log level 55. This debug message indicates that the membership of the packet for the client class was checked.

12.17 EVAL_DEBUG_NOT

```
%1: Popping %2 pushing %3
```

Logged at debug log level 55. This debug message indicates that the first value is popped from the value stack, negated and then pushed onto the value stack. The string is displayed in text.

12.18 EVAL_DEBUG_OPTION

```
%1: Pushing option %2 with value %3
```

Logged at debug log level 55. This debug message indicates that the given string representing the value of the requested option is being pushed onto the value stack. The string may be the text or binary value of the string based on the representation type requested (.text or .hex) or "true" or "false" if the requested type is .exists. The option code may be for either an option or a sub-option as requested in the classification statement.

12.19 EVAL_DEBUG_OR

```
%1: Popping %2 and %3 pushing %4
```

Logged at debug log level 55. This debug message indicates that two values are popped from the value stack. Then are then combined via logical or and the result is pushed onto the value stack. The string is displayed in text.

12.20 EVAL_DEBUG_PKT

```
%1: Pushing PKT meta data %2 with value %3
```

Logged at debug log level 55. This debug message indicates that the given binary string representing the value of the requested meta data is being pushed onto the value stack. The string is displayed in hex at the exception of interface name.

12.21 EVAL_DEBUG_PKT4

```
%1: Pushing PKT4 field %2 with value %3
```

Logged at debug log level 55. This debug message indicates that the given binary string representing the value of the requested field is being pushed onto the value stack. The string is displayed in hex.

12.22 EVAL_DEBUG_PKT6

```
%1: Pushing PKT6 field %2 with value %3
```

Logged at debug log level 55. This debug message indicates that the given binary string representing the value of the requested field is being pushed onto the value stack. The string is displayed in hex.

12.23 EVAL_DEBUG_POP_AND_BRANCH_FALSE

```
Value is false: branching to %1
```

Logged at debug log level 55. This debug message indicates that a branch on false condition is performed to the displayed target.

12.24 EVAL_DEBUG_POP_OR_BRANCH_FALSE

```
Value is false: keeping it and branching to %1
```

Logged at debug log level 55. This debug message indicates that a branch on false condition is performed to the displayed target.

12.25 EVAL_DEBUG_POP_OR_BRANCH_TRUE

```
Value is true: keeping it and branching to %1
```

Logged at debug log level 55. This debug message indicates that a branch on true condition is performed to the displayed target.

12.26 EVAL_DEBUG_RELAY6

```
%1: Pushing PKT6 relay field %2 nest %3 with value %4
```

Logged at debug log level 55. This debug message indicates that the given binary string representing the value of the requested field is being pushed onto the value stack. The string is displayed in hex.

12.27 EVAL_DEBUG_RELAY6_RANGE

```
%1: Pushing PKT6 relay field %2 nest %3 with value %4
```

Logged at debug log level 55. This debug message is generated if the nest field is out of range. The empty string will always be the value pushed onto the stack.

12.28 EVAL_DEBUG_SPLIT

```
%1: Popping field %2, delimiters %3, string %4, pushing result %5
```

Logged at debug log level 55. This debug message indicates that three values are being popped from the stack and a result is being pushed onto the stack. The values being popped are the field, delimiter and string. The result is the extracted field which is pushed onto the stack. The strings are displayed in hex.

12.29 EVAL_DEBUG_SPLIT_DELIM_EMPTY

```
%1: Popping field %2, delimiters %3, string %4, pushing result %5
```

Logged at debug log level 55. This debug message indicates that the delimiter popped from the stack was empty and so the result will be the entire string. The field, delimiter and string are still popped from the stack and the result is still pushed.

12.30 EVAL_DEBUG_SPLIT_EMPTY

```
%1: Popping field %2, delimiters %3, string %4, pushing result %5
```

Logged at debug log level 55. This debug message indicates that the string popped from the stack was empty and so the result will also be empty. The field, delimiter and string are still popped from the stack and the result is still pushed.

12.31 EVAL_DEBUG_SPLIT_FIELD_OUT_OF_RANGE

```
%1: Popping field %2, delimiters %3, string %4, pushing result %5
```

Logged at debug log level 55. This debug message indicates that the field is either less than one or larger than the number of fields in the string popped from the stack. The result will be empty. The field, delimiter and string are still popped from the stack and the result is still pushed.

12.32 EVAL_DEBUG_STRING

```
%1: Pushing text string %2
```

Logged at debug log level 55. This debug message indicates that the given text string is being pushed onto the value stack. The string is displayed in text.

12.33 EVAL_DEBUG_SUBSTRING

```
%1: Popping length %2, start %3, string %4 pushing result %5
```

Logged at debug log level 55. This debug message indicates that three values are being popped from the value stack and a result is being pushed onto the value stack. The values being popped are the starting point and length of a substring to extract from the given string. The resulting string is pushed onto the stack. The strings are displayed in hex.

12.34 EVAL_DEBUG_SUBSTRING_EMPTY

```
%1: Popping length %2, start %3, string %4 pushing result %5
```

Logged at debug log level 55. This debug message indicates that the string popped from the stack was empty and so the result will also be empty. The start, length and string are still popped from the stack and the result is still pushed.

12.35 EVAL_DEBUG_SUBSTRING_RANGE

```
%1: Popping length %2, start %3, string %4 pushing result %5
```

Logged at debug log level 55. This debug message indicates that the value of start is outside of the string and an empty result will be pushed onto the stack. The start, length and string are still popped from the stack and the result is still pushed. The strings are displayed in hex.

12.36 EVAL_DEBUG_SUB_OPTION

```
%1: Pushing option %2 sub-option %3 with value %4
```

This debug message indicates that the given string representing the value of the requested sub-option of the requested parent option is being pushed onto the value stack. The string may be the text or binary value of the string based on the representation type requested (.text or .hex) or "true" or "false" if the requested type is .exists. The codes are the parent option and the sub-option codes as requested in the classification statement.

12.37 EVAL_DEBUG_SUB_OPTION_NO_OPTION

```
%1: Requested option %2 sub-option %3, but the parent option is not present, pushing␣
↪result %4
```

This debug message indicates that the parent option was not found. The codes are the parent option and the sub-option codes as requested in the classification statement.

12.38 EVAL_DEBUG_TOHEXSTRING

```
%1: Popping binary value %2 and separator %3, pushing result %4
```

Logged at debug log level 55. This debug message indicates that two values are being popped from the value stack and a result is being pushed onto the value stack. The values being popped are the binary value to convert and the separator. The binary value is converted to its hexadecimal string representation and pushed onto the stack. The binary value is displayed in hex.

12.39 EVAL_DEBUG_UCASE

```
%1: Popping string %2 and pushing converted value to upper case %3
```

Logged at debug log level 55. This debug message indicates that the given string representation is being converted to upper case and pushed onto the value stack.

12.40 EVAL_DEBUG_UINT16TOTEXT

```
%1: Pushing UInt16 %2
```

Logged at debug log level 55. This debug message indicates that the given address string representation is being pushed onto the value stack. This represents a 16 bit unsigned integer.

12.41 EVAL_DEBUG_UINT32TOTEXT

```
%1: Pushing UInt32 %2
```

Logged at debug log level 55. This debug message indicates that the given address string representation is being pushed onto the value stack. This represents a 32 bit unsigned integer.

12.42 EVAL_DEBUG_UINT8TOTEXT

```
%1: Pushing UInt8 %2
```

Logged at debug log level 55. This debug message indicates that the given address string representation is being pushed onto the value stack. This represents an 8 bit unsigned integer.

12.43 EVAL_DEBUG_VENDOR_CLASS_DATA

```
%1: Data %2 (out of %3 received) in vendor class found, pushing result '%4'
```

Logged at debug log level 55. This debug message indicates that vendor class option was found and passed enterprise-id checks and has sufficient number of data chunks. The total number of chunks and value pushed are reported as debugging aid.

12.44 EVAL_DEBUG_VENDOR_CLASS_DATA_NOT_FOUND

```
%1: Requested data index %2, but option with enterprise-id %3 has only %4 data tuple(s),␣
↪pushing result '%5'
```

Logged at debug log level 55. This debug message indicates that vendor class option was found and passed enterprise-id checks, but does not have sufficient number of data chunks. Note that the index starts at 0, so there has to be at least (index + 1) data chunks.

12.45 EVAL_DEBUG_VENDOR_CLASS_ENTERPRISE_ID

```
%1: Pushing enterprise-id %2 as result 0x%3
```

Logged at debug log level 55. This debug message indicates that the expression has been evaluated and vendor class option was found and its enterprise-id is being reported.

12.46 EVAL_DEBUG_VENDOR_CLASS_ENTERPRISE_ID_MISMATCH

```
%1: Was looking for %2, option had %3, pushing result '%4'
```

Logged at debug log level 55. This debug message indicates that the expression has been evaluated and vendor class option was found, but has different enterprise-id than specified in the expression.

12.47 EVAL_DEBUG_VENDOR_CLASS_EXISTS

```
%1: Option with enterprise-id %2 found, pushing result '%3'
```

Logged at debug log level 55. This debug message indicates that the expression has been evaluated and vendor class option was found.

12.48 EVAL_DEBUG_VENDOR_CLASS_NO_OPTION

```
%1: Option with code %2 missing, pushing result '%3'
```

Logged at debug log level 55. This debug message indicates that the expression has been evaluated and vendor class option was not found.

12.49 EVAL_DEBUG_VENDOR_ENTERPRISE_ID

```
%1: Pushing enterprise-id %2 as result 0x%3
```

Logged at debug log level 55. This debug message indicates that the expression has been evaluated and vendor option was found and its enterprise-id is being reported.

12.50 EVAL_DEBUG_VENDOR_ENTERPRISE_ID_MISMATCH

```
%1: Was looking for %2, option had %3, pushing result '%4'
```

Logged at debug log level 55. This debug message indicates that the expression has been evaluated and vendor option was found, but has different enterprise-id than specified in the expression.

12.51 EVAL_DEBUG_VENDOR_EXISTS

```
%1: Option with enterprise-id %2 found, pushing result '%3'
```

Logged at debug log level 55. This debug message indicates that the expression has been evaluated and vendor option was found.

CHAPTER

THIRTEEN

FLEX

13.1 FLEX_OPTION_LOAD_ERROR

```
loading Flex Option hooks library failed: %1
```

This error message indicates an error during loading the Flex Option hooks library. The details of the error are provided as argument of the log message.

13.2 FLEX_OPTION_PROCESS_ADD

```
Added the option code %1 with value %2
```

Logged at debug log level 40. This debug message is printed when an option was added into the response packet. The option code and the value (between quotes if printable, in hexadecimal if not) are provided.

13.3 FLEX_OPTION_PROCESS_CLIENT_CLASS

```
Skip processing of the option code %1 for class '%2'
```

Logged at debug log level 40. This debug message is printed when the processing for an option is skipped because the query does not belongs to the client class. The option code and the client class name are provided.

13.4 FLEX_OPTION_PROCESS_ERROR

```
An error occurred processing query %1: %2
```

This error message indicates an error during processing of a query by the Flex Option hooks library. The client identification information from the query and the details of the error are provided as arguments of the log message.

13.5 FLEX_OPTION_PROCESS_REMOVE

```
Removed option code %1
```

Logged at debug log level 40. This debug message is printed when an option was removed from the response packet. The option code is provided.

13.6 FLEX_OPTION_PROCESS_SUB_ADD

```
Added the sub-option code %1 in option code %2 with value %3
```

Logged at debug log level 40. This debug message is printed when an sub-option was added into the response packet. The sub-option and container option codes, and the value (between quotes if printable, in hexadecimal if not) are provided.

13.7 FLEX_OPTION_PROCESS_SUB_CLIENT_CLASS

```
Skip processing of the sub-option code %1 in option code %2 for class '%3'
```

Logged at debug log level 40. This debug message is printed when the processing for a sub-option is skipped because the query does not belongs to the client class. The sub-option and container option codes, and the client class name are provided.

13.8 FLEX_OPTION_PROCESS_SUB_REMOVE

```
Removed sub-option code %1 in option code %2
```

Logged at debug log level 40. This debug message is printed when a sub-option was removed from the response packet. The sub-option and container option codes are provided.

13.9 FLEX_OPTION_PROCESS_SUB_SUPERSEDE

```
Supersedes the sub-option code %1 in option code %2 with value %3
```

Logged at debug log level 40. This debug message is printed when a sub-option was superseded into the response packet. The sub-option and container option codes, and the value (between quotes if printable, in hexadecimal if not) are provided.

13.10 FLEX_OPTION_PROCESS_SUPERSEDE

```
Supersedes the option code %1 with value %2
```

Logged at debug log level 40. This debug message is printed when an option was superseded into the response packet. The option code and the value (between quotes if printable, in hexadecimal if not) are provided.

13.11 FLEX_OPTION_PROCESS_VENDOR_ID_MISMATCH

```
Skip processing of vendor option code %1 with vendor id %2 not matching wanted %3
```

Logged at debug log level 40. This debug message is printed when a sub-option of a vendor option is processed but vendor ids do not match. The code of the vendor option and the two vendor ids are provided.

CHAPTER

FOURTEEN

FUZZ

14.1 FUZZ_DATA_READ

```
read %1 byte(s) from AFL via stdin
```

Logged at debug log level 50. A debug message output to indicate how much data has been received from the fuzzer via stdin

14.2 FUZZ_INIT_COMPLETE

```
fuzz initialization complete: interface %1, address %2, port %3, max loops %4
```

An informational message output when the fuzzing initialization function has completed successfully. The parameters listed are those which must be/can be set via environment variables.

14.3 FUZZ_INIT_FAIL

```
fuzz initialization failure, reason: %1
```

An error message reported if the fuzzing initialization failed. The reason for the failure is given in the message.

14.4 FUZZ_READ_FAIL

```
error reading input from fuzzer: %1
```

This error is reported if the read of data from the fuzzer (which is received over stdin) fails, or if a read returns zero bytes. If this occurs, the thread will sleep for a short period before retrying the read. The message includes the reason for the failure.

14.5 FUZZ_SEND

```
sent %1 byte(s) to the socket connected to the Kea interface
```

Logged at debug log level 50. A debug message stating that the sendto() call in the main fuzzing function has successfully completed and reporting the number of bytes sent. This call sends data received from AFL to the port on which Kea is listening.

14.6 FUZZ_SEND_ERROR

```
failed to send data to Kea input socket: %1
```

This error will be reported if the sendto() call in the fuzzing thread (which sends data received from AFL to the socket on which Kea is listening) fails. The reason for the failure is given in the message. The fuzzing code will attempt to continue from this, but it may cause the fuzzing process to fail.

14.7 FUZZ_SHORT_SEND

```
expected to send %1 bytes to Kea input socket but only sent %2
```

A warning message that is output if the sendto() call (used to send data from the fuzzing thread to the main Kea processing) did not send as much data as that read from AFL. This may indicate a problem in the underlying communications between the fuzzing thread and the main Kea processing.

CHAPTER FIFTEEN

HA

15.1 HA_BUFFER4_RECEIVE_FAILED

```
buffer4_receive callout failed: %1
```

This error message is issued when the callout for the buffer4_receive hook point failed. This may occur as a result of an internal server error. The argument contains a reason for the error.

15.2 HA_BUFFER4_RECEIVE_NOT_FOR_US

```
%1: dropping query to be processed by another server
```

Logged at debug log level 40. This debug message is issued when the received DHCPv4 query is dropped by this server because it should be served by another server. This is the case when the remote server was designated to process the packet as a result of load balancing or because it is a primary server in the hot standby configuration. The argument provides client identification information retrieved from the query.

15.3 HA_BUFFER4_RECEIVE_PACKET_OPTIONS_SKIPPED

```
an error unpacking an option, caused subsequent options to be skipped: %1
```

Logged at debug log level 40. A debug message issued when an option failed to unpack correctly, making it impossible to unpack the remaining options in the DHCPv4 query. The server will still attempt to service the packet. The sole argument provides a reason for unpacking error.

15.4 HA_BUFFER4_RECEIVE_UNPACK_FAILED

```
failed to parse query from %1 to %2, received over interface %3, reason: %4
```

Logged at debug log level 40. This debug message is issued when received DHCPv4 query is malformed and can't be parsed by the buffer4_receive callout. The query will be dropped by the server. The first three arguments specify source IP address, destination IP address and the interface. The last argument provides a reason for failure.

15.5 HA_BUFFER6_RECEIVE_FAILED

```
buffer6_receive callout failed: %1
```

This error message is issued when the callout for the buffer6_receive hook point failed. This may occur as a result of an internal server error. The argument contains a reason for the error.

15.6 HA_BUFFER6_RECEIVE_NOT_FOR_US

```
%1: dropping query to be processed by another server
```

Logged at debug log level 40. This debug message is issued when the received DHCPv6 query is dropped by this server because it should be served by another server. This is the case when the remote server was designated to process the packet as a result of load balancing or because it is a primary server in the hot standby configuration. The argument provides client identification information retrieved from the query.

15.7 HA_BUFFER6_RECEIVE_PACKET_OPTIONS_SKIPPED

```
an error unpacking an option, caused subsequent options to be skipped: %1
```

Logged at debug log level 40. A debug message issued when an option failed to unpack correctly, making it impossible to unpack the remaining options in the DHCPv6 query. The server will still attempt to service the packet. The sole argument provides a reason for unpacking error.

15.8 HA_BUFFER6_RECEIVE_UNPACK_FAILED

```
failed to parse query from %1 to %2, received over interface %3, reason: %4
```

Logged at debug log level 40. This debug message is issued when received DHCPv6 query is malformed and can't be parsed by the buffer6_receive callout. The query will be dropped by the server. The first three arguments specify source IP address, destination IP address and the interface. The last argument provides a reason for failure.

15.9 HA_COMMAND_PROCESSED_FAILED

```
command_processed callout failed: %1
```

This error message is issued when the callout for the command_processed hook point failed. The argument contains a reason for the error.

15.10 HA_COMMUNICATION_INTERRUPTED

```
%1: communication with %2 is interrupted
```

This warning message is issued by the server which discovered that the communication to the active partner has been interrupted for a time period longer than the configured heartbeat-delay time. At this stage the server starts the failover procedure by monitoring the DHCP traffic sent to the partner and checking whether the partner server responds to this traffic. If the max-unacked-clients value is set to 0 such verification is disabled in which case the server will transition to the partner-down state.

15.11 HA_COMMUNICATION_INTERRUPTED_CLIENT4

```
%1: new client %2 attempting to get a lease from the partner
```

This informational message is issued when the surviving server observes a DHCP packet sent to the partner with which the communication is interrupted. The client whose packet is observed is not yet considered "unacked" because the secs field value does not exceed the configured threshold specified with max-ack-delay.

15.12 HA_COMMUNICATION_INTERRUPTED_CLIENT4_UNACKED

```
%1: partner server failed to respond to %2, %3 clients unacked so far, %4 clients left␣
↪before transitioning to the partner-down state
```

This informational message is issued when the surviving server determines that its partner failed to respond to the DHCP query and that this client is considered to not be served by the partner. The surviving server counts such clients and if the number of such clients exceeds the max-unacked-clients threshold, the server will transition to the partner-down state. The first argument specifies the relationship name. The second argument contains client identification information. The third argument specifies the number of clients to which the server has failed to respond. The forth argument specifies the number of additional clients which, if not provisioned, will cause the server to transition to the partner-down state.

15.13 HA_COMMUNICATION_INTERRUPTED_CLIENT6

```
%1: new client %2 attempting to get a lease from the partner
```

This informational message is issued when the surviving server observes a DHCP packet sent to the partner with which the communication is interrupted. The client whose packet is observed is not yet considered "unacked" because the elapsed time option value does not exceed the configured threshold specified with max-ack-delay. The sole argument specifies client identification information.

15.14 HA_COMMUNICATION_INTERRUPTED_CLIENT6_UNACKED

```
%1: partner server failed to respond to %2, %3 clients unacked so far, %4 clients left␣
↪before transitioning to the partner-down state
```

This informational message is issued when the surviving server determines that its partner failed to respond to the DHCP query and that this client is considered to not be served by the partner. The surviving server counts such clients and if the number of such clients exceeds the max-unacked-clients threshold, the server will transition to the partner-down state. The first argument specifies the relationship name. The second argument contains client identification information. The third argument specifies the number of clients to which the server has failed to respond. The forth argument specifies the number of additional clients which, if not provisioned, will cause the server to transition to the partner-down state.

15.15 HA_CONFIGURATION_FAILED

```
failed to configure High Availability hooks library: %1
```

This error message is issued when there is an error configuring the HA hooks library. The argument provides the detailed error message.

15.16 HA_CONFIGURATION_SUCCESSFUL

```
HA hook library has been successfully configured
```

This informational message is issued when the HA hook library configuration parser successfully parses and validates the new configuration.

15.17 HA_CONFIG_AUTO_FAILOVER_DISABLED

```
%1: auto-failover disabled
```

This warning message is issued to indicate that the 'auto-failover' parameter was administratively disabled for the specified server. The server will not automatically start serving partner's scope when the partner failure is detected. The server administrator will need to enable this scope manually by sending appropriate ha-scopes command.

15.18 HA_CONFIG_DHCP_MT_DISABLED

```
%1: HA multi-threading has been disabled, it cannot be enabled when Kea global multi-
↪threading is disabled
```

This informational message is issued when HA configuration has enabled multi-threading while Kea global configuration has multi-threading disabled.

15.19 HA_CONFIG_DHCP_MT_DISABLED_AND_KEA_MT_ENABLED

```
%1: HA multi-threading is disabled while Kea global multi-threading is enabled which␣
↪most likely cause performance degradation.
```

This warning message is issued when HA configuration has disabled multi-threading while Kea global configuration has multi-threading enabled. This will likely cause performance degradation.

15.20 HA_CONFIG_LEASE_SYNCING_DISABLED

```
%1: lease database synchronization between HA servers is disabled
```

This warning message is issued when the lease database synchronization is administratively disabled. This is valid configuration if the leases are replicated between lease databases via some other mechanism, e.g. SQL database replication.

15.21 HA_CONFIG_LEASE_SYNCING_DISABLED_REMINDER

```
%1: bypassing SYNCING state because lease database synchronization is administratively␣
↪disabled
```

This informational message is issued as a reminder that lease database synchronization is administratively disabled and therefore the server transitions directly from the "waiting" to "ready" state.

15.22 HA_CONFIG_LEASE_UPDATES_AND_SYNCING_DIFFER

```
%1: unusual configuration where "send-lease-updates": %2 and "sync-leases": %3
```

This warning message is issued when the configuration values of the send-lease-updates and sync-leases parameters differ. This may be a valid configuration but is unusual. Normally, if the lease database with replication is in use, both values are set to false. If a lease database without replication is in use (e.g. memfile), both values are set to true. Providing different values for those parameters means that an administrator either wants the server to not synchronize leases upon startup but later send lease updates to the partner, or the lease database should be synchronized upon startup, but no lease updates are later sent as a result of leases allocation.

15.23 HA_CONFIG_LEASE_UPDATES_DISABLED

```
%1: lease updates will not be generated
```

This warning message is issued when the lease updates are administratively disabled. This is valid configuration if the leases are replicated to the partner's database via some other mechanism, e.g. SQL database replication.

15.24 HA_CONFIG_LEASE_UPDATES_DISABLED_REMINDER

```
%1: lease updates are administratively disabled and will not be generated while in %2␣
↪state
```

This informational message is issued as a reminder that the lease updates are administratively disabled and will not be issued in the HA state to which the server has transitioned. The sole argument specifies the state into which the server has transitioned.

15.25 HA_CONFIG_SYSTEM_MT_UNSUPPORTED

```
%1: HA multi-threading has been disabled, auto-detection of thread support reports 0
```

This informational message is issued when HA multi-threading configuration has specified auto-detection for the number of threads to use and the system reports the number of concurrent threads as 0. If you know your system can support multiple threads, then you may override this condition by specifying explicit values for http-listener-threads and http-client-threads.

15.26 HA_CONTINUE_HANDLER_FAILED

```
ha-continue command failed: %1
```

This error message is issued to indicate that the ha-continue command handler failed while processing the command. The argument provides the reason for failure.

15.27 HA_DEINIT_OK

```
unloading High Availability hooks library successful
```

This informational message indicates that the High Availability hooks library has been unloaded successfully.

15.28 HA_DHCP4_START_SERVICE_FAILED

```
failed to start DHCPv4 HA services in dhcp4_srv_configured callout: %1
```

This error message is issued when an attempt to start High Availability services for the DHCPv4 server failed in the dhcp4_srv_configured callout. This is internal server error and a bug report should be created.

15.29 HA_DHCP6_START_SERVICE_FAILED

```
failed to start DHCPv6 HA services in dhcp6_srv_configured callout: %1
```

This error message is issued when an attempt to start High Availability services for the DHCPv6 server failed in the dhcp6_srv_configured callout. This is internal server error and a bug report should be created.

15.30 HA_DHCP_DISABLE_COMMUNICATIONS_FAILED

```
%1: failed to send request to disable DHCP service of %2: %3
```

This warning message indicates that there was a problem in communication with a HA peer while sending the dhcp-disable command. The first argument specifies the local server's name. The second argument provides the remote server's name. The third argument provides a reason for failure.

15.31 HA_DHCP_DISABLE_FAILED

```
%1: failed to disable DHCP service of %2: %3
```

This warning message indicates that a peer returned an error status code in response to a dhcp-disable command. The first argument provides the local server's name. The second argument provides the remote server's name. The third argument provides a reason for failure.

15.32 HA_DHCP_ENABLE_COMMUNICATIONS_FAILED

```
%1: failed to send request to enable DHCP service of %2: %3
```

This warning message indicates that there was a problem in communication with a HA peer while sending the dhcp-enable command. The first argument provides the local server's name. The second argument provides the remote server's name. The third argument provides a reason for failure.

15.33 HA_DHCP_ENABLE_FAILED

```
%1: failed to enable DHCP service of %2: %3
```

This warning message indicates that a peer returned an error status code in response to a dhcp-enable command. The first argument provides the local server's name. The second argument provides the remote server's name. The third argument provides a reason for failure.

15.34 HA_HEARTBEAT_COMMUNICATIONS_FAILED

```
%1: failed to send heartbeat to %2: %3
```

This warning message indicates that there was a problem in communication with a HA peer while sending a heartbeat. This is a first sign that the peer may be down. The server will keep trying to send heartbeats until it considers that communication is interrupted.

15.35 HA_HEARTBEAT_FAILED

```
%1: heartbeat to %2 failed: %3
```

This warning message indicates that a peer returned an error status code in response to a heartbeat. This is the sign that the peer may not function properly. The server will keep trying to send heartbeats until it considers that communication is interrupted.

15.36 HA_HEARTBEAT_HANDLER_FAILED

```
heartbeat command failed: %1
```

This error message is issued to indicate that the heartbeat command handler failed while processing the command. The argument provides the reason for failure.

15.37 HA_HIGH_CLOCK_SKEW

```
%1: %2, please synchronize clocks!
```

This warning message is issued when the clock skew between the active servers exceeds 30 seconds. The HA service continues to operate but may not function properly, especially for low lease lifetimes. The administrator should should synchronize the clocks, e.g. using NTP. If the clock skew exceeds 60 seconds, the HA service will terminate.

15.38 HA_HIGH_CLOCK_SKEW_CAUSED_TERMINATION

```
%1: %2, causing HA service to terminate
```

This warning message is issued when the clock skew between the active servers exceeds 60 seconds. The HA service stops. The servers will continue to respond to the DHCP queries but won't exchange lease updates or send heartbeats. The administrator is required to synchronize the clocks and then restart the servers to resume the HA service.

15.39 HA_INIT_OK

```
loading High Availability hooks library successful
```

This informational message indicates that the High Availability hooks library has been loaded successfully. Enjoy!

15.40 HA_INVALID_PARTNER_STATE_COMMUNICATION_RECOVERY

```
%1: partner is in the communication-recovery state unexpectedly
```

This warning message is issued when a partner is in the communication-recovery state, and this server is not running in the load balancing mode. The server may only transition to the communication-recovery state when it runs in the load balancing mode. The HA mode of both servers must be the same.

15.41 HA_INVALID_PARTNER_STATE_HOT_STANDBY

```
%1: partner is in the hot-standby state unexpectedly
```

This warning message is issued when a partner is in the hot-standby state, and this server is not running in the hot standby mode. The server may only transition to the hot-standby state when it runs in the hot standby mode. The HA mode of both servers must be the same.

15.42 HA_INVALID_PARTNER_STATE_LOAD_BALANCING

```
%1: partner is in the load-balancing state unexpectedly
```

This warning message is issued when a partner is in the load-balancing state, and this server is not running in the load balancing mode. The server may only transition to the load-balancing state when it runs in the load balancing mode. The HA mode of both servers must be the same.

15.43 HA_LEASE4_SERVER_DECLINE_FAILED

```
lease4_server_decline callout failed: %1
```

This error message is issued when the callout for the lease4_server_decline hook point failed. This includes unexpected errors like wrong arguments provided to the callout by the DHCP server (unlikely internal server error). The argument contains a reason for the error.

15.44 HA_LEASES4_COMMITTED_FAILED

```
leases4_committed callout failed: %1
```

This error message is issued when the callout for the leases4_committed hook point failed. This includes unexpected errors like wrong arguments provided to the callout by the DHCP server (unlikely internal server error). The argument contains a reason for the error.

15.45 HA_LEASES4_COMMITTED_NOTHING_TO_UPDATE

```
%1: leases4_committed callout was invoked without any leases
```

Logged at debug log level 40. This debug message is issued when the "leases4_committed" callout returns because there are neither new leases nor deleted leases for which updates should be sent. The sole argument specifies the details of the client which sent the packet.

15.46 HA_LEASES4_COMMITTED_NO_RELATIONSHIP

```
%1: HA relationship not found: %2
```

This error message is issued when the relationship for the server name provided by the earlier callouts was not found in the HA configuration. This error is highly unlikely and rather indicates some programming error. The first argument is the client identification information. The second argument holds a more detailed error message.

15.47 HA_LEASES6_COMMITTED_FAILED

```
leases6_committed callout failed: %1
```

This error message is issued when the callout for the leases6_committed hook point failed. This includes unexpected errors like wrong arguments provided to the callout by the DHCP server (unlikely internal server error). The argument contains a reason for the error.

15.48 HA_LEASES6_COMMITTED_NOTHING_TO_UPDATE

```
%1: leases6_committed callout was invoked without any leases
```

Logged at debug log level 40. This debug message is issued when the "leases6_committed" callout returns because there are neither new leases nor deleted leases for which updates should be sent. The sole argument specifies the details of the client which sent the packet.

15.49 HA_LEASES6_COMMITTED_NO_RELATIONSHIP

```
%1: HA relationship not found: %2
```

This error message is issued when the relationship for the server name provided by the earlier callouts was not found in the HA configuration. This error is highly unlikely and rather indicates some programming error. The first argument is the client identification information. The second argument holds a more detailed error message.

15.50 HA_LEASES_BACKLOG_COMMUNICATIONS_FAILED

```
%1: failed to communicate with %2 while sending lease updates backlog: %3
```

This error message is issued to indicate that there was a communication error with a partner server while sending outstanding lease updates after resuming connection. The third argument contains a reason for the error.

15.51 HA_LEASES_BACKLOG_FAILED

```
%1: failed to send lease updates backlog to %2: %3
```

This error message is issued to indicate that sending lease updates backlog to a partner server failed. The lease updates backlog is sent to the partner after resuming temporarily broken communication with the partner. If this operation fails the server will transition to the waiting state to initiate full lease database synchronization.

15.52 HA_LEASES_BACKLOG_NOTHING_TO_SEND

```
%1: no leases in backlog after communication recovery
```

This informational message is issued when there are no outstanding leases to be sent after communication recovery with a partner. This means that the communication interruption was short enough that no DHCP clients obtained any leases from the server while it was in the communication-recovery state. The server may now transition to the load-balancing state.

15.53 HA_LEASES_BACKLOG_START

```
%1: starting to send %2 outstanding lease updates to %3
```

This informational message is issued when the server starts to send outstanding lease updates to the partner after resuming communications. The first argument specifies the local server's name. The second argument specifies the number of lease updates to be sent. The name of the partner is specified with the third argument.

15.54 HA_LEASES_BACKLOG_SUCCESS

```
%1: sending lease updates backlog to %2 successful in %3
```

This informational message is issued when server successfully completes sending lease updates backlog to the partner. The first argument specifies the local server's name. The second argument specifies the name of the remote server. The third argument specifies the duration of this operation.

15.55 HA_LEASES_SYNC_APPLIED_LEASES

```
%1: applied %2 leases received from the partner in the local lease database
```

This informational message outputs the number of leases received from the partner during the database synchronization and applied in the local database. A typical case when only some leases are applied is when the server has multiple relationships and some of the received leases belong to another relationship. The first argument specifies this server name. The second argument specifies the number of applied leases.

15.56 HA_LEASES_SYNC_COMMUNICATIONS_FAILED

```
%1: failed to communicate with %2 while syncing leases: %3
```

This error message is issued to indicate that there was a communication error with a partner server while trying to fetch leases from its lease database. The argument contains a reason for the error.

15.57 HA_LEASES_SYNC_FAILED

```
%1: failed to synchronize leases with %2: %3
```

This error message is issued to indicate that there was a problem while parsing a response from the server from which leases have been fetched for local database synchronization. The third argument contains a reason for the error.

15.58 HA_LEASES_SYNC_LEASE_PAGE_RECEIVED

```
%1: received %2 leases from %3
```

This informational message is issued during lease database synchronization to indicate that a bulk of leases have been received. The first argument specifies the local server's name. The second argument holds the count of leases received. The third argument specifies the partner server name.

15.59 HA_LEASE_SYNC_FAILED

```
%1: synchronization failed for lease: %2, reason: %3
```

This warning message is issued when creating or updating a lease in the local lease database fails. The lease information in the JSON format is provided as a first argument. The third argument provides a reason for the failure.

15.60 HA_LEASE_SYNC_STALE_LEASE4_SKIP

```
%1: skipping stale lease %2 in subnet %3
```

Logged at debug log level 40. This debug message is issued during lease database synchronization, when fetched IPv4 lease instance appears to be older than the instance in the local database. The newer instance is left in the database and the fetched lease is dropped. The remote server will still hold the older lease instance until it synchronizes its database with this server. The first argument specifies the local server's name. The second argument specifies leased address. The third argument specifies a subnet to which the lease belongs.

