

Kea Messages Manual

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Abstract

This is the messages manual for Kea version 0.9. The most up-to-date version of this document, along with other documents for Kea, can be found at <http://kea.isc.org/docs>.

Chapter 1

Introduction

This document lists each message that can be logged by the programs in the Kea package. Each entry in this manual is of the form:

```
IDENTIFICATION message-text
```

... where "IDENTIFICATION" is the message identification included in each message logged and "message-text" is the accompanying message text. The "message-text" may include placeholders of the form "%1", "%2" etc.; these parameters are replaced by relevant values when the message is logged.

Each entry is also accompanied by a description giving more information about the circumstances that result in the message being logged.

For information on configuring and using Kea logging, refer to the [Kea Guide](#).

Chapter 2

Kea Log Messages

ASIODNS_FD_ADD_TCP adding a new TCP server by opened fd %1

A debug message informing about installing a file descriptor as a server. The file descriptor number is noted.

ASIODNS_FD_ADD_UDP adding a new UDP server by opened fd %1

A debug message informing about installing a file descriptor as a server. The file descriptor number is noted.

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

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.

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

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.

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.

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.

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

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.

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.

ASIODNS_SYNC_UDP_CLOSE_FAIL failed to close a DNS/UDP socket: %1

This is the same to ASIODNS_UDP_CLOSE_FAIL but happens on the "synchronous UDP server", mainly used for the authoritative DNS server daemon.

ASIODNS_TCP_ACCEPT_FAIL failed to accept TCP DNS connection: %1

Accepting a TCP connection from a DNS client failed due to an error that could happen but should be rare. The reason for the error is included in the log message. The server still keeps accepting new connections, so unless it happens often it's probably okay to ignore this error. If the shown error indicates something like "too many open files", it's probably because the run time environment is too restrictive on this limitation, so consider adjusting the limit using a tool such as ulimit. If you see other types of errors too often, there may be something overlooked; please file a bug report in that case.

ASIODNS_TCP_CLEANUP_CLOSE_FAIL failed to close a DNS/TCP socket on port cleanup: %1

A TCP DNS server tried to close a TCP socket (one created on accepting a new connection or is already unused) as a step of cleaning up the corresponding listening port, but it failed to do that. This is generally an unexpected event and so is logged as an error. See also the description of ASIODNS_TCP_CLOSE_ACCEPTOR_FAIL.

ASIODNS_TCP_CLOSE_ACCEPTOR_FAIL failed to close listening TCP socket: %1

A TCP DNS server tried to close a listening TCP socket (for accepting new connections) as a step of cleaning up the corresponding listening port (e.g., on server shutdown or updating port configuration), but it failed to do that. This is generally an unexpected event and so is logged as an error. See ASIODNS_TCP_CLOSE_FAIL on the implication of related system resources.

ASIODNS_TCP_CLOSE_FAIL failed to close DNS/TCP socket with a client: %1

A TCP DNS server tried to close a TCP socket used to communicate with a client, but it failed to do that. While closing a socket should normally be an error-free operation, there have been known cases where this happened with a "connection reset by peer" error. This might be because of some odd client behavior, such as sending a TCP RST after establishing the connection and before the server closes the socket, but how exactly this could happen seems to be system dependent (i.e, it's not part of the standard socket API), so it's difficult to provide a general explanation. In any case, it is believed that an error on closing a socket doesn't mean leaking system resources (the kernel should clean up any internal resource related to the socket, just reporting an error detected in the close call), but, again, it seems to be system dependent. This message is logged at a debug level as it's known to happen and could be triggered by a remote node and it would be better to not be too verbose, but you might want to increase the log level and make sure there's no resource leak or other system level troubles when it's logged.

ASIODNS_TCP_CLOSE_NORESP_FAIL failed to close DNS/TCP socket with a client: %1

A TCP DNS server tried to close a TCP socket used to communicate with a client without returning an answer (which normally happens for zone transfer requests), but it failed to do that. See ASIODNS_TCP_CLOSE_FAIL for more details.

ASIODNS_TCP_GETREMOTE_FAIL failed to get remote address of a DNS TCP connection: %1

A TCP DNS server tried to get the address and port of a remote client on a connected socket but failed. It's expected to be rare but can still happen. See also ASIODNS_TCP_READLEN_FAIL.

ASIODNS_TCP_READDATA_FAIL failed to get DNS data on a TCP socket: %1

A TCP DNS server tried to read a DNS message (that follows a 2-byte length field) but failed. It's expected to be rare but can still happen. See also ASIODNS_TCP_READLEN_FAIL.

ASIODNS_TCP_READLEN_FAIL failed to get DNS data length on a TCP socket: %1

A TCP DNS server tried to get the length field of a DNS message (the first 2 bytes of a new chunk of data) but failed. This is generally expected to be rare but can still happen, e.g, due to an unexpected reset of the connection. A specific reason for the failure is included in the log message.

ASIODNS_TCP_WRITE_FAIL failed to send DNS message over a TCP socket: %1

A TCP DNS server tried to send a DNS message to a remote client but failed. It's expected to be rare but can still happen. See also ASIODNS_TCP_READLEN_FAIL.

ASIODNS_UDP_ASYNC_SEND_FAIL Error sending UDP packet to %1: %2

The low-level ASIO library reported an error when trying to send a UDP packet in asynchronous UDP mode. This can be any error reported by send_to(), and can indicate problems such as too high a load on the network, or a problem in the underlying library or system. This packet is dropped and will not be sent, but service should resume normally. If you see a single occurrence of this message, it probably does not indicate any significant problem, but if it is logged often, it is probably a good idea to inspect your network traffic.

ASIODNS_UDP_CLOSE_FAIL failed to close a DNS/UDP socket: %1

A UDP DNS server tried to close its UDP socket, but failed to do that. This is generally an unexpected event and so is logged as an error.

ASIODNS_UDP_RECEIVE_FAIL failed to receive UDP DNS packet: %1

Receiving a UDP packet from a DNS client failed due to an error that could happen but should be very rare. The server still keeps receiving UDP packets on this socket. The reason for the error is included in the log message. This log message is basically not expected to appear at all in practice; if it does, there may be some system level failure and other system logs may have to be checked.

ASIODNS_UDP_SYNC_RECEIVE_FAIL failed to receive UDP DNS packet: %1

This is the same to ASIODNS_UDP_RECEIVE_FAIL but happens on the "synchronous UDP server", mainly used for the authoritative DNS server daemon.

ASIODNS_UDP_SYNC_SEND_FAIL Error sending UDP packet to %1: %2

The low-level ASIO library reported an error when trying to send a UDP packet in synchronous UDP mode. See ASIODNS_UDP_ASYNC_SEND_FAIL for more information.

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.

ASIODNS_UNKNOWN_RESULT unknown result (%1) when IOFetch::stop() was executed for I/O to %2(%3)

An internal error indicating that the termination method of the resolver's upstream fetch class was called with an unknown result code (which is given in the message). Please submit a bug report.

CC_ASYNC_READ_FAILED asynchronous read failed (error code = %1)

This marks a low level error, we tried to read data from the message queue daemon asynchronously, but the ASIO library returned an error.

CC_CONN_ERROR error connecting to message queue (%1)

It is impossible to reach the message queue daemon for the reason given. It is unlikely there'll be reason for whatever program this currently is to continue running, as the communication with the rest of Kea is vital for the components.

CC_DISCONNECT disconnecting from message queue daemon

The library is disconnecting from the message queue daemon. This debug message indicates that the program is trying to shut down gracefully.

CC_ESTABLISH trying to establish connection with message queue daemon at %1

This debug message indicates that the command channel library is about to connect to the message queue daemon, which should be listening on the UNIX-domain socket listed in the output.

CC_ESTABLISHED successfully connected to message queue daemon

This debug message indicates that the connection was successfully made, this should follow CC_ESTABLISH.

CC_GROUP_RECEIVE trying to receive a message with seq %1

Debug message, noting that a message is expected to come over the command channel.

CC_GROUP_RECEIVED message arrived ('%1', '%2')

Debug message, noting that we successfully received a message (its envelope and payload listed). This follows CC_GROUP_RECEIVE but might happen some time later, depending if we waited for it or just polled.

CC_GROUP_SEND sending message '%1' to group '%2'

Debug message, we're about to send a message over the command channel.

CC_INVALID_LENGTHS invalid length parameters (%1, %2)

This happens when garbage comes over the command channel or some kind of confusion happens in the program. The data received from the socket make no sense if we interpret it as lengths of message. The first one is total length of the message; the second is the length of the header. The header and its length (2 bytes) is counted in the total length.

CC_LENGTH_NOT_READY length not ready

There should be data representing the length of message on the socket, but it is not there.

CC_LNAME_RECEIVED received local name: %1

Debug message: the local module received its unique identifier (name) from msgq on completion of establishing the session with msgq.

CC_NO_MESSAGE no message ready to be received yet

The program polled for incoming messages, but there was no message waiting. This is a debug message which may happen only after CC_GROUP_RECEIVE.

CC_NO_MSGQ unable to connect to message queue (%1)

It isn't possible to connect to the message queue daemon, for reason listed. It is unlikely any program will be able continue without the communication.

CC_READ_ERROR error reading data from command channel (%1)

A low level error happened when the library tried to read data from the command channel socket. The reason is listed.

CC_READ_EXCEPTION error reading data from command channel (%1)

We received an exception while trying to read data from the command channel socket. The reason is listed.

CC_REPLY replying to message from '%1' with '%2'

Debug message, noting we're sending a response to the original message with the given envelope.

