ktls events

ONTAP 9.15.1 EMS reference

NetApp
June 10, 2024

This PDF was generated from https://docs.netapp.com/us-en/ontap-ems/ktls-badauth-events.html on June 10, 2024. Always check docs.netapp.com for the latest.

Table of Contents

ktls events 1
ktls.badauth events 1
ktls.cnxnhandshakelimit events 1
ktls.failed events 2
ktls.health events 2

ktls events

ktls.badauth events

ktls.badAuth

Severity

NOTICE

Description

This message occurs when the system receives a TLS message with bad 'authentication' data. The connection is closed. It might indicate that this system is under attack.

Corrective Action

ONTAP software automatically closes the connection from which this incorrect authentication information was received. If this message is repeatedly generated from the same internet address, it might indicate that this system is under attack.

Syslog Message

ONTAP received a TLS message with incorrect authentication at local address %s local port %d from remote address %s remote port %d via IPspace %d.

Parameters

localAddr (STRING): Full internet address of the local end of this session.
localPort (INT): Local port number that was being reached.
remoteAddr (STRING): Full internet address of the remote end of this session.
remotePort (INT): Remote port number that sent the erroneous data.
IPspace (INT): IPspace in which the remote address was reached.

ktls.cnxnhandshakelimit events

ktls.cnxnHandshakeLimit

Severity

NOTICE

Description

This message occurs when the concurrent TLS connection handshake limit is reached. Any new TLS connection request will fail and an error status will be returned.

Corrective Action

Reduce the encrypted connection load on ONTAP to avoid reaching the maximum concurrent TLS handshake limit.

Syslog Message

ONTAP reached the maximum limit of %d concurrent TLS connection handshakes. If this limit is reached, subsequent TLS connections will fail.

Parameters

maxTLSConnHandles (INT): Maximum number of concurrent TLS connection handshakes.

ktls.failed events

ktls.failed

Severity

NOTICE

Description

This message occurs when several successive Transport Layer Security (TLS) connections with a remote system have failed.

Corrective Action

Corrective actions will necessarily depend on what condition is being reported.

Syslog Message

"The TLS connections have failed several times with remote host '%s' in IPspace '%s', for which the latest reason given is: %s."

Parameters

peer (STRING): Network address of the remote peer.
ipsname (STRING): IPspace within which the network address is defined.
reason (STRING): Reason for failure.

ktls.health events

ktls.health.actionQGrowing

Severity

NOTICE

Description

This message occurs when the depth of the action queue in the ktlsd subsystem is increasing in the majority of time intervals. It is a potential indication of back-pressure accumulating within ktlsd or the kernel.

Corrective Action

(None).

Syslog Message

"The depth of the action queue in the ktlsd subsystem has trended upward over the last "%d" intervals of" %d" seconds."

Parameters

intervalQuantity (INT): Number of intervals over which the problem was observed.
intervalLength (INT): Length of the observation intervals for this problem, in seconds.

ktls.health.actionQHigh

Severity

NOTICE

Description

This message occurs when the depth of the action queue in the ktlsd subsystem accounts for a significant percentage of our total available handshake slots. It is a potential indication of back-pressure accumulating within ktlsd or the kernel.

Corrective Action

(None).

Syslog Message

"The depth of the action queue in the ktlsd subsystem has been at an elevated level over the last %d intervals of %d seconds."

Parameters

intervalQuantity (INT): Number of intervals over which the problem was observed.
intervalLength (INT): Length of the observation intervals for this problem, in seconds.

ktls.health.backoffGrowing

Severity

NOTICE

Description

This message occurs when the number of backoffs in the ktlsd subsystem is increasing in the majority of time intervals. It is most likely an indication that handshake timeouts are occurring frequently.

Corrective Action

(None).

Syslog Message

"The number of self-imposed backoffs in the ktlsd subsystem has trended upward over the last "%d" intervals of "%d" seconds."

Parameters

intervalQuantity (INT): Number of intervals over which the problem was observed.
intervalLength (INT): Length of the observation intervals for this problem, in seconds.

ktls.health.highStress

Severity

ALERT

Description

This message occurs when a combination of indicators suggest high stress within the Kernel Transport Layer Security (KTLS) subsystem. This subsystem does not perform adequately as a consequence.

Corrective Action

There might be a variety of potential corrective actions. The first course of action should be to check for other ktls.health.* events around the same time. These might have their own guidance. In general it is likely that the resolution involves reducing the inbound load on KTLS, which requires different steps depending on the feature.

Syslog Message

"The KTLS subsystem is exhibiting signs of high stress."

Parameters

(None).

ktls.health.inactiveGrowing

Severity

NOTICE

Description

This message occurs when the total length of time handshakes spend in an active state has been increasing in the majority of time intervals.

Corrective Action

(None).

Syslog Message

"The inactive period for TLS handshakes has trended upward over the last "%d" intervals of "%d" seconds."

Parameters

intervalQuantity (INT): Number of intervals over which the problem was observed.
intervalLength (INT): Length of the observation intervals for this problem, in seconds.

ktls.health.latencyGrowing

Severity

NOTICE

Description

This message occurs when the latency of handshakes has been increasing in the majority of time intervals.