15.61 HA_LEASE_SYNC_STALE_LEASE6_SKIP

```
%1: skipping stale lease %2 in subnet %3
```

Logged at debug log level 40. This debug message is issued during lease database synchronization, when fetched IPv6 lease instance appears to be older than the instance in the local database. The newer instance is left in the database and the fetched lease is dropped. The remote server will still hold the older lease instance until it synchronizes its database with this server. The first argument specifies the local server's name. The second argument specifies leased address. The second argument specifies a subnet to which the lease belongs.

15.62 HA_LEASE_UPDATES_DISABLED

```
%1: lease updates will not be sent to the partner while in %2 state
```

This informational message is issued to indicate that lease updates will not be sent to the partner while the server is in the current state. The second argument specifies the server's current state name. The lease updates are still sent to the backup servers if they are configured but any possible errors in communication with the backup servers are ignored.

15.63 HA_LEASE_UPDATES_ENABLED

```
%1: lease updates will be sent to the partner while in %2 state
```

This informational message is issued to indicate that lease updates will be sent to the partner while the server is in the current state. The second specifies the server's current state name.

15.64 HA_LEASE_UPDATE_COMMUNICATIONS_FAILED

```
%1: failed to send lease update %2 to %3: %4
```

This warning message indicates that there was a problem in communication with a HA peer while processing a DHCP client query and sending lease update. The client's DHCP message will be dropped.

15.65 HA_LEASE_UPDATE_CONFLICT

```
%1: lease update %2 sent to %3 returned conflict status code: %4
```

This warning message indicates that the partner returned a conflict status code in response to a lease update. The client's DHCP message will be dropped. If the server is configured to track conflicting lease updates, it may eventually transition to the terminated state when the configured threshold is exceeded.

15.66 HA_LEASE_UPDATE_CREATE_UPDATE_FAILED_ON_PEER

```
%1: failed to create or update the lease having type %2 for address %3, reason: %4
```

This informational message is issued when one of the leases failed to be created or updated on the HA peer while processing the lease updates sent from this server. This may indicate an issue with communication between the peer and its lease database.

15.67 HA_LEASE_UPDATE_DELETE_FAILED_ON_PEER

```
%1: failed to delete the lease having type %2 for address %3, reason: %4
```

This informational message is issued when one of the leases failed to delete on the HA peer while processing lease updates sent from this server. Typically, the lease fails to delete when it doesn't exist in the peer's database.

15.68 HA_LEASE_UPDATE_FAILED

```
%1: lease update %2 sent to %3 failed: %4
```

This warning message indicates that a peer returned an error status code in response to a lease update. The client's DHCP message will be dropped.

15.69 HA_LEASE_UPDATE_REJECTS_CAUSED_TERMINATION

```
%1: too many rejected lease updates cause the HA service to terminate
```

This error message is issued when the HA service terminates because the number of lease updates for which a conflict status code was returned by the partner exceeds the limit set with max-rejected-lease-updates configuration parameter.

15.70 HA_LOAD_BALANCING_DUID_MISSING

```
%1: load balancing failed for the DHCPv6 message (transaction id: %2) because DUID is␣
↪missing
```

Logged at debug log level 40. This debug message is issued when the HA hook library was unable to load balance an incoming DHCPv6 query because neither client identifier nor HW address was included in the query. The query will be dropped. The sole argument contains transaction id.

15.71 HA_LOAD_BALANCING_IDENTIFIER_MISSING

```
%1: load balancing failed for the DHCPv4 message (transaction id: %2) because HW address␣
↪and client identifier are missing
```

Logged at debug log level 40. This debug message is issued when the HA hook library was unable to load balance an incoming DHCPv4 query because neither client identifier nor HW address was included in the query. The query will be dropped. The sole argument contains transaction id.

15.72 HA_LOCAL_DHCP_DISABLE

```
local DHCP service is disabled while the %1 is in the %2 state
```

This informational message is issued to indicate that the local DHCP service is disabled because the server remains in a state in which the server should not respond to DHCP clients, e.g. the server hasn't synchronized its lease database. The first argument specifies server name. The second argument specifies server's state.

15.73 HA_LOCAL_DHCP_ENABLE

```
local DHCP service is enabled while the %1 is in the %2 state
```

This informational message is issued to indicate that the local DHCP service is enabled because the server remains in a state in which it should respond to the DHCP clients. The first argument specifies server name. The second argument specifies server's state.

15.74 HA_MAINTENANCE_CANCEL_HANDLER_FAILED

```
ha-maintenance-cancel command failed: %1
```

This error message is issued to indicate that the ha-maintenance-cancel command handler failed while processing the command. The argument provides the reason for failure.

15.75 HA_MAINTENANCE_NOTIFY_CANCEL_COMMUNICATIONS_FAILED

```
%1: failed to send ha-maintenance-notify to %2 in attempt to cancel its maintenance: %3
```

This warning message indicates that there was a problem in communication with a HA peer while sending the ha-maintenance-notify command with the cancel flag set to true. The first argument provides the local server's name. The second argument provides the remote server's name. The third argument provides a reason for failure.

15.76 HA_MAINTENANCE_NOTIFY_CANCEL_FAILED

```
%1: error returned while processing ha-maintenance-notify by %2 in attempt to cancel its␣
↪maintenance: %3
```

This warning message indicates that a peer returned an error status code in response to a ha-maintenance-notify command with the cancel flag set to true. The first argument provides the local server's name. The second argument provides the remote server's name. The third argument provides a reason for failure.

15.77 HA_MAINTENANCE_NOTIFY_COMMUNICATIONS_FAILED

```
%1: failed to send ha-maintenance-notify to %2: %3
```

This warning message indicates that there was a problem in communication with a HA peer while sending the ha-maintenance-notify command. The first argument provides the local server's name. The second argument provides the remote server's name. The third argument provides a reason for failure.

15.78 HA_MAINTENANCE_NOTIFY_FAILED

```
%1: error returned while processing ha-maintenance-notify by %2: %3
```

This warning message indicates that a peer returned an error status code in response to a ha-maintenance-notify command. The first argument provides the remote server's name. The second argument provides a reason for failure.

15.79 HA_MAINTENANCE_NOTIFY_HANDLER_FAILED

```
ha-maintenance-notify command failed: %1
```

This error message is issued to indicate that the ha-maintenance-notify command handler failed while processing the command. The argument provides the reason for failure.

15.80 HA_MAINTENANCE_SHUTDOWN_SAFE

```
%1: the server can now be shutdown for maintenance as the partner has taken over the␣
↪DHCP traffic
```

This informational message is displayed after the server transitions to the in-maintenance state. This server no longer responds to any DHCP queries and its partner - in partner-in-maintenance state - has taken over the DHCP traffic. When the server in-maintenance state is shut down, the partner moves to the partner-down state immediately.

15.81 HA_MAINTENANCE_STARTED

```
%1: the server is now in the partner-in-maintenance state and the partner is in-
↪maintenance state
```

This informational message is displayed when the server receiving the ha-maintenance-start command transitions to the partner-in-maintenance state. The server does it after sending the ha-maintenance-notify to its partner to put the partner in the in-maintenance state. From now on, the server in the partner-in-maintenance state will be responding to all queries and the partner will respond to no queries. The partner may be safely shut down for maintenance in which case this server will automatically transition from the partner-in-maintenance state to the partner-down state.

15.82 HA_MAINTENANCE_STARTED_IN_PARTNER_DOWN

```
%1: the server is now in the partner-down mode as a result of requested maintenance
```

This informational message is displayed when the server receiving the ha-maintenance-start command transitions to the partner-down state because it was unable to communicate with the partner while receiving the command. It is assumed that in such situation the partner is already offline for the maintenance. Note that in this case the normal failover procedure does not take place. The server does not wait for a heartbeat to fail several times, nor it monitors the DHCP traffic for not responded queries. In the maintenance case the server transitions to the partner-down state when it first encounters a communication problem with the partner.

15.83 HA_MAINTENANCE_START_HANDLER_FAILED

```
ha-maintenance-start command failed: %1
```

This error message is issued to indicate that the ha-maintenance-start command handler failed while processing the command. The argument provides the reason for failure.

15.84 HA_MISSING_CONFIGURATION

```
high-availability parameter not specified for High Availability hooks library
```

This error message is issued to indicate that the configuration for the High Availability hooks library hasn't been specified. The 'high-availability' parameter must be specified for the hooks library to load properly.

15.85 HA_PAUSE_CLIENT_LISTENER_FAILED

```
%1: pausing multi-threaded HTTP processing failed: %2
```

This error message is emitted when attempting to pause HA's HTTP client and listener threads. This error is highly unlikely and indicates a programmatic issue that should be reported as a defect.

15.86 HA_PAUSE_CLIENT_LISTENER_ILLEGAL

```
%1: pausing multi-threaded HTTP processing failed: %2
```

This error message is emitted when attempting to pause HA's HTTP client or listener thread pools from a worker thread. This error indicates that a command run on the listener threads is trying to use a critical section which would result in a dead-lock.

15.87 HA_RESET_COMMUNICATIONS_FAILED

```
%1: failed to send ha-reset command to %2: %3
```

This warning message indicates a problem with communication with a HA peer while sending the ha-reset command. The first argument specifies the local server name. The second argument specifies a remote server name. The third argument specifies a reason for failure.

15.88 HA_RESET_FAILED

```
%1: failed to reset HA state machine of %2: %3
```

This warning message indicates that a peer returned an error status code in response to the ha-reset command. The first argument specifies a local server name. The second argument specifies a remote server name. The third argument specifies a reason for failure.

15.89 HA_RESET_HANDLER_FAILED

```
ha-reset command failed: %1
```

This error message is issued to indicate that the ha-reset command handler failed while processing the command. The argument provides the reason for failure.

15.90 HA_RESUME_CLIENT_LISTENER_FAILED

```
%1: resuming multi-threaded HTTP processing failed: %2
```

This error message is emitted when attempting to resume HA's HTTP client and listener threads. This error is highly unlikely and indicates a programmatic issue that should be reported as a defect.

15.91 HA_SCOPES_HANDLER_FAILED

```
ha-scopes command failed: %1
```

This error message is issued to indicate that the ha-scopes command handler failed while processing the command. The argument provides reason for the failure.

15.92 HA_SERVICE_STARTED

```
%1: started high availability service in %2 mode as %3 server
```

This informational message is issued when the HA service is started as a result of server startup or reconfiguration. The first argument specifies a local server name. The second argument provides the HA mode. The third argument specifies the role of this server instance in this configuration.

15.93 HA_STATE_MACHINE_CONTINUED

```
%1: state machine is un-paused
```

This informational message is issued when the HA state machine is un-paused. This unlocks the server from the current state. It may transition to any other state if it needs to do so, e.g. 'partner-down' if its partner appears to be offline. The server may also remain in the current state if the HA setup state warrants such behavior.

15.94 HA_STATE_MACHINE_PAUSED

```
%1: state machine paused in state %2
```

This informational message is issued when the HA state machine is paused. HA state machine may be paused in certain states specified in the HA hooks library configuration. When the state machine is paused, the server remains in the given state until it is explicitly unpaused (via the ha-continue command). If the state machine is paused, the server operates normally but cannot transition to any other state.

15.95 HA_STATE_TRANSITION

```
%1: server transitions from %2 to %3 state, partner state is %4
```

This informational message is issued when the server transitions to a new state as a result of some interaction (or lack of thereof) with its partner. The arguments specify local server name, initial server state, new server state and the partner's state.

15.96 HA_STATE_TRANSITION_PASSIVE_BACKUP

```
%1: server transitions from %2 to %3 state
```

This informational message is issued when the server in passive-backup mode transitions to a new state. The arguments specify local server name, initial server state and a new server state.

15.97 HA_SUBNET4_SELECT_FAILED

```
subnet4_select callout failed: %1
```

This error message is issued when the callout for the subnet4_select hook point failed. This may occur as a result of an internal server error. The argument contains a reason for the error.

15.98 HA_SUBNET4_SELECT_INVALID_HA_SERVER_NAME

```
%1: invalid ha-server-name value for subnet %2
```

This error message is issued when the received DHCPv4 query is dropped by this server because the specified ha-server-name value in the subnet's user-context has non-string type or is empty. It is a server's misconifguration. The first argument is the client identification information. The second argument is a subnet prefix.

15.99 HA_SUBNET4_SELECT_NOT_FOR_US

```
%1: dropping query in relationship %2 to be processed by another server
```

Logged at debug log level 40. This debug message is issued when the received DHCPv4 query is dropped by this server because it should be served by another server. This is the case when a remote primary server is operational. The first argument is the client identification information. The second argument is the relationship name.

15.100 HA_SUBNET4_SELECT_NO_RELATIONSHIP_FOR_SUBNET

```
%1: HA relationship not found for %2
```

This error message is issued when the received DHCPv4 query is dropped by this server because the server could not find a relationship matching the specified ha-server-name for a subnet. The server name matches no relationship specified in the HA configuration. A typical reason for it is a typo. The first argument is the client identification information. The second argument is the relationship name.

15.101 HA_SUBNET4_SELECT_NO_RELATIONSHIP_SELECTOR_FOR_SUBNET

```
%1: unable to determine HA relationship because selected subnet %2 lacks the ha-server-
↪name
```

This error message is issued when the received DHCPv4 query is dropped by this server because it was unable to determine the HA relationship to which the received query belongs. If there are multiple relationships, it is required to specify ha-server-name value in the user-context at the subnet or shared network level for each subnet and/or shared network. The server uses them as a relationship selector. If these selectors are unspecified for any of the subnets it is a configuration error. The first argument is the client identification information. The second argument is a subnet prefix.

15.102 HA_SUBNET4_SELECT_NO_SUBNET_SELECTED

```
%1: unable to determine HA relationship because no subnet has been selected for the␣
↪client
```

Logged at debug log level 40. This debug message is issued when the received DHCPv4 query is dropped by this server because it could not select a subnet for this client. Selecting the subnet is required to find a suitable HA relationship. This message is not emitted when the server has only one relationship. The argument is the client identification information.

15.103 HA_SUBNET6_SELECT_FAILED

```
subnet6_select callout failed: %1
```

This error message is issued when the callout for the subnet6_select hook point failed. This may occur as a result of an internal server error. The argument contains a reason for the error.

15.104 HA_SUBNET6_SELECT_INVALID_HA_SERVER_NAME

```
%1: invalid ha-server-name value for subnet %2
```

This error message is issued when the received DHCPv6 query is dropped by this server because the specified ha-server-name value in the subnet's user-context has non-string type or is empty. It is a server's misconifguration. The first argument is the client identification information. The second argument is a subnet prefix.

15.105 HA_SUBNET6_SELECT_NOT_FOR_US

```
%1: dropping query in relationship %2 to be processed by another server
```

Logged at debug log level 40. This debug message is issued when the received DHCPv6 query is dropped by this server because it should be served by another server. This is the case when a remote primary server is operational. The first argument is the client identification information. The second argument is the relationship name.

15.106 HA_SUBNET6_SELECT_NO_RELATIONSHIP_FOR_SUBNET

```
%1: HA relationship not found for %2
```

This error message is issued when the received DHCPv6 query is dropped by this server because the server could not find a relationship matching the specified ha-server-name for a subnet. The server name matches no relationship specified in the HA configuration. A typical reason for it is a typo. The first argument is the client identification information. The second argument is the relationship name.

15.107 HA_SUBNET6_SELECT_NO_RELATIONSHIP_SELECTOR_FOR_SUBNET

```
%1: unable to determine HA relationship because selected subnet %2 lacks the ha-server-
↪name
```

This error message is issued when the received DHCPv6 query is dropped by this server because it was unable to determine the HA relationship to which the received query belongs. If there are multiple relationships, it is required to specify ha-server-name value in the user-context at the subnet or shared network level for each subnet and/or shared network. The server uses them as a relationship selector. If these selectors are unspecified for any of the subnets it is a configuration error. The first argument is the client identification information. The second argument is a subnet prefix.

15.108 HA_SUBNET6_SELECT_NO_SUBNET_SELECTED

```
%1: unable to determine HA relationship because no subnet has been selected for the␣
↪client
```

Logged at debug log level 40. This debug message is issued when the received DHCPv6 query is dropped by this server because it could not select a subnet for this client. Selecting the subnet is required to find a suitable HA relationship. This message is not emitted when the server has only one relationship. The argument is the client identification information.

15.109 HA_SYNC_COMPLETE_NOTIFY_COMMUNICATIONS_FAILED

```
%1: failed to send ha-sync-complete-notify to %2: %3
```

This warning message indicates that there was a problem in communication with an HA peer while sending the ha-sync-complete-notify command. The first argument provides a local server's name. The second argument provides the remote server's name. The third argument provides a reason for failure.

15.110 HA_SYNC_COMPLETE_NOTIFY_FAILED

```
%1: error processing ha-sync-complete-notify command on %2: %3
```

This warning message indicates that a peer returned an error status code in response to the ha-sync-complete-notify command. The first argument provides a local server's name. The second argument provides the remote server's name. The third argument provides a reason for failure.

15.111 HA_SYNC_COMPLETE_NOTIFY_HANDLER_FAILED

```
ha-sync-complete-notify command failed: %1
```

This error message is issued to indicate that the ha-sync-complete-notify command handler failed while processing the command. The argument provides the reason for failure.

15.112 HA_SYNC_FAILED

```
%1: lease database synchronization with %2 failed: %3
```

This error message is issued to indicate that the lease database synchronization failed. The first argument provides the local server's name. The second argument provides the partner server's name. The third argument provides a reason for the failure.

15.113 HA_SYNC_HANDLER_FAILED

```
ha-sync command failed: %1
```

This error message is issued to indicate that the ha-sync command handler failed while processing the command. The argument provides the reason for failure.

15.114 HA_SYNC_START

```
%1: starting lease database synchronization with %2
```

This informational message is issued when the server starts lease database synchronization with a partner. The arguments specify the local and remote server names.

15.115 HA_SYNC_SUCCESSFUL

```
%1: lease database synchronization with %2 completed successfully in %3
```

This informational message is issued when the server successfully completed lease database synchronization with the partner. The first argument specifies local server name. The second argument specifies the name of the partner server. The third argument specifies the duration of the synchronization.

15.116 HA_TERMINATED

```
HA %1: service terminated due to an unrecoverable condition. Check previous error␣
↪message(s), address the problem and restart!
```

This error message is issued to indicate that the HA service has been stopped due to an unacceptable condition (e.g. too large of a clock skew). The exact cause should appear in a previous error message. Address the condition reported then restart the servers to resume service.

15.117 HA_TERMINATED_PARTNER_DID_NOT_RESTART

```
%1: service is terminating because the terminated partner was not restarted within %2␣
↪minutes
```

This warning message is issued to indicate that the HA service is terminating because partner server is in the terminated state and was not restarted within an expected time frame. The terminated servers should be restarted after correcting the problem that caused the termination. They can be restarted sequentially but the duration between the restarts should not be too long. If it is long it may mean that the restart of one of the servers was unintentional (e.g., power outage). If the restarted server remains in the waiting state it cannot serve DHCP clients. Moving to the terminated state at least allows for responding to the DHCP traffic.

CHAPTER

SIXTEEN

HOOKS

16.1 HOOKS_ALL_CALLOUTS_DEREGISTERED

```
hook library at index %1 removed all callouts on hook %2
```

Logged at debug log level 55. A debug message issued when all callouts on the specified hook registered by the library with the given index were removed. This is similar to the HOOKS_CALLOUTS_REMOVED message (and the two are likely to be seen together), but is issued at a lower-level in the hook framework.

16.2 HOOKS_CALLOUTS_BEGIN

```
begin all callouts for hook %1
```

Logged at debug log level 45. This debug message is issued when callout manager begins to invoke callouts for the hook. The argument specifies the hook name.

16.3 HOOKS_CALLOUTS_COMPLETE

```
completed callouts for hook %1 (total callouts duration: %2)
```

Logged at debug log level 45. This debug message is issued when callout manager has completed execution of all callouts for the particular hook. The arguments specify the hook name and total execution time for all callouts in milliseconds.

16.4 HOOKS_CALLOUTS_REMOVED

```
callouts removed from hook %1 for library %2
```

Logged at debug log level 45. This is a debug message issued during library unloading. It notes that one of more callouts registered by that library have been removed from the specified hook. This is similar to the HOOKS_DEREGISTER_ALL_CALLOUTS message (and the two are likely to be seen together), but is issued at a higher-level in the hook framework.

16.5 HOOKS_CALLOUT_CALLED

```
hooks library with index %1 has called a callout on hook %2 that has address %3 (callout␣
↪duration: %4)
```

Logged at debug log level 55. Only output at a high debugging level, this message indicates that a callout on the named hook registered by the library with the given index (in the list of loaded libraries) has been called and returned a success state. The address of the callout is given in the message. The message includes the callout execution time in milliseconds.

16.6 HOOKS_CALLOUT_DEREGISTERED

```
hook library at index %1 deregistered a callout on hook %2
```

Logged at debug log level 55. A debug message issued when all instances of a particular callouts on the hook identified in the message that were registered by the library with the given index have been removed.

16.7 HOOKS_CALLOUT_ERROR

```
error returned by callout on hook %1 registered by library with index %2 (callout␣
↪address %3) (callout duration %4)
```

If a callout returns an error status when called, this error message is issued. It identifies the hook to which the callout is attached, the index of the library (in the list of loaded libraries) that registered it and the address of the callout. The error is otherwise ignored. The error message includes the callout execution time in milliseconds.

16.8 HOOKS_CALLOUT_EXCEPTION

```
exception thrown by callout on hook %1 registered by library with index %2 (callout␣
↪address %3): %4 (callout duration: %5)
```

If a callout throws an exception when called, this error message is issued. It identifies the hook to which the callout is attached, the index of the library (in the list of loaded libraries) that registered it and the address of the callout. The error is otherwise ignored. The error message includes the callout execution time in milliseconds.

16.9 HOOKS_CALLOUT_REGISTRATION

```
hooks library with index %1 registering callout for hook '%2'
```

Logged at debug log level 45. This is a debug message, output when a library (whose index in the list of libraries (being) loaded is given) registers a callout.

16.10 HOOKS_CLOSE_ERROR

```
failed to close hook library %1: %2
```

Kea has failed to close the named hook library for the stated reason. Although this is an error, this should not affect the running system other than as a loss of resources. If this error persists, you should restart Kea.

16.11 HOOKS_HOOK_LIST_RESET

```
the list of hooks has been reset
```

This is a message indicating that the list of hooks has been reset. While this is usual when running the Kea test suite, it should not be seen when running Kea in a production environment. If this appears, please report a bug through the usual channels.

16.12 HOOKS_INCORRECT_VERSION

```
hook library %1 is at version %2, require version %3
```

Kea has detected that the named hook library has been built against a version of Kea that is incompatible with the version of Kea running on your system. It has not loaded the library. This is most likely due to the installation of a new version of Kea without rebuilding the hook library. A rebuild and re-install of the library should fix the problem in most cases.

16.13 HOOKS_LIBRARY_CLOSED

```
hooks library %1 successfully closed
```

This information message is issued when a user-supplied hooks library has been successfully closed.

16.14 HOOKS_LIBRARY_LOADED

```
hooks library %1 successfully loaded
```

This information message is issued when a user-supplied hooks library has been successfully loaded.

16.15 HOOKS_LIBRARY_LOADING

```
loading hooks library %1
```

Logged at debug log level 40. This is a debug message output just before the specified library is loaded. If the action is successfully, it will be followed by the HOOKS_LIBRARY_LOADED informational message.

16.16 HOOKS_LIBRARY_MULTI_THREADING_COMPATIBLE

```
hooks library %1 reports its multi-threading compatibility as %2
```

Logged at debug log level 45. A debug message issued when the "multi_threading_compatible" function was called. The returned value (0 means not compatible, others compatible) is displayed.

16.17 HOOKS_LIBRARY_MULTI_THREADING_NOT_COMPATIBLE

```
hooks library %1 is not compatible with multi-threading
```

When multi-threading is enabled and the library is not compatible (either because the "multi_threading_compatible" function returned 0 or was not implemented) this error message is issued. The library must be removed from the configuration or the multi-threading disabled.

16.18 HOOKS_LIBRARY_UNLOADED

```
hooks library %1 successfully unloaded
```

This information message is issued when a user-supplied hooks library has been successfully unloaded.

16.19 HOOKS_LIBRARY_UNLOADING

```
unloading library %1
```

Logged at debug log level 40. This is a debug message called when the specified library is being unloaded. If all is successful, it will be followed by the HOOKS_LIBRARY_UNLOADED informational message.

16.20 HOOKS_LIBRARY_VERSION

```
hooks library %1 reports its version as %2
```

Logged at debug log level 45. A debug message issued when the version check on the hooks library has succeeded.

16.21 HOOKS_LOAD_ERROR

```
'load' function in hook library %1 returned error %2
```

A "load" function was found in the library named in the message and was called. The function returned a non-zero status (also given in the message) which was interpreted as an error. The library has been unloaded and no callouts from it will be installed.

16.22 HOOKS_LOAD_EXCEPTION

```
'load' function in hook library %1 threw an exception
```

A "load" function was found in the library named in the message and was called. The function threw an exception (an error indication) during execution, which is an error condition. The library has been unloaded and no callouts from it will be installed.

16.23 HOOKS_LOAD_FRAMEWORK_EXCEPTION

```
'load' function in hook library %1 threw an exception: reason %2
```

A "load" function was found in the library named in the message and was called. Either the hooks framework or the function threw an exception (an error indication) during execution, which is an error condition; the cause of the exception is recorded in the message. The library has been unloaded and no callouts from it will be installed.

16.24 HOOKS_LOAD_SUCCESS

```
'load' function in hook library %1 returned success
```

Logged at debug log level 40. This is a debug message issued when the "load" function has been found in a hook library and has been successfully called.

16.25 HOOKS_MULTI_THREADING_COMPATIBLE_EXCEPTION

```
'multi_threading_compatible' function in hook library %1 threw an exception
```

This error message is issued if the multi_threading_compatible() function in the specified hooks library was called and generated an exception. The library is considered unusable and will not be loaded.

16.26 HOOKS_NO_LOAD

```
no 'load' function found in hook library %1
```

Logged at debug log level 40. This is a debug message saying that the specified library was loaded but no function called "load" was found in it. Providing the library contained some "standard" functions (i.e. functions with the names of the hooks for the given server), this is not an issue.

16.27 HOOKS_NO_UNLOAD

```
no 'unload' function found in hook library %1
```

Logged at debug log level 40. This is a debug message issued when the library is being unloaded. It merely states that the library did not contain an "unload" function.

16.28 HOOKS_NO_VERSION

```
no 'version' function found in hook library %1
```

The shared library named in the message was found and successfully loaded, but Kea did not find a function named "version" in it. This function is required and should return the version of Kea against which the library was built. The value is used to check that the library was built against a compatible version of Kea. The library has not been loaded.

16.29 HOOKS_OPEN_ERROR

```
failed to open hook library %1: %2
```

Kea failed to open the specified hook library for the stated reason. The library has not been loaded. Kea will continue to function, but without the services offered by the library.

16.30 HOOKS_STD_CALLOUT_REGISTERED

```
hooks library %1 registered standard callout for hook %2 at address %3
```

Logged at debug log level 45. This is a debug message, output when the library loading function has located a standard callout (a callout with the same name as a hook point) and registered it. The address of the callout is indicated.

16.31 HOOKS_UNLOAD_ERROR

```
'unload' function in hook library %1 returned error %2
```

During the unloading of a library, an "unload" function was found. It was called, but returned an error (non-zero) status, resulting in the issuing of this message. The unload process continued after this message and the library has been unloaded.

16.32 HOOKS_UNLOAD_EXCEPTION

```
'unload' function in hook library %1 threw an exception
```

During the unloading of a library, an "unload" function was found. It was called, but in the process generated an exception (an error indication). The unload process continued after this message and the library has been unloaded.

16.33 HOOKS_UNLOAD_FRAMEWORK_EXCEPTION

```
'unload' function in hook library %1 threw an exception, reason %2
```

During the unloading of a library, an "unload" function was found. It was called, but in the process either it or the hooks framework generated an exception (an error indication); the cause of the error is recorded in the message. The unload process continued after this message and the library has been unloaded.

16.34 HOOKS_UNLOAD_SUCCESS

```
'unload' function in hook library %1 returned success
```

Logged at debug log level 40. This is a debug message issued when an "unload" function has been found in a hook library during the unload process, called, and returned success.

CHAPTER

SEVENTEEN

HOSTS

17.1 HOSTS_BACKENDS_REGISTERED

```
the following host backend types are available: %1
```

This informational message lists all possible host backends that could be used in hosts-database[s].

17.2 HOSTS_BACKEND_DEREGISTER

```
deregistered host backend type: %1
```

Logged at debug log level 40. This debug message is issued when a backend factory was deregistered. It is no longer possible to use host backend of this type.

17.3 HOSTS_BACKEND_REGISTER

```
registered host backend type: %1
```

Logged at debug log level 40. This debug message is issued when a backend factory was successfully registered. It is now possible to use host backend of this type.

17.4 HOSTS_CFG_ADD_HOST

```
add the host for reservations: %1
```

Logged at debug log level 40. This debug message is issued when new host (with reservations) is added to the server's configuration. The argument describes the host and its reservations in detail.

17.5 HOSTS_CFG_CACHE_HOST_DATA_SOURCE

```
get host cache data source: %1
```

This informational message is issued when a host cache data source is detected by the host manager.

17.6 HOSTS_CFG_CLOSE_HOST_DATA_SOURCE

```
Closing host data source: %1
```

Logged at debug log level 40. This is a normal message being printed when the server closes host data source connection.

17.7 HOSTS_CFG_DEL

```
deleted %1 host(s) having %2 IPv6 reservation(s) for subnet id %3 and address %4
```

Logged at debug log level 40. This debug message is issued when reservations are deleted for the specified subnet and address. The first argument specifies how many hosts have been deleted. The second argument specifies how many reservations have been deleted. The third argument is the subnet identifier. The fourth argument is the IP address.

17.8 HOSTS_CFG_DEL4

```
deleted %1 host(s) for subnet id %2 and identifier %3
```

Logged at debug log level 40. This debug message is issued when IPv4 reservations are deleted for the specified subnet and identifier. The first argument specifies how many hosts have been deleted. The second argument is the subnet identifier. The third argument is the identifier.

17.9 HOSTS_CFG_DEL6

```
deleted %1 host(s) having %2 IPv6 reservation(s) for subnet id %3 and identifier %4
```

Logged at debug log level 40. This debug message is issued when IPv6 reservations are deleted for the specified subnet and identifier. The first argument specifies how many hosts have been deleted. The second argument specifies how many reservations have been deleted. The third argument is the subnet identifier. The fourth argument is the identifier.

17.10 HOSTS_CFG_DEL_ALL_SUBNET4

```
deleted all %1 host(s) for subnet id %2
```

Logged at debug log level 40. This debug message is issued when all IPv4 reservations are deleted for the specified subnet. The first argument specifies how many reservations have been deleted. The second argument is the subnet identifier.

17.11 HOSTS_CFG_DEL_ALL_SUBNET6

```
deleted all %1 host(s) having %2 IPv6 reservation(s) for subnet id %3
```

Logged at debug log level 40. This debug message is issued when all IPv6 reservations are deleted for the specified subnet. The first argument specifies how many hosts have been deleted. The second argument specifies how many IPv6 (addresses and prefixes) reservations have been deleted. The third argument is the subnet identifier.

17.12 HOSTS_CFG_GET_ALL

```
get all hosts with reservations
```

Logged at debug log level 40. This debug message is issued when starting to retrieve all hosts.

17.13 HOSTS_CFG_GET_ALL_ADDRESS4

```
get all hosts with reservations for IPv4 address %1
```

Logged at debug log level 40. This debug message is issued when starting to retrieve all hosts, holding the reservation for the specific IPv4 address, from the configuration. The argument specifies the IPv4 address used to search the hosts.

17.14 HOSTS_CFG_GET_ALL_ADDRESS4_COUNT

```
using address %1, found %2 host(s)
```

Logged at debug log level 45. This debug message logs the number of hosts found using the specified IPv4 address. The arguments specify the IPv4 address used and the number of hosts found respectively.

17.15 HOSTS_CFG_GET_ALL_ADDRESS4_HOST

```
using address %1 found host: %2
```

Logged at debug log level 55. This debug message is issued when found host with the reservation for the specified IPv4 address. The arguments specify the IPv4 address and the detailed description of the host found.

17.16 HOSTS_CFG_GET_ALL_ADDRESS6

```
get all hosts with reservations for IPv6 address %1
```

Logged at debug log level 40. This debug message is issued when starting to retrieve all hosts, holding the reservation for the specific IPv6 address, from the configuration. The argument specifies the IPv6 address used to search the hosts.

17.17 HOSTS_CFG_GET_ALL_ADDRESS6_COUNT

```
using address %1, found %2 host(s)
```

Logged at debug log level 45. This debug message logs the number of hosts found using the specified IPv6 address. The arguments specify the IPv6 address used and the number of hosts found respectively.

17.18 HOSTS_CFG_GET_ALL_ADDRESS6_HOST

```
using address %1 found host: %2
```

Logged at debug log level 55. This debug message is issued when found host with the reservation for the specified IPv6 address. The arguments specify the IPv6 address and the detailed description of the host found.

17.19 HOSTS_CFG_GET_ALL_COUNT

```
found %1 host(s)
```

Logged at debug log level 45. This debug message include the details of the host found. The argument specifies the number of hosts found.

17.20 HOSTS_CFG_GET_ALL_HOST

```
found host: %1
```

Logged at debug log level 55. This debug message includes the details of the host found. The argument specifies found host details.

17.21 HOSTS_CFG_GET_ALL_HOSTNAME

```
get all hosts with reservations for hostname %1
```

Logged at debug log level 40. This debug message is issued when starting to retrieve all hosts with the specific hostname. The argument specifies hostname.

17.22 HOSTS_CFG_GET_ALL_HOSTNAME_COUNT

```
using hostname %1, found %2 host(s)
```

Logged at debug log level 45. This debug message include the details of the host found using the hostname. The arguments specify hostname and the number of hosts found respectively.

17.23 HOSTS_CFG_GET_ALL_HOSTNAME_HOST

```
using hostname %1, found host: %2
```

Logged at debug log level 55. This debug message includes the details of the host found using the hostname. The arguments specify hostname and found host details respectively.