CC_SET_TIMEOUT setting timeout to %1ms

Debug message. A timeout for which the program is willing to wait for a reply is being set.

CC_START_READ starting asynchronous read

Debug message. From now on, when a message (or command) comes, it'll wake the program and the library will automatically pass it over to correct place.

CC_SUBSCRIBE subscribing to communication group %1

Debug message. The program wants to receive messages addressed to this group.

CC_TIMEOUT timeout reading data from command channel

The program waited too long for data from the command channel (usually when it sent a query to different program and it didn't answer for whatever reason).

CC_UNSUBSCRIBE unsubscribing from communication group %1

Debug message. The program no longer wants to receive messages addressed to this group.

CC_WRITE_ERROR error writing data to command channel (%1)

A low level error happened when the library tried to write data to the command channel socket.

CC_ZERO_LENGTH invalid message length (0)

The library received a message length being zero, which makes no sense, since all messages must contain at least the envelope.

CONFIG_CCSESSION_MSG error in CC session message: %1

There was a problem with an incoming message on the command and control channel. The message does not appear to be a valid command, and is missing a required element or contains an unknown data format. This most likely means that another Kea module is sending a bad message. The message itself is ignored by this module.

CONFIG_CCSESSION_MSG_INTERNAL error handling CC session message: %1

There was an internal problem handling an incoming message on the command and control channel. An unexpected exception was thrown, details of which are appended to the message. The module will continue to run, but will not send back an answer.

The most likely cause of this error is a programming error. Please raise a bug report.

CONFIG_CCSESSION_STOPPING error sending stopping message: %1

There was a problem when sending a message signaling that the module using this CCSession is stopping. This message is sent so that the rest of the system is aware that the module is no longer running. Apart from logging this message, the error itself is ignored, and the ModuleCCSession is still stopped. The specific exception message is printed.

CONFIG_CCSESSION_STOPPING_UNKNOWN unknown error sending stopping message

Similar to CONFIG_CCSESSION_STOPPING, but in this case the exception that is seen is not a standard exception, and further information is unknown. This is a bug.

CONFIG_GET_FAIL error getting configuration from cfgmgr: %1

The configuration manager returned an error when this module requested the configuration. The full error message answer from the configuration manager is appended to the log error. The most likely cause is that the module is of a different (command specification) version than the running configuration manager.

CONFIG_JSON_PARSE JSON parse error in %1: %2

There was an error parsing the JSON file. The given file does not appear to be in valid JSON format. Please verify that the filename is correct and that the contents are valid JSON.

CONFIG_LOG_EXPLICIT will use logging configuration for explicitly-named logger %1

This is a debug message. When processing the "loggers" part of the configuration file, the configuration library found an entry for the named logger that matches the logger specification for the program. The logging configuration for the program will be updated with the information.

CONFIG_LOG_IGNORE_EXPLICIT ignoring logging configuration for explicitly-named logger %1

This is a debug message. When processing the "loggers" part of the configuration file, the configuration library found an entry for the named logger. As this does not match the logger specification for the program, it has been ignored.

CONFIG_LOG_IGNORE_WILD ignoring logging configuration for wildcard logger %1

This is a debug message. When processing the "loggers" part of the configuration file, the configuration library found the named wildcard entry (one containing the "*" character) that matched a logger already matched by an explicitly named entry. The configuration is ignored.

CONFIG_LOG_WILD_MATCH will use logging configuration for wildcard logger %1

This is a debug message. When processing the "loggers" part of the configuration file, the configuration library found the named wildcard entry (one containing the "*" character) that matches a logger specification in the program. The logging configuration for the program will be updated with the information.

CONFIG_MOD_SPEC_FORMAT module specification error in %1: %2

The given file does not appear to be a valid specification file: details are included in the message. Please verify that the filename is correct and that its contents are a valid Kea module specification.

CONFIG_MOD_SPEC_REJECT module specification rejected by cfgmgr: %1

The specification file for this module was rejected by the configuration manager. The full error message answer from the configuration manager is appended to the log error. The most likely cause is that the module is of a different (specification file) version than the running configuration manager.

CONFIG_OPEN_FAIL error opening %1: %2

There was an error opening the given file. The reason for the failure is included in the message.

CONFIG_RPC_SEQ RPC call %1 to %2 with seq %3

Debug message, saying there's a RPC call of given command to given module. It has internal sequence number as listed in the message.

DCTL_CCSESSION_ENDING %1 ending control channel session

This debug message is issued just before the controller attempts to disconnect from its session with the Kea control channel.

DCTL_CCSESSION_STARTING %1 starting control channel session, specfile: %2

This debug message is issued just before the controller attempts to establish a session with the Kea control channel.

DCTL_COMMAND_RECEIVED %1 received command: %2, arguments: %3

A debug message listing the command (and possible arguments) received from the Kea control system by the controller.

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.

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.

DCTL_CONFIG_LOAD_FAIL %1 configuration failed to load: %2

This critical error message indicates that the initial application configuration has failed. The service will start, but will not process requests until the configuration has been corrected.

DCTL_CONFIG_START parsing new configuration: %1

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

DCTL_CONFIG_STUB %1 configuration stub handler called

This debug message is issued when the dummy handler for configuration events is called. This only happens during initial startup.

DCTL_CONFIG_UPDATE %1 updated configuration received: %2

A debug message indicating that the controller has received an updated configuration from the Kea configuration system.

DCTL_DISCONNECT_FAIL %1 controller failed to end session with Bundy: %2

This message indicates that while shutting down, the DHCP-DDNS controller encountered an error terminating communication with the Bundy configuration system. The service will still exit. While theoretically possible, this situation is rather unlikely.

DCTL_INIT_PROCESS %1 initializing the application

This debug message is issued just before the controller attempts to create and initialize its application instance.

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.

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.

DCTL_PARSER_FAIL : %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.

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.

DCTL_RUN_PROCESS %1 starting application event loop

This debug message is issued just before the controller invokes the application run method.

DCTL_SESSION_FAIL %1 controller failed to establish Kea session: %1

The controller has failed to establish communication with the rest of Kea and will exit.

DCTL_STANDALONE %1 skipping message queue, running standalone

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

DHCP4_ACTIVATE_INTERFACE activating interface %1

This message is printed when DHCPv4 server enabled an interface to be used to receive DHCPv4 traffic. IPv4 socket on this interface will be opened once Interface Manager starts up procedure of opening sockets.

DHCP4_CCSESSION_STARTED control channel session started on socket %1

A debug message issued during startup after the DHCPv4 server has successfully established a session with the Kea control channel.

DHCP4_CCSESSION_STARTING starting control channel session, specfile: %1

This debug message is issued just before the DHCPv4 server attempts to establish a session with the Kea control channel.

DHCP4_CLASS_ASSIGNED client packet has been assigned to the following class(es): %1

This debug message informs that incoming packet has been assigned to specified class or classes. This is a normal message.

DHCP4_CLASS_PROCESSING_FAILED client class specific processing failed

This debug message means that the server processing that is unique for each client class has reported a failure. The response packet will not be sent.

DHCP4_CLIENT_NAME_PROC_FAIL failed to process the fqdn or hostname sent by a client: %1

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.

DHCP4_COMMAND_RECEIVED received command %1, arguments: %2

A debug message listing the command (and possible arguments) received from the Kea control system by the DHCPv4 server.

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.

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.

DHCP4_CONFIG_NEW_SUBNET 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.

DHCP4_CONFIG_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 a particular subnet. Adding multiple options is uncommon for DHCPv4, but is not prohibited.

DHCP4_CONFIG_RECEIVED received configuration %1

A debug message listing the configuration received by the DHCPv4 server. The source of that configuration depends on used configuration backend.

DHCP4_CONFIG_START DHCPv4 server is processing the following configuration: %1

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.

DHCP4_CONFIG_UPDATE updated configuration received: %1

A debug message indicating that the DHCPv4 server has received an updated configuration from the Kea configuration system.

DHCP4_DDNS_REQUEST_SEND_FAILED failed sending a request to kea-dhcp-ddns, error: %1, ncr: %2

This error message indicates that DHCPv4 server attempted to send a DDNS update request to the DHCP-DDNS server. This is most likely a configuration or networking error.

DHCP4_DEACTIVATE_INTERFACE deactivate interface %1

This message is printed when DHCPv4 server disables an interface from being used to receive DHCPv4 traffic. Sockets on this interface will not be opened by the Interface Manager until interface is enabled.

DHCP4_DHCID_COMPUTE_ERROR failed to compute the DHCID for lease: %1, reason: %2

This error message is logged when the attempt to compute DHCID for a specified lease has failed. The lease details and reason for failure is logged in the message.

DHCP4_DYNAMIC_RECONFIGURATION initiate server reconfiguration using file: %1, after receiving SIGHUP signal

This is the info message logged when the DHCPv4 server starts reconfiguration as a result of receiving SIGHUP signal.

DHCP4_DYNAMIC_RECONFIGURATION_FAIL dynamic server reconfiguration failed with file: %1

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

DHCP4_EMPTY_HOSTNAME received empty hostname from the client, skipping processing of this option

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.

DHCP4_HOOKS_LIBS_RELOAD_FAIL reload of hooks libraries failed

A "libreload" command was issued to reload the hooks libraries but for some reason the reload failed. Other error messages issued from the hooks framework will indicate the nature of the problem.

DHCP4_HOOK_BUFFER_RCVD_SKIP received DHCPv4 buffer was dropped because a callout set the skip flag.

This debug message is printed when a callout installed on buffer4_receive hook point set the skip flag. For this particular hook point, the setting of the flag by a callout instructs the server to drop the packet.