Corrective Action

(None).

Syslog Message

"The latency of TLS handshakes has trended upward over the last "%d" intervals of "%d" seconds."

Parameters

intervalQuantity (INT): Number of intervals over which the problem was observed.
intervalLength (INT): Length of the observation intervals for this problem, in seconds.

ktls.health.lowCompletion

Severity

ERROR

Description

This message occurs when a significant percentage of handshakes initiated in the ktlsd subsystem over an interval of time do not succeed.

Corrective Action

There might be a variety of potential corrective actions. Any ktls.failed events generated around the same time contain a "reason" parameter which provides a good starting point for probable causes of this condition.

Syslog Message

"A high percentage of handshakes initiated in the ktlsd subsystem over the last "%d" intervals of "%d" seconds have not completed successfully."

Parameters

intervalQuantity (INT): Number of intervals over which the problem was observed.
intervalLength (INT): Length of the observation intervals for this problem, in seconds.

ktls.health.startLatencyHigh

Severity

NOTICE

Description

This message occurs when the amount of time handshakes are spending in the start queue in the ktlsd subsystem is at an elevated level over some time intervals. It is a potential indication of back-pressure accumulating within ktlsd.

Corrective Action

(None).

Syslog Message

"The amount of time handshakes have spent in the start queue of the ktlsd subsystem has been at an elevated level over the last "%d" intervals of "%d" seconds."

Parameters

intervalQuantity (INT): Number of intervals over which the problem was observed.
intervalLength (INT): Length of the observation intervals for this problem, in seconds.

ktls.health.startQGrowing

Severity

NOTICE

Description

This message occurs when the depth of the start queue in the ktlsd subsystem is increasing in the majority of time intervals. It is a potential indication of back-pressure accumulating within ktlsd.

Corrective Action

(None).

Syslog Message

"The depth of the start queue in the ktlsd subsystem has trended upward over the last "%d" intervals of "%d" seconds."

Parameters

intervalQuantity (INT): Number of intervals over which the problem was observed.
intervalLength (INT): Length of the observation intervals for this problem, in seconds.

ktls.health.startQHigh

Severity

NOTICE

Description

This message occurs when the depth of the start queue in the ktlsd subsystem accounts for a significant percentage of total available handshake slots. It is a potential indication of back-pressure accumulating within ktlsd.

Corrective Action

(None).

Syslog Message

"The depth of the start queue in the ktlsd subsystem has been at an elevated level over the last "%d" intervals of "%d" seconds."

Parameters

intervalQuantity (INT): Number of intervals over which the problem was observed.
intervalLength (INT): Length of the observation intervals for this problem, in seconds.

ktls.health.stress

Severity

ERROR

Description

This message occurs when a combination of indicators suggest moderate stress within the Kernel Transport Layer Security (KTLS) subsystem.

Corrective Action

There might be a variety of potential corrective actions. The first course of action should be to check for other ktls.health.* events around the same time. These might have their own guidance. In general it is likely that the resolution involves reducing the inbound load on KTLS, which requires different steps depending on the feature.

Syslog Message

"The KTLS subsystem is exhibiting signs of moderate stress."

Parameters

(None).

Copyright information

Copyright © 2024 NetApp, Inc. All Rights Reserved. Printed in the U.S. No part of this document covered by copyright may be reproduced in any form or by any means—graphic, electronic, or mechanical, including photocopying, recording, taping, or storage in an electronic retrieval system—without prior written permission of the copyright owner.

Software derived from copyrighted NetApp material is subject to the following license and disclaimer:

THIS SOFTWARE IS PROVIDED BY NETAPP “AS IS” AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE HEREBY DISCLAIMED. IN NO EVENT SHALL NETAPP BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

NetApp reserves the right to change any products described herein at any time, and without notice. NetApp assumes no responsibility or liability arising from the use of products described herein, except as expressly agreed to in writing by NetApp. The use or purchase of this product does not convey a license under any patent rights, trademark rights, or any other intellectual property rights of NetApp.

The product described in this manual may be protected by one or more U.S. patents, foreign patents, or pending applications.

LIMITED RIGHTS LEGEND: Use, duplication, or disclosure by the government is subject to restrictions as set forth in subparagraph (b)(3) of the Rights in Technical Data -Noncommercial Items at DFARS 252.227-7013 (FEB 2014) and FAR 52.227-19 (DEC 2007).

Data contained herein pertains to a commercial product and/or commercial service (as defined in FAR 2.101) and is proprietary to NetApp, Inc. All NetApp technical data and computer software provided under this Agreement is commercial in nature and developed solely at private expense. The U.S. Government has a non-exclusive, non-transferrable, nonsublicensable, worldwide, limited irrevocable license to use the Data only in connection with and in support of the U.S. Government contract under which the Data was delivered. Except as provided herein, the Data may not be used, disclosed, reproduced, modified, performed, or displayed without the prior written approval of NetApp, Inc. United States Government license rights for the Department of Defense are limited to those rights identified in DFARS clause 252.227-7015(b) (FEB 2014).

Trademark information

NETAPP, the NETAPP logo, and the marks listed at http://www.netapp.com/TM are trademarks of NetApp, Inc. Other company and product names may be trademarks of their respective owners.