17.24 HOSTS_CFG_GET_ALL_HOSTNAME_SUBNET_ID4

```
get all hosts with reservations for hostname %1 and IPv4 subnet %2
```

Logged at debug log level 40. This debug message is issued when starting to retrieve all hosts with the specific hostname connected to the specific DHCPv4 subnet. The argument specifies hostname and subnet id.

17.25 HOSTS_CFG_GET_ALL_HOSTNAME_SUBNET_ID4_COUNT

```
using hostname %1 and IPv4 subnet %2, found %3 host(s)
```

Logged at debug log level 45. This debug message include the details of the host found using the hostname and the DHCPv4 subnet id. The arguments specify hostname, subnet id and the number of hosts found respectively.

17.26 HOSTS_CFG_GET_ALL_HOSTNAME_SUBNET_ID4_HOST

```
using hostname %1 and IPv4 subnet %2, found host: %3
```

Logged at debug log level 55. This debug message includes the details of the host found using the hostname and the DHCPv4 subnet id. The arguments specify hostname, subnet id and found host details respectively.

17.27 HOSTS_CFG_GET_ALL_HOSTNAME_SUBNET_ID6

```
get all hosts with reservations for hostname %1 and IPv6 subnet %2
```

Logged at debug log level 40. This debug message is issued when starting to retrieve all hosts with the specific hostname connected to the specific DHCPv6 subnet. The argument specifies hostname and subnet id.

17.28 HOSTS_CFG_GET_ALL_HOSTNAME_SUBNET_ID6_COUNT

```
using hostname %1 and IPv6 subnet %2, found %3 host(s)
```

Logged at debug log level 45. This debug message include the details of the host found using the hostname and the DHCPv6 subnet id. The arguments specify hostname, subnet id and the number of hosts found respectively.

17.29 HOSTS_CFG_GET_ALL_HOSTNAME_SUBNET_ID6_HOST

```
using hostname %1 and IPv6 subnet %2, found host: %3
```

Logged at debug log level 55. This debug message includes the details of the host found using the hostname and the DHCPv6 subnet id. The arguments specify hostname, subnet id and found host details respectively.

17.30 HOSTS_CFG_GET_ALL_IDENTIFIER

```
get all hosts with reservations using identifier: %1
```

Logged at debug log level 40. This debug message is issued when starting to retrieve reservations for all hosts identified by HW address or DUID. The argument holds both the identifier type and the value.

17.31 HOSTS_CFG_GET_ALL_IDENTIFIER_COUNT

```
using identifier %1, found %2 host(s)
```

Logged at debug log level 45. This debug message logs the number of hosts found using the specified identifier. The arguments specify the identifier used and the number of hosts found respectively.

17.32 HOSTS_CFG_GET_ALL_IDENTIFIER_HOST

```
using identifier: %1, found host: %2
```

Logged at debug log level 55. This debug message is issued when found host identified by the specific identifier. The arguments specify the identifier and the detailed description of the host found.

17.33 HOSTS_CFG_GET_ALL_SUBNET_ID4

```
get all hosts with reservations for IPv4 subnet %1
```

Logged at debug log level 40. This debug message is issued when starting to retrieve all hosts connected to the specific DHCPv4 subnet. The argument specifies subnet id.

17.34 HOSTS_CFG_GET_ALL_SUBNET_ID4_COUNT

```
using IPv4 subnet %1, found %2 host(s)
```

Logged at debug log level 45. This debug message include the details of the host found using the DHCPv4 subnet id. The arguments specify subnet id and the number of hosts found respectively.

17.35 HOSTS_CFG_GET_ALL_SUBNET_ID4_HOST

```
using IPv4 subnet %1, found host: %2
```

Logged at debug log level 55. This debug message includes the details of the host found using the DHCPv4 subnet id. The arguments specify subnet id and found host details respectively.

17.36 HOSTS_CFG_GET_ALL_SUBNET_ID6

```
get all hosts with reservations for IPv6 subnet %1
```

Logged at debug log level 40. This debug message is issued when starting to retrieve all hosts connected to the specific DHCPv6 subnet. The argument specifies subnet id.

17.37 HOSTS_CFG_GET_ALL_SUBNET_ID6_COUNT

```
using IPv6 subnet %1, found %2 host(s)
```

Logged at debug log level 45. This debug message include the details of the host found using the DHCPv6 subnet id. The arguments specify subnet id and the number of hosts found respectively.

17.38 HOSTS_CFG_GET_ALL_SUBNET_ID6_HOST

```
using IPv6 subnet %1, found host: %2
```

Logged at debug log level 55. This debug message includes the details of the host found using the DHCPv6 subnet id. The arguments specify subnet id and found host details respectively.

17.39 HOSTS_CFG_GET_ALL_SUBNET_ID_ADDRESS4

```
get all hosts with reservations for subnet id %1 and IPv4 address %2
```

Logged at debug log level 40. This debug message is issued when starting to retrieve all hosts having the reservation for the given IPv4 address within the given subnet. The first argument specifies subnet identifier. The second argument specifies the IPv4 address for which the reservation is to be returned.

17.40 HOSTS_CFG_GET_ALL_SUBNET_ID_ADDRESS4_COUNT

```
using IPv4 subnet %1 and IPv4 address %2, found %3 host(s)
```

Logged at debug log level 45. This debug message logs the number of hosts found having the reservation for the specified IPv4 address within the specified subnet. The first argument specifies the subnet identifier. The second argument specifies the reserved IPv4 address. The third argument specifies the number of hosts found.

17.41 HOSTS_CFG_GET_ALL_SUBNET_ID_ADDRESS4_HOST

```
using IPv4 subnet %1 and IPv4 address %2, found host: %3
```

Logged at debug log level 55. This debug message is issued when found host having the reservation for the specified IPv4 address in the specified subnet. The first argument specifies the subnet identifier. The second argument specifies the reserved IPv4 address. The third argument specifies host details.

17.42 HOSTS_CFG_GET_ALL_SUBNET_ID_ADDRESS6

```
get all hosts with reservations for subnet id %1 and IPv6 address %2
```

Logged at debug log level 40. This debug message is issued when starting to retrieve all hosts connected to the specific subnet and having the specific IPv6 address reserved. The arguments specify subnet id and IPv6 address respectively.

17.43 HOSTS_CFG_GET_ALL_SUBNET_ID_ADDRESS6_COUNT

```
using subnet id %1 and address %2, found %3 host(s)
```

Logged at debug log level 45. This debug message include the details of the host found using the subnet id and address. The arguments specify subnet id, address and the number of hosts found respectively.

17.44 HOSTS_CFG_GET_ALL_SUBNET_ID_ADDRESS6_HOST

```
using subnet id %1 and address %2, found host: %3
```

Logged at debug log level 55. This debug message includes the details of the host found using the subnet id and address. The arguments specify subnet id, address and the number of hosts found respectively. found host details respectively.

17.45 HOSTS_CFG_GET_ONE_PREFIX

```
get one host with reservation for prefix %1/%2
```

Logged at debug log level 40. This debug message is issued when starting to retrieve a host having a reservation for a specified prefix. The arguments specify a prefix and prefix length.

17.46 HOSTS_CFG_GET_ONE_PREFIX_HOST

```
using prefix %1/%2, found host: %3
```

Logged at debug log level 55. This debug message includes the details of the host found using the specific prefix/prefix length. The arguments specify prefix, prefix length and host details respectively.

17.47 HOSTS_CFG_GET_ONE_PREFIX_NULL

```
host not found using prefix %1/%2
```

Logged at debug log level 55. This debug message is issued when no host was found for a specified prefix and prefix length.

17.48 HOSTS_CFG_GET_ONE_SUBNET_ID_ADDRESS4

```
get one host with reservation for subnet id %1 and IPv4 address %2
```

Logged at debug log level 40. This debug message is issued when starting to retrieve a host connected to the specific subnet and having the specific IPv4 address reserved. The arguments specify subnet id and IPv4 address respectively.

17.49 HOSTS_CFG_GET_ONE_SUBNET_ID_ADDRESS4_HOST

```
using subnet id %1 and address %2, found host: %3
```

Logged at debug log level 45. This debug message logs the details of the host found using the subnet id and IPv4 address.

17.50 HOSTS_CFG_GET_ONE_SUBNET_ID_ADDRESS4_NULL

```
host not found using subnet id %1 and address %2
```

Logged at debug log level 45. This debug message is issued when no host was found for the specified subnet id and IPv4 address.

17.51 HOSTS_CFG_GET_ONE_SUBNET_ID_ADDRESS6

```
get one host with reservation for subnet id %1 and having IPv6 address %2
```

Logged at debug log level 40. This debug message is issued when starting to retrieve a host connected to the specific subnet and having the specific IPv6 address reserved. The arguments specify subnet id and IPv6 address respectively.

17.52 HOSTS_CFG_GET_ONE_SUBNET_ID_ADDRESS6_HOST

```
using subnet id %1 and address %2, found host: %3
```

Logged at debug log level 45. This debug message logs the details of the host found using the subnet id and IPv6 address.

17.53 HOSTS_CFG_GET_ONE_SUBNET_ID_ADDRESS6_NULL

```
host not found using subnet id %1 and address %2
```

Logged at debug log level 45. This debug message is issued when no host was found using the specified subnet if and IPv6 address.

17.54 HOSTS_CFG_GET_ONE_SUBNET_ID_IDENTIFIER

```
get one host with %1 reservation for subnet id %2, identified by %3
```

Logged at debug log level 40. This debug message is issued when starting to retrieve a host holding IPv4 or IPv6 reservations, which is connected to a specific subnet and is identified by a specific unique identifier. The first argument identifies if the IPv4 or IPv6 reservation is desired.

17.55 HOSTS_CFG_GET_ONE_SUBNET_ID_IDENTIFIER_HOST

```
using subnet id %1 and identifier %2, found host: %3
```

Logged at debug log level 45. This debug message includes the details of a host found using a subnet id and specific host identifier.

17.56 HOSTS_CFG_GET_ONE_SUBNET_ID_IDENTIFIER_NULL

```
host not found using subnet id %1 and identifier %2
```

Logged at debug log level 45. This debug message is issued when no host was found using the specified subnet id and host identifier.

17.57 HOSTS_CFG_UPDATE_ADD

```
add the host for reservations: %1
```

Logged at debug log level 40. This debug message is issued when a new host (with reservations) is added to the server's configuration during an update. The argument describes the host and its reservations in detail.

17.58 HOSTS_CFG_UPDATE_DEL4

```
deleted %1 host(s) for subnet id %2 and identifier %3
```

Logged at debug log level 40. This debug message is issued when IPv4 reservations are deleted for the specified subnet and identifier during an update. The first argument specifies how many hosts have been deleted. The second argument is the subnet identifier. The third argument is the identifier.

17.59 HOSTS_CFG_UPDATE_DEL6

```
deleted %1 host(s) having %2 IPv6 reservation(s) for subnet id %3 and identifier %4
```

Logged at debug log level 40. This debug message is issued when IPv6 reservations are deleted for the specified subnet and identifier during an update. The first argument specifies how many hosts have been deleted. The second argument specifies how many reservations have been deleted. The third argument is the subnet identifier. The fourth argument is the identifier.

17.60 HOSTS_MGR_ALTERNATE_GET4_SUBNET_ID_ADDRESS4

```
trying alternate sources for host using subnet id %1 and address %2
```

Logged at debug log level 40. This debug message is issued when the Host Manager doesn't find the host connected to the specific subnet and having the reservation for the specific IPv4 address, and it is starting to search for this host in alternate host data sources.

17.61 HOSTS_MGR_ALTERNATE_GET4_SUBNET_ID_IDENTIFIER

```
get one host with IPv4 reservation for subnet id %1, identified by %2
```

Logged at debug log level 40. This debug message is issued when starting to retrieve a host holding IPv4 reservation, which is connected to a specific subnet and is identified by a specific unique identifier.

17.62 HOSTS_MGR_ALTERNATE_GET4_SUBNET_ID_IDENTIFIER_HOST

```
using subnet id %1 and identifier %2, found in %3 host: %4
```

Logged at debug log level 45. This debug message includes the details of a host returned by an alternate hosts data source using a subnet id and specific host identifier.

17.63 HOSTS_MGR_ALTERNATE_GET4_SUBNET_ID_IDENTIFIER_NULL

```
host not found using subnet id %1 and identifier %2
```

Logged at debug log level 45. This debug message is issued when no host was found using the specified subnet id and host identifier.

17.64 HOSTS_MGR_ALTERNATE_GET6_PREFIX

```
trying alternate sources for host using prefix %1/%2
```

Logged at debug log level 40. This debug message is issued when the Host Manager doesn't find the host connected to the specific subnet and having the reservation for the specified prefix, and it is starting to search for this host in alternate host data sources.

17.65 HOSTS_MGR_ALTERNATE_GET6_SUBNET_ID_ADDRESS6

```
trying alternate sources for host using subnet id %1 and IPv6 address %2
```

Logged at debug log level 40. This debug message is issued when the Host Manager doesn't find the host connected to the specific subnet and having the reservation for the specified IPv6 address, and it is starting to search for this host in alternate host data sources.

17.66 HOSTS_MGR_ALTERNATE_GET6_SUBNET_ID_IDENTIFIER

```
get one host with IPv6 reservation for subnet id %1, identified by %2
```

Logged at debug log level 40. This debug message is issued when starting to retrieve a host holding IPv4 reservation, which is connected to a specific subnet and is identified by a specific unique identifier.

17.67 HOSTS_MGR_ALTERNATE_GET6_SUBNET_ID_IDENTIFIER_HOST

```
using subnet id %1 and identifier %2, found in %3 host: %4
```

Logged at debug log level 45. This debug message includes the details of a host returned by an alternate host data source using a subnet id and specific host identifier.

17.68 HOSTS_MGR_ALTERNATE_GET6_SUBNET_ID_IDENTIFIER_NULL

```
host not found using subnet id %1 and identifier %2
```

Logged at debug log level 45. This debug message is issued when no host was found using the specified subnet id and host identifier.

17.69 HOSTS_MGR_ALTERNATE_GET_ALL_SUBNET_ID_ADDRESS4

```
trying alternate sources for hosts using subnet id %1 and address %2
```

Logged at debug log level 40. This debug message is issued when the Host Manager is starting to search for hosts in alternate host data sources by subnet ID and IPv4 address.

17.70 HOSTS_MGR_ALTERNATE_GET_ALL_SUBNET_ID_ADDRESS6

```
trying alternate sources for hosts using subnet id %1 and address %2
```

Logged at debug log level 40. This debug message is issued when the Host Manager is starting to search for hosts in alternate host data sources by subnet ID and IPv6 address.

CHAPTER

EIGHTEEN

HTTPS

18.1 HTTPS_REQUEST_RECEIVE_START

```
start receiving request from %1
```

Logged at debug log level 50. This debug message is issued when the server starts receiving new request over the established connection. The argument specifies the address of the remote endpoint.

CHAPTER

NINETEEN

HTTP

19.1 HTTP_BAD_CLIENT_REQUEST_RECEIVED

```
bad request received from %1: %2
```

Logged at debug log level 40. This debug message is issued when an HTTP client sends malformed request to the server. This includes HTTP requests using unexpected content types, including malformed JSON etc. The first argument specifies an address of the remote endpoint which sent the request. The second argument provides a detailed error message.

19.2 HTTP_BAD_CLIENT_REQUEST_RECEIVED_DETAILS

```
detailed information about bad request received from %1:\n%2
```

Logged at debug log level 45. This debug message is issued when an HTTP client sends malformed request to the server. It includes detailed information about the received request rejected by the server. The first argument specifies an address of the remote endpoint which sent the request. The second argument provides a request in the textual format. The request is truncated by the logger if it is too large to be printed.

19.3 HTTP_BAD_SERVER_RESPONSE_RECEIVED

```
bad response received when communicating with %1: %2
```

Logged at debug log level 40. This debug message is issued when an HTTP client fails to receive a response from the server or when this response is malformed. The first argument specifies the server URL. The second argument provides a detailed error message.

19.4 HTTP_BAD_SERVER_RESPONSE_RECEIVED_DETAILS

```
detailed information about bad response received from %1:\n%2
```

Logged at debug log level 45. This debug message is issued when an HTTP client receives malformed response from the server. The first argument specifies an URL of the server. The second argument provides a response in the textual format. The request is truncated by the logger if it is too large to be printed.

19.5 HTTP_CLIENT_MT_STARTED

```
HttpClient has been started in multi-threaded mode running %1 threads
```

Logged at debug log level 40. This debug message is issued when a multi-threaded HTTP client instance has been created. The argument specifies the maximum number of threads.

19.6 HTTP_CLIENT_QUEUE_SIZE_GROWING

```
queue for URL: %1, now has %2 entries and may be growing too quickly
```

This warning message is issued when the queue of pending requests for the given URL appears to be growing more quickly than the requests can be handled. It will be emitted periodically as long as the queue size continues to grow. This may occur with a surge of client traffic creating a momentary backlog which then subsides as the surge subsides. If it happens continually then it most likely indicates a deployment configuration that cannot sustain the client load.

19.7 HTTP_CLIENT_REQUEST_AUTHORIZED

```
received HTTP request authorized for '%1'
```

This information message is issued when the server receives with a matching authentication header. The argument provides the user id.

19.8 HTTP_CLIENT_REQUEST_BAD_AUTH_HEADER

```
received HTTP request with malformed authentication header: %1
```

This information message is issued when the server receives a request with a malformed authentication header. The argument explains the problem.

19.9 HTTP_CLIENT_REQUEST_NOT_AUTHORIZED

```
received HTTP request with not matching authentication header
```

This information message is issued when the server receives a request with authentication header carrying not recognized credential: the user provided incorrect user id and/or password.

19.10 HTTP_CLIENT_REQUEST_RECEIVED

```
received HTTP request from %1
```

Logged at debug log level 40. This debug message is issued when the server finished receiving a HTTP request from the remote endpoint. The address of the remote endpoint is specified as an argument.

19.11 HTTP_CLIENT_REQUEST_RECEIVED_DETAILS

```
detailed information about well-formed request received from %1:\n%2
```

Logged at debug log level 45. This debug message is issued when the HTTP server receives a well-formed request. It includes detailed information about the received request. The first argument specifies an address of the remote endpoint which sent the request. The second argument provides the request in the textual format. The request is truncated by the logger if it is too large to be printed.

19.12 HTTP_CLIENT_REQUEST_SEND

```
sending HTTP request %1 to %2
```

Logged at debug log level 50. This debug message is issued when the client is starting to send a HTTP request to a server. The first argument holds basic information about the request (HTTP version number and status code). The second argument specifies a URL of the server.

19.13 HTTP_CLIENT_REQUEST_SEND_DETAILS

```
detailed information about request sent to %1:\n%2
```

Logged at debug log level 55. This debug message is issued right before the client sends an HTTP request to the server. It includes detailed information about the request. The first argument specifies an URL of the server to which the request is being sent. The second argument provides the request in the textual form. The request is truncated by the logger if it is too large to be printed.

19.14 HTTP_CLIENT_REQUEST_TIMEOUT_OCCURRED

```
HTTP request timeout occurred when communicating with %1
```

Logged at debug log level 50. This debug message is issued when the HTTP request timeout has occurred and the server is going to send a response with Http Request timeout status code.

19.15 HTTP_COMMAND_MGR_IGNORED_TLS_SETUP_CHANGES

```
ignore a change in TLS setup of the http control socket
```

The warning message is issued when the HTTP/HTTPS control socket was reconfigured with a different TLS setup but keeping the address and port. These changes are ignored because they can't be applied without opening a new socket which will conflict with the existing one.

19.16 HTTP_COMMAND_MGR_SERVICE_STARTED

```
started %1 service bound to address %2 port %3
```

This informational message indicates that the server has started HTTP/HTTPS service on the specified address and port for receiving control commands.

19.17 HTTP_CONNECTION_CLOSE_CALLBACK_FAILED

```
Connection close callback threw an exception
```

This is an error message emitted when the close connection callback registered on the connection failed unexpectedly. This is a programmatic error that should be submitted as a bug.

19.18 HTTP_CONNECTION_HANDSHAKE_FAILED

```
TLS handshake with %1 failed with %2
```

This information message is issued when the TLS handshake failed at the server side. The client address and the error message are displayed.

19.19 HTTP_CONNECTION_HANDSHAKE_START

```
start TLS handshake with %1 with timeout %2
```

Logged at debug log level 50. This debug message is issued when the server starts the TLS handshake with the remote endpoint. The first argument specifies the address of the remote endpoint. The second argument specifies request timeout in seconds.

19.20 HTTP_CONNECTION_SHUTDOWN

```
shutting down HTTP connection from %1
```

Logged at debug log level 40. This debug message is issued when one of the HTTP connections is shut down. The connection can be stopped as a result of an error or after the successful message exchange with a client.

19.21 HTTP_CONNECTION_SHUTDOWN_FAILED

```
shutting down HTTP connection failed
```

This error message is issued when an error occurred during shutting down a HTTP connection with a client.

19.22 HTTP_CONNECTION_STOP

```
stopping HTTP connection from %1
```

Logged at debug log level 40. This debug message is issued when one of the HTTP connections is stopped. The connection can be stopped as a result of an error or after the successful message exchange with a client.

19.23 HTTP_CONNECTION_STOP_FAILED

```
stopping HTTP connection failed
```

This error message is issued when an error occurred during closing a HTTP connection with a client.

19.24 HTTP_CONNECTION_WATCH_SOCKET_CLEAR_ERROR

```
clearing connection watch socket failed: %1
```

This error message is issued when an error occurred during clearing the watch socket associated with a HTTP connection with a client. The error is displayed.

19.25 HTTP_CONNECTION_WATCH_SOCKET_CLOSE_ERROR

```
closing connection watch socket failed: %1
```

This error message is issued when an error occurred during closing the watch socket associated with a HTTP connection with a client. The error is displayed.

19.26 HTTP_CONNECTION_WATCH_SOCKET_MARK_READY_ERROR

```
marking ready connection watch socket failed: %1
```

This error message is issued when an error occurred during marking as ready the watch socket associated with a HTTP connection with a client. The error is displayed.

19.27 HTTP_DATA_RECEIVED

```
received %1 bytes from %2
```

Logged at debug log level 55. This debug message is issued when the server receives a chunk of data from the remote endpoint. This may include the whole request or only a part of the request. The first argument specifies the amount of received data. The second argument specifies an address of the remote endpoint which produced the data.

19.28 HTTP_IDLE_CONNECTION_TIMEOUT_OCCURRED

```
closing persistent connection with %1 as a result of a timeout
```

Logged at debug log level 50. This debug message is issued when the persistent HTTP connection is being closed as a result of being idle.

19.29 HTTP_PREMATURE_CONNECTION_TIMEOUT_OCCURRED

```
premature connection timeout occurred: in transaction ? %1, transid: %2, current_
↪transid: %3
```

This warning message is issued when unexpected timeout occurred during the transaction. This is proven to occur when the system clock is moved manually or as a result of synchronization with a time server. Any ongoing transactions will be interrupted. New transactions should be conducted normally.

19.30 HTTP_REQUEST_RECEIVE_START

```
start receiving request from %1 with timeout %2
```

Logged at debug log level 50. This debug message is issued when the server starts receiving new request over the established connection. The first argument specifies the address of the remote endpoint. The second argument specifies request timeout in seconds.

19.31 HTTP_SERVER_RESPONSE_RECEIVED

```
received HTTP response from %1
```

Logged at debug log level 40. This debug message is issued when the client finished receiving an HTTP response from the server. The URL of the server is specified as an argument.

19.32 HTTP_SERVER_RESPONSE_RECEIVED_DETAILS

```
detailed information about well-formed response received from %1:\n%2
```

Logged at debug log level 45. This debug message is issued when the HTTP client receives a well-formed response from the server. It includes detailed information about the received response. The first argument specifies a URL of the server which sent the response. The second argument provides the response in the textual format. The response is truncated by the logger if it is too large to be printed.

19.33 HTTP_SERVER_RESPONSE_SEND

```
sending HTTP response %1 to %2
```

Logged at debug log level 40. This debug message is issued when the server is starting to send a HTTP response to a remote endpoint. The first argument holds basic information about the response (HTTP version number and status code). The second argument specifies an address of the remote endpoint.

CHAPTER

TWENTY

LEASE

20.1 LEASE_CMDS_ADD4

```
lease4-add command successful (address: %1)
```

Logged at debug log level 20. The lease4-add command has been successful. Lease IPv4 address is logged.

20.2 LEASE_CMDS_ADD4_CONFLICT

```
lease4-add command failed due to conflict (parameters: %1, reason: %2)
```

The received lease4-add is well-formed and contains valid parameters but the lease could not be created because it is in conflict with the server state or configuration. The reason for a conflict is logged in the message.

20.3 LEASE_CMDS_ADD4_FAILED

```
lease4-add command failed (parameters: %1, reason: %2)
```

The lease4-add command has failed. Both the reason as well as the parameters passed are logged.

20.4 LEASE_CMDS_ADD6

```
lease6-add command successful (address: %1)
```

Logged at debug log level 20. The lease6-add command has been successful. Lease IPv6 address is logged.

20.5 LEASE_CMDS_ADD6_CONFLICT

```
lease6-add command failed due to conflict (parameters: %1, reason: %2)
```

The received lease6-add is well-formed and contains valid parameters but the lease could not be created because it is in conflict with the server state or configuration. The reason for a conflict is logged in the message.

20.6 LEASE_CMDS_ADD6_FAILED

```
lease6-add command failed (parameters: %1, reason: %2)
```

The lease6-add command has failed. Both the reason as well as the parameters passed are logged.

20.7 LEASE_CMDS_BULK_APPLY6

```
lease6-bulk-apply command successful (applied addresses count: %1)
```

Logged at debug log level 20. The lease6-bulk-apply command has been successful. The number of applied addresses is logged.

20.8 LEASE_CMDS_BULK_APPLY6_FAILED

```
lease6-bulk-apply command failed (parameters: %1, reason: %2)
```

The lease6-bulk-apply command has failed. Both the reason as well as the parameters passed are logged.

20.9 LEASE_CMDS_DEINIT_OK

```
unloading Lease Commands hooks library successful
```

This info message indicates that the Lease Commands hooks library has been removed successfully.

20.10 LEASE_CMDS_DEL4

```
lease4-del command successful (address: %1)
```

Logged at debug log level 20. The attempt to delete an IPv4 lease (lease4-del command) has been successful. Lease IPv4 address is logged.

20.11 LEASE_CMDS_DEL4_FAILED

```
lease4-del command failed (parameters: %1, reason: %2)
```

The attempt to delete an IPv4 lease (lease4-del command) has failed. Both the reason as well as the parameters passed are logged.

20.12 LEASE_CMDS_DEL6

```
lease4-del command successful (address: %1)
```

Logged at debug log level 20. The attempt to delete an IPv4 lease (lease4-del command) has been successful. Lease IPv6 address is logged.

20.13 LEASE_CMDS_DEL6_FAILED

```
lease6-del command failed (parameters: %1, reason: %2)
```

The attempt to delete an IPv6 lease (lease4-del command) has failed. Both the reason as well as the parameters passed are logged.

20.14 LEASE_CMDS_GET4_FAILED

```
lease4-get command failed (parameters: %1, reason: %2)
```

The lease4-get command has failed. Both the reason as well as the parameters passed are logged.

20.15 LEASE_CMDS_GET6_FAILED

```
lease6-get command failed (parameters: %1, reason: %2)
```

The lease4-get command has failed. Both the reason as well as the parameters passed are logged.

20.16 LEASE_CMDS_INIT_OK

```
loading Lease Commands hooks library successful
```

This info message indicates that the Lease Commands hooks library has been loaded successfully. Enjoy!

20.17 LEASE_CMDS_RESEND_DDNS4

```
lease4-resend-ddns command successful: %1
```

A request to update DNS for the requested IPv4 lease has been successfully queued for transmission to kea-dhcp-ddns.

20.18 LEASE_CMDS_RESEND_DDNS4_FAILED

```
lease4-resend-ddns command failed: %1
```

A request to update DNS for the requested IPv4 lease has failed. The reason for the failure is logged.

20.19 LEASE_CMDS_RESEND_DDNS6

```
lease6-resend-ddns command successful: %1
```

A request to update DNS for the requested IPv6 lease has been successfully queued for transmission to kea-dhcp-ddns.

20.20 LEASE_CMDS_RESEND_DDNS6_FAILED

```
lease6-resend-ddns command failed: %1
```

A request to update DNS for the requested IPv6 lease has failed. The reason for the failure is logged.

20.21 LEASE_CMDS_UPDATE4

```
lease4-update command successful (address: %1)
```

Logged at debug log level 20. The lease4-update command has been successful. Lease IPv4 address is logged.

20.22 LEASE_CMDS_UPDATE4_CONFLICT

```
lease4-update command failed due to conflict (parameters: %1, reason: %2)
```

The received lease4-update is well-formed and contains valid parameters but the lease could not be created because it is in conflict with the server state or configuration. The reason for a conflict is logged in the message.

20.23 LEASE_CMDS_UPDATE4_FAILED

```
lease4-update command failed (parameters: %1, reason: %2)
```

The lease4-update command has failed. Both the reason as well as the parameters passed are logged.

20.24 LEASE_CMDS_UPDATE6

```
lease6-update command successful (address: %1)
```

Logged at debug log level 20. The lease6-update command has been successful. Lease IPv6 address is logged.

20.25 LEASE_CMDS_UPDATE6_CONFLICT

```
lease6-update command failed due to conflict (parameters: %1, reason: %2)
```

The received lease6-update is well-formed and contains valid parameters but the lease could not be created because it is in conflict with the server state or configuration. The reason for a conflict is logged in the message.

20.26 LEASE_CMDS_UPDATE6_FAILED

```
lease6-add command failed (parameters: %1, reason: %2)
```

The lease6-update command has failed. Both the reason as well as the parameters passed are logged.

20.27 LEASE_CMDS_WIPE4

```
lease4-wipe command successful (parameters: %1)
```

The lease4-wipe command has been successful. Parameters of the command are logged.

20.28 LEASE_CMDS_WIPE4_DEPRECATED

```
lease4-wipe command is deprecated and it will be removed in the future.
```

The lease4-wipe command is deprecated and it will be removed in the future.

20.29 LEASE_CMDS_WIPE4_FAILED

```
lease4-wipe command failed (parameters: %1, reason: %2)
```

The lease4-wipe command has failed. Both the reason as well as the parameters passed are logged.

20.30 LEASE_CMDS_WIPE6

```
lease6-wipe command successful (parameters: %1)
```

The lease6-wipe command has been successful. Parameters of the command are logged.

20.31 LEASE_CMDS_WIPE6_DEPRECATED

```
lease6-wipe command is deprecated and it will be removed in the future.
```

The lease6-wipe command is deprecated and it will be removed in the future.

CHAPTER

TWENTYONE

LFC

21.1 LFC_FAIL_PID_CREATE

```
: %1
```

This message is issued if LFC detected a failure when trying to create the PID file. It includes a more specific error string.

21.2 LFC_FAIL_PID_DEL

```
: %1
```

This message is issued if LFC detected a failure when trying to delete the PID file. It includes a more specific error string.

21.3 LFC_FAIL_PROCESS

```
: %1
```

This message is issued if LFC detected a failure when trying to process the files. It includes a more specific error string.

21.4 LFC_FAIL_ROTATE

```
: %1
```

This message is issued if LFC detected a failure when trying to rotate the files. It includes a more specific error string.

21.5 LFC_PROCESSING

```
Previous file: %1, copy file: %2
```

This message is issued just before LFC starts processing the lease files.

21.6 LFC_READ_STATS

```
Leases: %1, attempts: %2, errors: %3.
```

This message prints out the number of leases that were read, the number of attempts to read leases and the number of errors encountered while reading.

21.7 LFC_ROTATING

```
LFC rotating files
```

This message is issued just before LFC starts rotating the lease files - removing the old and replacing them with the new.

21.8 LFC_RUNNING

```
LFC instance already running
```

This message is issued if LFC detects that a previous copy of LFC may still be running via the PID check.

21.9 LFC_START

```
Starting lease file cleanup
```

This message is issued as the LFC process starts.

21.10 LFC_TERMINATE

```
LFC finished processing
```

This message is issued when the LFC process completes. It does not indicate that the process was successful only that it has finished.

CHAPTER

TWENTYTWO

LOGIMPL

22.1 LOGIMPL_ABOVE_MAX_DEBUG

```
debug level of %1 is too high and will be set to the maximum of %2
```

A message from the interface to the underlying logger implementation reporting that the debug level (as set by an internally-created string DEBUGn, where n is an integer, e.g. DEBUG22) is above the maximum allowed value and has been reduced to that value. The appearance of this message may indicate a programming error - please submit a bug report.

22.2 LOGIMPL_BAD_DEBUG_STRING

```
debug string '%1' has invalid format
```

A message from the interface to the underlying logger implementation reporting that an internally-created string used to set the debug level is not of the correct format (it should be of the form DEBUGn, where n is an integer, e.g. DEBUG22). The appearance of this message indicates a programming error - please submit a bug report.

CHAPTER

TWENTYTHREE

LOG

23.1 LOG_BAD_DESTINATION

```
unrecognized log destination: %1
```

This error message is printed when a logger destination value was given that was not recognized. The destination should be one of "console", "file", or "syslog".

23.2 LOG_BAD_SEVERITY

```
unrecognized log severity: %1
```

This error message is printed when a logger severity value was given that was not recognized. The severity should be one of "DEBUG", "INFO", "WARN", "ERROR", "FATAL" or "NONE".

23.3 LOG_BAD_STREAM

```
bad log console output stream: %1
```

Logging has been configured so that output is written to the terminal (console) but the stream on which it is to be written is not recognized. Allowed values are "stdout" and "stderr".

23.4 LOG_DUPLICATE_MESSAGE_ID

```
duplicate message ID (%1) in compiled code
```

During start-up, Kea detected that the given message identification had been defined multiple times in the Kea code. This indicates a programming error; please submit a bug report.

23.5 LOG_DUPLICATE_NAMESPACE

```
line %1: duplicate $NAMESPACE directive found
```

When reading a message file, more than one $NAMESPACE directive was found. (This directive is used to set a C++ namespace when generating header files during software development.) Such a condition is regarded as an error and the read will be abandoned.

23.6 LOG_INPUT_OPEN_FAIL

```
unable to open message file %1 for input: %2
```

The program was not able to open the specified input message file for the reason given.

23.7 LOG_INVALID_MESSAGE_ID

```
line %1: invalid message identification '%2'
```

An invalid message identification (ID) has been found during the read of a message file. Message IDs should comprise only alphanumeric characters and the underscore, and should not start with a digit.