DHCP4_HOOK_BUFFER_SEND_SKIP prepared DHCPv4 response was dropped because a callout set the skip flag.

This debug message is printed when a callout installed on buffer4_send hook point set the skip flag. For this particular hook point, the setting of the flag 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.

DHCP4_HOOK_LEASE4_RELEASE_SKIP DHCPv4 lease was not released because a callout set the skip flag.

This debug message is printed when a callout installed on lease4_release hook point set the skip flag. For this particular hook point, the setting of the flag by a callout instructs the server to not release a lease.

DHCP4_HOOK_PACKET_RCVD_SKIP received DHCPv4 packet was dropped, because a callout set the skip flag.

This debug message is printed when a callout installed on the pkt4_receive hook point sets the skip flag. For this particular hook point, the setting of the flag instructs the server to drop the packet.

DHCP4_HOOK_PACKET_SEND_SKIP prepared DHCPv6 response was not sent, because a callout set skip flag.

This debug message is printed when a callout installed on the pkt4_send hook point sets the skip flag. For this particular hook point, the setting of the flag 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).

DHCP4_HOOK_SUBNET4_SELECT_SKIP no subnet was selected, because a callout set skip flag.

This debug message is printed when a callout installed on the subnet4_select hook point sets the skip flag. 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.

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.

DHCP4_INVALID_ADDRESS_INIT_REBOOT invalid address %1 requested by INIT-REBOOT client (id: %2, hwaddr: %3)

This debug message is issued when the client being in the INIT-REBOOT state requested an address which is not assigned to him. The server will respond to this client with DHCPNAK.

DHCP4_LEASE_ADVERT lease %1 advertised (client client-id %2, hwaddr %3)

This debug message indicates that the server successfully advertised a lease. It is up to the client to choose one server out of othe advertised and continue allocation with that server. This is a normal behavior and indicates successful operation.

DHCP4_LEASE_ADVERT_FAIL failed to advertise a lease for client client-id %1, hwaddr %2, client sent yiaddr %3

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.

DHCP4_LEASE_ALLOC lease %1 has been allocated for client-id %2, hwaddr %3

This debug message indicates that the server successfully granted a lease in response to client's REQUEST message. This is a normal behavior and indicates successful operation.

DHCP4_LEASE_ALLOC_FAIL failed to grant a lease for client-id %1, hwaddr %2, client sent yiaddr %3

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.

DHCP4_NAME_GEN_UPDATE_FAIL failed to update the lease after generating name for a client: %1

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 message argument indicates the reason for the failure.

DHCP4_NCR_CREATION_FAILED failed to generate name change requests for DNS: %1

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 reason for the failure is printed in the logged message.

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.

DHCP4_NO_SOCKETS_OPEN no interface configured to listen to DHCP traffic

This warning message is issued when current server configuration specifies no interfaces that server should listen on, or specified interfaces are not configured to receive the traffic.

DHCP4_NO_SUBNET_FOR_DIRECT_CLIENT no suitable subnet configured for a direct client sending packet with transaction id %1

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.

DHCP4_OPEN_SOCKET opening sockets on port %1

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

DHCP4_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.

DHCP4_PACKET_DROP_NO_TYPE packet received on interface %1 dropped, because of missing msg-type option

This is a debug message informing that incoming DHCPv4 packet did not have mandatory DHCP message type option and thus was dropped.

DHCP4_PACKET_NOT_FOR_US received DHCPv4 message (transid=%1, iface=%2) dropped because it contains foreign server identifier %3

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.

DHCP4_PACKET_PARSE_FAIL failed to parse incoming packet: %1

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.

DHCP4_PACKET_PROCESS_FAIL failed to process packet received from %1: %2

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.

DHCP4_PACKET_RECEIVED %1 (type %2) packet received on interface %3

A debug message noting that the server has received the specified type of packet on the specified interface. Note that a packet marked as UNKNOWN may well be a valid DHCP packet, just a type not expected by the server (e.g. it will report a received OFFER packet as UNKNOWN).

DHCP4_PACKET_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.

DHCP4_PACKET_SEND_FAIL failed to send DHCPv4 packet: %1

This error is output if the DHCPv4 server fails to send an assembled DHCP message to a client. The reason for the error is included in the message.

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.

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.

DHCP4_PARSER_CREATED created parser for configuration element %1

A debug message output during a configuration update of the DHCPv4 server, notifying that the parser for the specified configuration element has been successfully created.

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.

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.

DHCP4_QUERY_DATA received packet type %1, data is <%2>

A debug message listing the data received from the client.

DHCP4_QUEUE_NCR name change request to %1 DNS entry queued: %2

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 parameter of this log message indicates whether the DNS entry is to be added or removed. The second parameter carries the details of the NameChangeRequest.

DHCP4_RELEASE address %1 belonging to client-id %2, hwaddr %3 was released properly.

This debug message indicates that an address was released properly. It is a normal operation during client shutdown.

DHCP4_RELEASE_EXCEPTION exception %1 while trying to release address %2

This message is output when an error was encountered during an attempt to process a RELEASE message. The error will not affect the client, which does not expect any response from the server for RELEASE messages. Depending on the nature of problem, it may affect future server operation.

DHCP4_RELEASE_FAIL failed to remove lease for address %1 for duid %2, hwaddr %3

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.

DHCP4_RELEASE_FAIL_NO_LEASE client (client-id %1, hwaddr %2) tried to release address, %3, but there is no such lease

This warning message is printed when client attempts to release a lease, but no such lease is known to the server.

DHCP4_RELEASE_FAIL_WRONG_CLIENT_ID client (client-id %2) tried to release address %1, but it belongs to client (cli

This warning message indicates that 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.

DHCP4_RELEASE_FAIL_WRONG_HWADDR client (client-id %2) tried to release address %1, but sent from a wrong hardw

This warning message indicates that client tried to release an address that does belong to it, but the lease information was associated with a different hardware address. One possible reason for using different hardware address is that a cloned virtual machine was not updated and both clones use the same client-id.

DHCP4_RESPONSE_DATA responding with packet type %1, data is <%2>

A debug message listing the data returned to the client.

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.

DHCP4_SHUTDOWN server shutdown

The DHCPv4 server has terminated normally.

DHCP4_SHUTDOWN_REQUEST shutdown of server requested

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.

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.

DHCP4_STARTING Kea DHCPv4 server version %1 starting

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

DHCP4_START_INFO pid: %1, port: %2, verbose: %3

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

DHCP4_SUBNET_SELECTED the %1 subnet was selected for client assignment

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.

DHCP4_SUBNET_SELECTION_FAILED failed to select a subnet for incoming packet, src: %1, type: %2

This warning 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.

DHCP4_UNRECOGNIZED_RCVD_PACKET_TYPE received message (transaction id %1) has unrecognized type %2 in option

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.

DHCP4_UNSUPPORTED_RCVD_PACKET_TYPE received message (transaction id %1), having type %2 is not supported

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 Offer, ACK, NAK etc.

DHCP6_ACTIVATE_INTERFACE activating interface %1

This message is printed when DHCPv6 server enabled an interface to be used to receive DHCPv6 traffic. IPv6 socket on this interface will be opened once Interface Manager starts up procedure of opening sockets.

DHCP6_CCSESSION_STARTED control channel session started on socket %1

A debug message issued during startup after the IPv6 DHCP server has successfully established a session with the Kea control channel.

DHCP6_CCSESSION_STARTING starting control channel session, specfile: %1

This debug message is issued just before the IPv6 DHCP server attempts to establish a session with the Kea control channel.

DHCP6_CLASS_ASSIGNED client packet has been assigned to the following class(es): %1

This debug message informs that incoming packet has been assigned to specified class or classes. This is a normal

DHCP6_CLIENTID_MISSING mandatory client-id option is missing, message from %1 dropped

This error message indicates that the received message is being dropped because it does not include the mandatory client-id option necessary for address assignment. The most likely cause is a problem with the client.

DHCP6_COMMAND_RECEIVED received command %1, arguments: %2

A debug message listing the command (and possible arguments) received from the Kea control system by the IPv6 DHCP server.

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.

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.

DHCP6_CONFIG_NEW_SUBNET 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.

DHCP6_CONFIG_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.

DHCP6_CONFIG_RECEIVED received configuration: %1

A debug message listing the configuration received by the DHCPv6 server. The source of that configuration depends on used configuration backend.

DHCP6_CONFIG_START DHCPv6 server is processing the following configuration: %1

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.

DHCP6_CONFIG_UPDATE updated configuration received: %1

A debug message indicating that the IPv6 DHCP server has received an updated configuration from the Kea configuration system.

DHCP6_DB_BACKEND_STARTED lease database started (type: %1, name: %2)

This informational message is printed every time the IPv6 DHCP server is started. It indicates what database backend type is being to store lease and other information.

DHCP6_DDNS_CREATE_ADD_NAME_CHANGE_REQUEST created name change request: %1

This debug message is logged when the new Name Change Request has been created to perform the DNS Update, which adds new RRs.

DHCP6_DDNS_CREATE_REMOVE_NAME_CHANGE_REQUEST created name change request: %1

This debug message is logged when the new Name Change Request has been created to perform the DNS Update, which removes RRs from the DNS.

DHCP6_DDNS_LEASE_ASSIGN_FQDN_CHANGE FQDN for the allocated lease: %1 has changed. New values: hostname =

This debug message is logged when FQDN mapping for a particular lease has been changed by the recent Request message. This mapping will be changed in DNS.

DHCP6_DDNS_LEASE_RENEW_FQDN_CHANGE FQDN for the renewed lease: %1 has changed

New values: hostname = %2, reverse mapping = %3, forward mapping = %4 This debug message is logged when FQDN mapping for a particular lease has been changed by the recent Renew message. This mapping will be changed in DNS.

DHCP6_DDNS_RECEIVE_FQDN received DHCPv6 Client FQDN Option: %1

This debug message is logged when server has found the DHCPv6 Client FQDN Option sent by a client and started processing it.

DHCP6_DDNS_REMOVE_INVALID_HOSTNAME invalid FQDN: %1 for the lease: %2 when removing DNS bindings

This error message is issued when a lease being deleted contains an indication that the DNS Update has been performed for it, but the FQDN held in the lease database has invalid format and can't be transformed to the canonical on-wire format.

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.

DHCP6_DDNS_SEND_FQDN sending DHCPv6 Client FQDN Option to the client: %1

This debug message is logged when server includes an DHCPv6 Client FQDN Option in its response to the client.

DHCP6_DEACTIVATE_INTERFACE deactivate interface %1

This message is printed when DHCPv6 server disables an interface from being used to receive DHCPv6 traffic. Sockets on this interface will not be opened by the Interface Manager until interface is enabled.

DHCP6_DYNAMIC_RECONFIGURATION initiate server reconfiguration using file: %1, after receiving SIGHUP signal

This is the info message logged when the DHCPv6 server starts reconfiguration as a result of receiving SIGHUP signal.

DHCP6_DYNAMIC_RECONFIGURATION_FAIL dynamic server reconfiguration failed with file: %1

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

DHCP6_EXTEND_LEASE_SUBNET_SELECTED the %1 subnet was selected for client extending its lease

This is a debug message informing that a given subnet was selected. It will be used for extending lifetime of the lease. This is one of the early steps in the processing of incoming client message.

DHCP6_EXTEND_LEASE_SUBNET_SELECT_FAILED failed to select a subnet for received %1: src=%2 type=%3

This warning message is output when a Renew or Rebind was received from a subnet for which the DHCPv6 server has not been configured. The cause is most likely due to a misconfiguration of the server. The packet processing will continue, but the response will only contain generic configuration parameters and no addresses or prefixes.

DHCP6_EXTEND_NA_UNKNOWN received unknown IA_NA from client (duid=%1, iaid=%2) in subnet %3

This warning message is printed when client attempts to extend the lease for the address (in the IA_NA option) but no such lease is known by the server. It typically means that client has attempted to use its lease past its lifetime: causes of this include a adjustment of the client's date/time setting or poor support on the client for sleep/recovery. A properly implemented client will recover from such a situation by restarting the lease allocation process after receiving a negative reply from the server.

An alternative cause could be that the server has lost its database recently and does not recognize its well-behaving clients. This is more probable if you see many such messages. Clients will recover from this, but they will most likely get a different IP addresses and experience a brief service interruption.

DHCP6_EXTEND_NA_UNKNOWN_SUBNET %1 message received from client on unknown subnet (duid=%2, iaid=%3)

A warning message indicating that a client is attempting to extend lease lifetime for the address, but the server does not have any information about the subnet this client belongs to. This may mean that faulty the mobile client changed its location and is trying to renew its old address (client is supposed to send confirm, not renew in such cases, according to RFC3315) or the server configuration has changed and information about existing subnet was removed. Note that in a sense this is worse case of DHCP6_EXTEND_NA_UNKNOWN, as not only the lease is unknown, but also the subnet is. Depending on the reasons of this condition, it may or may not correct on its own.

DHCP6_EXTEND_PD_NO_BINDING client sent a %1 message to extend lifetimes of prefixes for an unknown binding: duid=

This warning message is logged when a client attempts to extend the lifetime of the prefix it is using, but the server was unable to find the binding to which this lease belongs. This error condition has different implications for the Renew and Rebind messages. For the former, the server will respond with NoBinding status code. For the latter, the server will discard the message.

DHCP6_EXTEND_PD_UNKNOWN_SUBNET %1 message received from client on unknown subnet (duid=%2, iaid=%3)

A warning message indicating that a client is attempting to extend lease lifetime for the prefix, but the server doesn't have any information about the subnet this client belongs to.

DHCP6_HOOKS_LIBS_RELOAD_FAIL reload of hooks libraries failed

A "libreload" command was issued to reload the hooks libraries but for some reason the reload failed. Other error messages issued from the hooks framework will indicate the nature of the problem.

DHCP6_HOOK_BUFFER_RCVD_SKIP received DHCPv6 buffer was dropped because a callout set the skip flag

This debug message is printed when a callout installed on buffer6_receive hook point set the skip flag. For this particular hook point, the setting of the flag by a callout instructs the server to drop the packet.

DHCP6_HOOK_BUFFER_SEND_SKIP prepared DHCPv6 response was dropped because a callout set the skip flag

This debug message is printed when a callout installed on buffer6_send hook point set the skip flag. For this particular hook point, the setting of the flag 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.

DHCP6_HOOK_LEASE6_EXTEND_SKIP DHCPv6 lease lifetime was not extended because a callout set the skip flag for mess

or 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 client requested renewal of multiples 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.

DHCP6_HOOK_LEASE6_RELEASE_NA_SKIP DHCPv6 address lease was not released because a callout set the skip flag

This debug message is printed when a callout installed on the lease6_release hook point set the skip flag. For this particular hook point, the setting of the flag 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.

DHCP6_HOOK_LEASE6_RELEASE_PD_SKIP DHCPv6 prefix lease was not released because a callout set the skip flag

This debug message is printed when a callout installed on lease6_release hook point set the skip flag. For this particular hook point, the setting of the flag 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.

DHCP6_HOOK_LEASE6_RENEW_SKIP DHCPv6 lease was not renewed because a callout set the skip flag

This debug message is printed when a callout installed on lease6_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. If client requested renewal of multiples 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.

DHCP6_HOOK_PACKET_RCVD_SKIP received DHCPv6 packet was dropped because a callout set the skip flag

This debug message is printed when a callout installed on the pkt6_receive hook point set the skip flag. For this particular hook point, the setting of the flag by a callout instructs the server to drop the packet.

DHCP6_HOOK_PACKET_SEND_SKIP prepared DHCPv6 response was not sent because a callout set the skip flag

This debug message is printed when a callout installed on the pkt6_send hook point set the skip flag. For this particular hook point, the setting of the flag 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).

DHCP6_HOOK_SUBNET6_SELECT_SKIP no subnet was selected because a callout set the skip flag

This debug message is printed when a callout installed on the subnet6_select hook point set the skip flag. 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 or prefixes will be assigned.

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.

DHCP6_LEASE_ADVERT address lease %1 advertised (client duid=%2, iaid=%3)

This debug message indicates that the server successfully advertised an address lease. It is up to the client to choose one server out of the advertised servers and continue allocation with that server. This is a normal behavior and indicates successful operation.

DHCP6_LEASE_ADVERT_FAIL failed to advertise an address lease for client duid=%1, iaid=%2

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.

DHCP6_LEASE_ALLOC address lease %1 has been allocated (client duid=%2, iaid=%3)

This debug message indicates that in response to a client's REQUEST message, the server successfully granted an non-temporary address lease. This is a normal behavior and indicates successful operation.

DHCP6_LEASE_ALLOC_FAIL failed to grant an address lease for client duid=%1, iaid=%2

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.

DHCP6_LEASE_NA_WITHOUT_DUID address lease for address %1 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.

DHCP6_LEASE_PD_WITHOUT_DUID prefix lease for address %1 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.

DHCP6_NAME_GEN_UPDATE_FAIL failed to update the lease using address %1, after generating FQDN for a client, reason %2

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.

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.

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.

DHCP6_NO_SOCKETS_OPEN no interface configured to listen to DHCP traffic

This warning message is issued when current server configuration specifies no interfaces that server should listen on, or specified interfaces are not configured to receive the traffic.

DHCP6_OPEN_SOCKET opening sockets on port %1

A debug message issued during startup, this indicates that the IPv6 DHCP server is about to open sockets on the specified port.

DHCP6_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.

DHCP6_PACKET_MISMATCH_SERVERID_DROP dropping packet %1 (transid=%2, interface=%3) having mismatched server identifier

A debug message noting that server has received message with server identifier option that not matching server identifier that server is using.

DHCP6_PACKET_PARSE_FAIL failed to parse incoming packet

The IPv6 DHCP server has received a packet that it is unable to interpret.

DHCP6_PACKET_PROCESS_FAIL processing of %1 message received from %2 failed: %3

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.

DHCP6_PACKET_RECEIVED %1 packet received

A debug message noting that the server has received the specified type of packet. Note that a packet marked as UNKNOWN may well be a valid DHCP packet, just a type not expected by the server (e.g. it will report a received OFFER packet as UNKNOWN).

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.

DHCP6_PACKET_SEND_FAIL failed to send DHCPv6 packet: %1

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.

DHCP6_PACK_FAIL failed to assemble response correctly

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.

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.

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.

DHCP6_PARSER_CREATED created parser for configuration element %1

A debug message output during a configuration update of the IPv6 DHCP server, notifying that the parser for the specified configuration element has been successfully created.

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.

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.

DHCP6_PD_LEASE_ADVERT prefix lease %1/%2 advertised (client duid=%3, iaid=%4)

This debug message indicates that the server successfully advertised a prefix lease. It is up to the client to choose one server out of the advertised servers and continue allocation with that server. This is a normal behavior and indicates successful operation.