23.8 LOG_NAMESPACE_EXTRA_ARGS

```
line %1: $NAMESPACE directive has too many arguments
```

The $NAMESPACE directive in a message file takes a single argument, a namespace in which all the generated symbol names are placed. This error is generated when the compiler finds a $NAMESPACE directive with more than one argument.

23.9 LOG_NAMESPACE_INVALID_ARG

```
line %1: $NAMESPACE directive has an invalid argument ('%2')
```

The $NAMESPACE argument in a message file should be a valid C++ namespace. This message is output if the simple check on the syntax of the string carried out by the reader fails.

23.10 LOG_NAMESPACE_NO_ARGS

```
line %1: no arguments were given to the $NAMESPACE directive
```

The $NAMESPACE directive in a message file takes a single argument, a C++ namespace in which all the generated symbol names are placed. This error is generated when the compiler finds a $NAMESPACE directive with no arguments.

23.11 LOG_NO_MESSAGE_ID

```
line %1: message definition line found without a message ID
```

Within a message file, message are defined by lines starting with a "%". The rest of the line should comprise the message ID and text describing the message. This error indicates the message compiler found a line in the message file comprising just the "%" and nothing else.

23.12 LOG_NO_MESSAGE_TEXT

```
line %1: line found containing a message ID ('%2') and no text
```

Within a message file, message are defined by lines starting with a "%". The rest of the line should comprise the message ID and text describing the message. This error indicates the message compiler found a line in the message file comprising just the "%" and message identification, but no text.

23.13 LOG_NO_SUCH_MESSAGE

```
could not replace message text for '%1': no such message
```

During start-up a local message file was read. A line with the listed message identification was found in the file, but the identification is not one contained in the compiled-in message dictionary. This message may appear a number of times in the file, once for every such unknown message identification. There are several reasons why this message may appear: - The message ID has been misspelled in the local message file. - The program outputting the message may not use that particular message (e.g. it originates in a module not used by the program). - The local file was written for an earlier version of the Kea software and the later version no longer generates that message. Whatever the reason, there is no impact on the operation of Kea.

23.14 LOG_OPEN_OUTPUT_FAIL

```
unable to open %1 for output: %2
```

Originating within the logging code, the program was not able to open the specified output file for the reason given.

23.15 LOG_PREFIX_EXTRA_ARGS

```
line %1: $PREFIX directive has too many arguments
```

Within a message file, the $PREFIX directive takes a single argument, a prefix to be added to the symbol names when a C++ file is created. This error is generated when the compiler finds a $PREFIX directive with more than one argument. Note: the $PREFIX directive is deprecated and will be removed in a future version of Kea.

23.16 LOG_PREFIX_INVALID_ARG

```
line %1: $PREFIX directive has an invalid argument ('%2')
```

Within a message file, the $PREFIX directive takes a single argument, a prefix to be added to the symbol names when a C++ file is created. As such, it must adhere to restrictions on C++ symbol names (e.g. may only contain alphanumeric characters or underscores, and may nor start with a digit). A $PREFIX directive was found with an argument (given in the message) that violates those restrictions. Note: the $PREFIX directive is deprecated and will be removed in a future version of Kea.

23.17 LOG_READING_LOCAL_FILE

```
reading local message file %1
```

This is an informational message output by Kea when it starts to read a local message file. (A local message file may replace the text of one or more messages; the ID of the message will not be changed though.)

23.18 LOG_READ_ERROR

```
error reading from message file %1: %2
```

The specified error was encountered reading from the named message file.

23.19 LOG_UNRECOGNIZED_DIRECTIVE

```
line %1: unrecognized directive '%2'
```

Within a message file, a line starting with a dollar symbol was found (indicating the presence of a directive) but the first word on the line (shown in the message) was not recognized.

CHAPTER

TWENTYFOUR

MT

24.1 MT_TCP_LISTENER_MGR_STARTED

```
MtTcpListenerMgr started with %1 threads, listening on %2:%3, use TLS: %4
```

Logged at debug log level 40. This debug messages is issued when an MtTcpListenerMgr has been started to accept connections. Arguments detail the number of threads that the listener is using, the address and port at which it is listening, and if TLS is used or not.

24.2 MT_TCP_LISTENER_MGR_STOPPED

```
MtTcpListenerMgr for %1:%2 stopped.
```

Logged at debug log level 40. This debug messages is issued when the MtTcpListenerMgr, listening at the given address and port, has completed shutdown.

24.3 MT_TCP_LISTENER_MGR_STOPPING

```
Stopping MtTcpListenerMgr for %1:%2
```

Logged at debug log level 40. This debug messages is issued when the MtTcpListenerMgr, listening at the given address and port, has begun to shutdown.

CHAPTER

TWENTYFIVE

MYSQL

25.1 MYSQL_CB_CREATE_UPDATE_BY_POOL_OPTION4

```
create or update option pool start: %1 pool end: %2
```

Logged at debug log level 40. Debug message issued when triggered an action to create or update option by pool

25.2 MYSQL_CB_CREATE_UPDATE_BY_POOL_OPTION6

```
create or update option pool start: %1 pool end: %2
```

Logged at debug log level 40. Debug message issued when triggered an action to create or update option by pool

25.3 MYSQL_CB_CREATE_UPDATE_BY_PREFIX_OPTION6

```
create or update option prefix: %1 prefix len: %2
```

Logged at debug log level 40. Debug message issued when triggered an action to create or update option by prefix

25.4 MYSQL_CB_CREATE_UPDATE_BY_SUBNET_ID_OPTION4

```
create or update option by subnet id: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to create or update option by subnet id

25.5 MYSQL_CB_CREATE_UPDATE_BY_SUBNET_ID_OPTION6

```
create or update option by subnet id: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to create or update option by subnet id

25.6 MYSQL_CB_CREATE_UPDATE_CLIENT_CLASS4

```
create or update client class: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to create or update client class

25.7 MYSQL_CB_CREATE_UPDATE_CLIENT_CLASS6

```
create or update client class: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to create or update client class

25.8 MYSQL_CB_CREATE_UPDATE_GLOBAL_PARAMETER4

```
create or update global parameter: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to create or update global parameter

25.9 MYSQL_CB_CREATE_UPDATE_GLOBAL_PARAMETER6

```
create or update global parameter: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to create or update global parameter

25.10 MYSQL_CB_CREATE_UPDATE_OPTION4

```
create or update option
```

Logged at debug log level 40. Debug message issued when triggered an action to create or update option

25.11 MYSQL_CB_CREATE_UPDATE_OPTION6

```
create or update option
```

Logged at debug log level 40. Debug message issued when triggered an action to create or update option

25.12 MYSQL_CB_CREATE_UPDATE_OPTION_DEF4

```
create or update option definition: %1 code: %2
```

Logged at debug log level 40. Debug message issued when triggered an action to create or update option definition

25.13 MYSQL_CB_CREATE_UPDATE_OPTION_DEF6

```
create or update option definition: %1 code: %2
```

Logged at debug log level 40. Debug message issued when triggered an action to create or update option definition

25.14 MYSQL_CB_CREATE_UPDATE_SERVER4

```
create or update server: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to create or update a DHCPv4 server information.

25.15 MYSQL_CB_CREATE_UPDATE_SERVER6

```
create or update server: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to create or update a DHCPv6 server information.

25.16 MYSQL_CB_CREATE_UPDATE_SHARED_NETWORK4

```
create or update shared network: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to create or update shared network

25.17 MYSQL_CB_CREATE_UPDATE_SHARED_NETWORK6

```
create or update shared network: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to create or update shared network

25.18 MYSQL_CB_CREATE_UPDATE_SHARED_NETWORK_OPTION4

```
create or update shared network: %1 option
```

Logged at debug log level 40. Debug message issued when triggered an action to create or update shared network option

25.19 MYSQL_CB_CREATE_UPDATE_SHARED_NETWORK_OPTION6

```
create or update shared network: %1 option
```

Logged at debug log level 40. Debug message issued when triggered an action to create or update shared network option

25.20 MYSQL_CB_CREATE_UPDATE_SUBNET4

```
create or update subnet: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to create or update subnet

25.21 MYSQL_CB_CREATE_UPDATE_SUBNET6

```
create or update subnet: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to create or update subnet

25.22 MYSQL_CB_DELETE_ALL_CLIENT_CLASSES4

```
delete all client classes
```

Logged at debug log level 40. Debug message issued when triggered an action to delete all client classes

25.23 MYSQL_CB_DELETE_ALL_CLIENT_CLASSES4_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete all client classes

25.24 MYSQL_CB_DELETE_ALL_CLIENT_CLASSES6

```
delete all client classes
```

Logged at debug log level 40. Debug message issued when triggered an action to delete all client classes

25.25 MYSQL_CB_DELETE_ALL_CLIENT_CLASSES6_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete all client classes

25.26 MYSQL_CB_DELETE_ALL_GLOBAL_PARAMETERS4

```
delete all global parameters
```

Logged at debug log level 40. Debug message issued when triggered an action to delete all global parameters

25.27 MYSQL_CB_DELETE_ALL_GLOBAL_PARAMETERS4_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete all global parameters

25.28 MYSQL_CB_DELETE_ALL_GLOBAL_PARAMETERS6

```
delete all global parameters
```

Logged at debug log level 40. Debug message issued when triggered an action to delete all global parameters

25.29 MYSQL_CB_DELETE_ALL_GLOBAL_PARAMETERS6_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete all global parameters

25.30 MYSQL_CB_DELETE_ALL_OPTION_DEFS4

```
delete all option definitions
```

Logged at debug log level 40. Debug message issued when triggered an action to delete all option definitions

25.31 MYSQL_CB_DELETE_ALL_OPTION_DEFS4_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete all option definitions

25.32 MYSQL_CB_DELETE_ALL_OPTION_DEFS6

```
delete all option definitions
```

Logged at debug log level 40. Debug message issued when triggered an action to delete all option definitions

25.33 MYSQL_CB_DELETE_ALL_OPTION_DEFS6_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete all option definitions

25.34 MYSQL_CB_DELETE_ALL_SERVERS4

```
delete all DHCPv4 servers
```

Logged at debug log level 40. Debug message issued when triggered an action to delete all servers.

25.35 MYSQL_CB_DELETE_ALL_SERVERS4_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete all servers.

25.36 MYSQL_CB_DELETE_ALL_SERVERS6

```
delete all DHCPv6 servers
```

Logged at debug log level 40. Debug message issued when triggered an action to delete all servers.

25.37 MYSQL_CB_DELETE_ALL_SERVERS6_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete all servers.

25.38 MYSQL_CB_DELETE_ALL_SHARED_NETWORKS4

```
delete all shared networks
```

Logged at debug log level 40. Debug message issued when triggered an action to delete all shared networks

25.39 MYSQL_CB_DELETE_ALL_SHARED_NETWORKS4_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete all shared networks

25.40 MYSQL_CB_DELETE_ALL_SHARED_NETWORKS6

```
delete all shared networks
```

Logged at debug log level 40. Debug message issued when triggered an action to delete all shared networks

25.41 MYSQL_CB_DELETE_ALL_SHARED_NETWORKS6_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete all shared networks

25.42 MYSQL_CB_DELETE_ALL_SUBNETS4

```
delete all subnets
```

Logged at debug log level 40. Debug message issued when triggered an action to delete all subnets

25.43 MYSQL_CB_DELETE_ALL_SUBNETS4_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete all subnets

25.44 MYSQL_CB_DELETE_ALL_SUBNETS6

```
delete all subnets
```

Logged at debug log level 40. Debug message issued when triggered an action to delete all subnets

25.45 MYSQL_CB_DELETE_ALL_SUBNETS6_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete all subnets

25.46 MYSQL_CB_DELETE_BY_POOL_OPTION4

```
delete pool start: %1 pool end: %2 option code: %3 space: %4
```

Logged at debug log level 40. Debug message issued when triggered an action to delete option by pool

25.47 MYSQL_CB_DELETE_BY_POOL_OPTION4_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete option by pool

25.48 MYSQL_CB_DELETE_BY_POOL_OPTION6

```
delete pool start: %1 pool end: %2 option code: %3 space: %4
```

Logged at debug log level 40. Debug message issued when triggered an action to delete option by pool

25.49 MYSQL_CB_DELETE_BY_POOL_OPTION6_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete option by pool

25.50 MYSQL_CB_DELETE_BY_POOL_PREFIX_OPTION6

```
delete prefix: %1 prefix len: %2 option code: %3 space: %4
```

Logged at debug log level 40. Debug message issued when triggered an action to delete option by prefix

25.51 MYSQL_CB_DELETE_BY_POOL_PREFIX_OPTION6_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete option by prefix

25.52 MYSQL_CB_DELETE_BY_PREFIX_SUBNET4

```
delete subnet by prefix: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to delete subnet by prefix

25.53 MYSQL_CB_DELETE_BY_PREFIX_SUBNET4_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete subnet by prefix

25.54 MYSQL_CB_DELETE_BY_PREFIX_SUBNET6

```
delete subnet by prefix: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to delete subnet by prefix

25.55 MYSQL_CB_DELETE_BY_PREFIX_SUBNET6_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete subnet by prefix

25.56 MYSQL_CB_DELETE_BY_SUBNET_ID_OPTION4

```
delete by subnet id: %1 option code: %2 space: %3
```

Logged at debug log level 40. Debug message issued when triggered an action to delete option by subnet id

25.57 MYSQL_CB_DELETE_BY_SUBNET_ID_OPTION4_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete option by subnet id

25.58 MYSQL_CB_DELETE_BY_SUBNET_ID_OPTION6

```
delete by subnet id: %1 option code: %2 space: %3
```

Logged at debug log level 40. Debug message issued when triggered an action to delete option by subnet id

25.59 MYSQL_CB_DELETE_BY_SUBNET_ID_OPTION6_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete option by subnet id

25.60 MYSQL_CB_DELETE_BY_SUBNET_ID_SUBNET4

```
delete subnet by subnet id: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to delete subnet by subnet id

25.61 MYSQL_CB_DELETE_BY_SUBNET_ID_SUBNET4_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete subnet by subnet id

25.62 MYSQL_CB_DELETE_BY_SUBNET_ID_SUBNET6

```
delete subnet by subnet id: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to delete subnet by subnet id

25.63 MYSQL_CB_DELETE_BY_SUBNET_ID_SUBNET6_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete subnet by subnet id

25.64 MYSQL_CB_DELETE_CLIENT_CLASS4

```
delete client class: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to delete client class

25.65 MYSQL_CB_DELETE_CLIENT_CLASS4_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete client class

25.66 MYSQL_CB_DELETE_CLIENT_CLASS6

```
delete client class: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to delete client class

25.67 MYSQL_CB_DELETE_CLIENT_CLASS6_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete client class

25.68 MYSQL_CB_DELETE_GLOBAL_PARAMETER4

```
delete global parameter: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to delete global parameter

25.69 MYSQL_CB_DELETE_GLOBAL_PARAMETER4_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete global parameter

25.70 MYSQL_CB_DELETE_GLOBAL_PARAMETER6

```
delete global parameter: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to delete global parameter

25.71 MYSQL_CB_DELETE_GLOBAL_PARAMETER6_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete global parameter

25.72 MYSQL_CB_DELETE_OPTION4

```
delete option code: %1 space: %2
```

Logged at debug log level 40. Debug message issued when triggered an action to delete option

25.73 MYSQL_CB_DELETE_OPTION4_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete option

25.74 MYSQL_CB_DELETE_OPTION6

```
delete option code: %1 space: %2
```

Logged at debug log level 40. Debug message issued when triggered an action to delete option

25.75 MYSQL_CB_DELETE_OPTION6_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete option

25.76 MYSQL_CB_DELETE_OPTION_DEF4

```
delete option definition code: %1 space: %2
```

Logged at debug log level 40. Debug message issued when triggered an action to delete option definition

25.77 MYSQL_CB_DELETE_OPTION_DEF4_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete option definition

25.78 MYSQL_CB_DELETE_OPTION_DEF6

```
delete option definition code: %1 space: %2
```

Logged at debug log level 40. Debug message issued when triggered an action to delete option definition

25.79 MYSQL_CB_DELETE_OPTION_DEF6_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete option definition

25.80 MYSQL_CB_DELETE_SERVER4

```
delete DHCPv4 server: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to delete a server.

25.81 MYSQL_CB_DELETE_SERVER4_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete a server.

25.82 MYSQL_CB_DELETE_SERVER6

```
delete DHCPv6 server: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to delete a server.

25.83 MYSQL_CB_DELETE_SERVER6_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete a server.

25.84 MYSQL_CB_DELETE_SHARED_NETWORK4

```
delete shared network: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to delete shared network

25.85 MYSQL_CB_DELETE_SHARED_NETWORK4_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete shared network

25.86 MYSQL_CB_DELETE_SHARED_NETWORK6

```
delete shared network: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to delete shared network

25.87 MYSQL_CB_DELETE_SHARED_NETWORK6_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete shared network

25.88 MYSQL_CB_DELETE_SHARED_NETWORK_OPTION4

```
delete shared network: %1 option code: %2 space: %3
```

Logged at debug log level 40. Debug message issued when triggered an action to delete shared network option

25.89 MYSQL_CB_DELETE_SHARED_NETWORK_OPTION4_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete shared network option

25.90 MYSQL_CB_DELETE_SHARED_NETWORK_OPTION6

```
delete shared network: %1 option code: %2 space: %3
```

Logged at debug log level 40. Debug message issued when triggered an action to delete shared network option

25.91 MYSQL_CB_DELETE_SHARED_NETWORK_OPTION6_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete shared network option

25.92 MYSQL_CB_DELETE_SHARED_NETWORK_SUBNETS4

```
delete shared network: %1 subnets
```

Logged at debug log level 40. Debug message issued when triggered an action to delete shared network subnets

25.93 MYSQL_CB_DELETE_SHARED_NETWORK_SUBNETS4_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete shared network subnets

25.94 MYSQL_CB_DELETE_SHARED_NETWORK_SUBNETS6

```
delete shared network: %1 subnets
```

Logged at debug log level 40. Debug message issued when triggered an action to delete shared network subnets

25.95 MYSQL_CB_DELETE_SHARED_NETWORK_SUBNETS6_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete shared network subnets

25.96 MYSQL_CB_GET_ALL_CLIENT_CLASSES4

```
retrieving all client classes
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve all client classes

25.97 MYSQL_CB_GET_ALL_CLIENT_CLASSES4_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve all client classes

25.98 MYSQL_CB_GET_ALL_CLIENT_CLASSES6

```
retrieving all client classes
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve all client classes

25.99 MYSQL_CB_GET_ALL_CLIENT_CLASSES6_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve all client classes

25.100 MYSQL_CB_GET_ALL_GLOBAL_PARAMETERS4

```
retrieving all global parameters
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve all global parameters

25.101 MYSQL_CB_GET_ALL_GLOBAL_PARAMETERS4_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve all global parameters

25.102 MYSQL_CB_GET_ALL_GLOBAL_PARAMETERS6

```
retrieving all global parameters
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve all global parameters

25.103 MYSQL_CB_GET_ALL_GLOBAL_PARAMETERS6_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve all global parameters

25.104 MYSQL_CB_GET_ALL_OPTIONS4

```
retrieving all options
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve all options

25.105 MYSQL_CB_GET_ALL_OPTIONS4_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve all options

25.106 MYSQL_CB_GET_ALL_OPTIONS6

```
retrieving all options
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve all options

25.107 MYSQL_CB_GET_ALL_OPTIONS6_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve all options

25.108 MYSQL_CB_GET_ALL_OPTION_DEFS4

```
retrieving all option definitions
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve all option definitions

25.109 MYSQL_CB_GET_ALL_OPTION_DEFS4_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve all option definitions

25.110 MYSQL_CB_GET_ALL_OPTION_DEFS6

```
retrieving all option definitions
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve all option definitions

25.111 MYSQL_CB_GET_ALL_OPTION_DEFS6_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve all option definitions

25.112 MYSQL_CB_GET_ALL_SERVERS4

```
retrieving all servers
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve all DHCPv4 servers

25.113 MYSQL_CB_GET_ALL_SERVERS4_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve all DHCPv4 servers

25.114 MYSQL_CB_GET_ALL_SERVERS6

```
retrieving all DHCPv6 servers
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve all DHCPv6 servers

25.115 MYSQL_CB_GET_ALL_SERVERS6_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve all DHCPv6 servers

25.116 MYSQL_CB_GET_ALL_SHARED_NETWORKS4

```
retrieving all shared networks
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve all shared networks

25.117 MYSQL_CB_GET_ALL_SHARED_NETWORKS4_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve all shared networks

25.118 MYSQL_CB_GET_ALL_SHARED_NETWORKS6

```
retrieving all shared networks
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve all shared networks

25.119 MYSQL_CB_GET_ALL_SHARED_NETWORKS6_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve all shared networks

25.120 MYSQL_CB_GET_ALL_SUBNETS4

```
retrieving all subnets
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve all subnets

25.121 MYSQL_CB_GET_ALL_SUBNETS4_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve all subnets

25.122 MYSQL_CB_GET_ALL_SUBNETS6

```
retrieving all subnets
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve all subnets

25.123 MYSQL_CB_GET_ALL_SUBNETS6_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve all subnets

25.124 MYSQL_CB_GET_CLIENT_CLASS4

```
retrieving client class: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve a client class

25.125 MYSQL_CB_GET_CLIENT_CLASS6

```
retrieving client class: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve a client class

25.126 MYSQL_CB_GET_GLOBAL_PARAMETER4

```
retrieving global parameter: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve global parameter

25.127 MYSQL_CB_GET_GLOBAL_PARAMETER6

```
retrieving global parameter: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve global parameter

25.128 MYSQL_CB_GET_HOST4

```
get host
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve host

25.129 MYSQL_CB_GET_HOST6

```
get host
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve host

25.130 MYSQL_CB_GET_MODIFIED_CLIENT_CLASSES4

```
retrieving modified client classes from: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve modified client classes from specified time

25.131 MYSQL_CB_GET_MODIFIED_CLIENT_CLASSES4_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve modified client classes from specified time

25.132 MYSQL_CB_GET_MODIFIED_CLIENT_CLASSES6

```
retrieving modified client classes from: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve modified client classes from specified time

25.133 MYSQL_CB_GET_MODIFIED_CLIENT_CLASSES6_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve modified client classes from specified time

25.134 MYSQL_CB_GET_MODIFIED_GLOBAL_PARAMETERS4

```
retrieving modified global parameters from: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve modified global parameters from specified time

25.135 MYSQL_CB_GET_MODIFIED_GLOBAL_PARAMETERS4_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve modified global parameters from specified time

25.136 MYSQL_CB_GET_MODIFIED_GLOBAL_PARAMETERS6

```
retrieving modified global parameters from: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve modified global parameters from specified time

25.137 MYSQL_CB_GET_MODIFIED_GLOBAL_PARAMETERS6_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve modified global parameters from specified time

25.138 MYSQL_CB_GET_MODIFIED_OPTIONS4

```
retrieving modified options from: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve modified options from specified time

25.139 MYSQL_CB_GET_MODIFIED_OPTIONS4_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve modified options from specified time

25.140 MYSQL_CB_GET_MODIFIED_OPTIONS6

```
retrieving modified options from: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve modified options from specified time

25.141 MYSQL_CB_GET_MODIFIED_OPTIONS6_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve modified options from specified time

25.142 MYSQL_CB_GET_MODIFIED_OPTION_DEFS4

```
retrieving modified option definitions from: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve modified option definitions from specified time

25.143 MYSQL_CB_GET_MODIFIED_OPTION_DEFS4_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve modified option definitions from specified time

25.144 MYSQL_CB_GET_MODIFIED_OPTION_DEFS6

```
retrieving modified option definitions from: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve modified option definitions from specified time

25.145 MYSQL_CB_GET_MODIFIED_OPTION_DEFS6_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve modified option definitions from specified time

25.146 MYSQL_CB_GET_MODIFIED_SHARED_NETWORKS4

```
retrieving modified shared networks from: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve modified shared networks from specified time

25.147 MYSQL_CB_GET_MODIFIED_SHARED_NETWORKS4_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve modified shared networks from specified time

25.148 MYSQL_CB_GET_MODIFIED_SHARED_NETWORKS6

```
retrieving modified shared networks from: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve modified shared networks from specified time

25.149 MYSQL_CB_GET_MODIFIED_SHARED_NETWORKS6_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve modified shared networks from specified time

25.150 MYSQL_CB_GET_MODIFIED_SUBNETS4

```
retrieving modified subnets from: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve modified subnets from specified time

25.151 MYSQL_CB_GET_MODIFIED_SUBNETS4_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve modified subnets from specified time

25.152 MYSQL_CB_GET_MODIFIED_SUBNETS6

```
retrieving modified subnets from: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve modified subnets from specified time

25.153 MYSQL_CB_GET_MODIFIED_SUBNETS6_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve modified subnets from specified time

25.154 MYSQL_CB_GET_OPTION4

```
retrieving option code: %1 space: %2
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve option

25.155 MYSQL_CB_GET_OPTION6

```
retrieving option code: %1 space: %2
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve option

25.156 MYSQL_CB_GET_OPTION_DEF4

```
retrieving option definition code: %1 space: %2
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve option definition

25.157 MYSQL_CB_GET_OPTION_DEF6

```
retrieving option definition code: %1 space: %2
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve option definition

25.158 MYSQL_CB_GET_PORT4

```
get port
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve port

25.159 MYSQL_CB_GET_PORT6

```
get port
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve port

25.160 MYSQL_CB_GET_RECENT_AUDIT_ENTRIES4

```
retrieving audit entries from: %1 %2
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve audit entries from specified time and id.

25.161 MYSQL_CB_GET_RECENT_AUDIT_ENTRIES4_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve audit entries from specified time

25.162 MYSQL_CB_GET_RECENT_AUDIT_ENTRIES6

```
retrieving audit entries from: %1 %2
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve audit entries from specified time and id

25.163 MYSQL_CB_GET_RECENT_AUDIT_ENTRIES6_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve audit entries from specified time

25.164 MYSQL_CB_GET_SERVER4

```
retrieving DHCPv4 server: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve a DHCPv4 server information.

25.165 MYSQL_CB_GET_SERVER6

```
retrieving DHCPv6 server: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve a DHCPv6 server information.

25.166 MYSQL_CB_GET_SHARED_NETWORK4

```
retrieving shared network: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve shared network

25.167 MYSQL_CB_GET_SHARED_NETWORK6

```
retrieving shared network: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve shared network

25.168 MYSQL_CB_GET_SHARED_NETWORK_SUBNETS4

```
retrieving shared network: %1 subnets
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve shared network subnets

25.169 MYSQL_CB_GET_SHARED_NETWORK_SUBNETS4_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve shared network subnets

25.170 MYSQL_CB_GET_SHARED_NETWORK_SUBNETS6

```
retrieving shared network: %1 subnets
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve shared network subnets

25.171 MYSQL_CB_GET_SHARED_NETWORK_SUBNETS6_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve shared network subnets

25.172 MYSQL_CB_GET_SUBNET4_BY_PREFIX

```
retrieving subnet by prefix: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve subnet by prefix

25.173 MYSQL_CB_GET_SUBNET4_BY_SUBNET_ID

```
retrieving subnet by subnet id: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve subnet by subnet id

25.174 MYSQL_CB_GET_SUBNET6_BY_PREFIX

```
retrieving subnet by prefix: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve subnet by prefix

25.175 MYSQL_CB_GET_SUBNET6_BY_SUBNET_ID

```
retrieving subnet by subnet id: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve subnet by subnet id

25.176 MYSQL_CB_GET_TYPE4

```
get type
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve type

25.177 MYSQL_CB_GET_TYPE6

```
get type
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve type

25.178 MYSQL_CB_NO_TLS

```
TLS was required but is not used
```

This error message is issued when TLS for the connection was required but TLS is not used.

25.179 MYSQL_CB_RECONNECT_ATTEMPT_FAILED4

```
database reconnect failed: %1
```

Error message issued when an attempt to reconnect has failed.

25.180 MYSQL_CB_RECONNECT_ATTEMPT_FAILED6

```
database reconnect failed: %1
```

Error message issued when an attempt to reconnect has failed.

25.181 MYSQL_CB_RECONNECT_ATTEMPT_SCHEDULE4

```
scheduling attempt %1 of %2 in %3 milliseconds
```

Info message issued when the server is scheduling the next attempt to reconnect to the database. This occurs when the server has lost database connectivity and is attempting to reconnect automatically.

25.182 MYSQL_CB_RECONNECT_ATTEMPT_SCHEDULE6

```
scheduling attempt %1 of %2 in %3 milliseconds
```

Info message issued when the server is scheduling the next attempt to reconnect to the database. This occurs when the server has lost database connectivity and is attempting to reconnect automatically.

25.183 MYSQL_CB_RECONNECT_FAILED4

```
maximum number of database reconnect attempts: %1, has been exhausted without success
```

Error message issued when the server failed to reconnect. Loss of connectivity is typically a network or database server issue.

25.184 MYSQL_CB_RECONNECT_FAILED6

```
maximum number of database reconnect attempts: %1, has been exhausted without success
```

Error message issued when the server failed to reconnect. Loss of connectivity is typically a network or database server issue.

25.185 MYSQL_CB_REGISTER_BACKEND_TYPE4

```
register backend
```

Logged at debug log level 40. Debug message issued when triggered an action to register backend

25.186 MYSQL_CB_REGISTER_BACKEND_TYPE6

```
register backend
```

Logged at debug log level 40. Debug message issued when triggered an action to register backend

25.187 MYSQL_CB_TLS_CIPHER

```
TLS cipher: %1
```

Logged at debug log level 40. A debug message issued when a new MySQL connected is created with TLS. The TLS cipher name is logged.

25.188 MYSQL_CB_UNREGISTER_BACKEND_TYPE4

```
unregister backend
```

Logged at debug log level 40. Debug message issued when triggered an action to unregister backend

25.189 MYSQL_DEINIT_OK

```
unloading MySQL hooks library successful
```

This informational message indicates that the MySQL Backend hooks library has been unloaded successfully.

25.190 MYSQL_HB_DB

```
opening MySQL hosts database: %1
```

This informational message is logged when a DHCP server (either V4 or V6) is about to open a MySQL hosts database. The parameters of the connection including database name and username needed to access it (but not the password if any) are logged.

25.191 MYSQL_HB_DB_GET_VERSION

```
obtaining schema version information for the MySQL hosts database
```

Logged at debug log level 50. A debug message issued when the server is about to obtain schema version information from the MySQL hosts database.

25.192 MYSQL_HB_DB_READONLY

```
MySQL host database opened for read access only
```

This informational message is issued when the user has configured the MySQL database in read-only mode. Kea will not be able to insert or modify host reservations but will be able to retrieve existing ones and assign them to the clients communicating with the server.

25.193 MYSQL_HB_DB_RECONNECT_ATTEMPT_FAILED

```
database reconnect failed: %1
```

An error message issued when an attempt to reconnect has failed.

25.194 MYSQL_HB_DB_RECONNECT_ATTEMPT_SCHEDULE

```
scheduling attempt %1 of %2 in %3 milliseconds
```

An info message issued when the server is scheduling the next attempt to reconnect to the database. This occurs when the server has lost database connectivity and is attempting to reconnect automatically.

25.195 MYSQL_HB_DB_RECONNECT_FAILED

```
maximum number of database reconnect attempts: %1, has been exhausted without success
```

An error message issued when the server failed to reconnect. Loss of connectivity is typically a network or database server issue.

25.196 MYSQL_HB_NO_TLS

```
TLS was required but is not used
```

This error message is issued when TLS for the connection was required but TLS is not used.

25.197 MYSQL_INIT_OK

```
loading MySQL hooks library successful
```

This informational message indicates that the MySQL Backend hooks library has been loaded successfully. Enjoy!

25.198 MYSQL_LB_ADD_ADDR4

```
adding IPv4 lease with address %1
```

Logged at debug log level 50. A debug message issued when the server is about to add an IPv4 lease with the specified address to the MySQL backend database.

25.199 MYSQL_LB_ADD_ADDR6

```
adding IPv6 lease with address %1, lease type %2
```

Logged at debug log level 50. A debug message issued when the server is about to add an IPv6 lease with the specified address to the MySQL backend database.

25.200 MYSQL_LB_COMMIT

```
committing to MySQL database
```

Logged at debug log level 50. The code has issued a commit call. All outstanding transactions will be committed to the database. Note that depending on the MySQL settings, the commit may not include a write to disk.

25.201 MYSQL_LB_DB

```
opening MySQL lease database: %1
```

This informational message is logged when a DHCP server (either V4 or V6) is about to open a MySQL lease database. The parameters of the connection including database name and username needed to access it (but not the password if any) are logged.

25.202 MYSQL_LB_DB_RECONNECT_ATTEMPT_FAILED

```
database reconnect failed: %1
```

An error message issued when an attempt to reconnect has failed.

25.203 MYSQL_LB_DB_RECONNECT_ATTEMPT_SCHEDULE

```
scheduling attempt %1 of %2 in %3 milliseconds
```

An info message issued when the server is scheduling the next attempt to reconnect to the database. This occurs when the server has lost database connectivity and is attempting to reconnect automatically.

25.204 MYSQL_LB_DB_RECONNECT_FAILED

```
maximum number of database reconnect attempts: %1, has been exhausted without success
```

An error message issued when the server failed to reconnect. Loss of connectivity is typically a network or database server issue.

25.205 MYSQL_LB_DELETED_EXPIRED_RECLAIMED

```
deleted %1 reclaimed leases from the database
```

Logged at debug log level 50. A debug message issued when the server has removed a number of reclaimed leases from the database. The number of removed leases is included in the message.

25.206 MYSQL_LB_DELETE_ADDR4

```
deleting lease for address %1
```

Logged at debug log level 50. A debug message issued when the server is attempting to delete a lease for the specified address from the MySQL database for the specified address.

25.207 MYSQL_LB_DELETE_ADDR6

```
deleting lease for address %1
```

Logged at debug log level 50. A debug message issued when the server is attempting to delete a lease for the specified address from the MySQL database for the specified address.

25.208 MYSQL_LB_DELETE_EXPIRED_RECLAIMED4

```
deleting reclaimed IPv4 leases that expired more than %1 seconds ago
```

Logged at debug log level 50. A debug message issued when the server is removing reclaimed DHCPv4 leases which have expired longer than a specified period of time. The argument is the amount of time Kea waits after a reclaimed lease expires before considering its removal.

25.209 MYSQL_LB_DELETE_EXPIRED_RECLAIMED6

```
deleting reclaimed IPv6 leases that expired more than %1 seconds ago
```

Logged at debug log level 50. A debug message issued when the server is removing reclaimed DHCPv6 leases which have expired longer than a specified period of time. The argument is the amount of time Kea waits after a reclaimed lease expires before considering its removal.

25.210 MYSQL_LB_GET4

```
obtaining all IPv4 leases
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain all IPv4 leases from the MySQL database.

25.211 MYSQL_LB_GET6

```
obtaining all IPv6 leases
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain all IPv6 leases from the MySQL database.

25.212 MYSQL_LB_GET_ADDR4

```
obtaining IPv4 lease for address %1
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain an IPv4 lease from the MySQL database for the specified address.

25.213 MYSQL_LB_GET_ADDR6

```
obtaining IPv6 lease for address %1, lease type %2
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain an IPv6 lease from the MySQL database for the specified address.

25.214 MYSQL_LB_GET_CLIENTID

```
obtaining IPv4 leases for client ID %1
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain a set of IPv4 leases from the MySQL database for a client with the specified client identification.

25.215 MYSQL_LB_GET_DUID

```
obtaining IPv6 lease for duid %1,
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain an IPv6 lease from the MySQL database for the specified duid.

25.216 MYSQL_LB_GET_EXPIRED4

```
obtaining maximum %1 of expired IPv4 leases
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain expired IPv4 leases to reclaim them. The maximum number of leases to be retrieved is logged in the message.

25.217 MYSQL_LB_GET_EXPIRED6

```
obtaining maximum %1 of expired IPv6 leases
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain expired IPv6 leases to reclaim them. The maximum number of leases to be retrieved is logged in the message.

25.218 MYSQL_LB_GET_HOSTNAME4

```
obtaining IPv4 leases for hostname %1
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain a set of IPv4 leases from the MySQL database for a client with the specified hostname.

25.219 MYSQL_LB_GET_HOSTNAME6

```
obtaining IPv6 leases for hostname %1
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain a set of IPv6 leases from the MySQL database for a client with the specified hostname.

25.220 MYSQL_LB_GET_HWADDR

```
obtaining IPv4 leases for hardware address %1
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain a set of IPv4 leases from the MySQL database for a client with the specified hardware address.

25.221 MYSQL_LB_GET_IAID_DUID

```
obtaining IPv6 leases for IAID %1, DUID %2, lease type %3
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain a set of IPv6 leases from the MySQL database for a client with the specified IAID (Identity Association ID) and DUID (DHCP Unique Identifier).

25.222 MYSQL_LB_GET_IAID_SUBID_DUID

```
obtaining IPv6 leases for IAID %1, Subnet ID %2, DUID %3, lease type %4
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain an IPv6 lease from the MySQL database for a client with the specified IAID (Identity Association ID), Subnet ID and DUID (DHCP Unique Identifier).

25.223 MYSQL_LB_GET_PAGE4

```
obtaining at most %1 IPv4 leases starting from address %2
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain a page of leases beginning with the specified address.

25.224 MYSQL_LB_GET_PAGE6

```
obtaining at most %1 IPv6 leases starting from address %2
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain a page of leases beginning with the specified address.

25.225 MYSQL_LB_GET_RELAYID4

```
obtaining at most %1 IPv4 leases starting from address %2 with relay id %3 and cltt␣
↪between %4 and %5
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain a page of IPv4 leases beginning with the specified address with a relay id and client transaction time between start and end dates.

25.226 MYSQL_LB_GET_RELAYID6

```
obtaining at most %1 IPv6 leases starting from address %2 with relay id %3
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain a page of IPv6 leases beginning with the specified address with a relay id.

25.227 MYSQL_LB_GET_REMOTEID4

```
obtaining at most %1 IPv4 leases starting from address %2 with remote id %3 and cltt␣
↪between %4 and %5
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain a page of IPv4 leases beginning with the specified address with a remote id and client transaction time between start and end dates.

25.228 MYSQL_LB_GET_REMOTEID6

```
obtaining at most %1 IPv6 leases starting from address %2 with remote id %3
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain a page of IPv6 leases beginning with the specified address with a remote id.

25.229 MYSQL_LB_GET_SUBID4

```
obtaining IPv4 leases for subnet ID %1
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain all IPv4 leases for a given subnet identifier from the MySQL database.

25.230 MYSQL_LB_GET_SUBID6

```
obtaining IPv6 leases for subnet ID %1
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain all IPv6 leases for a given subnet identifier from the MySQL database.

25.231 MYSQL_LB_GET_SUBID_CLIENTID

```
obtaining IPv4 lease for subnet ID %1 and client ID %2
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain an IPv4 lease from the MySQL database for a client with the specified subnet ID and client ID.

25.232 MYSQL_LB_GET_SUBID_HWADDR

```
obtaining IPv4 lease for subnet ID %1 and hardware address %2
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain an IPv4 lease from the MySQL database for a client with the specified subnet ID and hardware address.

25.233 MYSQL_LB_GET_SUBID_PAGE6

```
obtaining at most %1 IPv6 leases starting from address %2 for subnet ID %3
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain a page of IPv6 leases from the MySQL database beginning with the specified address for the specified subnet identifier.

25.234 MYSQL_LB_GET_VERSION

```
obtaining schema version information
```

Logged at debug log level 50. A debug message issued when the server is about to obtain schema version information from the MySQL database.

25.235 MYSQL_LB_NEGATIVE_LEASES_STAT

```
recount of leases returned a negative value
```

This warning message is issued when the recount of leases using counters in the MySQL database returned a negative value. This shows a problem which can be fixed only by an offline direct recount on the database. This message is issued only once.

25.236 MYSQL_LB_NO_TLS

```
TLS was required but is not used
```

This error message is issued when TLS for the connection was required but TLS is not used.

25.237 MYSQL_LB_ROLLBACK

```
rolling back MySQL database
```

Logged at debug log level 50. The code has issued a rollback call. All outstanding transaction will be rolled back and not committed to the database.

25.238 MYSQL_LB_TLS_CIPHER

```
TLS cipher: %1
```

Logged at debug log level 40. A debug message issued when a new MySQL connected is created with TLS. The TLS cipher name is logged.

25.239 MYSQL_LB_UPDATE_ADDR4

```
updating IPv4 lease for address %1
```

Logged at debug log level 50. A debug message issued when the server is attempting to update IPv4 lease from the MySQL database for the specified address.

25.240 MYSQL_LB_UPDATE_ADDR6

```
updating IPv6 lease for address %1, lease type %2
```

Logged at debug log level 50. A debug message issued when the server is attempting to update IPv6 lease from the MySQL database for the specified address.

25.241 MYSQL_LB_UPGRADE_EXTENDED_INFO4

```
upgrading IPv4 leases done in %1 pages with %2 updated leases
```

Logged at debug log level 40. The server upgraded extended info. The number of pages and the final count of updated leases are displayed.

25.242 MYSQL_LB_UPGRADE_EXTENDED_INFO4_ERROR

```
upgrading extending info for IPv4 lease at %1 failed with %2
```

Logged at debug log level 40. A debug message issued when the server failed to upgrade an extended info. The address of the lease and the error message are displayed.

25.243 MYSQL_LB_UPGRADE_EXTENDED_INFO4_PAGE

```
upgrading IPv4 lease extended info at page %1 starting at %2 (updated %3)
```

Logged at debug log level 50. A debug message issued when the server upgrades IPv4 lease extended info. The page number and started address, and the count of already updated leases are displayed.

25.244 MYSQL_LB_UPGRADE_EXTENDED_INFO6

```
upgrading IPv6 leases done in %1 pages with %2 updated leases
```

Logged at debug log level 40. The server upgraded extended info. The number of pages and the final count of updated leases are displayed.

25.245 MYSQL_LB_UPGRADE_EXTENDED_INFO6_ERROR

```
upgrading extending info for IPv6 lease at %1 failed with %2
```

Logged at debug log level 40. A debug message issued when the server failed to upgrade the extended info for a lease. The address of the lease and the error message are displayed.

CHAPTER

TWENTYSIX

NETCONF

26.1 NETCONF_BOOT_UPDATE_COMPLETED

```
Boot-update configuration completed for server %1
```

This informational message is issued when the initial configuration was retrieved using NETCONF and successfully applied to Kea server.

26.2 NETCONF_CONFIG_CHANGED_DETAIL

```
YANG configuration changed: %1
```

Logged at debug log level 55. This debug message indicates a YANG configuration change. The format is the change operation (created, modified, deleted or moved) followed by xpaths and values of old and new nodes.

26.3 NETCONF_CONFIG_CHANGE_EVENT

```
Received YANG configuration change %1 event
```

This informational message is issued when kea-netconf receives a YANG configuration change event. The type of event is printed.

26.4 NETCONF_CONFIG_CHECK_FAIL

```
NETCONF configuration check failed: %1
```

This error message indicates that kea-netconf had failed configuration check. Details are provided. Additional details may be available in earlier log entries, possibly on lower levels.

26.5 NETCONF_CONFIG_FAIL

```
NETCONF configuration failed: %1
```

This error message indicates that kea-netconf had failed configuration attempt. Details are provided. Additional details may be available in earlier log entries, possibly on lower levels.

26.6 NETCONF_CONFIG_SYNTAX_WARNING

```
NETCONF configuration syntax warning: %1
```

This warning message indicates that the NETCONF configuration had a minor syntax error. The error was displayed and the configuration parsing resumed.

26.7 NETCONF_FAILED

```
application experienced a fatal error: %1
```

This is a fatal error message issued when kea-netconf got an unrecoverable error from within the event loop.

26.8 NETCONF_GET_CONFIG

```
got configuration from %1 server: %2
```

Logged at debug log level 55. This debug message indicates that kea-netconf got the configuration from a Kea server. The server name and the retrieved configuration are printed.

26.9 NETCONF_GET_CONFIG_FAILED

```
getting configuration from %1 server failed: %2
```

The error message indicates that kea-netconf got an error getting the configuration from a Kea server. Make sure that the server is up and running, has appropriate control socket defined and that the controls socket configuration on the server matches that of kea-netconf. The name of the server and the error are printed.

26.10 NETCONF_GET_CONFIG_STARTED

```
getting configuration from %1 server
```

This informational message indicates that kea-netconf is trying to get the configuration from a Kea server.

26.11 NETCONF_MODULE_CHANGE_INTERNAL_ERROR

```
an internal error occurred while processing changes for module %1: %2
```

The error message indicates that kea-netconf got an error while sysrepo was processing modules changes. This usually follows a config validation failure, and can be recovered from. The name of the module and the internal error message are printed.

26.12 NETCONF_MODULE_MISSING_ERR

```
Missing essential module %1 in sysrepo
```

This fatal error message indicates that a module required by Netconf configuration is not available in the sysrepo repository. The name of the module is printed.

26.13 NETCONF_MODULE_MISSING_WARN

```
Missing module %1 in sysrepo
```

This warning message indicates that a module used by Kea is not available in the sysrepo repository. The name of the module is printed.

26.14 NETCONF_MODULE_REVISION_ERR

```
Essential module %1 does NOT have the right revision: expected %2, got %3
```

This fatal error message indicates that a module required by Netconf configuration is not at the right revision in the sysrepo repository. The name, expected and available revisions of the module are printed.

26.15 NETCONF_MODULE_REVISION_WARN

```
Module %1 does NOT have the right revision: expected %2, got %3
```

This warning message indicates that a module used by Kea is not at the right revision in the sysrepo repository. The name, expected and available revisions of the module are printed.

26.16 NETCONF_NOTIFICATION_INTERNAL_ERROR

```
an internal error occurred while sending an event notification for module %1: %2
```

The error message indicates that kea-netconf got an error while sysrepo was sending an event notification. This error is not fatal and can be recovered from. The name of the module and the internal error message are printed.

26.17 NETCONF_NOTIFICATION_RECEIVED

```
Received notification of type %1 for module %2: '%3'
```

This informational message logs any YANG notification that has been signaled by the server, sent to kea-netconf which then was forwarded to subscribed clients. To achieve this, kea-netconf subscribes itself as a client to all notifications for the configured module.

26.18 NETCONF_NOT_SUBSCRIBED_TO_NOTIFICATIONS

```
subscribing to notifications for %1 server with %2 module failed: %3
```

The warning message indicates that kea-netconf got an error subscribing to notifications for a Kea server. The most probable cause is probably that the model that kea-netconf subscribed to does not have any notification nodes, but there may be other more unexpected causes as well. The server name, module name and the error are printed.

26.19 NETCONF_RUN_EXIT

```
application is exiting the event loop
```

Logged at debug log level 0. This is a debug message issued when kea-netconf exits its event loop. This is a normal step during kea-netconf shutdown.

26.20 NETCONF_SET_CONFIG

```
set configuration to %1 server: %2
```

Logged at debug log level 55. This debug message indicates that kea-netconf set the configuration to a Kea server. The server name and the applied configuration are printed.

26.21 NETCONF_SET_CONFIG_FAILED

```
setting configuration to %1 server failed: %2
```

The error message indicates that kea-netconf got an error setting the configuration to a Kea server. Make sure that the server is up and running, has appropriate control socket defined and that the controls socket configuration on the server matches that of kea-netconf. The name of the server and the error are printed.

26.22 NETCONF_SET_CONFIG_STARTED

```
setting configuration to %1 server
```

This informational message indicates that kea-netconf is trying to set the configuration to a Kea server.

26.23 NETCONF_STARTED

```
kea-netconf (version %1) started
```

This informational message indicates that kea-netconf has processed all configuration information and is ready to begin processing. The version is also printed.

26.24 NETCONF_SUBSCRIBE_CONFIG

```
subscribing configuration changes for %1 server with %2 module
```

This information message indicates that kea-netconf is trying to subscribe configuration changes for a Kea server. The names of the server and the module are printed.

26.25 NETCONF_SUBSCRIBE_CONFIG_FAILED

```
subscribe configuration changes for %1 server with %2 module failed: %3
```

The error message indicates that kea-netconf got an error subscribing configuration changes for a Kea server. The names of the server and the module, and the error are printed.

26.26 NETCONF_SUBSCRIBE_NOTIFICATIONS

```
subscribing to notifications for %1 server with %2 module
```

This information message indicates that kea-netconf is trying to subscribe to notifications for a Kea server. The server name and module name are printed.

26.27 NETCONF_UPDATE_CONFIG

```
updating configuration with %1 server: %2
```

Logged at debug log level 55. This debug message indicates that kea-netconf update the configuration of a Kea server. The server name and the updated configuration are printed.

26.28 NETCONF_UPDATE_CONFIG_COMPLETED

```
completed updating configuration for %1 server
```

This informational message indicates that kea-netconf updated with success the configuration of a Kea server.

26.29 NETCONF_UPDATE_CONFIG_FAILED

```
updating configuration with %1 server: %2
```

The error message indicates that kea-netconf got an error updating the configuration of a Kea server. This includes a configuration rejected by a Kea server when it tried to apply it. The name of the server and the error are printed.

26.30 NETCONF_UPDATE_CONFIG_STARTED

```
started updating configuration for %1 server
```

This informational message indicates that kea-netconf is trying to update the configuration of a Kea server.

26.31 NETCONF_VALIDATE_CONFIG

```
validating configuration with %1 server: %2
```

Logged at debug log level 55. This debug message indicates that kea-netconf is validating the configuration with a Kea server. The server name and the validated configuration are printed.

26.32 NETCONF_VALIDATE_CONFIG_COMPLETED

```
completed validating configuration for %1 server
```

This informational message indicates that kea-netconf validated with success the configuration with a Kea server.

26.33 NETCONF_VALIDATE_CONFIG_FAILED

```
validating configuration with %1 server got an error: %2
```

The error message indicates that kea-netconf got an error validating the configuration with a Kea server. This message is produced when exception is thrown during an attempt to validate received configuration. Additional explanation may be provided as a parameter. You may also take a look at earlier log messages. The name of the server and the error are printed.

26.34 NETCONF_VALIDATE_CONFIG_REJECTED

```
validating configuration with %1 server was rejected: %2
```

The warning message indicates that kea-netconf got an error validating the configuration with a Kea server. This message is printed when the configuration was rejected during normal processing. Additional explanation may be provided as a parameter. You may also take a look at earlier log messages. The name of the server and the error are printed.

CHAPTER

TWENTYSEVEN

PERFMON

27.1 PERFMON_ALARM_CLEARED

```
Alarm for %1 has been cleared, reported mean duration %2 is now below low-water-ms: %3
```

This info message is emitted when the reported mean duration for an alarm that has been triggered has fallen below the value of its low-water-ms parameter. The arguments detail the alarm's key and the most recently reported mean.

27.2 PERFMON_ALARM_TRIGGERED

```
Alarm for %1 has been triggered since %2, reported mean duration %3 exceeds high-water-
↪ms: %4
```

This warning message is emitted when the reported mean duration for an alarm exceeds its high-water-ms value. As long as the reported averges remain above the low-water-ms value, the alarm will remain triggered and this message will be repeated every alarm-report-secs. Arguments detail the alarm's key, the time the alarm was first triggered, the most recent reported mean, and the high-water-ms value.

27.3 PERFMON_CMDS_CONTROL_ERROR

```
perfmon-control command processing failed: %1
```

This error message is issued when the PerfMon hook library encounters an error processing a perfmon-control command. The argument explains the command error.

27.4 PERFMON_CMDS_CONTROL_OK

```
perfmon-control command success: active monitoring: %1, stats-mgr-reporting: %2
```

This info log is issued when perfmon-control command has successfully enabled/disabled active monitoring and/or statistics mgr reporting. Arguments reflect the current state of both.

27.5 PERFMON_CMDS_GET_ALL_DURATIONS_ERROR

```
perfmon-get-all-durations command processing failed: %1
```

This error message is issued when the PerfMon hook library encounters an error processing a perfmon-get-all-durations command. The argument explains the command error.

27.6 PERFMON_CMDS_GET_ALL_DURATIONS_OK

```
perfmon-get-all-durations returning %1 durations
```

This info log is issued when perfmon-get-all-durations command has completed successfully. The argument contains the number of durations returned.

27.7 PERFMON_DEINIT_OK

```
unloading PerfMon hooks library successful
```

This info message indicates that the PerfMon hooks library has been removed successfully.

27.8 PERFMON_DHCP4_PKT_EVENTS

```
query: %1 events=[%2]
```

Logged at debug log level 50. This debug message is emitted after an inbound DHCPv4 query has been processed, the arguments are the query label and the dump of the query's packet event stack.

27.9 PERFMON_DHCP4_PKT_PROCESS_ERROR

```
Packet event stack was not processed for query %1, reason %2
```

Logged at debug log level 50. This debug message is emitted when the query's event stack could not be processed. This is most likely a programmatic error and should be reported. The arguments identify the query and the reason it could not be processed. These errors should not affect server's normal operations.

27.10 PERFMON_DHCP4_SOCKET_RECEIVED_TIME_SUPPORT

```
Kernel supports socket received time? %1
```

Logged at debug log level 40. This debug message is emitted after a (re)configuration and indicates whether or not the packet filter being used by kea-dhcp4 can supply the timestamp a packet was received by the kernel for recording SOCKET_RECEIVED events. If it does not, perfmon will still function but will not have data available to determine kernel buffer wait times.

27.11 PERFMON_DHCP6_PKT_EVENTS

```
query: %1 events=[%2]
```

Logged at debug log level 50. The debug message is emitted after an inbound DHCPv6 query has been processed, the arguments are the query label and the dump of the query's packet event stack.

27.12 PERFMON_DHCP6_PKT_PROCESS_ERROR

```
Packet event stack was not processed for query %1, reason %2
```

Logged at debug log level 50. This debug message is emitted when the query's event stack could not be processed. This is most likely a programmatic error and should be reported. The arguments identify the query and the reason it could not be processed. These errors should not affect server's normal operations.

27.13 PERFMON_DHCP6_SOCKET_RECEIVED_TIME_SUPPORT

```
Kernel supports socket received time? %1
```

Logged at debug log level 40. This debug message is emitted after a (re)configuration and indicates whether or not the packet filter being used by kea-dhcp6 can supply the timestamp a packet was received by the kernel for recording SOCKET_RECEIVED events. If it does not, perfmon will still function but will not have data available to determine kernel buffer wait times.

27.14 PERFMON_INIT_FAILED

```
loading PerfMon hooks library failed: %1
```

This error message indicates an error during loading the PerfMon hooks library. The details of the error are provided as argument of the log message.

CHAPTER

TWENTYEIGHT

PGSQL

28.1 PGSQL_CB_CREATE_UPDATE_BY_POOL_OPTION4

```
create or update option pool start: %1 pool end: %2
```

Logged at debug log level 40. Debug message issued when triggered an action to create or update option by pool

28.2 PGSQL_CB_CREATE_UPDATE_BY_POOL_OPTION6

```
create or update option pool start: %1 pool end: %2
```

Logged at debug log level 40. Debug message issued when triggered an action to create or update option by pool

28.3 PGSQL_CB_CREATE_UPDATE_BY_PREFIX_OPTION6

```
create or update option prefix: %1 prefix len: %2
```

Logged at debug log level 40. Debug message issued when triggered an action to create or update option by prefix

28.4 PGSQL_CB_CREATE_UPDATE_BY_SUBNET_ID_OPTION4

```
create or update option by subnet id: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to create or update option by subnet id

28.5 PGSQL_CB_CREATE_UPDATE_BY_SUBNET_ID_OPTION6

```
create or update option by subnet id: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to create or update option by subnet id

28.6 PGSQL_CB_CREATE_UPDATE_CLIENT_CLASS4

```
create or update client class: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to create or update client class

28.7 PGSQL_CB_CREATE_UPDATE_CLIENT_CLASS6

```
create or update client class: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to create or update client class

28.8 PGSQL_CB_CREATE_UPDATE_GLOBAL_PARAMETER4

```
create or update global parameter: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to create or update global parameter

28.9 PGSQL_CB_CREATE_UPDATE_GLOBAL_PARAMETER6

```
create or update global parameter: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to create or update global parameter

28.10 PGSQL_CB_CREATE_UPDATE_OPTION4

```
create or update option
```

Logged at debug log level 40. Debug message issued when triggered an action to create or update option

28.11 PGSQL_CB_CREATE_UPDATE_OPTION6

```
create or update option
```

Logged at debug log level 40. Debug message issued when triggered an action to create or update option

28.12 PGSQL_CB_CREATE_UPDATE_OPTION_DEF4

```
create or update option definition: %1 code: %2
```

Logged at debug log level 40. Debug message issued when triggered an action to create or update option definition

28.13 PGSQL_CB_CREATE_UPDATE_OPTION_DEF6

```
create or update option definition: %1 code: %2
```

Logged at debug log level 40. Debug message issued when triggered an action to create or update option definition

28.14 PGSQL_CB_CREATE_UPDATE_SERVER4

```
create or update server: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to create or update a DHCPv4 server information.

28.15 PGSQL_CB_CREATE_UPDATE_SERVER6

```
create or update server: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to create or update a DHCPv6 server information.

28.16 PGSQL_CB_CREATE_UPDATE_SHARED_NETWORK4

```
create or update shared network: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to create or update shared network

28.17 PGSQL_CB_CREATE_UPDATE_SHARED_NETWORK6

```
create or update shared network: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to create or update shared network

28.18 PGSQL_CB_CREATE_UPDATE_SHARED_NETWORK_OPTION4

```
create or update shared network: %1 option
```

Logged at debug log level 40. Debug message issued when triggered an action to create or update shared network option

28.19 PGSQL_CB_CREATE_UPDATE_SHARED_NETWORK_OPTION6

```
create or update shared network: %1 option
```

Logged at debug log level 40. Debug message issued when triggered an action to create or update shared network option

28.20 PGSQL_CB_CREATE_UPDATE_SUBNET4

```
create or update subnet: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to create or update subnet

28.21 PGSQL_CB_CREATE_UPDATE_SUBNET6

```
create or update subnet: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to create or update subnet

28.22 PGSQL_CB_DELETE_ALL_CLIENT_CLASSES4

```
delete all client classes
```

Logged at debug log level 40. Debug message issued when triggered an action to delete all client classes

28.23 PGSQL_CB_DELETE_ALL_CLIENT_CLASSES4_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete all client classes

28.24 PGSQL_CB_DELETE_ALL_CLIENT_CLASSES6

```
delete all client classes
```

Logged at debug log level 40. Debug message issued when triggered an action to delete all client classes

28.25 PGSQL_CB_DELETE_ALL_CLIENT_CLASSES6_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete all client classes

28.26 PGSQL_CB_DELETE_ALL_GLOBAL_PARAMETERS4

```
delete all global parameters
```

Logged at debug log level 40. Debug message issued when triggered an action to delete all global parameters

28.27 PGSQL_CB_DELETE_ALL_GLOBAL_PARAMETERS4_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete all global parameters

28.28 PGSQL_CB_DELETE_ALL_GLOBAL_PARAMETERS6

```
delete all global parameters
```

Logged at debug log level 40. Debug message issued when triggered an action to delete all global parameters

28.29 PGSQL_CB_DELETE_ALL_GLOBAL_PARAMETERS6_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete all global parameters

28.30 PGSQL_CB_DELETE_ALL_OPTION_DEFS4

```
delete all option definitions
```

Logged at debug log level 40. Debug message issued when triggered an action to delete all option definitions

28.31 PGSQL_CB_DELETE_ALL_OPTION_DEFS4_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete all option definitions

28.32 PGSQL_CB_DELETE_ALL_OPTION_DEFS6

```
delete all option definitions
```

Logged at debug log level 40. Debug message issued when triggered an action to delete all option definitions

28.33 PGSQL_CB_DELETE_ALL_OPTION_DEFS6_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete all option definitions

28.34 PGSQL_CB_DELETE_ALL_SERVERS4

```
delete all DHCPv4 servers
```

Logged at debug log level 40. Debug message issued when triggered an action to delete all servers.

28.35 PGSQL_CB_DELETE_ALL_SERVERS4_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete all servers.

28.36 PGSQL_CB_DELETE_ALL_SERVERS6

```
delete all DHCPv6 servers
```

Logged at debug log level 40. Debug message issued when triggered an action to delete all servers.

28.37 PGSQL_CB_DELETE_ALL_SERVERS6_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete all servers.

28.38 PGSQL_CB_DELETE_ALL_SHARED_NETWORKS4

```
delete all shared networks
```

Logged at debug log level 40. Debug message issued when triggered an action to delete all shared networks

28.39 PGSQL_CB_DELETE_ALL_SHARED_NETWORKS4_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete all shared networks

28.40 PGSQL_CB_DELETE_ALL_SHARED_NETWORKS6

```
delete all shared networks
```

Logged at debug log level 40. Debug message issued when triggered an action to delete all shared networks

28.41 PGSQL_CB_DELETE_ALL_SHARED_NETWORKS6_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete all shared networks

28.42 PGSQL_CB_DELETE_ALL_SUBNETS4

```
delete all subnets
```

Logged at debug log level 40. Debug message issued when triggered an action to delete all subnets

28.43 PGSQL_CB_DELETE_ALL_SUBNETS4_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete all subnets

28.44 PGSQL_CB_DELETE_ALL_SUBNETS6

```
delete all subnets
```

Logged at debug log level 40. Debug message issued when triggered an action to delete all subnets

28.45 PGSQL_CB_DELETE_ALL_SUBNETS6_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete all subnets

28.46 PGSQL_CB_DELETE_BY_POOL_OPTION4

```
delete pool start: %1 pool end: %2 option code: %3 space: %4
```

Logged at debug log level 40. Debug message issued when triggered an action to delete option by pool

28.47 PGSQL_CB_DELETE_BY_POOL_OPTION4_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete option by pool

28.48 PGSQL_CB_DELETE_BY_POOL_OPTION6

```
delete pool start: %1 pool end: %2 option code: %3 space: %4
```

Logged at debug log level 40. Debug message issued when triggered an action to delete option by pool

28.49 PGSQL_CB_DELETE_BY_POOL_OPTION6_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete option by pool

28.50 PGSQL_CB_DELETE_BY_POOL_PREFIX_OPTION6

```
delete prefix: %1 prefix len: %2 option code: %3 space: %4
```

Logged at debug log level 40. Debug message issued when triggered an action to delete option by prefix

28.51 PGSQL_CB_DELETE_BY_POOL_PREFIX_OPTION6_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete option by prefix

28.52 PGSQL_CB_DELETE_BY_PREFIX_SUBNET4

```
delete subnet by prefix: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to delete subnet by prefix

28.53 PGSQL_CB_DELETE_BY_PREFIX_SUBNET4_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete subnet by prefix

28.54 PGSQL_CB_DELETE_BY_PREFIX_SUBNET6

```
delete subnet by prefix: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to delete subnet by prefix

28.55 PGSQL_CB_DELETE_BY_PREFIX_SUBNET6_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete subnet by prefix

28.56 PGSQL_CB_DELETE_BY_SUBNET_ID_OPTION4

```
delete by subnet id: %1 option code: %2 space: %3
```

Logged at debug log level 40. Debug message issued when triggered an action to delete option by subnet id

28.57 PGSQL_CB_DELETE_BY_SUBNET_ID_OPTION4_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete option by subnet id

28.58 PGSQL_CB_DELETE_BY_SUBNET_ID_OPTION6

```
delete by subnet id: %1 option code: %2 space: %3
```

Logged at debug log level 40. Debug message issued when triggered an action to delete option by subnet id

28.59 PGSQL_CB_DELETE_BY_SUBNET_ID_OPTION6_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete option by subnet id

28.60 PGSQL_CB_DELETE_BY_SUBNET_ID_SUBNET4

```
delete subnet by subnet id: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to delete subnet by subnet id

28.61 PGSQL_CB_DELETE_BY_SUBNET_ID_SUBNET4_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete subnet by subnet id

28.62 PGSQL_CB_DELETE_BY_SUBNET_ID_SUBNET6

```
delete subnet by subnet id: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to delete subnet by subnet id

28.63 PGSQL_CB_DELETE_BY_SUBNET_ID_SUBNET6_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete subnet by subnet id

28.64 PGSQL_CB_DELETE_CLIENT_CLASS4

```
delete client class: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to delete client class

28.65 PGSQL_CB_DELETE_CLIENT_CLASS4_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete client class

28.66 PGSQL_CB_DELETE_CLIENT_CLASS6

```
delete client class: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to delete client class

28.67 PGSQL_CB_DELETE_CLIENT_CLASS6_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete client class

28.68 PGSQL_CB_DELETE_GLOBAL_PARAMETER4

```
delete global parameter: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to delete global parameter

28.69 PGSQL_CB_DELETE_GLOBAL_PARAMETER4_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete global parameter

28.70 PGSQL_CB_DELETE_GLOBAL_PARAMETER6

```
delete global parameter: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to delete global parameter

28.71 PGSQL_CB_DELETE_GLOBAL_PARAMETER6_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete global parameter

28.72 PGSQL_CB_DELETE_OPTION4

```
delete option code: %1 space: %2
```

Logged at debug log level 40. Debug message issued when triggered an action to delete option

28.73 PGSQL_CB_DELETE_OPTION4_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete option

28.74 PGSQL_CB_DELETE_OPTION6

```
delete option code: %1 space: %2
```

Logged at debug log level 40. Debug message issued when triggered an action to delete option

28.75 PGSQL_CB_DELETE_OPTION6_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete option

28.76 PGSQL_CB_DELETE_OPTION_DEF4

```
delete option definition code: %1 space: %2
```

Logged at debug log level 40. Debug message issued when triggered an action to delete option definition

28.77 PGSQL_CB_DELETE_OPTION_DEF4_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete option definition

28.78 PGSQL_CB_DELETE_OPTION_DEF6

```
delete option definition code: %1 space: %2
```

Logged at debug log level 40. Debug message issued when triggered an action to delete option definition

28.79 PGSQL_CB_DELETE_OPTION_DEF6_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete option definition

28.80 PGSQL_CB_DELETE_SERVER4

```
delete DHCPv4 server: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to delete a server.

28.81 PGSQL_CB_DELETE_SERVER4_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete a server.

28.82 PGSQL_CB_DELETE_SERVER6

```
delete DHCPv6 server: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to delete a server.