DHCP6_PD_LEASE_ADVERT_FAIL failed to advertise a prefix lease for client duid=%1, iaid=%2

This message indicates that in response to a received SOLICIT, the server failed to advertise a prefix lease for the client. There may be many reasons for such failure. Each failure is logged in a separate log entry.

DHCP6_PD_LEASE_ALLOC prefix lease %1/%2 has been allocated (client duid=%3, iaid=%4)

This debug message indicates that in response to a client's REQUEST message, the server successfully granted a prefix delegation lease. This is a normal behavior and indicates successful operation.

DHCP6_PD_LEASE_ALLOC_FAIL failed to grant a prefix lease for client duid=%1, iaid=%2

This message indicates that the server failed to grant (in response to received REQUEST) a prefix lease for a given client. There may be many reasons for such failure. Each failure is logged in a separate log entry.

DHCP6_PROCESS_IA_NA_REQUEST server is processing IA_NA option (duid=%1, iaid=%2, hint=%3)

This is a debug message that indicates the processing of a received IA_NA option. It may optionally contain an address that may be used by the server as a hint for possible requested address.

DHCP6_PROCESS_IA_PD_REQUEST server is processing IA_PD option (duid=%1, iaid=%2, hint=%3)

This is a debug message that indicates a processing of received IA_PD option. It may optionally contain a prefix that may be used by the server as a hint for possible requested prefix.

DHCP6_QUERY_DATA received packet length %1, data length %2, data is %3

A debug message listing the data received from the client or relay.

DHCP6_RELEASE_MISSING_CLIENTID client (address=%1) sent RELEASE message without mandatory client-id

This warning message indicates that client sent RELEASE message without mandatory client-id option. This is most likely caused by a buggy client (or a relay that malformed forwarded message). This request will not be processed and a response with error status code will be sent back.

DHCP6_RELEASE_NA address %1 belonging to client duid=%2, iaid=%3 was released properly

This debug message indicates that an address was released properly. It is a normal operation during client shutdown.

DHCP6_RELEASE_NA_FAIL failed to remove address lease for address %1 for duid=%2, 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.

DHCP6_RELEASE_NA_FAIL_WRONG_DUID client (duid=%1) tried to release address %2, but it belongs to another client (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.

DHCP6_RELEASE_NA_FAIL_WRONG_IAID client (duid=%1) tried to release address %2, but it used wrong IAID (expected %3)

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.

DHCP6_RELEASE_PD prefix %1 belonging to client duid=%2, iaid=%3 was released properly

This debug message indicates that a prefix was released properly. It is a normal operation during client shutdown.

DHCP6_RELEASE_PD_FAIL failed to remove prefix lease for address %1 for duid=%2, iaid=%3

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.

DHCP6_RELEASE_PD_FAIL_WRONG_DUID client (duid=%1) tried to release prefix %2, but it belongs to another client (duid=%3)

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.

DHCP6_RELEASE_PD_FAIL_WRONG_IAID client (duid=%1) tried to release prefix %2, but it used wrong IAID (expected %3)

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.

DHCP6_REQUIRED_OPTIONS_CHECK_FAIL %1 message received from %2 failed the following check: %3

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.

DHCP6_RESPONSE_DATA responding with packet type %1 data is %2

A debug message listing the data returned to the client.

DHCP6_SERVERID_GENERATED server-id %1 has been generated and will be stored in %2

This informational messages indicates that the server was not able to read its server identifier (DUID) and has generated a new one. This server-id will be stored in a file and will be read and used during next restart. It is normal behavior when the server is started for the first time. If this message is printed every start, please check that the server have sufficient permission to write its server-id file and that the file is not corrupt.

Changing the server identifier in a production environment is not recommended as existing clients will not recognize the server and may go through a rebind phase. However, they should be able to recover without losing their leases.

DHCP6_SERVERID_LOADED server-id %1 has been loaded from file %2

This debug message indicates that the server loaded its server identifier. That value is sent in all server responses and clients use it to discriminate between servers. This is a part of normal startup or reconfiguration procedure.

DHCP6_SERVERID_WRITE_FAIL server was not able to write its ID to file %1

This warning message indicates that server was not able to write its server identifier (DUID) to a file. This likely indicates lack of write permission to a given file or directory. This is not critical and the server will continue to operate, but server will generate different DUID during every start and clients will need to go through a rebind phase to recover.

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.

DHCP6_SHUTDOWN server shutdown

The IPv6 DHCP server has terminated normally.

DHCP6_SHUTDOWN_REQUEST shutdown of server requested

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.

DHCP6_SOCKET_UNICAST server is about to open socket on address %1 on interface %2

This is a debug message that inform that a unicast socket will be opened.

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.

DHCP6_STANDALONE skipping message queue, running standalone

This is a debug message indicating that the IPv6 server is running in standalone mode, not connected to the message queue. Standalone mode is only useful during program development, and should not be used in a production environment.

DHCP6_STARTING Kea DHCPv6 server version %1 starting

This informational message indicates that the IPv6 DHCP server has processed any command-line switches and is starting. The version is also printed.

DHCP6_START_INFO pid: %1, port: %2, verbose: %3

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.

DHCP6_SUBNET_SELECTED the %1 subnet was selected for client assignment

This is a debug message informing that a given subnet was selected. It will be used for address and option assignment. This is one of the early steps in the processing of incoming client message.

DHCP6_SUBNET_SELECTION_FAILED failed to select a subnet for incoming packet, src=%1 type=%2

This warning message is output when a packet was received from a subnet for which the DHCPv6 server has not been configured. The cause is most likely due to a misconfiguration of the server. The packet processing will continue, but the response will only contain generic configuration parameters and no addresses or prefixes.

DHCP6_UNKNOWN_MSG_RECEIVED received unknown message (type %d) on interface %2

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/parameters>.

DHCP6_UNKNOWN_RELEASE_NA received RELEASE from unknown client (IA_NA, duid=%1, iaid=%2)

This warning message is printed when client attempts to release an address lease, but no such lease is known by the server. See the explanation of the status code DHCP6_UNKNOWN_RENEW_NA for possible reasons for such behavior.

DHCP6_UNKNOWN_RELEASE_PD received RELEASE from unknown client (IA_PD, duid=%1, iaid=%2)

This warning message is printed when client attempts to release an prefix lease, but no such lease is known by the server. See the explanation of the status code DHCP6_UNKNOWN_RENEW_PD for possible reasons for such behavior.

DHCPSRV_ADDRESS4_ALLOC_ERROR error during attempt to allocate an IPv4 address: %1

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.

DHCPSRV_ADDRESS4_ALLOC_FAIL failed to allocate an IPv4 address after %1 attempt(s)

THE DHCP allocation engine gave up trying to allocate an IPv4 address after the specified number of attempts. This probably means that the address pool from which the allocation is being attempted is either empty, or very nearly empty. As a result, the client will have been refused a lease.

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. In this way, addresses allocated to clients that are no longer active on the network will become available available sooner.

DHCPSRV_ADDRESS6_ALLOC_ERROR error during attempt to allocate an IPv6 address: %1

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.

DHCPSRV_ADDRESS6_ALLOC_FAIL failed to allocate an IPv6 address after %1 attempt(s)

The DHCP allocation engine gave up trying to allocate an IPv6 address after the specified number of attempts. This probably means that the address pool from which the allocation is being attempted is either empty, or very nearly empty. As a result, the client will have been refused a lease.

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. In this way, addresses allocated to clients that are no longer active on the network will become available available sooner.

DHCPSRV_CFGMGR_ADD_IFACE listening on interface %1

An info message issued when new interface is being added to the collection of interfaces on which server listens to DHCP messages.

DHCPSRV_CFGMGR_ADD_SUBNET4 adding subnet %1

A debug message reported when the DHCP configuration manager is adding the specified IPv4 subnet to its database.

DHCPSRV_CFGMGR_ADD_SUBNET6 adding subnet %1

A debug message reported when the DHCP configuration manager is adding the specified IPv6 subnet to its database.

DHCPSRV_CFGMGR_ADD_UNICAST listening on unicast address %1, on interface %2

A debug message issued when new configuring DHCP server to listen on unicast address on the specific interface.

DHCPSRV_CFGMGR_ALL_IFACES_ACTIVE enabling listening on all interfaces

A debug message issued when server is being configured to listen on all interfaces.

DHCPSRV_CFGMGR_CFG_DHCP_DDNS Setting DHCP-DDNS configuration to: %1

A debug message issued when the server's DHCP-DDNS settings are changed.

DHCPSRV_CFGMGR_CLEAR_ACTIVE_IFACES stop listening on all interfaces

A debug message issued when configuration manager clears the internal list of active interfaces. This doesn't prevent the server from listening to the DHCP traffic through open sockets, but will rather be used by Interface Manager to select active interfaces when sockets are re-opened.

DHCPSRV_CFGMGR_DELETE_SUBNET4 deleting all IPv4 subnets

A debug message noting that the DHCP configuration manager has deleted all IPv4 subnets in its database.

DHCPSRV_CFGMGR_DELETE_SUBNET6 deleting all IPv6 subnets

A debug message noting that the DHCP configuration manager has deleted all IPv6 subnets in its database.

DHCPSRV_CFGMGR_NO_SUBNET4 no suitable subnet is defined for address hint %1

This debug message is output when the DHCP configuration manager has received a request for an IPv4 subnet for the specified address, but no such subnet exists.

DHCPSRV_CFGMGR_NO_SUBNET6 no suitable subnet is defined for address hint %1

This debug message is output when the DHCP configuration manager has received a request for an IPv6 subnet for the specified address, but no such subnet exists.