28.83 PGSQL_CB_DELETE_SERVER6_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete a server.

28.84 PGSQL_CB_DELETE_SHARED_NETWORK4

```
delete shared network: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to delete shared network

28.85 PGSQL_CB_DELETE_SHARED_NETWORK4_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete shared network

28.86 PGSQL_CB_DELETE_SHARED_NETWORK6

```
delete shared network: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to delete shared network

28.87 PGSQL_CB_DELETE_SHARED_NETWORK6_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete shared network

28.88 PGSQL_CB_DELETE_SHARED_NETWORK_OPTION4

```
delete shared network: %1 option code: %2 space: %3
```

Logged at debug log level 40. Debug message issued when triggered an action to delete shared network option

28.89 PGSQL_CB_DELETE_SHARED_NETWORK_OPTION4_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete shared network option

28.90 PGSQL_CB_DELETE_SHARED_NETWORK_OPTION6

```
delete shared network: %1 option code: %2 space: %3
```

Logged at debug log level 40. Debug message issued when triggered an action to delete shared network option

28.91 PGSQL_CB_DELETE_SHARED_NETWORK_OPTION6_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete shared network option

28.92 PGSQL_CB_DELETE_SHARED_NETWORK_SUBNETS4

```
delete shared network: %1 subnets
```

Logged at debug log level 40. Debug message issued when triggered an action to delete shared network subnets

28.93 PGSQL_CB_DELETE_SHARED_NETWORK_SUBNETS4_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete shared network subnets

28.94 PGSQL_CB_DELETE_SHARED_NETWORK_SUBNETS6

```
delete shared network: %1 subnets
```

Logged at debug log level 40. Debug message issued when triggered an action to delete shared network subnets

28.95 PGSQL_CB_DELETE_SHARED_NETWORK_SUBNETS6_RESULT

```
deleted: %1 entries
```

Logged at debug log level 40. Debug message indicating the result of an action to delete shared network subnets

28.96 PGSQL_CB_GET_ALL_CLIENT_CLASSES4

```
retrieving all client classes
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve all client classes

28.97 PGSQL_CB_GET_ALL_CLIENT_CLASSES4_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve all client classes

28.98 PGSQL_CB_GET_ALL_CLIENT_CLASSES6

```
retrieving all client classes
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve all client classes

28.99 PGSQL_CB_GET_ALL_CLIENT_CLASSES6_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve all client classes

28.100 PGSQL_CB_GET_ALL_GLOBAL_PARAMETERS4

```
retrieving all global parameters
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve all global parameters

28.101 PGSQL_CB_GET_ALL_GLOBAL_PARAMETERS4_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve all global parameters

28.102 PGSQL_CB_GET_ALL_GLOBAL_PARAMETERS6

```
retrieving all global parameters
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve all global parameters

28.103 PGSQL_CB_GET_ALL_GLOBAL_PARAMETERS6_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve all global parameters

28.104 PGSQL_CB_GET_ALL_OPTIONS4

```
retrieving all options
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve all options

28.105 PGSQL_CB_GET_ALL_OPTIONS4_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve all options

28.106 PGSQL_CB_GET_ALL_OPTIONS6

```
retrieving all options
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve all options

28.107 PGSQL_CB_GET_ALL_OPTIONS6_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve all options

28.108 PGSQL_CB_GET_ALL_OPTION_DEFS4

```
retrieving all option definitions
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve all option definitions

28.109 PGSQL_CB_GET_ALL_OPTION_DEFS4_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve all option definitions

28.110 PGSQL_CB_GET_ALL_OPTION_DEFS6

```
retrieving all option definitions
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve all option definitions

28.111 PGSQL_CB_GET_ALL_OPTION_DEFS6_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve all option definitions

28.112 PGSQL_CB_GET_ALL_SERVERS4

```
retrieving all servers
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve all DHCPv4 servers

28.113 PGSQL_CB_GET_ALL_SERVERS4_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve all DHCPv4 servers

28.114 PGSQL_CB_GET_ALL_SERVERS6

```
retrieving all DHCPv6 servers
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve all DHCPv6 servers

28.115 PGSQL_CB_GET_ALL_SERVERS6_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve all DHCPv6 servers

28.116 PGSQL_CB_GET_ALL_SHARED_NETWORKS4

```
retrieving all shared networks
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve all shared networks

28.117 PGSQL_CB_GET_ALL_SHARED_NETWORKS4_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve all shared networks

28.118 PGSQL_CB_GET_ALL_SHARED_NETWORKS6

```
retrieving all shared networks
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve all shared networks

28.119 PGSQL_CB_GET_ALL_SHARED_NETWORKS6_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve all shared networks

28.120 PGSQL_CB_GET_ALL_SUBNETS4

```
retrieving all subnets
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve all subnets

28.121 PGSQL_CB_GET_ALL_SUBNETS4_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve all subnets

28.122 PGSQL_CB_GET_ALL_SUBNETS6

```
retrieving all subnets
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve all subnets

28.123 PGSQL_CB_GET_ALL_SUBNETS6_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve all subnets

28.124 PGSQL_CB_GET_CLIENT_CLASS4

```
retrieving client class: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve a client class

28.125 PGSQL_CB_GET_CLIENT_CLASS6

```
retrieving client class: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve a client class

28.126 PGSQL_CB_GET_GLOBAL_PARAMETER4

```
retrieving global parameter: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve global parameter

28.127 PGSQL_CB_GET_GLOBAL_PARAMETER6

```
retrieving global parameter: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve global parameter

28.128 PGSQL_CB_GET_HOST4

```
get host
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve host

28.129 PGSQL_CB_GET_HOST6

```
get host
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve host

28.130 PGSQL_CB_GET_MODIFIED_CLIENT_CLASSES4

```
retrieving modified client classes from: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve modified client classes from specified time

28.131 PGSQL_CB_GET_MODIFIED_CLIENT_CLASSES4_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve modified client classes from specified time

28.132 PGSQL_CB_GET_MODIFIED_CLIENT_CLASSES6

```
retrieving modified client classes from: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve modified client classes from specified time

28.133 PGSQL_CB_GET_MODIFIED_CLIENT_CLASSES6_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve modified client classes from specified time

28.134 PGSQL_CB_GET_MODIFIED_GLOBAL_PARAMETERS4

```
retrieving modified global parameters from: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve modified global parameters from specified time

28.135 PGSQL_CB_GET_MODIFIED_GLOBAL_PARAMETERS4_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve modified global parameters from specified time

28.136 PGSQL_CB_GET_MODIFIED_GLOBAL_PARAMETERS6

```
retrieving modified global parameters from: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve modified global parameters from specified time

28.137 PGSQL_CB_GET_MODIFIED_GLOBAL_PARAMETERS6_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve modified global parameters from specified time

28.138 PGSQL_CB_GET_MODIFIED_OPTIONS4

```
retrieving modified options from: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve modified options from specified time

28.139 PGSQL_CB_GET_MODIFIED_OPTIONS4_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve modified options from specified time

28.140 PGSQL_CB_GET_MODIFIED_OPTIONS6

```
retrieving modified options from: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve modified options from specified time

28.141 PGSQL_CB_GET_MODIFIED_OPTIONS6_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve modified options from specified time

28.142 PGSQL_CB_GET_MODIFIED_OPTION_DEFS4

```
retrieving modified option definitions from: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve modified option definitions from specified time

28.143 PGSQL_CB_GET_MODIFIED_OPTION_DEFS4_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve modified option definitions from specified time

28.144 PGSQL_CB_GET_MODIFIED_OPTION_DEFS6

```
retrieving modified option definitions from: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve modified option definitions from specified time

28.145 PGSQL_CB_GET_MODIFIED_OPTION_DEFS6_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve modified option definitions from specified time

28.146 PGSQL_CB_GET_MODIFIED_SHARED_NETWORKS4

```
retrieving modified shared networks from: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve modified shared networks from specified time

28.147 PGSQL_CB_GET_MODIFIED_SHARED_NETWORKS4_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve modified shared networks from specified time

28.148 PGSQL_CB_GET_MODIFIED_SHARED_NETWORKS6

```
retrieving modified shared networks from: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve modified shared networks from specified time

28.149 PGSQL_CB_GET_MODIFIED_SHARED_NETWORKS6_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve modified shared networks from specified time

28.150 PGSQL_CB_GET_MODIFIED_SUBNETS4

```
retrieving modified subnets from: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve modified subnets from specified time

28.151 PGSQL_CB_GET_MODIFIED_SUBNETS4_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve modified subnets from specified time

28.152 PGSQL_CB_GET_MODIFIED_SUBNETS6

```
retrieving modified subnets from: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve modified subnets from specified time

28.153 PGSQL_CB_GET_MODIFIED_SUBNETS6_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve modified subnets from specified time

28.154 PGSQL_CB_GET_OPTION4

```
retrieving option code: %1 space: %2
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve option

28.155 PGSQL_CB_GET_OPTION6

```
retrieving option code: %1 space: %2
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve option

28.156 PGSQL_CB_GET_OPTION_DEF4

```
retrieving option definition code: %1 space: %2
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve option definition

28.157 PGSQL_CB_GET_OPTION_DEF6

```
retrieving option definition code: %1 space: %2
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve option definition

28.158 PGSQL_CB_GET_PORT4

```
get port
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve port

28.159 PGSQL_CB_GET_PORT6

```
get port
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve port

28.160 PGSQL_CB_GET_RECENT_AUDIT_ENTRIES4

```
retrieving audit entries from: %1 %2
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve audit entries from specified time and id.

28.161 PGSQL_CB_GET_RECENT_AUDIT_ENTRIES4_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve audit entries from specified time

28.162 PGSQL_CB_GET_RECENT_AUDIT_ENTRIES6

```
retrieving audit entries from: %1 %2
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve audit entries from specified time and id

28.163 PGSQL_CB_GET_RECENT_AUDIT_ENTRIES6_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve audit entries from specified time

28.164 PGSQL_CB_GET_SERVER4

```
retrieving DHCPv4 server: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve a DHCPv4 server information.

28.165 PGSQL_CB_GET_SERVER6

```
retrieving DHCPv6 server: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve a DHCPv6 server information.

28.166 PGSQL_CB_GET_SHARED_NETWORK4

```
retrieving shared network: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve shared network

28.167 PGSQL_CB_GET_SHARED_NETWORK6

```
retrieving shared network: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve shared network

28.168 PGSQL_CB_GET_SHARED_NETWORK_SUBNETS4

```
retrieving shared network: %1 subnets
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve shared network subnets

28.169 PGSQL_CB_GET_SHARED_NETWORK_SUBNETS4_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve shared network subnets

28.170 PGSQL_CB_GET_SHARED_NETWORK_SUBNETS6

```
retrieving shared network: %1 subnets
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve shared network subnets

28.171 PGSQL_CB_GET_SHARED_NETWORK_SUBNETS6_RESULT

```
retrieving: %1 elements
```

Logged at debug log level 40. Debug message indicating the result of an action to retrieve shared network subnets

28.172 PGSQL_CB_GET_SUBNET4_BY_PREFIX

```
retrieving subnet by prefix: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve subnet by prefix

28.173 PGSQL_CB_GET_SUBNET4_BY_SUBNET_ID

```
retrieving subnet by subnet id: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve subnet by subnet id

28.174 PGSQL_CB_GET_SUBNET6_BY_PREFIX

```
retrieving subnet by prefix: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve subnet by prefix

28.175 PGSQL_CB_GET_SUBNET6_BY_SUBNET_ID

```
retrieving subnet by subnet id: %1
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve subnet by subnet id

28.176 PGSQL_CB_GET_TYPE4

```
get type
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve type

28.177 PGSQL_CB_GET_TYPE6

```
get type
```

Logged at debug log level 40. Debug message issued when triggered an action to retrieve type

28.178 PGSQL_CB_NO_TLS_SUPPORT

```
Attempt to configure TLS (unsupported for PostgreSQL): %1
```

This error message is printed when TLS support was required in the Kea configuration: Kea was built with this feature disabled for PostgreSQL. The parameters of the connection are logged.

28.179 PGSQL_CB_RECONNECT_ATTEMPT_FAILED4

```
database reconnect failed: %1
```

Error message issued when an attempt to reconnect has failed.

28.180 PGSQL_CB_RECONNECT_ATTEMPT_FAILED6

```
database reconnect failed: %1
```

Error message issued when an attempt to reconnect has failed.

28.181 PGSQL_CB_RECONNECT_ATTEMPT_SCHEDULE4

```
scheduling attempt %1 of %2 in %3 milliseconds
```

Info message issued when the server is scheduling the next attempt to reconnect to the database. This occurs when the server has lost database connectivity and is attempting to reconnect automatically.

28.182 PGSQL_CB_RECONNECT_ATTEMPT_SCHEDULE6

```
scheduling attempt %1 of %2 in %3 milliseconds
```

Info message issued when the server is scheduling the next attempt to reconnect to the database. This occurs when the server has lost database connectivity and is attempting to reconnect automatically.

28.183 PGSQL_CB_RECONNECT_FAILED4

```
maximum number of database reconnect attempts: %1, has been exhausted without success
```

Error message issued when the server failed to reconnect. Loss of connectivity is typically a network or database server issue.

28.184 PGSQL_CB_RECONNECT_FAILED6

```
maximum number of database reconnect attempts: %1, has been exhausted without success
```

Error message issued when the server failed to reconnect. Loss of connectivity is typically a network or database server issue.

28.185 PGSQL_CB_REGISTER_BACKEND_TYPE4

```
register backend
```

Logged at debug log level 40. Debug message issued when triggered an action to register backend

28.186 PGSQL_CB_REGISTER_BACKEND_TYPE6

```
register backend
```

Logged at debug log level 40. Debug message issued when triggered an action to register backend

28.187 PGSQL_CB_TLS_SUPPORT

```
Attempt to configure TLS: %1
```

This informational message is printed when TLS support was required in the Kea configuration: The TLS support in PostgreSQL will be initialized but its configuration is fully managed outside the C API. The parameters of the connection are logged.

28.188 PGSQL_CB_UNREGISTER_BACKEND_TYPE4

```
unregister backend
```

Logged at debug log level 40. Debug message issued when triggered an action to unregister backend

28.189 PGSQL_DEINIT_OK

```
unloading PostgreSQL hooks library successful
```

This informational message indicates that the PostgreSQL Backend hooks library has been unloaded successfully.

28.190 PGSQL_HB_DB

```
opening PostgreSQL hosts database: %1
```

This informational message is logged when a DHCP server (either V4 or V6) is about to open a PostgreSQL hosts database. The parameters of the connection including database name and username needed to access it (but not the password if any) are logged.

28.191 PGSQL_HB_DB_GET_VERSION

```
obtaining schema version information for the PostgreSQL hosts database
```

Logged at debug log level 50. A debug message issued when the server is about to obtain schema version information from the PostgreSQL hosts database.

28.192 PGSQL_HB_DB_READONLY

```
PostgreSQL host database opened for read access only
```

This informational message is issued when the user has configured the PostgreSQL database in read-only mode. Kea will not be able to insert or modify host reservations but will be able to retrieve existing ones and assign them to the clients communicating with the server.

28.193 PGSQL_HB_DB_RECONNECT_ATTEMPT_FAILED

```
database reconnect failed: %1
```

An error message issued when an attempt to reconnect has failed.

28.194 PGSQL_HB_DB_RECONNECT_ATTEMPT_SCHEDULE

```
scheduling attempt %1 of %2 in %3 milliseconds
```

An info message issued when the server is scheduling the next attempt to reconnect to the database. This occurs when the server has lost database connectivity and is attempting to reconnect automatically.

28.195 PGSQL_HB_DB_RECONNECT_FAILED

```
maximum number of database reconnect attempts: %1, has been exhausted without success
```

An error message issued when the server failed to reconnect. Loss of connectivity is typically a network or database server issue.

28.196 PGSQL_HB_NO_TLS_SUPPORT

```
Attempt to configure TLS (unsupported for PostgreSQL): %1
```

This error message is printed when TLS support was required in the Kea configuration: Kea was built with this feature disabled for PostgreSQL. The parameters of the connection are logged.

28.197 PGSQL_INIT_OK

```
loading PostgreSQL hooks library successful
```

This informational message indicates that the PostgreSQL Backend hooks library has been loaded successfully. Enjoy!

28.198 PGSQL_LB_ADD_ADDR4

```
adding IPv4 lease with address %1
```

Logged at debug log level 50. A debug message issued when the server is about to add an IPv4 lease with the specified address to the PostgreSQL backend database.

28.199 PGSQL_LB_ADD_ADDR6

```
adding IPv6 lease with address %1, lease type %2
```

Logged at debug log level 50. A debug message issued when the server is about to add an IPv6 lease with the specified address to the PostgreSQL backend database.

28.200 PGSQL_LB_COMMIT

```
committing to PostgreSQL database
```

Logged at debug log level 50. The code has issued a commit call. All outstanding transactions will be committed to the database. Note that depending on the PostgreSQL settings, the commit may not include a write to disk.

28.201 PGSQL_LB_DB

```
opening PostgreSQL lease database: %1
```

This informational message is logged when a DHCP server (either V4 or V6) is about to open a PostgreSQL lease database. The parameters of the connection including database name and username needed to access it (but not the password if any) are logged.

28.202 PGSQL_LB_DB_RECONNECT_ATTEMPT_FAILED

```
database reconnect failed: %1
```

An error message issued when an attempt to reconnect has failed.

28.203 PGSQL_LB_DB_RECONNECT_ATTEMPT_SCHEDULE

```
scheduling attempt %1 of %2 in %3 milliseconds
```

An info message issued when the server is scheduling the next attempt to reconnect to the database. This occurs when the server has lost database connectivity and is attempting to reconnect automatically.

28.204 PGSQL_LB_DB_RECONNECT_FAILED

```
maximum number of database reconnect attempts: %1, has been exhausted without success
```

An error message issued when the server failed to reconnect. Loss of connectivity is typically a network or database server issue.

28.205 PGSQL_LB_DELETE_ADDR4

```
deleting lease for address %1
```

Logged at debug log level 50. A debug message issued when the server is attempting to delete a lease for the specified address from the PostgreSQL database for the specified address.

28.206 PGSQL_LB_DELETE_ADDR6

```
deleting lease for address %1
```

Logged at debug log level 50. A debug message issued when the server is attempting to delete a lease for the specified address from the PostgreSQL database for the specified address.

28.207 PGSQL_LB_DELETE_EXPIRED_RECLAIMED4

```
deleting reclaimed IPv4 leases that expired more than %1 seconds ago
```

Logged at debug log level 50. A debug message issued when the server is removing reclaimed DHCPv4 leases which have expired longer than a specified period of time. The argument is the amount of time Kea waits after a reclaimed lease expires before considering its removal.

28.208 PGSQL_LB_DELETE_EXPIRED_RECLAIMED6

```
deleting reclaimed IPv6 leases that expired more than %1 seconds ago
```

Logged at debug log level 50. A debug message issued when the server is removing reclaimed DHCPv6 leases which have expired longer than a specified period of time. The argument is the amount of time Kea waits after a reclaimed lease expires before considering its removal.

28.209 PGSQL_LB_GET4

```
obtaining all IPv4 leases
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain all IPv4 leases from the PostgreSQL database.

28.210 PGSQL_LB_GET6

```
obtaining all IPv6 leases
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain all IPv6 leases from the PostgreSQL database.

28.211 PGSQL_LB_GET_ADDR4

```
obtaining IPv4 lease for address %1
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain an IPv4 lease from the PostgreSQL database for the specified address.

28.212 PGSQL_LB_GET_ADDR6

```
obtaining IPv6 lease for address %1 (lease type %2)
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain an IPv6 lease from the PostgreSQL database for the specified address.

28.213 PGSQL_LB_GET_CLIENTID

```
obtaining IPv4 leases for client ID %1
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain a set of IPv4 leases from the PostgreSQL database for a client with the specified client identification.

28.214 PGSQL_LB_GET_DUID

```
obtaining IPv6 leases for DUID %1,
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain a set of IPv6 leases from the PostgreSQL database for a client with the specified DUID (DHCP Unique Identifier).

28.215 PGSQL_LB_GET_EXPIRED4

```
obtaining maximum %1 of expired IPv4 leases
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain expired IPv4 leases to reclaim them. The maximum number of leases to be retrieved is logged in the message.

28.216 PGSQL_LB_GET_EXPIRED6

```
obtaining maximum %1 of expired IPv6 leases
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain expired IPv6 leases to reclaim them. The maximum number of leases to be retrieved is logged in the message.

28.217 PGSQL_LB_GET_HOSTNAME4

```
obtaining IPv4 leases for hostname %1
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain a set of IPv4 leases from the PostgreSQL database for a client with the specified hostname.

28.218 PGSQL_LB_GET_HOSTNAME6

```
obtaining IPv6 leases for hostname %1
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain a set of IPv6 leases from the PostgreSQL database for a client with the specified hostname.

28.219 PGSQL_LB_GET_HWADDR

```
obtaining IPv4 leases for hardware address %1
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain a set of IPv4 leases from the PostgreSQL database for a client with the specified hardware address.

28.220 PGSQL_LB_GET_IAID_DUID

```
obtaining IPv4 leases for IAID %1 and DUID %2, lease type %3
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain a set of IPv6 leases from the PostgreSQL database for a client with the specified IAID (Identity Association ID) and DUID (DHCP Unique Identifier).

28.221 PGSQL_LB_GET_IAID_SUBID_DUID

```
obtaining IPv4 leases for IAID %1, Subnet ID %2, DUID %3, and lease type %4
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain an IPv6 lease from the PostgreSQL database for a client with the specified IAID (Identity Association ID), Subnet ID and DUID (DHCP Unique Identifier).

28.222 PGSQL_LB_GET_PAGE4

```
obtaining at most %1 IPv4 leases starting from address %2
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain a page of leases beginning with the specified address.

28.223 PGSQL_LB_GET_PAGE6

```
obtaining at most %1 IPv6 leases starting from address %2
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain a page of leases beginning with the specified address.

28.224 PGSQL_LB_GET_RELAYID4

```
obtaining at most %1 IPv4 leases starting from address %2 with relay id %3 and cltt␣
↪between %4 and %5
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain a page of IPv4 leases beginning with the specified address with a relay id and client transaction time between start and end dates.

28.225 PGSQL_LB_GET_RELAYID6

```
obtaining at most %1 IPv6 leases starting from address %2 with relay id %3
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain a page of IPv6 leases beginning with the specified address with a relay id.

28.226 PGSQL_LB_GET_REMOTEID4

```
obtaining at most %1 IPv4 leases starting from address %2 with remote id %3 and cltt␣
↪between %4 and %5
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain a page of IPv4 leases beginning with the specified address with a remote id and client transaction time between start and end dates.

28.227 PGSQL_LB_GET_REMOTEID6

```
obtaining at most %1 IPv6 leases starting from address %2 with remote id %3
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain a page of IPv6 leases beginning with the specified address with a remote id.

28.228 PGSQL_LB_GET_SUBID4

```
obtaining IPv4 leases for subnet ID %1
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain all IPv4 leases for a given subnet identifier from the PostgreSQL database.

28.229 PGSQL_LB_GET_SUBID6

```
obtaining IPv6 leases for subnet ID %1
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain all IPv6 leases for a given subnet identifier from the PostgreSQL database.

28.230 PGSQL_LB_GET_SUBID_CLIENTID

```
obtaining IPv4 lease for subnet ID %1 and client ID %2
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain an IPv4 lease from the PostgreSQL database for a client with the specified subnet ID and client ID.

28.231 PGSQL_LB_GET_SUBID_HWADDR

```
obtaining IPv4 lease for subnet ID %1 and hardware address %2
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain an IPv4 lease from the PostgreSQL database for a client with the specified subnet ID and hardware address.

28.232 PGSQL_LB_GET_SUBID_PAGE6

```
obtaining at most %1 IPv6 leases starting from address %2 for subnet ID %3
```

Logged at debug log level 50. A debug message issued when the server is attempting to obtain a page of IPv6 leases from the PostgreSQL database beginning with the specified address for the specified subnet identifier.

28.233 PGSQL_LB_GET_VERSION

```
obtaining schema version information
```

Logged at debug log level 50. A debug message issued when the server is about to obtain schema version information from the PostgreSQL database.

28.234 PGSQL_LB_NEGATIVE_LEASES_STAT

```
recount of leases returned a negative value
```

This warning message is issued when the recount of leases using counters in the PostgreSQL database returned a negative value. This shows a problem which can be fixed only by an offline direct recount on the database. This message is issued only once.

28.235 PGSQL_LB_NO_TLS_SUPPORT

```
Attempt to configure TLS (unsupported for PostgreSQL): %1
```

This error message is printed when TLS support was required in the Kea configuration: Kea was built with this feature disabled for PostgreSQL. The parameters of the connection are logged.

28.236 PGSQL_LB_ROLLBACK

```
rolling back PostgreSQL database
```

Logged at debug log level 50. The code has issued a rollback call. All outstanding transaction will be rolled back and not committed to the database.

28.237 PGSQL_LB_TLS_SUPPORT

```
Attempt to configure TLS: %1
```

This informational message is printed when TLS support was required in the Kea configuration: The TLS support in PostgreSQL will be initialized but its configuration is fully managed outside the C API. The parameters of the connection are logged.

28.238 PGSQL_LB_UPDATE_ADDR4

```
updating IPv4 lease for address %1
```

Logged at debug log level 50. A debug message issued when the server is attempting to update IPv4 lease from the PostgreSQL database for the specified address.

28.239 PGSQL_LB_UPDATE_ADDR6

```
updating IPv6 lease for address %1, lease type %2
```

Logged at debug log level 50. A debug message issued when the server is attempting to update IPv6 lease from the PostgreSQL database for the specified address.

28.240 PGSQL_LB_UPGRADE_EXTENDED_INFO4

```
upgrading IPv4 leases done in %1 pages with %2 updated leases
```

Logged at debug log level 40. The server upgraded extended info. The number of pages and the final count of updated leases are displayed.

28.241 PGSQL_LB_UPGRADE_EXTENDED_INFO4_ERROR

```
upgrading extending info for IPv4 lease at %1 failed with %2
```

Logged at debug log level 40. A debug message issued when the server failed to upgrade an extended info. The address of the lease and the error message are displayed.

28.242 PGSQL_LB_UPGRADE_EXTENDED_INFO4_PAGE

```
upgrading IPv4 lease extended info at page %1 starting at %2 (updated %3)
```

Logged at debug log level 50. A debug message issued when the server upgrades IPv4 lease extended info. The page number and started address, and the count of already updated leases are displayed.

28.243 PGSQL_LB_UPGRADE_EXTENDED_INFO6

```
upgrading IPv6 leases done in %1 pages with %2 updated leases
```

Logged at debug log level 40. The server upgraded extended info. The number of pages and the final count of updated leases are displayed.

28.244 PGSQL_LB_UPGRADE_EXTENDED_INFO6_ERROR

```
upgrading extending info for IPv6 lease at %1 failed with %2
```

Logged at debug log level 40. A debug message issued when the server failed to upgrade the extended info for a lease. The address of the lease and the error message are displayed.

CHAPTER
TWENTYNINE

RUN

29.1 RUN_SCRIPT_LOAD

```
Run Script hooks library has been loaded
```

This info message indicates that the Run Script hooks library has been loaded.

29.2 RUN_SCRIPT_LOAD_ERROR

```
Run Script hooks library failed: %1
```

This error message indicates an error during loading the Run Script hooks library. The details of the error are provided as argument of the log message.

CHAPTER

THIRTY

STAT

30.1 STAT_CMDS_DEINIT_OK

```
unloading Stat Commands hooks library successful
```

This info message indicates that the Stat Commands hooks library has been removed successfully.

30.2 STAT_CMDS_INIT_OK

```
loading Stat Commands hooks library successful
```

This info message indicates that the Stat Commands hooks library has been loaded successfully. Enjoy!

30.3 STAT_CMDS_LEASE4_FAILED

```
stat-lease4-get command failed: reason: %1
```

The stat-lease4-get command has failed. The reason for failure is logged.

30.4 STAT_CMDS_LEASE4_GET

```
stat-lease4-get command successful, parameters: %1 rows found: %2
```

The stat-lease4-get command has been successful. The log will contain the parameters supplied and the number of rows found.

30.5 STAT_CMDS_LEASE4_GET_FAILED

```
stat-lease4-get command failed: parameters: %1, reason: %2
```

The stat-lease4-get command has failed. Both the parameters supplied and the reason for failure are logged.

30.6 STAT_CMDS_LEASE4_GET_INVALID

```
stat-lease4-get command is malformed or invalid, reason: %1
```

The stat-lease4-get command was either malformed or contained invalid parameters. A detailed explanation should be logged.

30.7 STAT_CMDS_LEASE4_GET_NO_SUBNETS

```
stat-lease4-get, parameters: %1, %2"
```

The parameters submitted with stat-lease4-get were valid but excluded all known subnets. The parameters supplied along with an explanation should be logged.

30.8 STAT_CMDS_LEASE4_ORPHANED_STATS

```
stat-lease4-get command omitted statistics for one or more non-existent subnets
```

Logged at debug log level 40. During processing the stat-lease4-get found statistics for subnet IDs for non-existent subnets. These values were omitted from the command response returned to the user. This may occur when subnets have been removed from the configuration in a manner that did not also remove the statistics. While the existence of such statistics is not harmful, steps should be considered to remove them. For memfile lease storage, the problem should disappear upon configuration reload or server restart. For database lease storage the issue is more complicated and as of Kea 2.0.0 we do not yet have a clean solution.

30.9 STAT_CMDS_LEASE6_FAILED

```
stat-lease6-get command failed: reason: %1
```

The stat-lease6-get command has failed. The reason for failure is logged.

30.10 STAT_CMDS_LEASE6_GET

```
stat-lease6-get command successful, parameters: %1 rows found: %2
```

The stat-lease6-get command has been successful. The log will contain the parameters supplied and the number of rows found.

30.11 STAT_CMDS_LEASE6_GET_FAILED

```
stat-lease6-get command failed: parameters: %1, reason: %2
```

The stat-lease6-get command has failed. Both the parameters supplied and the reason for failure are logged.

30.12 STAT_CMDS_LEASE6_GET_INVALID

```
stat-lease6-get command is malformed or invalid, reason: %1
```

The stat-lease6-get command was either malformed or contained invalid parameters. A detailed explanation should be logged.

30.13 STAT_CMDS_LEASE6_GET_NO_SUBNETS

```
stat-lease6-get, parameters: %1, %2"
```

The parameters submitted with stat-lease6-get were valid but excluded all known subnets. The parameters supplied along with an explanation should be logged.

CHAPTER

THIRTYONE

TCP

31.1 TCP_CLIENT_REQUEST_RECEIVED

```
received TCP request from %1
```

Logged at debug log level 40. This debug message is issued when the server finished receiving a TCP request from the remote endpoint. The address of the remote endpoint is specified as an argument.

31.2 TCP_CONNECTION_REJECTED_BY_FILTER

```
connection from %1 has been denied by the connection filter.
```

Logged at debug log level 50. This debug message is issued when the server's connection filter rejects a new connection based on the client's ip address.

31.3 TCP_CONNECTION_SHUTDOWN

```
shutting down TCP connection from %1
```

Logged at debug log level 40. This debug message is issued when one of the TCP connections is shut down. The connection can be stopped as a result of an error or after the successful message exchange with a client.

31.4 TCP_CONNECTION_SHUTDOWN_FAILED

```
shutting down TCP connection failed
```

This error message is issued when an error occurred during shutting down a TCP connection with a client.

31.5 TCP_CONNECTION_STOP

```
stopping TCP connection from %1
```

Logged at debug log level 40. This debug message is issued when one of the TCP connections is stopped. The connection can be stopped as a result of an error or after the successful message exchange with a client.

31.6 TCP_CONNECTION_STOP_FAILED

```
stopping TCP connection failed
```

This error message is issued when an error occurred during closing a TCP connection with a client.

31.7 TCP_DATA_RECEIVED

```
received %1 bytes from %2
```

Logged at debug log level 55. This debug message is issued when the server receives a chunk of data from the remote endpoint. This may include the whole request or only a part of the request. The first argument specifies the amount of received data. The second argument specifies an address of the remote endpoint which produced the data.

31.8 TCP_DATA_SENT

```
send %1 bytes to %2
```

Logged at debug log level 55. This debug message is issued when the server sends a chunk of data to the remote endpoint. This may include the whole response or only a part of the response. The first argument specifies the amount of sent data. The second argument specifies an address of the remote endpoint.

31.9 TCP_IDLE_CONNECTION_TIMEOUT_OCCURRED

```
closing connection with %1 as a result of a timeout
```

Logged at debug log level 50. This debug message is issued when the TCP connection is being closed as a result of being idle.

31.10 TCP_REQUEST_RECEIVED_FAILED

```
An unexpected error occurred processing a request from %1, error: %2
```

This error message is issued when an unexpected error occurred while the server attempted to process a received request. The first argument specifies the address of the remote endpoint. The second argument describes the nature error.

31.11 TCP_REQUEST_RECEIVE_START

```
start receiving request from %1 with timeout %2
```

Logged at debug log level 50. This debug message is issued when the server starts receiving new request over the established connection. The first argument specifies the address of the remote endpoint. The second argument specifies request timeout in seconds.

31.12 TCP_SERVER_RESPONSE_SEND

```
sending TCP response to %1
```

Logged at debug log level 40. This debug message is issued when the server is starting to send a TCP response to a remote endpoint. The argument specifies an address of the remote endpoint.

CHAPTER

THIRTYTWO

TLS

32.1 TLS_CONNECTION_HANDSHAKE_FAILED

```
TLS handshake with %1 failed with %2
```

This information message is issued when the TLS handshake failed at the server side. The client address and the error message are displayed.

32.2 TLS_CONNECTION_HANDSHAKE_START

```
start TLS handshake with %1 with timeout %2
```

Logged at debug log level 50. This debug message is issued when the server starts the TLS handshake with the remote endpoint. The first argument specifies the address of the remote endpoint. The second argument specifies request timeout in seconds.

32.3 TLS_REQUEST_RECEIVE_START

```
start receiving request from %1 with timeout %2
```

Logged at debug log level 50. This debug message is issued when the server starts receiving new request over the established connection. The first argument specifies the address of the remote endpoint. The second argument specifies request timeout in seconds.

CHAPTER

THIRTYTHREE

USER

33.1 USER_CHK_HOOK_LOAD_ERROR

```
DHCP UserCheckHook could not be loaded: %1
```

This is an error message issued when the DHCP UserCheckHook could not be loaded. The exact cause should be explained in the log message. User subnet selection will revert to default processing.

33.2 USER_CHK_HOOK_UNLOAD_ERROR

```
DHCP UserCheckHook an error occurred unloading the library: %1
```

This is an error message issued when an error occurs while unloading the UserCheckHook library. This is unlikely to occur and normal operations of the library will likely resume when it is next loaded.

33.3 USER_CHK_SUBNET4_SELECT_ERROR

```
DHCP UserCheckHook an unexpected error occurred in subnet4_select callout: %1
```

This is an error message issued when the DHCP UserCheckHook subnet4_select hook encounters an unexpected error. The message should contain a more detailed explanation.

33.4 USER_CHK_SUBNET4_SELECT_REGISTRY_NULL

```
DHCP UserCheckHook UserRegistry has not been created.
```

This is an error message issued when the DHCP UserCheckHook subnet4_select hook has been invoked but the UserRegistry has not been created. This is a programmatic error and should not occur.

33.5 USER_CHK_SUBNET6_SELECT_ERROR

```
DHCP UserCheckHook an unexpected error occurred in subnet6_select callout: %1
```

This is an error message issued when the DHCP UserCheckHook subnet6_select hook encounters an unexpected error. The message should contain a more detailed explanation.

CHAPTER

THIRTYFOUR

KEA DEBUG MESSAGES BY LOG LEVEL

34.1 Messages printed on debuglevel 0

- CTRL_AGENT_RUN_EXIT
- DCTL_INIT_PROCESS
- DCTL_RUN_PROCESS
- DCTL_SHUTDOWN
- DCTL_SHUTDOWN_SIGNAL_RECVD
- DCTL_STANDALONE
- DHCP4_OPEN_SOCKET
- DHCP4_START_INFO
- DHCP6_OPEN_SOCKET
- DHCP6_START_INFO
- DHCP_DDNS_CLEARED_FOR_SHUTDOWN
- DHCP_DDNS_QUEUE_MGR_STARTED
- DHCP_DDNS_QUEUE_MGR_STOPPING
- DHCP_DDNS_RUN_EXIT
- DHCP_DDNS_SHUTDOWN_COMMAND
- NETCONF_RUN_EXIT

34.2 Messages printed on debuglevel 10

- COMMAND_DEREGISTERED
- COMMAND_EXTENDED_REGISTERED
- COMMAND_HTTP_LISTENER_COMMAND_REJECTED
- COMMAND_HTTP_LISTENER_STARTED
- COMMAND_HTTP_LISTENER_STOPPED
- COMMAND_HTTP_LISTENER_STOPPING
- COMMAND_REGISTERED

- COMMAND_SOCKET_CONNECTION_CLOSED
- COMMAND_SOCKET_CONNECTION_OPENED
- COMMAND_SOCKET_READ
- COMMAND_SOCKET_WRITE
- CTRL_AGENT_COMMAND_FORWARD_BEGIN
- CTRL_AGENT_COMMAND_FORWARD_FAILED
- DCTL_CONFIG_START
- DHCP4_CONFIG_RECEIVED
- DHCP4_CONFIG_START
- DHCP6_CONFIG_RECEIVED
- DHCP6_CONFIG_START

34.3 Messages printed on debuglevel 15

- DHCP4_HOOK_BUFFER_RCVD_DROP
- DHCP4_HOOK_DDNS_UPDATE
- DHCP4_HOOK_DECLINE_SKIP
- DHCP4_HOOK_LEASE4_RELEASE_SKIP
- DHCP4_HOOK_PACKET_SEND_DROP
- DHCP4_HOOK_SUBNET4_SELECT_4O6_PARKING_LOT_FULL
- DHCP4_HOOK_SUBNET4_SELECT_PARKING_LOT_FULL
- DHCP4_HOOK_SUBNET6_SELECT_PARKING_LOT_FULL
- DHCP4_PACKET_DROP_0001
- DHCP4_PACKET_DROP_0002
- DHCP4_PACKET_DROP_0003
- DHCP4_PACKET_DROP_0004
- DHCP4_PACKET_DROP_0005
- DHCP4_PACKET_DROP_0006
- DHCP4_PACKET_DROP_0007
- DHCP4_PACKET_DROP_0008
- DHCP4_PACKET_DROP_0009
- DHCP4_PACKET_DROP_0010
- DHCP4_PACKET_DROP_0011
- DHCP4_PACKET_DROP_0012
- DHCP4_PACKET_DROP_0013
- DHCP4_PACKET_DROP_0014

- DHCP6_HOOK_BUFFER_RCVD_DROP
- DHCP6_HOOK_DDNS_UPDATE
- DHCP6_HOOK_DECLINE_DROP
- DHCP6_HOOK_LEASES6_COMMITTED_DROP
- DHCP6_HOOK_LEASES6_PARKING_LOT_FULL
- DHCP6_HOOK_PACKET_SEND_DROP
- DHCP6_PACKET_DROP_DHCP_DISABLED
- DHCP6_PACKET_DROP_DROP_CLASS
- DHCP6_PACKET_DROP_DROP_CLASS2
- DHCP6_PACKET_DROP_DROP_CLASS_EARLY
- DHCP6_PACKET_DROP_DUPLICATE
- DHCP6_PACKET_DROP_PARSE_FAIL
- DHCP6_PACKET_DROP_SERVERID_MISMATCH
- DHCP6_PACKET_DROP_UNICAST

34.4 Messages printed on debuglevel 20

- LEASE_CMDS_ADD4
- LEASE_CMDS_ADD6
- LEASE_CMDS_BULK_APPLY6
- LEASE_CMDS_DEL4
- LEASE_CMDS_DEL6
- LEASE_CMDS_UPDATE4
- LEASE_CMDS_UPDATE6

34.5 Messages printed on debuglevel 40

- ALLOC_ENGINE_IGNORING_UNSUITABLE_GLOBAL_ADDRESS
- ALLOC_ENGINE_IGNORING_UNSUITABLE_GLOBAL_ADDRESS6
- ALLOC_ENGINE_LEASE_RECLAIMED
- ALLOC_ENGINE_V4_DISCOVER_HR
- ALLOC_ENGINE_V4_LEASES_RECLAMATION_COMPLETE
- ALLOC_ENGINE_V4_LEASES_RECLAMATION_START
- ALLOC_ENGINE_V4_LEASES_RECLAMATION_TIMEOUT
- ALLOC_ENGINE_V4_LEASE_RECLAIM
- ALLOC_ENGINE_V4_NO_MORE_EXPIRED_LEASES
- ALLOC_ENGINE_V4_OFFER_EXISTING_LEASE

- ALLOC_ENGINE_V4_OFFER_NEW_LEASE
- ALLOC_ENGINE_V4_OFFER_REQUESTED_LEASE
- ALLOC_ENGINE_V4_RECLAIMED_LEASES_DELETE
- ALLOC_ENGINE_V4_RECLAIMED_LEASES_DELETE_COMPLETE
- ALLOC_ENGINE_V4_REQUEST_ADDRESS_RESERVED
- ALLOC_ENGINE_V4_REQUEST_ALLOC_REQUESTED
- ALLOC_ENGINE_V4_REQUEST_EXTEND_LEASE
- ALLOC_ENGINE_V4_REQUEST_INVALID
- ALLOC_ENGINE_V4_REQUEST_IN_USE
- ALLOC_ENGINE_V4_REQUEST_OUT_OF_POOL
- ALLOC_ENGINE_V4_REQUEST_PICK_ADDRESS
- ALLOC_ENGINE_V4_REQUEST_REMOVE_LEASE
- ALLOC_ENGINE_V4_REQUEST_USE_HR
- ALLOC_ENGINE_V6_ALLOC_HR_LEASE_EXISTS
- ALLOC_ENGINE_V6_ALLOC_LEASES_HR
- ALLOC_ENGINE_V6_ALLOC_LEASES_NO_HR
- ALLOC_ENGINE_V6_ALLOC_NO_LEASES_HR
- ALLOC_ENGINE_V6_ALLOC_NO_V6_HR
- ALLOC_ENGINE_V6_ALLOC_UNRESERVED
- ALLOC_ENGINE_V6_CALCULATED_PREFERRED_LIFETIME
- ALLOC_ENGINE_V6_EXPIRED_HINT_RESERVED
- ALLOC_ENGINE_V6_EXTEND_ALLOC_UNRESERVED
- ALLOC_ENGINE_V6_HINT_RESERVED
- ALLOC_ENGINE_V6_LEASES_RECLAMATION_COMPLETE
- ALLOC_ENGINE_V6_LEASES_RECLAMATION_START
- ALLOC_ENGINE_V6_LEASES_RECLAMATION_TIMEOUT
- ALLOC_ENGINE_V6_LEASE_RECLAIM
- ALLOC_ENGINE_V6_NO_MORE_EXPIRED_LEASES
- ALLOC_ENGINE_V6_RECLAIMED_LEASES_DELETE
- ALLOC_ENGINE_V6_RECLAIMED_LEASES_DELETE_COMPLETE
- ALLOC_ENGINE_V6_RENEW_HR
- ALLOC_ENGINE_V6_RENEW_REMOVE_RESERVED
- ASIODNS_FETCH_STOPPED
- BOOTP_BOOTP_QUERY
- BOOTP_PACKET_OPTIONS_SKIPPED
- BOOTP_PACKET_PACK

- BOOTP_PACKET_UNPACK_FAILED
- DHCP4_ADDITIONAL_CLASS_NO_TEST
- DHCP4_ADDITIONAL_CLASS_UNDEFINED
- DHCP4_BUFFER_RECEIVED
- DHCP4_CLASSES_ASSIGNED
- DHCP4_CLASSES_ASSIGNED_AFTER_SUBNET_SELECTION
- DHCP4_CLASS_ASSIGNED
- DHCP4_CLASS_UNCONFIGURED
- DHCP4_DHCP4O6_HOOK_SUBNET4_SELECT_DROP
- DHCP4_DHCP4O6_HOOK_SUBNET4_SELECT_SKIP
- DHCP4_DHCP4O6_PACKET_RECEIVED
- DHCP4_DHCP4O6_PACKET_SEND
- DHCP4_FLEX_ID
- DHCP4_HOOK_BUFFER_SEND_SKIP
- DHCP4_HOOK_PACKET_RCVD_SKIP
- DHCP4_HOOK_PACKET_SEND_SKIP
- DHCP4_HOOK_SUBNET4_SELECT_DROP
- DHCP4_HOOK_SUBNET4_SELECT_PARK
- DHCP4_HOOK_SUBNET4_SELECT_SKIP
- DHCP4_PACKET_QUEUE_FULL
- DHCP4_SHUTDOWN
- DHCP4_SHUTDOWN_REQUEST
- DHCP6_ADDITIONAL_CLASS_NO_TEST
- DHCP6_ADDITIONAL_CLASS_UNDEFINED
- DHCP6_BUFFER_RECEIVED
- DHCP6_CLASSES_ASSIGNED
- DHCP6_CLASSES_ASSIGNED_AFTER_SUBNET_SELECTION
- DHCP6_CLASS_ASSIGNED
- DHCP6_CLASS_UNCONFIGURED
- DHCP6_DHCP4O6_PACKET_RECEIVED
- DHCP6_FLEX_ID
- DHCP6_HOOK_BUFFER_SEND_SKIP
- DHCP6_HOOK_LEASE6_RELEASE_NA_SKIP
- DHCP6_HOOK_LEASE6_RELEASE_PD_SKIP
- DHCP6_HOOK_LEASES6_COMMITTED_PARK
- DHCP6_HOOK_PACKET_RCVD_SKIP

- DHCP6_HOOK_PACKET_SEND_SKIP
- DHCP6_HOOK_SUBNET6_SELECT_DROP
- DHCP6_HOOK_SUBNET6_SELECT_PARK
- DHCP6_HOOK_SUBNET6_SELECT_SKIP
- DHCP6_PACKET_PROCESS_FAIL
- DHCP6_PACKET_QUEUE_FULL
- DHCP6_REQUIRED_OPTIONS_CHECK_FAIL
- DHCP6_SHUTDOWN
- DHCP6_SHUTDOWN_REQUEST
- DHCP6_UNKNOWN_MSG_RECEIVED
- DHCPSRV_CFGMGR_ADD_SUBNET4
- DHCPSRV_CFGMGR_ADD_SUBNET6
- DHCPSRV_CFGMGR_ALL_IFACES_ACTIVE
- DHCPSRV_CFGMGR_CFG_DHCP_DDNS
- DHCPSRV_CFGMGR_DEL_SUBNET4
- DHCPSRV_CFGMGR_DEL_SUBNET6
- DHCPSRV_CFGMGR_SUBNET4
- DHCPSRV_CFGMGR_SUBNET4_ADDR
- DHCPSRV_CFGMGR_SUBNET4_IFACE
- DHCPSRV_CFGMGR_SUBNET4_RELAY
- DHCPSRV_CFGMGR_SUBNET6
- DHCPSRV_CFGMGR_SUBNET6_IFACE
- DHCPSRV_CFGMGR_SUBNET6_IFACE_ID
- DHCPSRV_CFGMGR_SUBNET6_RELAY
- DHCPSRV_CFGMGR_UPDATE_SUBNET4
- DHCPSRV_CFGMGR_UPDATE_SUBNET6
- DHCPSRV_CLOSE_DB
- DHCPSRV_HOOK_LEASE4_RECOVER_SKIP
- DHCPSRV_HOOK_LEASE4_RENEW_SKIP
- DHCPSRV_HOOK_LEASE4_SELECT_SKIP
- DHCPSRV_HOOK_LEASE6_EXTEND_SKIP
- DHCPSRV_HOOK_LEASE6_RECOVER_SKIP
- DHCPSRV_HOOK_LEASE6_SELECT_SKIP
- DHCPSRV_LEASE4_EXTENDED_INFO_UPGRADED
- DHCPSRV_LEASE6_EXTENDED_INFO_UPGRADED
- DHCPSRV_LEASE_MGR_BACKEND_DEREGISTER

- DHCPSRV_LEASE_MGR_BACKEND_REGISTER
- DHCPSRV_MEMFILE_BEGIN_BUILD_EXTENDED_INFO_TABLES6
- DHCPSRV_MEMFILE_BEGIN_EXTRACT_EXTENDED_INFO4
- DHCPSRV_MEMFILE_EXTRACT_EXTENDED_INFO4
- DHCPSRV_MEMFILE_EXTRACT_EXTENDED_INFO4_ERROR
- DHCPSRV_MEMFILE_LFC_UNREGISTER_TIMER_FAILED
- DHCPSRV_SUBNET4O6_SELECT_FAILED
- DHCPSRV_SUBNET4_SELECT_BY_ADDRESS_NO_MATCH
- DHCPSRV_SUBNET4_SELECT_BY_INTERFACE_NO_MATCH
- DHCPSRV_SUBNET4_SELECT_BY_RELAY_ADDRESS_NO_MATCH
- DHCPSRV_SUBNET4_SELECT_NO_RAI_OPTIONS
- DHCPSRV_SUBNET4_SELECT_NO_RELAY_ADDRESS
- DHCPSRV_SUBNET4_SELECT_NO_USABLE_ADDRESS
- DHCPSRV_SUBNET6_SELECT_BY_ADDRESS_NO_MATCH
- DHCPSRV_SUBNET6_SELECT_BY_INTERFACE_ID_NO_MATCH
- DHCPSRV_SUBNET6_SELECT_BY_INTERFACE_NO_MATCH
- DHCPSRV_TIMERMGR_REGISTER_TIMER
- DHCPSRV_TIMERMGR_START_TIMER
- DHCPSRV_TIMERMGR_STOP_TIMER
- DHCPSRV_TIMERMGR_UNREGISTER_ALL_TIMERS
- DHCPSRV_TIMERMGR_UNREGISTER_TIMER
- DHCP_DDNS_CONFIGURE
- DHCP_DDNS_NCR_UDP_RECV_CANCELED
- DHCP_DDNS_QUEUE_MGR_RECONFIGURING
- DHCP_DDNS_QUEUE_MGR_STOPPED
- FLEX_OPTION_PROCESS_ADD
- FLEX_OPTION_PROCESS_CLIENT_CLASS
- FLEX_OPTION_PROCESS_REMOVE
- FLEX_OPTION_PROCESS_SUB_ADD
- FLEX_OPTION_PROCESS_SUB_CLIENT_CLASS
- FLEX_OPTION_PROCESS_SUB_REMOVE
- FLEX_OPTION_PROCESS_SUB_SUPERSEDE
- FLEX_OPTION_PROCESS_SUPERSEDE
- FLEX_OPTION_PROCESS_VENDOR_ID_MISMATCH
- HA_BUFFER4_RECEIVE_NOT_FOR_US
- HA_BUFFER4_RECEIVE_PACKET_OPTIONS_SKIPPED

- HA_BUFFER4_RECEIVE_UNPACK_FAILED
- HA_BUFFER6_RECEIVE_NOT_FOR_US
- HA_BUFFER6_RECEIVE_PACKET_OPTIONS_SKIPPED
- HA_BUFFER6_RECEIVE_UNPACK_FAILED
- HA_LEASES4_COMMITTED_NOTHING_TO_UPDATE
- HA_LEASES6_COMMITTED_NOTHING_TO_UPDATE
- HA_LEASE_SYNC_STALE_LEASE4_SKIP
- HA_LEASE_SYNC_STALE_LEASE6_SKIP
- HA_LOAD_BALANCING_DUID_MISSING
- HA_LOAD_BALANCING_IDENTIFIER_MISSING
- HA_SUBNET4_SELECT_NOT_FOR_US
- HA_SUBNET4_SELECT_NO_SUBNET_SELECTED
- HA_SUBNET6_SELECT_NOT_FOR_US
- HA_SUBNET6_SELECT_NO_SUBNET_SELECTED
- HOOKS_LIBRARY_LOADING
- HOOKS_LIBRARY_UNLOADING
- HOOKS_LOAD_SUCCESS
- HOOKS_NO_LOAD
- HOOKS_NO_UNLOAD
- HOOKS_UNLOAD_SUCCESS
- HOSTS_BACKEND_DEREGISTER
- HOSTS_BACKEND_REGISTER
- HOSTS_CFG_ADD_HOST
- HOSTS_CFG_CLOSE_HOST_DATA_SOURCE
- HOSTS_CFG_DEL
- HOSTS_CFG_DEL4
- HOSTS_CFG_DEL6
- HOSTS_CFG_DEL_ALL_SUBNET4
- HOSTS_CFG_DEL_ALL_SUBNET6
- HOSTS_CFG_GET_ALL
- HOSTS_CFG_GET_ALL_ADDRESS4
- HOSTS_CFG_GET_ALL_ADDRESS6
- HOSTS_CFG_GET_ALL_HOSTNAME
- HOSTS_CFG_GET_ALL_HOSTNAME_SUBNET_ID4
- HOSTS_CFG_GET_ALL_HOSTNAME_SUBNET_ID6
- HOSTS_CFG_GET_ALL_IDENTIFIER

- HOSTS_CFG_GET_ALL_SUBNET_ID4
- HOSTS_CFG_GET_ALL_SUBNET_ID6
- HOSTS_CFG_GET_ALL_SUBNET_ID_ADDRESS4
- HOSTS_CFG_GET_ALL_SUBNET_ID_ADDRESS6
- HOSTS_CFG_GET_ONE_PREFIX
- HOSTS_CFG_GET_ONE_SUBNET_ID_ADDRESS4
- HOSTS_CFG_GET_ONE_SUBNET_ID_ADDRESS6
- HOSTS_CFG_GET_ONE_SUBNET_ID_IDENTIFIER
- HOSTS_CFG_UPDATE_ADD
- HOSTS_CFG_UPDATE_DEL4
- HOSTS_CFG_UPDATE_DEL6
- HOSTS_MGR_ALTERNATE_GET4_SUBNET_ID_ADDRESS4
- HOSTS_MGR_ALTERNATE_GET4_SUBNET_ID_IDENTIFIER
- HOSTS_MGR_ALTERNATE_GET6_PREFIX
- HOSTS_MGR_ALTERNATE_GET6_SUBNET_ID_ADDRESS6
- HOSTS_MGR_ALTERNATE_GET6_SUBNET_ID_IDENTIFIER
- HOSTS_MGR_ALTERNATE_GET_ALL_SUBNET_ID_ADDRESS4
- HOSTS_MGR_ALTERNATE_GET_ALL_SUBNET_ID_ADDRESS6
- HTTP_BAD_CLIENT_REQUEST_RECEIVED
- HTTP_BAD_SERVER_RESPONSE_RECEIVED
- HTTP_CLIENT_MT_STARTED
- HTTP_CLIENT_REQUEST_RECEIVED
- HTTP_CONNECTION_SHUTDOWN
- HTTP_CONNECTION_STOP
- HTTP_SERVER_RESPONSE_RECEIVED
- HTTP_SERVER_RESPONSE_SEND
- MT_TCP_LISTENER_MGR_STARTED
- MT_TCP_LISTENER_MGR_STOPPED
- MT_TCP_LISTENER_MGR_STOPPING
- MYSQL_CB_CREATE_UPDATE_BY_POOL_OPTION4
- MYSQL_CB_CREATE_UPDATE_BY_POOL_OPTION6
- MYSQL_CB_CREATE_UPDATE_BY_PREFIX_OPTION6
- MYSQL_CB_CREATE_UPDATE_BY_SUBNET_ID_OPTION4
- MYSQL_CB_CREATE_UPDATE_BY_SUBNET_ID_OPTION6
- MYSQL_CB_CREATE_UPDATE_CLIENT_CLASS4
- MYSQL_CB_CREATE_UPDATE_CLIENT_CLASS6

- MYSQL_CB_CREATE_UPDATE_GLOBAL_PARAMETER4
- MYSQL_CB_CREATE_UPDATE_GLOBAL_PARAMETER6
- MYSQL_CB_CREATE_UPDATE_OPTION4
- MYSQL_CB_CREATE_UPDATE_OPTION6
- MYSQL_CB_CREATE_UPDATE_OPTION_DEF4
- MYSQL_CB_CREATE_UPDATE_OPTION_DEF6
- MYSQL_CB_CREATE_UPDATE_SERVER4
- MYSQL_CB_CREATE_UPDATE_SERVER6
- MYSQL_CB_CREATE_UPDATE_SHARED_NETWORK4
- MYSQL_CB_CREATE_UPDATE_SHARED_NETWORK6
- MYSQL_CB_CREATE_UPDATE_SHARED_NETWORK_OPTION4
- MYSQL_CB_CREATE_UPDATE_SHARED_NETWORK_OPTION6
- MYSQL_CB_CREATE_UPDATE_SUBNET4
- MYSQL_CB_CREATE_UPDATE_SUBNET6
- MYSQL_CB_DELETE_ALL_CLIENT_CLASSES4
- MYSQL_CB_DELETE_ALL_CLIENT_CLASSES4_RESULT
- MYSQL_CB_DELETE_ALL_CLIENT_CLASSES6
- MYSQL_CB_DELETE_ALL_CLIENT_CLASSES6_RESULT
- MYSQL_CB_DELETE_ALL_GLOBAL_PARAMETERS4
- MYSQL_CB_DELETE_ALL_GLOBAL_PARAMETERS4_RESULT
- MYSQL_CB_DELETE_ALL_GLOBAL_PARAMETERS6
- MYSQL_CB_DELETE_ALL_GLOBAL_PARAMETERS6_RESULT
- MYSQL_CB_DELETE_ALL_OPTION_DEFS4
- MYSQL_CB_DELETE_ALL_OPTION_DEFS4_RESULT
- MYSQL_CB_DELETE_ALL_OPTION_DEFS6
- MYSQL_CB_DELETE_ALL_OPTION_DEFS6_RESULT
- MYSQL_CB_DELETE_ALL_SERVERS4
- MYSQL_CB_DELETE_ALL_SERVERS4_RESULT
- MYSQL_CB_DELETE_ALL_SERVERS6
- MYSQL_CB_DELETE_ALL_SERVERS6_RESULT
- MYSQL_CB_DELETE_ALL_SHARED_NETWORKS4
- MYSQL_CB_DELETE_ALL_SHARED_NETWORKS4_RESULT
- MYSQL_CB_DELETE_ALL_SHARED_NETWORKS6
- MYSQL_CB_DELETE_ALL_SHARED_NETWORKS6_RESULT
- MYSQL_CB_DELETE_ALL_SUBNETS4
- MYSQL_CB_DELETE_ALL_SUBNETS4_RESULT

- MYSQL_CB_DELETE_ALL_SUBNETS6
- MYSQL_CB_DELETE_ALL_SUBNETS6_RESULT
- MYSQL_CB_DELETE_BY_POOL_OPTION4
- MYSQL_CB_DELETE_BY_POOL_OPTION4_RESULT
- MYSQL_CB_DELETE_BY_POOL_OPTION6
- MYSQL_CB_DELETE_BY_POOL_OPTION6_RESULT
- MYSQL_CB_DELETE_BY_POOL_PREFIX_OPTION6
- MYSQL_CB_DELETE_BY_POOL_PREFIX_OPTION6_RESULT
- MYSQL_CB_DELETE_BY_PREFIX_SUBNET4
- MYSQL_CB_DELETE_BY_PREFIX_SUBNET4_RESULT
- MYSQL_CB_DELETE_BY_PREFIX_SUBNET6
- MYSQL_CB_DELETE_BY_PREFIX_SUBNET6_RESULT
- MYSQL_CB_DELETE_BY_SUBNET_ID_OPTION4
- MYSQL_CB_DELETE_BY_SUBNET_ID_OPTION4_RESULT
- MYSQL_CB_DELETE_BY_SUBNET_ID_OPTION6
- MYSQL_CB_DELETE_BY_SUBNET_ID_OPTION6_RESULT
- MYSQL_CB_DELETE_BY_SUBNET_ID_SUBNET4
- MYSQL_CB_DELETE_BY_SUBNET_ID_SUBNET4_RESULT
- MYSQL_CB_DELETE_BY_SUBNET_ID_SUBNET6
- MYSQL_CB_DELETE_BY_SUBNET_ID_SUBNET6_RESULT
- MYSQL_CB_DELETE_CLIENT_CLASS4
- MYSQL_CB_DELETE_CLIENT_CLASS4_RESULT
- MYSQL_CB_DELETE_CLIENT_CLASS6
- MYSQL_CB_DELETE_CLIENT_CLASS6_RESULT
- MYSQL_CB_DELETE_GLOBAL_PARAMETER4
- MYSQL_CB_DELETE_GLOBAL_PARAMETER4_RESULT
- MYSQL_CB_DELETE_GLOBAL_PARAMETER6
- MYSQL_CB_DELETE_GLOBAL_PARAMETER6_RESULT
- MYSQL_CB_DELETE_OPTION4
- MYSQL_CB_DELETE_OPTION4_RESULT
- MYSQL_CB_DELETE_OPTION6
- MYSQL_CB_DELETE_OPTION6_RESULT
- MYSQL_CB_DELETE_OPTION_DEF4
- MYSQL_CB_DELETE_OPTION_DEF4_RESULT
- MYSQL_CB_DELETE_OPTION_DEF6
- MYSQL_CB_DELETE_OPTION_DEF6_RESULT

- MYSQL_CB_DELETE_SERVER4
- MYSQL_CB_DELETE_SERVER4_RESULT
- MYSQL_CB_DELETE_SERVER6
- MYSQL_CB_DELETE_SERVER6_RESULT
- MYSQL_CB_DELETE_SHARED_NETWORK4
- MYSQL_CB_DELETE_SHARED_NETWORK4_RESULT
- MYSQL_CB_DELETE_SHARED_NETWORK6
- MYSQL_CB_DELETE_SHARED_NETWORK6_RESULT
- MYSQL_CB_DELETE_SHARED_NETWORK_OPTION4
- MYSQL_CB_DELETE_SHARED_NETWORK_OPTION4_RESULT
- MYSQL_CB_DELETE_SHARED_NETWORK_OPTION6
- MYSQL_CB_DELETE_SHARED_NETWORK_OPTION6_RESULT
- MYSQL_CB_DELETE_SHARED_NETWORK_SUBNETS4
- MYSQL_CB_DELETE_SHARED_NETWORK_SUBNETS4_RESULT
- MYSQL_CB_DELETE_SHARED_NETWORK_SUBNETS6
- MYSQL_CB_DELETE_SHARED_NETWORK_SUBNETS6_RESULT
- MYSQL_CB_GET_ALL_CLIENT_CLASSES4
- MYSQL_CB_GET_ALL_CLIENT_CLASSES4_RESULT
- MYSQL_CB_GET_ALL_CLIENT_CLASSES6
- MYSQL_CB_GET_ALL_CLIENT_CLASSES6_RESULT
- MYSQL_CB_GET_ALL_GLOBAL_PARAMETERS4
- MYSQL_CB_GET_ALL_GLOBAL_PARAMETERS4_RESULT
- MYSQL_CB_GET_ALL_GLOBAL_PARAMETERS6
- MYSQL_CB_GET_ALL_GLOBAL_PARAMETERS6_RESULT
- MYSQL_CB_GET_ALL_OPTIONS4
- MYSQL_CB_GET_ALL_OPTIONS4_RESULT
- MYSQL_CB_GET_ALL_OPTIONS6
- MYSQL_CB_GET_ALL_OPTIONS6_RESULT
- MYSQL_CB_GET_ALL_OPTION_DEFS4
- MYSQL_CB_GET_ALL_OPTION_DEFS4_RESULT
- MYSQL_CB_GET_ALL_OPTION_DEFS6
- MYSQL_CB_GET_ALL_OPTION_DEFS6_RESULT
- MYSQL_CB_GET_ALL_SERVERS4
- MYSQL_CB_GET_ALL_SERVERS4_RESULT
- MYSQL_CB_GET_ALL_SERVERS6
- MYSQL_CB_GET_ALL_SERVERS6_RESULT

- MYSQL_CB_GET_ALL_SHARED_NETWORKS4
- MYSQL_CB_GET_ALL_SHARED_NETWORKS4_RESULT
- MYSQL_CB_GET_ALL_SHARED_NETWORKS6
- MYSQL_CB_GET_ALL_SHARED_NETWORKS6_RESULT
- MYSQL_CB_GET_ALL_SUBNETS4
- MYSQL_CB_GET_ALL_SUBNETS4_RESULT
- MYSQL_CB_GET_ALL_SUBNETS6
- MYSQL_CB_GET_ALL_SUBNETS6_RESULT
- MYSQL_CB_GET_CLIENT_CLASS4
- MYSQL_CB_GET_CLIENT_CLASS6
- MYSQL_CB_GET_GLOBAL_PARAMETER4
- MYSQL_CB_GET_GLOBAL_PARAMETER6
- MYSQL_CB_GET_HOST4
- MYSQL_CB_GET_HOST6
- MYSQL_CB_GET_MODIFIED_CLIENT_CLASSES4
- MYSQL_CB_GET_MODIFIED_CLIENT_CLASSES4_RESULT
- MYSQL_CB_GET_MODIFIED_CLIENT_CLASSES6
- MYSQL_CB_GET_MODIFIED_CLIENT_CLASSES6_RESULT
- MYSQL_CB_GET_MODIFIED_GLOBAL_PARAMETERS4
- MYSQL_CB_GET_MODIFIED_GLOBAL_PARAMETERS4_RESULT
- MYSQL_CB_GET_MODIFIED_GLOBAL_PARAMETERS6
- MYSQL_CB_GET_MODIFIED_GLOBAL_PARAMETERS6_RESULT
- MYSQL_CB_GET_MODIFIED_OPTIONS4
- MYSQL_CB_GET_MODIFIED_OPTIONS4_RESULT
- MYSQL_CB_GET_MODIFIED_OPTIONS6
- MYSQL_CB_GET_MODIFIED_OPTIONS6_RESULT
- MYSQL_CB_GET_MODIFIED_OPTION_DEFS4
- MYSQL_CB_GET_MODIFIED_OPTION_DEFS4_RESULT
- MYSQL_CB_GET_MODIFIED_OPTION_DEFS6
- MYSQL_CB_GET_MODIFIED_OPTION_DEFS6_RESULT
- MYSQL_CB_GET_MODIFIED_SHARED_NETWORKS4
- MYSQL_CB_GET_MODIFIED_SHARED_NETWORKS4_RESULT
- MYSQL_CB_GET_MODIFIED_SHARED_NETWORKS6
- MYSQL_CB_GET_MODIFIED_SHARED_NETWORKS6_RESULT
- MYSQL_CB_GET_MODIFIED_SUBNETS4
- MYSQL_CB_GET_MODIFIED_SUBNETS4_RESULT

- MYSQL_CB_GET_MODIFIED_SUBNETS6
- MYSQL_CB_GET_MODIFIED_SUBNETS6_RESULT
- MYSQL_CB_GET_OPTION4
- MYSQL_CB_GET_OPTION6
- MYSQL_CB_GET_OPTION_DEF4
- MYSQL_CB_GET_OPTION_DEF6
- MYSQL_CB_GET_PORT4
- MYSQL_CB_GET_PORT6
- MYSQL_CB_GET_RECENT_AUDIT_ENTRIES4
- MYSQL_CB_GET_RECENT_AUDIT_ENTRIES4_RESULT
- MYSQL_CB_GET_RECENT_AUDIT_ENTRIES6
- MYSQL_CB_GET_RECENT_AUDIT_ENTRIES6_RESULT
- MYSQL_CB_GET_SERVER4
- MYSQL_CB_GET_SERVER6
- MYSQL_CB_GET_SHARED_NETWORK4
- MYSQL_CB_GET_SHARED_NETWORK6
- MYSQL_CB_GET_SHARED_NETWORK_SUBNETS4
- MYSQL_CB_GET_SHARED_NETWORK_SUBNETS4_RESULT
- MYSQL_CB_GET_SHARED_NETWORK_SUBNETS6
- MYSQL_CB_GET_SHARED_NETWORK_SUBNETS6_RESULT
- MYSQL_CB_GET_SUBNET4_BY_PREFIX
- MYSQL_CB_GET_SUBNET4_BY_SUBNET_ID
- MYSQL_CB_GET_SUBNET6_BY_PREFIX
- MYSQL_CB_GET_SUBNET6_BY_SUBNET_ID
- MYSQL_CB_GET_TYPE4
- MYSQL_CB_GET_TYPE6
- MYSQL_CB_REGISTER_BACKEND_TYPE4
- MYSQL_CB_REGISTER_BACKEND_TYPE6
- MYSQL_CB_TLS_CIPHER
- MYSQL_CB_UNREGISTER_BACKEND_TYPE4
- MYSQL_CB_UNREGISTER_BACKEND_TYPE6
- MYSQL_HB_TLS_CIPHER
- MYSQL_LB_TLS_CIPHER
- MYSQL_LB_UPGRADE_EXTENDED_INFO4
- MYSQL_LB_UPGRADE_EXTENDED_INFO4_ERROR
- MYSQL_LB_UPGRADE_EXTENDED_INFO6