DHCPSRV_CFGMGR_ONLY_SUBNET4 retrieved subnet %1 for address hint %2

This is a debug message reporting that the DHCP configuration manager has returned the specified IPv4 subnet when given the address hint specified because it is the only subnet defined.

DHCPSRV_CFGMGR_ONLY_SUBNET6 retrieved subnet %1 for address hint %2

This is a debug message reporting that the DHCP configuration manager has returned the specified IPv6 subnet when given the address hint specified because it is the only subnet defined.

DHCPSRV_CFGMGR_SUBNET4 retrieved subnet %1 for address hint %2

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.

DHCPSRV_CFGMGR_SUBNET4_RELAY selected subnet %1, because of matching relay addr %2

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.

DHCPSRV_CFGMGR_SUBNET6 retrieved subnet %1 for address hint %2

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.

DHCPSRV_CFGMGR_SUBNET6_IFACE selected subnet %1 for packet received over interface %2

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).

DHCPSRV_CFGMGR_SUBNET6_IFACE_ID selected subnet %1 (interface-id match) for incoming packet

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 server's interface-id option for that selected subnet6. (see 'interface-id' parameter in the subnet6 definition).

DHCPSRV_CFGMGR_SUBNET6_RELAY selected subnet %1, because of matching relay addr %2

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.

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.

DHCPSRV_CLOSE_DB closing currently open %1 database

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.

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.

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.

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.

DHCPSRV_DHCP_DDNS_NCR_SENT NameChangeRequest sent to kea-dhcp-ddns: %1

A debug message issued when a NameChangeRequest has been successfully sent to kea-dhcp-ddns.

DHCPSRV_DHCP_DDNS_SENDER_STARTED NameChangeRequest sender has been started: %1

A informational message issued when a communications with kea-dhcp-ddns has been successfully started.

DHCPSRV_DHCP_DDNS_SENDER_STOPPED NameChangeRequest sender has been stopped.

A informational message issued when a communications 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 breakdown.

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.

DHCPSRV_HOOK_LEASE4_RENEW_SKIP DHCPv4 lease was not renewed because a callout set the skip flag.

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.

DHCPSRV_HOOK_LEASE4_SELECT_SKIP Lease4 creation was skipped, because of callout skip flag.

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.

DHCPSRV_HOOK_LEASE6_SELECT_SKIP Lease6 (non-temporary) creation was skipped, because of callout skip flag.

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 NoAddrAvail for that IA_NA option.

DHCPSRV_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.

DHCPSRV_MEMFILE_ADD_ADDR4 adding IPv4 lease with address %1

A debug message issued when the server is about to add an IPv4 lease with the specified address to the memory file backend database.

DHCPSRV_MEMFILE_ADD_ADDR6 adding IPv6 lease with address %1

A debug message issued when the server is about to add an IPv6 lease with the specified address to the memory file backend database.

DHCPSRV_MEMFILE_COMMIT committing to memory file database

The code has issued a commit call. For the memory file database, this is a no-op.

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.

DHCPSRV_MEMFILE_DELETE_ADDR deleting lease for address %1

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.

DHCPSRV_MEMFILE_GET_ADDR4 obtaining IPv4 lease for address %1

A debug message issued when the server is attempting to obtain an IPv4 lease from the memory file database for the specified address.

DHCPSRV_MEMFILE_GET_ADDR6 obtaining IPv6 lease for address %1 and lease type %2

A debug message issued when the server is attempting to obtain an IPv6 lease from the memory file database for the specified address.

DHCPSRV_MEMFILE_GET_CLIENTID obtaining IPv4 leases for client ID %1

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.

DHCPSRV_MEMFILE_GET_CLIENTID_HWADDR_SUBID obtaining IPv4 lease for client ID %1, hardware address %2 and subnet ID %3

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 client ID, hardware address and subnet ID.

DHCPSRV_MEMFILE_GET_HWADDR obtaining IPv4 leases for hardware address %1

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.

DHCPSRV_MEMFILE_GET_IAID_DUID obtaining IPv6 leases for IAID %1 and DUID %2 and lease type %3

A debug message issued when the server is attempting to obtain a set of IPv6 lease from the memory file database for a client with the specified IAID (Identity Association ID) and DUID (DHCP Unique Identifier).

DHCPSRV_MEMFILE_GET_IAID_SUBID_DUID obtaining IPv6 leases for IAID %1, Subnet ID %2, DUID %3 and lease type %4

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).

DHCPSRV_MEMFILE_GET_SUBID_CLIENTID obtaining IPv4 lease for subnet ID %1 and client ID %2

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.

DHCPSRV_MEMFILE_GET_SUBID_HWADDR obtaining IPv4 lease for subnet ID %1 and hardware address %2

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.

DHCPSRV_MEMFILE_GET_VERSION obtaining schema version information

A debug message issued when the server is about to obtain schema version information from the memory file database.

DHCPSRV_MEMFILE_LEASES_RELOAD4 reloading leases from %1

An info message issued when server is about to start reading DHCPv4 leases from the lease file. All leases currently held in the memory will be replaced by those read from the file.

DHCPSRV_MEMFILE_LEASES_RELOAD6 reloading leases from %1

An info message issued when server is about to start reading DHCPv6 leases from the lease file. All leases currently held in the memory will be replaced by those read from the file.

DHCPSRV_MEMFILE_LEASE_LOAD4 loading lease %1

A debug message issued when DHCPv4 lease is being loaded from the file to memory.

DHCPSRV_MEMFILE_LEASE_LOAD6 loading lease %1

A debug message issued when DHCPv6 lease is being loaded from the file to memory.

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.

DHCPSRV_MEMFILE_ROLLBACK rolling back memory file database

The code has issued a rollback call. For the memory file database, this is a no-op.

DHCPSRV_MEMFILE_UPDATE_ADDR4 updating IPv4 lease for address %1

A debug message issued when the server is attempting to update IPv4 lease from the memory file database for the specified address.

DHCPSRV_MEMFILE_UPDATE_ADDR6 updating IPv6 lease for address %1

A debug message issued when the server is attempting to update IPv6 lease from the memory file database for the specified address.

DHCPSRV_MYSQL_ADD_ADDR4 adding IPv4 lease with address %1

A debug message issued when the server is about to add an IPv4 lease with the specified address to the MySQL backend database.

DHCPSRV_MYSQL_ADD_ADDR6 adding IPv6 lease with address %1, lease type %2

A debug message issued when the server is about to add an IPv6 lease with the specified address to the MySQL backend database.

DHCPSRV_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.

DHCPSRV_MYSQL_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.

DHCPSRV_MYSQL_DELETE_ADDR deleting lease for address %1

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.

DHCPSRV_MYSQL_GET_ADDR4 obtaining IPv4 lease for address %1

A debug message issued when the server is attempting to obtain an IPv4 lease from the MySQL database for the specified address.

DHCPSRV_MYSQL_GET_ADDR6 obtaining IPv6 lease for address %1, lease type %2

A debug message issued when the server is attempting to obtain an IPv6 lease from the MySQL database for the specified address.

DHCPSRV_MYSQL_GET_CLIENTID obtaining IPv4 leases for client ID %1

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.

DHCPSRV_MYSQL_GET_HWADDR obtaining IPv4 leases for hardware address %1

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.

DHCPSRV_MYSQL_GET_IAID_DUID obtaining IPv6 leases for IAID %1, DUID %2, lease type %3

A debug message issued when the server is attempting to obtain a set of IPv6 lease from the MySQL database for a client with the specified IAID (Identity Association ID) and DUID (DHCP Unique Identifier).

DHCPSRV_MYSQL_GET_IAID_SUBID_DUID obtaining IPv6 leases for IAID %1, Subnet ID %2, DUID %3, lease type %4

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).

DHCPSRV_MYSQL_GET_SUBID_CLIENTID obtaining IPv4 lease for subnet ID %1 and client ID %2

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.

DHCPSRV_MYSQL_GET_SUBID_HWADDR obtaining IPv4 lease for subnet ID %1 and hardware address %2

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.

DHCPSRV_MYSQL_GET_VERSION obtaining schema version information

A debug message issued when the server is about to obtain schema version information from the MySQL database.

DHCPSRV_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.

DHCPSRV_MYSQL_UPDATE_ADDR4 updating IPv4 lease for address %1

A debug message issued when the server is attempting to update IPv4 lease from the MySQL database for the specified address.

DHCPSRV_MYSQL_UPDATE_ADDR6 updating IPv6 lease for address %1, lease type %2

A debug message issued when the server is attempting to update IPv6 lease from the MySQL database for the specified address.

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.

DHCPSRV_NO_SOCKETS_OPEN no interface configured to listen to DHCP traffic

This warning message is issued when current server configuration specifies no interfaces that server should listen on, or specified interfaces are not configured to receive the traffic.

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.

DHCPSRV_PGSQL_ADD_ADDR4 adding IPv4 lease with address %1

A debug message issued when the server is about to add an IPv4 lease with the specified address to the PostgreSQL backend database.

DHCPSRV_PGSQL_ADD_ADDR6 adding IPv6 lease with address %1

A debug message issued when the server is about to add an IPv6 lease with the specified address to the PostgreSQL backend database.

DHCPSRV_PGSQL_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 PostgreSQL settings, the committal may not include a write to disk.

DHCPSRV_PGSQL_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.

DHCPSRV_PGSQL_DEALLOC_ERROR An error occurred deallocating SQL statements while closing the PostgreSQL lease

This is an error message issued when a DHCP server (either V4 or V6) experienced an 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.

DHCPSRV_PGSQL_DELETE_ADDR deleting lease for address %1

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.

DHCPSRV_PGSQL_GET_ADDR4 obtaining IPv4 lease for address %1

A debug message issued when the server is attempting to obtain an IPv4 lease from the PostgreSQL database for the specified address.

DHCPSRV_PGSQL_GET_ADDR6 obtaining IPv6 lease for address %1 (lease type %2)

A debug message issued when the server is attempting to obtain an IPv6 lease from the PostgreSQL database for the specified address.

DHCPSRV_PGSQL_GET_CLIENTID obtaining IPv4 leases for client ID %1

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.

DHCPSRV_PGSQL_GET_HWADDR obtaining IPv4 leases for hardware address %1

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.

DHCPSRV_PGSQL_GET_IAID_DUID obtaining IPv4 leases for IAID %1 and DUID %2, lease type %3

A debug message issued when the server is attempting to obtain a set of IPv6 lease from the PostgreSQL database for a client with the specified IAID (Identity Association ID) and DUID (DHCP Unique Identifier).

DHCPSRV_PGSQL_GET_IAID_SUBID_DUID obtaining IPv4 leases for IAID %1, Subnet ID %2, DUID %3, and lease type %4

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).

DHCPSRV_PGSQL_GET_SUBID_CLIENTID obtaining IPv4 lease for subnet ID %1 and client ID %2

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.

DHCPSRV_PGSQL_GET_SUBID_HWADDR obtaining IPv4 lease for subnet ID %1 and hardware address %2

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.

DHCPSRV_PGSQL_GET_VERSION obtaining schema version information

A debug message issued when the server is about to obtain schema version information from the PostgreSQL database.

DHCPSRV_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.

DHCPSRV_PGSQL_UPDATE_ADDR4 updating IPv4 lease for address %1

A debug message issued when the server is attempting to update IPv4 lease from the PostgreSQL database for the specified address.

DHCPSRV_PGSQL_UPDATE_ADDR6 updating IPv6 lease for address %1

A debug message issued when the server is attempting to update IPv6 lease from the PostgreSQL database for the specified address.

DHCPSRV_UNEXPECTED_NAME database access parameters passed through '%1', expected 'lease-database'

The parameters for access the lease database were passed to the server through the named configuration parameter, but the code was expecting them to be passed via the parameter named "lease-database". If the database opens successfully, there is no impact on server operation. However, as this does indicate an error in the source code, please submit a bug report.

DHCPSRV_UNKNOWN_DB unknown database type: %1

The database access string specified a database type (given in the message) that is unknown to the software. This is a configuration error.

DHCP_DDNS_ADD_FAILED DHCP_DDNS Transaction outcome: %1

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.

DHCP_DDNS_ADD_SUCCEEDED DHCP_DDNS successfully added the DNS mapping addition for this request: %1

This is an informational message issued after DHCP_DDNS has submitted DNS mapping additions which were received and accepted by an appropriate DNS server.

DHCP_DDNS_AT_MAX_TRANSACTIONS application has %1 queued requests but has reached maximum number of %2

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.

DHCP_DDNS_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.

DHCP_DDNS_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.

DHCP_DDNS_CLEARED_FOR_SHUTDOWN application has met shutdown criteria for shutdown type: %1

This is a debug message issued when the application has been instructed to shutdown and has met the required criteria to exit.

DHCP_DDNS_COMMAND command directive received, command: %1 - args: %2

This is a debug message issued when the DHCP-DDNS application command method has been invoked.

DHCP_DDNS_CONFIGURE configuration update received: %1

This is a debug message issued when the DHCP-DDNS application configure method has been invoked.

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.

DHCP_DDNS_FORWARD_ADD_BAD_DNSCLIENT_STATUS DHCP_DDNS received an unknown DNSClient status: %1, w

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.

DHCP_DDNS_FORWARD_ADD_BUILD_FAILURE DNS update message to add a forward DNS entry could not be construct

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.

DHCP_DDNS_FORWARD_ADD_IO_ERROR DHCP_DDNS encountered an IO error sending a forward mapping add for FQ

This is an error message issued when a communication error occurs while DHCP_DDNS is carrying out a forward address update. The application will retry against the same server or others as appropriate.

DHCP_DDNS_FORWARD_ADD_REJECTED DNS Server, %1, rejected a DNS update request to add the address mapping fo

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.

DHCP_DDNS_FORWARD_ADD_RESP_CORRUPT DHCP_DDNS received a corrupt response from the DNS server, %1, whi

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.

DHCP_DDNS_FORWARD_REMOVE_ADDRS_BAD_DNSCLIENT_STATUS DHCP_DDNS received an unknown DNSClient

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.

DHCP_DDNS_FORWARD_REMOVE_ADDRS_BUILD_FAILURE DNS update message to remove a forward DNS Address e

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.

DHCP_DDNS_FORWARD_REMOVE_ADDRS_IO_ERROR DHCP_DDNS encountered an IO error sending a forward mapp

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.

DHCP_DDNS_FORWARD_REMOVE_ADDRS_REJECTED DNS Server, %1, rejected a DNS update request to remove the fo

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.

DHCP_DDNS_FORWARD_REMOVE_ADDRS_RESP_CORRUPT DHCP_DDNS received a corrupt response from the DNS s

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.

DHCP_DDNS_FORWARD_REMOVE_RRS_BAD_DNSCLIENT_STATUS DHCP_DDNS received an unknown DNSClient sta

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.

DHCP_DDNS_FORWARD_REMOVE_RRS_BUILD_FAILURE DNS update message to remove forward DNS RR entries could not be constructed

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.

DHCP_DDNS_FORWARD_REMOVE_RRS_IO_ERROR DHCP_DDNS encountered an IO error sending a forward RR remove message

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.

DHCP_DDNS_FORWARD_REMOVE_RRS_REJECTED DNS Server, %1, rejected a DNS update request to remove forward RR entries

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.

DHCP_DDNS_FORWARD_REMOVE_RRS_RESP_CORRUPT DHCP_DDNS received a corrupt response from the DNS server

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.

DHCP_DDNS_FORWARD_REPLACE_BAD_DNSCLIENT_STATUS DHCP_DDNS received an unknown DNSClient status: %1

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.

DHCP_DDNS_FORWARD_REPLACE_BUILD_FAILURE DNS update message to replace a forward DNS entry could not be constructed

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.

DHCP_DDNS_FORWARD_REPLACE_IO_ERROR DHCP_DDNS encountered an IO error sending a forward mapping replacement message

This is an error message issued when a communication error occurs while DHCP_DDNS is carrying out a forward address update. The application will retry against the same server or others as appropriate.

DHCP_DDNS_FORWARD_REPLACE_REJECTED DNS Server, %1, rejected a DNS update request to replace the address mapping

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.

DHCP_DDNS_FORWARD_REPLACE_RESP_CORRUPT DHCP_DDNS received a corrupt response from the DNS server, %1

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.

DHCP_DDNS_FWD_REQUEST_IGNORED Forward updates are disabled, the forward portion of request will be ignored: %1

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 be performed.

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.

DHCP_DDNS_INVALID_RESPONSE received response to DNS Update message is malformed: %1

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.

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.

DHCP_DDNS_NCR_LISTEN_CLOSE_ERROR application encountered an error while closing the listener used to receive Name

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.

DHCP_DDNS_NCR_RECV_NEXT_ERROR application could not initiate the next read following a request receive.

This is a 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.

DHCP_DDNS_NCR_SEND_CLOSE_ERROR DHCP-DDNS client encountered an error while closing the sender connection u

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.

DHCP_DDNS_NCR_SEND_NEXT_ERROR DHCP-DDNS client could not initiate the next request send following send compl

This is a 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.

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.

DHCP_DDNS_NCR_UDP_RECV_CANCELED UDP socket receive was canceled while listening for DNS Update requests

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.

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.

DHCP_DDNS_NCR_UDP_SEND_CANCELED UDP socket send was canceled while sending a DNS Update request to DHCP_

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.

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.

DHCP_DDNS_NOT_ON_LOOPBACK the DHCP-DDNS server has been configured to listen on %1 which is not the local loop

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.

DHCP_DDNS_NO_ELIGIBLE_JOBS although there are queued requests, there are pending transactions for each Queue coun

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.

DHCP_DDNS_NO_FWD_MATCH_ERROR the configured list of forward DDNS domains does not contain a match for: %1 T

This is an error message that indicates that DHCP_DDNS received a request to update a 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.

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.

DHCP_DDNS_NO_REV_MATCH_ERROR the configured list of reverse DDNS domains does not contain a match for: %1 Th

This is an error message that indicates that DHCP_DDNS received a request to update a 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.

DHCP_DDNS_PROCESS_INIT application init invoked

This is a debug message issued when the DHCP-DDNS application enters its initialization method.

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.

DHCP_DDNS_QUEUE_MGR_RECONFIGURING application is reconfiguring the queue manager

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.

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.

DHCP_DDNS_QUEUE_MGR_RECV_ERROR application's queue manager was notified of a request receive error by its listen

This is an error message indicating that the NameChangeRequest listener used by DHCP-DDNS to receive requests encountered a 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.

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.

DHCP_DDNS_QUEUE_MGR_RESUMING application is resuming listening for requests now that the request queue size has

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.

DHCP_DDNS_QUEUE_MGR_STARTED application's queue manager has begun listening for requests.

This is a debug message indicating that DHCP_DDNS's Queue Manager has successfully started and is now listening for NameChangeRequests.

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.

DHCP_DDNS_QUEUE_MGR_STOPPED application's queue manager has stopped listening for requests.

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.