- MYSQL_LB_UPGRADE_EXTENDED_INFO6_ERROR
- PERFMON_DHCP4_SOCKET_RECEIVED_TIME_SUPPORT
- PERFMON_DHCP6_SOCKET_RECEIVED_TIME_SUPPORT
- PGSQL_CB_CREATE_UPDATE_BY_POOL_OPTION4
- PGSQL_CB_CREATE_UPDATE_BY_POOL_OPTION6
- PGSQL_CB_CREATE_UPDATE_BY_PREFIX_OPTION6
- PGSQL_CB_CREATE_UPDATE_BY_SUBNET_ID_OPTION4
- PGSQL_CB_CREATE_UPDATE_BY_SUBNET_ID_OPTION6
- PGSQL_CB_CREATE_UPDATE_CLIENT_CLASS4
- PGSQL_CB_CREATE_UPDATE_CLIENT_CLASS6
- PGSQL_CB_CREATE_UPDATE_GLOBAL_PARAMETER4
- PGSQL_CB_CREATE_UPDATE_GLOBAL_PARAMETER6
- PGSQL_CB_CREATE_UPDATE_OPTION4
- PGSQL_CB_CREATE_UPDATE_OPTION6
- PGSQL_CB_CREATE_UPDATE_OPTION_DEF4
- PGSQL_CB_CREATE_UPDATE_OPTION_DEF6
- PGSQL_CB_CREATE_UPDATE_SERVER4
- PGSQL_CB_CREATE_UPDATE_SERVER6
- PGSQL_CB_CREATE_UPDATE_SHARED_NETWORK4
- PGSQL_CB_CREATE_UPDATE_SHARED_NETWORK6
- PGSQL_CB_CREATE_UPDATE_SHARED_NETWORK_OPTION4
- PGSQL_CB_CREATE_UPDATE_SHARED_NETWORK_OPTION6
- PGSQL_CB_CREATE_UPDATE_SUBNET4
- PGSQL_CB_CREATE_UPDATE_SUBNET6
- PGSQL_CB_DELETE_ALL_CLIENT_CLASSES4
- PGSQL_CB_DELETE_ALL_CLIENT_CLASSES4_RESULT
- PGSQL_CB_DELETE_ALL_CLIENT_CLASSES6
- PGSQL_CB_DELETE_ALL_CLIENT_CLASSES6_RESULT
- PGSQL_CB_DELETE_ALL_GLOBAL_PARAMETERS4
- PGSQL_CB_DELETE_ALL_GLOBAL_PARAMETERS4_RESULT
- PGSQL_CB_DELETE_ALL_GLOBAL_PARAMETERS6
- PGSQL_CB_DELETE_ALL_GLOBAL_PARAMETERS6_RESULT
- PGSQL_CB_DELETE_ALL_OPTION_DEFS4
- PGSQL_CB_DELETE_ALL_OPTION_DEFS4_RESULT
- PGSQL_CB_DELETE_ALL_OPTION_DEFS6
- PGSQL_CB_DELETE_ALL_OPTION_DEFS6_RESULT

- PGSQL_CB_DELETE_ALL_SERVERS4
- PGSQL_CB_DELETE_ALL_SERVERS4_RESULT
- PGSQL_CB_DELETE_ALL_SERVERS6
- PGSQL_CB_DELETE_ALL_SERVERS6_RESULT
- PGSQL_CB_DELETE_ALL_SHARED_NETWORKS4
- PGSQL_CB_DELETE_ALL_SHARED_NETWORKS4_RESULT
- PGSQL_CB_DELETE_ALL_SHARED_NETWORKS6
- PGSQL_CB_DELETE_ALL_SHARED_NETWORKS6_RESULT
- PGSQL_CB_DELETE_ALL_SUBNETS4
- PGSQL_CB_DELETE_ALL_SUBNETS4_RESULT
- PGSQL_CB_DELETE_ALL_SUBNETS6
- PGSQL_CB_DELETE_ALL_SUBNETS6_RESULT
- PGSQL_CB_DELETE_BY_POOL_OPTION4
- PGSQL_CB_DELETE_BY_POOL_OPTION4_RESULT
- PGSQL_CB_DELETE_BY_POOL_OPTION6
- PGSQL_CB_DELETE_BY_POOL_OPTION6_RESULT
- PGSQL_CB_DELETE_BY_POOL_PREFIX_OPTION6
- PGSQL_CB_DELETE_BY_POOL_PREFIX_OPTION6_RESULT
- PGSQL_CB_DELETE_BY_PREFIX_SUBNET4
- PGSQL_CB_DELETE_BY_PREFIX_SUBNET4_RESULT
- PGSQL_CB_DELETE_BY_PREFIX_SUBNET6
- PGSQL_CB_DELETE_BY_PREFIX_SUBNET6_RESULT
- PGSQL_CB_DELETE_BY_SUBNET_ID_OPTION4
- PGSQL_CB_DELETE_BY_SUBNET_ID_OPTION4_RESULT
- PGSQL_CB_DELETE_BY_SUBNET_ID_OPTION6
- PGSQL_CB_DELETE_BY_SUBNET_ID_OPTION6_RESULT
- PGSQL_CB_DELETE_BY_SUBNET_ID_SUBNET4
- PGSQL_CB_DELETE_BY_SUBNET_ID_SUBNET4_RESULT
- PGSQL_CB_DELETE_BY_SUBNET_ID_SUBNET6
- PGSQL_CB_DELETE_BY_SUBNET_ID_SUBNET6_RESULT
- PGSQL_CB_DELETE_CLIENT_CLASS4
- PGSQL_CB_DELETE_CLIENT_CLASS4_RESULT
- PGSQL_CB_DELETE_CLIENT_CLASS6
- PGSQL_CB_DELETE_CLIENT_CLASS6_RESULT
- PGSQL_CB_DELETE_GLOBAL_PARAMETER4
- PGSQL_CB_DELETE_GLOBAL_PARAMETER4_RESULT

- PGSQL_CB_DELETE_GLOBAL_PARAMETER6
- PGSQL_CB_DELETE_GLOBAL_PARAMETER6_RESULT
- PGSQL_CB_DELETE_OPTION4
- PGSQL_CB_DELETE_OPTION4_RESULT
- PGSQL_CB_DELETE_OPTION6
- PGSQL_CB_DELETE_OPTION6_RESULT
- PGSQL_CB_DELETE_OPTION_DEF4
- PGSQL_CB_DELETE_OPTION_DEF4_RESULT
- PGSQL_CB_DELETE_OPTION_DEF6
- PGSQL_CB_DELETE_OPTION_DEF6_RESULT
- PGSQL_CB_DELETE_SERVER4
- PGSQL_CB_DELETE_SERVER4_RESULT
- PGSQL_CB_DELETE_SERVER6
- PGSQL_CB_DELETE_SERVER6_RESULT
- PGSQL_CB_DELETE_SHARED_NETWORK4
- PGSQL_CB_DELETE_SHARED_NETWORK4_RESULT
- PGSQL_CB_DELETE_SHARED_NETWORK6
- PGSQL_CB_DELETE_SHARED_NETWORK6_RESULT
- PGSQL_CB_DELETE_SHARED_NETWORK_OPTION4
- PGSQL_CB_DELETE_SHARED_NETWORK_OPTION4_RESULT
- PGSQL_CB_DELETE_SHARED_NETWORK_OPTION6
- PGSQL_CB_DELETE_SHARED_NETWORK_OPTION6_RESULT
- PGSQL_CB_DELETE_SHARED_NETWORK_SUBNETS4
- PGSQL_CB_DELETE_SHARED_NETWORK_SUBNETS4_RESULT
- PGSQL_CB_DELETE_SHARED_NETWORK_SUBNETS6
- PGSQL_CB_DELETE_SHARED_NETWORK_SUBNETS6_RESULT
- PGSQL_CB_GET_ALL_CLIENT_CLASSES4
- PGSQL_CB_GET_ALL_CLIENT_CLASSES4_RESULT
- PGSQL_CB_GET_ALL_CLIENT_CLASSES6
- PGSQL_CB_GET_ALL_CLIENT_CLASSES6_RESULT
- PGSQL_CB_GET_ALL_GLOBAL_PARAMETERS4
- PGSQL_CB_GET_ALL_GLOBAL_PARAMETERS4_RESULT
- PGSQL_CB_GET_ALL_GLOBAL_PARAMETERS6
- PGSQL_CB_GET_ALL_GLOBAL_PARAMETERS6_RESULT
- PGSQL_CB_GET_ALL_OPTIONS4
- PGSQL_CB_GET_ALL_OPTIONS4_RESULT

- PGSQL_CB_GET_ALL_OPTIONS6
- PGSQL_CB_GET_ALL_OPTIONS6_RESULT
- PGSQL_CB_GET_ALL_OPTION_DEFS4
- PGSQL_CB_GET_ALL_OPTION_DEFS4_RESULT
- PGSQL_CB_GET_ALL_OPTION_DEFS6
- PGSQL_CB_GET_ALL_OPTION_DEFS6_RESULT
- PGSQL_CB_GET_ALL_SERVERS4
- PGSQL_CB_GET_ALL_SERVERS4_RESULT
- PGSQL_CB_GET_ALL_SERVERS6
- PGSQL_CB_GET_ALL_SERVERS6_RESULT
- PGSQL_CB_GET_ALL_SHARED_NETWORKS4
- PGSQL_CB_GET_ALL_SHARED_NETWORKS4_RESULT
- PGSQL_CB_GET_ALL_SHARED_NETWORKS6
- PGSQL_CB_GET_ALL_SHARED_NETWORKS6_RESULT
- PGSQL_CB_GET_ALL_SUBNETS4
- PGSQL_CB_GET_ALL_SUBNETS4_RESULT
- PGSQL_CB_GET_ALL_SUBNETS6
- PGSQL_CB_GET_ALL_SUBNETS6_RESULT
- PGSQL_CB_GET_CLIENT_CLASS4
- PGSQL_CB_GET_CLIENT_CLASS6
- PGSQL_CB_GET_GLOBAL_PARAMETER4
- PGSQL_CB_GET_GLOBAL_PARAMETER6
- PGSQL_CB_GET_HOST4
- PGSQL_CB_GET_HOST6
- PGSQL_CB_GET_MODIFIED_CLIENT_CLASSES4
- PGSQL_CB_GET_MODIFIED_CLIENT_CLASSES4_RESULT
- PGSQL_CB_GET_MODIFIED_CLIENT_CLASSES6
- PGSQL_CB_GET_MODIFIED_CLIENT_CLASSES6_RESULT
- PGSQL_CB_GET_MODIFIED_GLOBAL_PARAMETERS4
- PGSQL_CB_GET_MODIFIED_GLOBAL_PARAMETERS4_RESULT
- PGSQL_CB_GET_MODIFIED_GLOBAL_PARAMETERS6
- PGSQL_CB_GET_MODIFIED_GLOBAL_PARAMETERS6_RESULT
- PGSQL_CB_GET_MODIFIED_OPTIONS4
- PGSQL_CB_GET_MODIFIED_OPTIONS4_RESULT
- PGSQL_CB_GET_MODIFIED_OPTIONS6
- PGSQL_CB_GET_MODIFIED_OPTIONS6_RESULT

- PGSQL_CB_GET_MODIFIED_OPTION_DEFS4
- PGSQL_CB_GET_MODIFIED_OPTION_DEFS4_RESULT
- PGSQL_CB_GET_MODIFIED_OPTION_DEFS6
- PGSQL_CB_GET_MODIFIED_OPTION_DEFS6_RESULT
- PGSQL_CB_GET_MODIFIED_SHARED_NETWORKS4
- PGSQL_CB_GET_MODIFIED_SHARED_NETWORKS4_RESULT
- PGSQL_CB_GET_MODIFIED_SHARED_NETWORKS6
- PGSQL_CB_GET_MODIFIED_SHARED_NETWORKS6_RESULT
- PGSQL_CB_GET_MODIFIED_SUBNETS4
- PGSQL_CB_GET_MODIFIED_SUBNETS4_RESULT
- PGSQL_CB_GET_MODIFIED_SUBNETS6
- PGSQL_CB_GET_MODIFIED_SUBNETS6_RESULT
- PGSQL_CB_GET_OPTION4
- PGSQL_CB_GET_OPTION6
- PGSQL_CB_GET_OPTION_DEF4
- PGSQL_CB_GET_OPTION_DEF6
- PGSQL_CB_GET_PORT4
- PGSQL_CB_GET_PORT6
- PGSQL_CB_GET_RECENT_AUDIT_ENTRIES4
- PGSQL_CB_GET_RECENT_AUDIT_ENTRIES4_RESULT
- PGSQL_CB_GET_RECENT_AUDIT_ENTRIES6
- PGSQL_CB_GET_RECENT_AUDIT_ENTRIES6_RESULT
- PGSQL_CB_GET_SERVER4
- PGSQL_CB_GET_SERVER6
- PGSQL_CB_GET_SHARED_NETWORK4
- PGSQL_CB_GET_SHARED_NETWORK6
- PGSQL_CB_GET_SHARED_NETWORK_SUBNETS4
- PGSQL_CB_GET_SHARED_NETWORK_SUBNETS4_RESULT
- PGSQL_CB_GET_SHARED_NETWORK_SUBNETS6
- PGSQL_CB_GET_SHARED_NETWORK_SUBNETS6_RESULT
- PGSQL_CB_GET_SUBNET4_BY_PREFIX
- PGSQL_CB_GET_SUBNET4_BY_SUBNET_ID
- PGSQL_CB_GET_SUBNET6_BY_PREFIX
- PGSQL_CB_GET_SUBNET6_BY_SUBNET_ID
- PGSQL_CB_GET_TYPE4
- PGSQL_CB_GET_TYPE6

- PGSQL_CB_REGISTER_BACKEND_TYPE4
- PGSQL_CB_REGISTER_BACKEND_TYPE6
- PGSQL_CB_UNREGISTER_BACKEND_TYPE4
- PGSQL_CB_UNREGISTER_BACKEND_TYPE6
- PGSQL_LB_UPGRADE_EXTENDED_INFO4
- PGSQL_LB_UPGRADE_EXTENDED_INFO4_ERROR
- PGSQL_LB_UPGRADE_EXTENDED_INFO6
- PGSQL_LB_UPGRADE_EXTENDED_INFO6_ERROR
- STAT_CMDS_LEASE4_ORPHANED_STATS
- STAT_CMDS_LEASE6_ORPHANED_STATS
- TCP_CLIENT_REQUEST_RECEIVED
- TCP_CONNECTION_SHUTDOWN
- TCP_CONNECTION_STOP
- TCP_SERVER_RESPONSE_SEND
- TLS_SERVER_RESPONSE_SEND

34.6 Messages printed on debuglevel 45

- DHCP4_DHCP4O6_SUBNET_SELECTED
- DHCP4_SUBNET_DYNAMICALLY_CHANGED
- DHCP4_SUBNET_SELECTED
- DHCP6_SUBNET_DYNAMICALLY_CHANGED
- DHCP6_SUBNET_SELECTED
- HOOKS_CALLOUTS_BEGIN
- HOOKS_CALLOUTS_COMPLETE
- HOOKS_CALLOUTS_REMOVED
- HOOKS_CALLOUT_REGISTRATION
- HOOKS_LIBRARY_MULTI_THREADING_COMPATIBLE
- HOOKS_LIBRARY_VERSION
- HOOKS_STD_CALLOUT_REGISTERED
- HOSTS_CFG_GET_ALL_ADDRESS4_COUNT
- HOSTS_CFG_GET_ALL_ADDRESS6_COUNT
- HOSTS_CFG_GET_ALL_COUNT
- HOSTS_CFG_GET_ALL_HOSTNAME_COUNT
- HOSTS_CFG_GET_ALL_HOSTNAME_SUBNET_ID4_COUNT
- HOSTS_CFG_GET_ALL_HOSTNAME_SUBNET_ID6_COUNT

- HOSTS_CFG_GET_ALL_IDENTIFIER_COUNT
- HOSTS_CFG_GET_ALL_SUBNET_ID4_COUNT
- HOSTS_CFG_GET_ALL_SUBNET_ID6_COUNT
- HOSTS_CFG_GET_ALL_SUBNET_ID_ADDRESS4_COUNT
- HOSTS_CFG_GET_ALL_SUBNET_ID_ADDRESS6_COUNT
- HOSTS_CFG_GET_ONE_SUBNET_ID_ADDRESS4_HOST
- HOSTS_CFG_GET_ONE_SUBNET_ID_ADDRESS4_NULL
- HOSTS_CFG_GET_ONE_SUBNET_ID_ADDRESS6_HOST
- HOSTS_CFG_GET_ONE_SUBNET_ID_ADDRESS6_NULL
- HOSTS_CFG_GET_ONE_SUBNET_ID_IDENTIFIER_HOST
- HOSTS_CFG_GET_ONE_SUBNET_ID_IDENTIFIER_NULL
- HOSTS_MGR_ALTERNATE_GET4_SUBNET_ID_IDENTIFIER_HOST
- HOSTS_MGR_ALTERNATE_GET4_SUBNET_ID_IDENTIFIER_NULL
- HOSTS_MGR_ALTERNATE_GET6_SUBNET_ID_IDENTIFIER_HOST
- HOSTS_MGR_ALTERNATE_GET6_SUBNET_ID_IDENTIFIER_NULL
- HTTP_BAD_CLIENT_REQUEST_RECEIVED_DETAILS
- HTTP_BAD_SERVER_RESPONSE_RECEIVED_DETAILS
- HTTP_CLIENT_REQUEST_RECEIVED_DETAILS
- HTTP_SERVER_RESPONSE_RECEIVED_DETAILS
- HTTP_SERVER_RESPONSE_SEND_DETAILS

34.7 Messages printed on debuglevel 50

- ALLOC_ENGINE_V6_EXTEND_LEASE
- ASIODNS_READ_TIMEOUT
- DHCP4_ADDITIONAL_CLASS_EVAL_RESULT
- DHCP4_BUFFER_UNPACK
- DHCP4_BUFFER_WAIT_SIGNAL
- DHCP4_CLIENTID_IGNORED_FOR_LEASES
- DHCP4_CLIENT_FQDN_PROCESS
- DHCP4_CLIENT_HOSTNAME_MALFORMED
- DHCP4_CLIENT_HOSTNAME_PROCESS
- DHCP4_DEFERRED_OPTION_MISSING
- DHCP4_DEFERRED_OPTION_UNPACK_FAIL
- DHCP4_DHCP4O6_BAD_PACKET
- DHCP4_DHCP4O6_RECEIVE_FAIL

- DHCP4_DHCP4O6_RECEIVING
- DHCP4_DHCP4O6_SUBNET_SELECTION_FAILED
- DHCP4_DISCOVER
- DHCP4_EMPTY_HOSTNAME
- DHCP4_HOOK_BUFFER_RCVD_SKIP
- DHCP4_INFORM_DIRECT_REPLY
- DHCP4_NO_LEASE_INIT_REBOOT
- DHCP4_PACKET_NAK_0002
- DHCP4_PACKET_NAK_0003
- DHCP4_PACKET_NAK_0004
- DHCP4_PACKET_OPTIONS_SKIPPED
- DHCP4_PACKET_PACK
- DHCP4_RELEASE
- DHCP4_RELEASE_FAIL
- DHCP4_RELEASE_FAIL_NO_LEASE
- DHCP4_RELEASE_FAIL_WRONG_CLIENT
- DHCP4_REQUEST
- DHCP4_RESPONSE_HOSTNAME_GENERATE
- DHCP4_SUBNET_SELECTION_FAILED
- DHCP4_UNKNOWN_ADDRESS_REQUESTED
- DHCP6_ADDITIONAL_CLASS_EVAL_RESULT
- DHCP6_ADD_GLOBAL_STATUS_CODE
- DHCP6_ADD_STATUS_CODE_FOR_IA
- DHCP6_BUFFER_UNPACK
- DHCP6_BUFFER_WAIT_SIGNAL
- DHCP6_DDNS_CREATE_ADD_NAME_CHANGE_REQUEST
- DHCP6_DDNS_GENERATE_FQDN
- DHCP6_DDNS_RECEIVE_FQDN
- DHCP6_DDNS_REMOVE_OLD_LEASE_FQDN
- DHCP6_DDNS_RESPONSE_FQDN_DATA
- DHCP6_DECLINE_PROCESS_IA
- DHCP6_DHCP4O6_RECEIVE_FAIL
- DHCP6_DHCP4O6_RECEIVING
- DHCP6_HOOK_BUFFER_RCVD_SKIP
- DHCP6_HOOK_DECLINE_SKIP
- DHCP6_LEASE_ADVERT

- DHCP6_LEASE_ADVERT_FAIL
- DHCP6_LEASE_ALLOC
- DHCP6_LEASE_ALLOC_FAIL
- DHCP6_PACKET_OPTIONS_SKIPPED
- DHCP6_PD_LEASE_ADVERT
- DHCP6_PD_LEASE_ADVERT_FAIL
- DHCP6_PD_LEASE_ALLOC
- DHCP6_PD_LEASE_ALLOC_FAIL
- DHCP6_PROCESS_IA_NA_EXTEND
- DHCP6_PROCESS_IA_NA_RELEASE
- DHCP6_PROCESS_IA_NA_REQUEST
- DHCP6_PROCESS_IA_NA_SOLICIT
- DHCP6_PROCESS_IA_PD_EXTEND
- DHCP6_PROCESS_IA_PD_REQUEST
- DHCP6_PROCESS_IA_PD_SOLICIT
- DHCP6_RAPID_COMMIT
- DHCP6_SUBNET_SELECTION_FAILED
- DHCPSRV_DHCP_DDNS_NCR_SENT
- DHCPSRV_EVAL_RESULT
- DHCPSRV_MEMFILE_ADD_ADDR4
- DHCPSRV_MEMFILE_ADD_ADDR6
- DHCPSRV_MEMFILE_COMMIT
- DHCPSRV_MEMFILE_DELETE_ADDR4
- DHCPSRV_MEMFILE_DELETE_ADDR6
- DHCPSRV_MEMFILE_DELETE_EXPIRED_RECLAIMED4
- DHCPSRV_MEMFILE_DELETE_EXPIRED_RECLAIMED6
- DHCPSRV_MEMFILE_DELETE_EXPIRED_RECLAIMED_START
- DHCPSRV_MEMFILE_GET4
- DHCPSRV_MEMFILE_GET6
- DHCPSRV_MEMFILE_GET6_DUID
- DHCPSRV_MEMFILE_GET_ADDR4
- DHCPSRV_MEMFILE_GET_ADDR6
- DHCPSRV_MEMFILE_GET_CLIENTID
- DHCPSRV_MEMFILE_GET_EXPIRED4
- DHCPSRV_MEMFILE_GET_EXPIRED6
- DHCPSRV_MEMFILE_GET_HOSTNAME4

- DHCPSRV_MEMFILE_GET_HOSTNAME6
- DHCPSRV_MEMFILE_GET_HWADDR
- DHCPSRV_MEMFILE_GET_IAID_DUID
- DHCPSRV_MEMFILE_GET_IAID_SUBID_DUID
- DHCPSRV_MEMFILE_GET_PAGE4
- DHCPSRV_MEMFILE_GET_PAGE6
- DHCPSRV_MEMFILE_GET_RELAYID4
- DHCPSRV_MEMFILE_GET_RELAYID6
- DHCPSRV_MEMFILE_GET_REMOTEID4
- DHCPSRV_MEMFILE_GET_REMOTEID6
- DHCPSRV_MEMFILE_GET_SUBID4
- DHCPSRV_MEMFILE_GET_SUBID6
- DHCPSRV_MEMFILE_GET_SUBID_CLIENTID
- DHCPSRV_MEMFILE_GET_SUBID_HWADDR
- DHCPSRV_MEMFILE_GET_SUBID_PAGE6
- DHCPSRV_MEMFILE_ROLLBACK
- DHCPSRV_MEMFILE_UPDATE_ADDR4
- DHCPSRV_MEMFILE_UPDATE_ADDR6
- DHCPSRV_QUEUE_NCR_SKIP
- DHCPSRV_TEMPLATE_EVAL_RESULT
- DHCPSRV_TIMERMGR_RUN_TIMER_OPERATION
- DHCP_DDNS_INVALID_RESPONSE
- DHCP_DDNS_STARTING_TRANSACTION
- DHCP_DDNS_UPDATE_REQUEST_SENT
- DHCP_DDNS_UPDATE_RESPONSE_RECEIVED
- FUZZ_DATA_READ
- FUZZ_SEND
- HTTPS_REQUEST_RECEIVE_START
- HTTP_CLIENT_REQUEST_SEND
- HTTP_CLIENT_REQUEST_TIMEOUT_OCCURRED
- HTTP_CONNECTION_HANDSHAKE_START
- HTTP_IDLE_CONNECTION_TIMEOUT_OCCURRED
- HTTP_REQUEST_RECEIVE_START
- MYSQL_HB_DB_GET_VERSION
- MYSQL_LB_ADD_ADDR4
- MYSQL_LB_ADD_ADDR6

- MYSQL_LB_COMMIT
- MYSQL_LB_DELETED_EXPIRED_RECLAIMED
- MYSQL_LB_DELETE_ADDR4
- MYSQL_LB_DELETE_ADDR6
- MYSQL_LB_DELETE_EXPIRED_RECLAIMED4
- MYSQL_LB_DELETE_EXPIRED_RECLAIMED6
- MYSQL_LB_GET4
- MYSQL_LB_GET6
- MYSQL_LB_GET_ADDR4
- MYSQL_LB_GET_ADDR6
- MYSQL_LB_GET_CLIENTID
- MYSQL_LB_GET_DUID
- MYSQL_LB_GET_EXPIRED4
- MYSQL_LB_GET_EXPIRED6
- MYSQL_LB_GET_HOSTNAME4
- MYSQL_LB_GET_HOSTNAME6
- MYSQL_LB_GET_HWADDR
- MYSQL_LB_GET_IAID_DUID
- MYSQL_LB_GET_IAID_SUBID_DUID
- MYSQL_LB_GET_PAGE4
- MYSQL_LB_GET_PAGE6
- MYSQL_LB_GET_RELAYID4
- MYSQL_LB_GET_RELAYID6
- MYSQL_LB_GET_REMOTEID4
- MYSQL_LB_GET_REMOTEID6
- MYSQL_LB_GET_SUBID4
- MYSQL_LB_GET_SUBID6
- MYSQL_LB_GET_SUBID_CLIENTID
- MYSQL_LB_GET_SUBID_HWADDR
- MYSQL_LB_GET_SUBID_PAGE6
- MYSQL_LB_GET_VERSION
- MYSQL_LB_ROLLBACK
- MYSQL_LB_UPDATE_ADDR4
- MYSQL_LB_UPDATE_ADDR6
- MYSQL_LB_UPGRADE_EXTENDED_INFO4_PAGE
- MYSQL_LB_UPGRADE_EXTENDED_INFO6_PAGE

- PERFMON_DHCP4_PKT_EVENTS
- PERFMON_DHCP4_PKT_PROCESS_ERROR
- PERFMON_DHCP6_PKT_EVENTS
- PERFMON_DHCP6_PKT_PROCESS_ERROR
- PGSQL_HB_DB_GET_VERSION
- PGSQL_LB_ADD_ADDR4
- PGSQL_LB_ADD_ADDR6
- PGSQL_LB_COMMIT
- PGSQL_LB_DELETE_ADDR4
- PGSQL_LB_DELETE_ADDR6
- PGSQL_LB_DELETE_EXPIRED_RECLAIMED4
- PGSQL_LB_DELETE_EXPIRED_RECLAIMED6
- PGSQL_LB_GET4
- PGSQL_LB_GET6
- PGSQL_LB_GET_ADDR4
- PGSQL_LB_GET_ADDR6
- PGSQL_LB_GET_CLIENTID
- PGSQL_LB_GET_DUID
- PGSQL_LB_GET_EXPIRED4
- PGSQL_LB_GET_EXPIRED6
- PGSQL_LB_GET_HOSTNAME4
- PGSQL_LB_GET_HOSTNAME6
- PGSQL_LB_GET_HWADDR
- PGSQL_LB_GET_IAID_DUID
- PGSQL_LB_GET_IAID_SUBID_DUID
- PGSQL_LB_GET_PAGE4
- PGSQL_LB_GET_PAGE6
- PGSQL_LB_GET_RELAYID4
- PGSQL_LB_GET_RELAYID6
- PGSQL_LB_GET_REMOTEID4
- PGSQL_LB_GET_REMOTEID6
- PGSQL_LB_GET_SUBID4
- PGSQL_LB_GET_SUBID6
- PGSQL_LB_GET_SUBID_CLIENTID
- PGSQL_LB_GET_SUBID_HWADDR
- PGSQL_LB_GET_SUBID_PAGE6

- PGSQL_LB_GET_VERSION
- PGSQL_LB_ROLLBACK
- PGSQL_LB_UPDATE_ADDR4
- PGSQL_LB_UPDATE_ADDR6
- PGSQL_LB_UPGRADE_EXTENDED_INFO4_PAGE
- PGSQL_LB_UPGRADE_EXTENDED_INFO6_PAGE
- TCP_CONNECTION_REJECTED_BY_FILTER
- TCP_IDLE_CONNECTION_TIMEOUT_OCCURRED
- TCP_REQUEST_RECEIVE_START
- TLS_CONNECTION_HANDSHAKE_START
- TLS_REQUEST_RECEIVE_START

34.8 Messages printed on debuglevel 55

- ALLOC_ENGINE_V4_REUSE_EXPIRED_LEASE_DATA
- ALLOC_ENGINE_V6_EXTEND_LEASE_DATA
- ALLOC_ENGINE_V6_EXTEND_NEW_LEASE_DATA
- ALLOC_ENGINE_V6_REUSE_EXPIRED_LEASE_DATA
- DHCP4_CLIENT_FQDN_DATA
- DHCP4_CLIENT_HOSTNAME_DATA
- DHCP4_CLIENT_NAME_PROC_FAIL
- DHCP4_DHCP4O6_RESPONSE_DATA
- DHCP4_DHCP4O6_SUBNET_DATA
- DHCP4_GENERATE_FQDN
- DHCP4_QUERY_DATA
- DHCP4_RECOVERED_STASHED_RELAY_AGENT_INFO
- DHCP4_RESERVED_HOSTNAME_ASSIGNED
- DHCP4_RESPONSE_DATA
- DHCP4_RESPONSE_FQDN_DATA
- DHCP4_RESPONSE_HOSTNAME_DATA
- DHCP4_SUBNET_DATA
- DHCP6_DDNS_FQDN_GENERATED
- DHCP6_DHCP4O6_RESPONSE_DATA
- DHCP6_LEASE_DATA
- DHCP6_QUERY_DATA
- DHCP6_RESPONSE_DATA

- DHCP6_SUBNET_DATA
- DHCPSRV_DDNS_TTL_PERCENT_TOO_SMALL
- DHCPSRV_MEMFILE_LEASE_LOAD
- DHCPSRV_QUEUE_NCR
- DHCP_DDNS_AT_MAX_TRANSACTIONS
- DHCP_DDNS_FWD_REQUEST_IGNORED
- DHCP_DDNS_NO_ELIGIBLE_JOBS
- DHCP_DDNS_QUEUE_MGR_QUEUE_RECEIVE
- DHCP_DDNS_REQUEST_DROPPED
- DHCP_DDNS_REV_REQUEST_IGNORED
- EVAL_DEBUG_AND
- EVAL_DEBUG_BRANCH
- EVAL_DEBUG_CONCAT
- EVAL_DEBUG_EQUAL
- EVAL_DEBUG_HEXSTRING
- EVAL_DEBUG_IFELSE_FALSE
- EVAL_DEBUG_IFELSE_TRUE
- EVAL_DEBUG_INT16TOTEXT
- EVAL_DEBUG_INT32TOTEXT
- EVAL_DEBUG_INT8TOTEXT
- EVAL_DEBUG_IPADDRESS
- EVAL_DEBUG_IPADDRESSTOTEXT
- EVAL_DEBUG_LCASE
- EVAL_DEBUG_MATCH
- EVAL_DEBUG_MEMBER
- EVAL_DEBUG_NOT
- EVAL_DEBUG_OPTION
- EVAL_DEBUG_OR
- EVAL_DEBUG_PKT
- EVAL_DEBUG_PKT4
- EVAL_DEBUG_PKT6
- EVAL_DEBUG_POP_AND_BRANCH_FALSE
- EVAL_DEBUG_POP_OR_BRANCH_FALSE
- EVAL_DEBUG_POP_OR_BRANCH_TRUE
- EVAL_DEBUG_RELAY6
- EVAL_DEBUG_RELAY6_RANGE

- EVAL_DEBUG_SPLIT
- EVAL_DEBUG_SPLIT_DELIM_EMPTY
- EVAL_DEBUG_SPLIT_EMPTY
- EVAL_DEBUG_SPLIT_FIELD_OUT_OF_RANGE
- EVAL_DEBUG_STRING
- EVAL_DEBUG_SUBSTRING
- EVAL_DEBUG_SUBSTRING_EMPTY
- EVAL_DEBUG_SUBSTRING_RANGE
- EVAL_DEBUG_TOHEXSTRING
- EVAL_DEBUG_UCASE
- EVAL_DEBUG_UINT16TOTEXT
- EVAL_DEBUG_UINT32TOTEXT
- EVAL_DEBUG_UINT8TOTEXT
- EVAL_DEBUG_VENDOR_CLASS_DATA
- EVAL_DEBUG_VENDOR_CLASS_DATA_NOT_FOUND
- EVAL_DEBUG_VENDOR_CLASS_ENTERPRISE_ID
- EVAL_DEBUG_VENDOR_CLASS_ENTERPRISE_ID_MISMATCH
- EVAL_DEBUG_VENDOR_CLASS_EXISTS
- EVAL_DEBUG_VENDOR_CLASS_NO_OPTION
- EVAL_DEBUG_VENDOR_ENTERPRISE_ID
- EVAL_DEBUG_VENDOR_ENTERPRISE_ID_MISMATCH
- EVAL_DEBUG_VENDOR_EXISTS
- EVAL_DEBUG_VENDOR_NO_OPTION
- HOOKS_ALL_CALLOUTS_DEREGISTERED
- HOOKS_CALLOUT_CALLED
- HOOKS_CALLOUT_DEREGISTERED
- HOSTS_CFG_GET_ALL_ADDRESS4_HOST
- HOSTS_CFG_GET_ALL_ADDRESS6_HOST
- HOSTS_CFG_GET_ALL_HOST
- HOSTS_CFG_GET_ALL_HOSTNAME_HOST
- HOSTS_CFG_GET_ALL_HOSTNAME_SUBNET_ID4_HOST
- HOSTS_CFG_GET_ALL_HOSTNAME_SUBNET_ID6_HOST
- HOSTS_CFG_GET_ALL_IDENTIFIER_HOST
- HOSTS_CFG_GET_ALL_SUBNET_ID4_HOST
- HOSTS_CFG_GET_ALL_SUBNET_ID6_HOST
- HOSTS_CFG_GET_ALL_SUBNET_ID_ADDRESS4_HOST

- HOSTS_CFG_GET_ALL_SUBNET_ID_ADDRESS6_HOST
- HOSTS_CFG_GET_ONE_PREFIX_HOST
- HOSTS_CFG_GET_ONE_PREFIX_NULL
- HTTP_CLIENT_REQUEST_SEND_DETAILS
- HTTP_DATA_RECEIVED
- NETCONF_CONFIG_CHANGED_DETAIL
- NETCONF_GET_CONFIG
- NETCONF_SET_CONFIG
- NETCONF_UPDATE_CONFIG
- NETCONF_VALIDATE_CONFIG
- TCP_DATA_RECEIVED
- TCP_DATA_SENT

34.9 Messages printed on debuglevel 70

- ASIODNS_FETCH_COMPLETED