DHCP_DDNS_QUEUE_MGR_STOPPING application is stopping the queue manager for %1

This is an informational message indicating that DHCP_DDNS is stopping the queue manager either to reconfigure it or as part of application shutdown.

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.

DHCP_DDNS_QUEUE_MGR_UNEXPECTED_HANDLER_ERROR application's queue manager request receive handler error

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.

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.

DHCP_DDNS_REMOVE_FAILED DHCP_DDNS Transaction outcome: %1

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.

DHCP_DDNS_REMOVE_SUCCEEDED DHCP_DDNS successfully removed the DNS mapping addition for this request: %1

This is an informational message issued after DHCP_DDNS has submitted DNS mapping removals which were received and accepted by an appropriate DNS server.

DHCP_DDNS_REQUEST_DROPPED Request contains no enabled update requests and will be dropped: %1

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.

DHCP_DDNS_REVERSE_REMOVE_BAD_DNSCLIENT_STATUS DHCP_DDNS received an unknown DNSClient status: %1

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.

DHCP_DDNS_REVERSE_REMOVE_BUILD_FAILURE DNS update message to remove a reverse DNS entry could not be constructed

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.

DHCP_DDNS_REVERSE_REMOVE_IO_ERROR DHCP_DDNS encountered an IO error sending a reverse mapping removal

This is an error message issued when a communication error occurs while DHCP_DDNS is carrying out a reverse address update. The application will retry against the same server or others as appropriate.

DHCP_DDNS_REVERSE_REMOVE_REJECTED DNS Server, %1, rejected a DNS update request to remove the reverse mapping

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.

DHCP_DDNS_REVERSE_REMOVE_RESP_CORRUPT DHCP_DDNS received a corrupt response from the DNS server, %1

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.

DHCP_DDNS_REVERSE_REPLACE_BAD_DNSCLIENT_STATUS DHCP_DDNS received an unknown DNSClient status: %1

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.

DHCP_DDNS_REVERSE_REPLACE_BUILD_FAILURE DNS update message to replace a reverse DNS entry could not be co

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.

DHCP_DDNS_REVERSE_REPLACE_IO_ERROR DHCP_DDNS encountered an IO error sending a reverse mapping replac

This is an error message issued when a communication error occurs while DHCP_DDNS is carrying out a reverse address update. The application will retry against the same server or others as appropriate.

DHCP_DDNS_REVERSE_REPLACE_REJECTED DNS Server, %1, rejected a DNS update request to replace the reverse ma

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.

DHCP_DDNS_REVERSE_REPLACE_RESP_CORRUPT DHCP_DDNS received a corrupt response from the DNS server, %1

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.

DHCP_DDNS_REV_REQUEST_IGNORED Reverse updates are disabled, the reverse portion of request will be ignored: %1

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.

DHCP_DDNS_RUN_ENTER application has entered the event loop

This is a debug message issued when the DHCP-DDNS application enters its run method.

DHCP_DDNS_RUN_EXIT application is exiting the event loop

This is a debug message issued when the DHCP-DDNS server exits its event lo

DHCP_DDNS_SHUTDOWN DHCP-DDNS has shut down

This is an informational message indicating that the DHCP-DDNS service has shut down.

DHCP_DDNS_SHUTDOWN_COMMAND application received shutdown command with args: %1

This is a debug message issued when the application has been instructed to shut down by the controller.

DHCP_DDNS_SHUTDOWN_SIGNAL_RECVD OS signal %1 received, starting shutdown

This is a debug message indicating the application has received a signal instructing it to shutdown.

DHCP_DDNS_SIGNAL_ERROR signal handler for signal %1, threw an unexpected exception: %2

This is an error message indicating that the application encountered an unexpected error after receiving a signal. This is a programmatic error and should be reported. While The application will likely continue to operating, it may be unable to respond correctly to signals.

DHCP_DDNS_STARTING DHCP-DDNS starting, pid: %1, version: %2

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

DHCP_DDNS_STARTING_TRANSACTION Transaction Key: %1

This is a debug message issued when DHCP-DDNS has begun a transaction for a given request.

DHCP_DDNS_STATE_MODEL_UNEXPECTED_ERROR application encountered an unexpected error while carrying out a

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.

DHCP_DDNS_TRANS_SEND_ERROR application encountered an unexpected error while attempting to send a DNS update:

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.

DHCP_DDNS_UNCAUGHT_NCR_RECV_HANDLER_ERROR unexpected exception thrown from the application receive co

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.

DHCP_DDNS_UNCAUGHT_NCR_SEND_HANDLER_ERROR unexpected exception thrown from the DHCP-DDNS client se

This is an error message that indicates that an exception was thrown but not caught in the application's send completion handler. This is a programmatic error that needs to be reported. Dependent upon the nature of the error the client may or may not continue operating normally.

DHCP_DDNS_UNSUPPORTED_SIGNAL ignoring reception of unsupported signal: %1

This is a debug message indicating that the application received an unsupported signal. This is a programming error indicating that the application has registered to receive the signal but no associated processing logic has been added.

DHCP_DDNS_UPDATE_REQUEST_SENT %1 for transaction key: %2 to server: %3

This is a debug message issued when DHCP_DDNS sends a DNS request to a DNS server.

DHCP_DDNS_UPDATE_RESPONSE_RECEIVED for transaction key: %1 to server: %2 status: %3

This is a debug message issued when DHCP_DDNS receives sends a DNS update response from a DNS server.

DHCP_DDNS_WATCH_SINK_CLOSE_ERROR Sink-side watch socket failed to close: %1

This is an error message that indicates the application was unable to close the inbound side of a NCR sender's watch socket. While technically possible this error is highly unlikely to occur and should not impair the application's ability to process requests.

DHCP_DDNS_WATCH_SOURCE_CLOSE_ERROR Source-side watch socket failed to close: %1

This is an error message that indicates the application was unable to close the outbound side of a NCR sender's watch socket. While technically possible this error is highly unlikely to occur and should not impair the application's ability to process requests.

HOOKS_ALL_CALLOUTS_DEREGISTERED hook library at index %1 removed all callouts on hook %2

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.

HOOKS_CALLOUTS_REMOVED callouts removed from hook %1 for library %2

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.

HOOKS_CALLOUT_CALLED hooks library with index %1 has called a callout on hook %2 that has address %3

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

HOOKS_CALLOUT_DEREGISTERED hook library at index %1 deregistered a callout on hook %2

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.

HOOKS_CALLOUT_ERROR error returned by callout on hook %1 registered by library with index %2 (callout address %3)

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.

HOOKS_CALLOUT_EXCEPTION exception thrown by callout on hook %1 registered by library with index %2 (callout address %3)

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.

HOOKS_CALLOUT_REGISTRATION hooks library with index %1 registering callout for hook '%2'

This is a debug message, output when a library (whose index in the list of libraries (being) loaded is given) registers a callout.

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.

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.

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.

HOOKS_LIBRARY_LOADED hooks library %1 successfully loaded

This information message is issued when a user-supplied hooks library has been successfully loaded.

HOOKS_LIBRARY_LOADING loading hooks library %1

This is a debug message output just before the specified library is loaded. If the action is successful, it will be followed by the HOOKS_LIBRARY_LOADED informational message.

HOOKS_LIBRARY_UNLOADED hooks library %1 successfully unloaded

This information message is issued when a user-supplied hooks library has been successfully unloaded.

HOOKS_LIBRARY_UNLOADING unloading library %1

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.

HOOKS_LIBRARY_VERSION hooks library %1 reports its version as %2

A debug message issued when the version check on the hooks library has succeeded.

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.

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.

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.

HOOKS_LOAD_SUCCESS 'load' function in hook library %1 returned success

This is a debug message issued when the "load" function has been found in a hook library and has been successfully called.

HOOKS_NO_LOAD no 'load' function found in hook library %1

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.

HOOKS_NO_UNLOAD no 'unload' function found in hook library %1

This is a debug message issued when the library is being unloaded. It merely states that the library did not contain an "unload" function.

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.

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.

HOOKS_STD_CALLOUT_REGISTERED hooks library %1 registered standard callout for hook %2 at address %3

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.

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.

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.

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.

HOOKS_UNLOAD_SUCCESS 'unload' function in hook library %1 returned success

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.

HOOKS_VERSION_EXCEPTION 'version' function in hook library %1 threw an exception

This error message is issued if the version() function in the specified hooks library was called and generated an exception. The library is considered unusable and will not be loaded.

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.

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.

LOGIMPL_BELOW_MIN_DEBUG debug level of %1 is too low and will be set to the minimum 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 below the minimum allowed value and has been increased to that value. The appearance of this message may indicate a programming error - please submit a bug report.

LOG_BAD_DESTINATION unrecognized log destination: %1

A logger destination value was given that was not recognized. The destination should be one of "console", "file", or "syslog".

LOG_BAD_SEVERITY unrecognized log severity: %1

A logger severity value was given that was not recognized. The severity should be one of "DEBUG", "INFO", "WARN", "ERROR", "FATAL" or "NONE".

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 recognised. Allowed values are "stdout" and "stderr".

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.

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.

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.

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.

LOG_LOCK_TEST_MESSAGE this is a test message.

This is a log message used in testing.

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.

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.

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.

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.

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.

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 may be several reasons why this message may appear:

- The message ID has been mis-spelled 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.

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.

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.

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 not 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.

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.)

LOG_READ_ERROR error reading from message file %1: %2

The specified error was encountered reading from the named message file.

LOG_UNRECOGNISED_DIRECTIVE line %1: unrecognised 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 recognised.

LOG_WRITE_ERROR error writing to %1: %2

The specified error was encountered by the message compiler when writing to the named output file.
