

Release Notes: Advanced Insight Scripts (AI-Scripts) Release 7.0R3.1

8 March 2018
Revision 1

This release notes accompany Juniper Networks[®] Advanced Insight Scripts (AI-Scripts) Release 7.0R3.1. AI-Scripts are Junos OS event scripts used to enable devices running Junos OS to do the following:

- React to specific events that occur in devices running Junos OS and provide relevant information for analysis.
- Periodically collect data on events that can be used to predict and prevent risks.
- Package all incident and intelligence event data into a structured format, such as a Juniper Message Bundle (JMB), and send it to an archive location to be collected and displayed by Service Now and Junos Space.

You can also find the **Advanced Insight Scripts (AI-Scripts) Release Notes** on the Juniper Networks Technical Publications Webpage at

<https://www.juniper.net/documentation/software/management/ais/>.

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Summary of AI-Scripts Release 7.0

This section lists new features, events, and issues resolved in AI-Scripts Release 7.0. Following each feature, event, and resolved issue is the PR number to refer for further information.

- [AI-Scripts Release 7.0R3.1 on page 3](#)
- [AI-Scripts Release 7.0R2.0 on page 5](#)
- [AI-Scripts Release 7.0R1.0 on page 9](#)

AI-Scripts Release 7.0R3.1

Features

AI-Scripts Release 7.0R3.1 introduces the following features:

- AI-Scripts is enhanced to collect outputs of the following commands that are required for the Chassis Info Fetcher (CIF) tool:
 - **show chassis hardware clei-models**
 - **show security alg status** (applicable only for SRX devices)

[PR 1315676]

- To reduce the load on the device CPU and to enhance the performance, AI-Scripts does not execute the following Junos OS commands required for the ESI attachment file while generating a device snapshot:
 - **show pfe statistics error**
 - **ssh show system boot-messages no-forwarding**
 - **show system virtual-memory no-forwarding**
 - **show system buffer no-forwarding**
 - **show system queues no-forwarding**
 - **show system statistics no-forwarding**
 - **show task io**
 - **show configuration event-options | display inheritance | display commit-scripts**
 - **show configuration system scripts | display inheritance | display commit-scripts**

Instead, the following Junos OS command is executed in addition to the outputs of the other existing commands:

- **show chassis hardware clei-models**

[PR 1330186]

- AI-Scripts is modified to exclude trend data in device snapshots. [PR 1330187]
- AI-Scripts is modified to provide a workaround for the intermittent RPC call issue that occurs on SRX5400 devices that run Junos OS Release 12.3X48-D10.3. [PR 1340321]

- The AI-Scripts FIFO reinitializes immediately after a Routing Engine is rebooted to avoid the **ais-param-set.slax** script from reporting an error. [PR 1341222]
- AI-Scripts is enhanced to allow JMBs from the secondary Routing Engine of an MX Series Virtual Chassis master node to be transferred to the primary Routing Engine of the master node after the JMBs are generated. [PR 1343851]

New Events

AI-Scripts Release 7.0R3.1 includes new events listed in [Table 1 on page 4](#):

Table 1: New Events Introduced in AI-Scripts Release 7.0R3.1

Event Policy File Name	Event	PR Number
problem-event-ea_hmcio_tx_afifo.slax	EA.*HMCIO TX: AFIFO overflow event detected in Channel	PR 1332236
problem-event-ea_hmcio_rx_sfifo.slax	EA.*HMCIO RX: SFIFO overflow detected in Channel	PR 1332289
problem-event-ea_li_recv_parcel.slax	MQSS.*LI.*Received a parcel with more than 512B accompanying data	PR 1332292
problem-event-ea_cellpackintrfc.slax	MQSS.*Cell packing interface error	PR 1332299
problem-event-ea_cksmerdet.slax	EA.*Checksum error detected on FO response	PR 1332634
problem-event-ea_chlddrperr.slax	MQSS.*FI.*Child drop error	PR 1332636
problem-event-ea_celljmpdrp.slax	MQSS.*FI.*Cell jump drop error	PR 1334098
problem-event-ea_rspnsfatalHMC.slax	EA.*HMCIF Rx: Link.: A response packet with a FATAL state is received from HMC - State: 0x1f	PR 1334656
problem-event-ea_cmdfsmstate.slax	MQSS.*DRD.*CMD FSM state error	PR 1334932
problem-event-xl_dbug_prot_corr.slax	XL.*cass_xr.*dbuf_protect Corrected XR DBUF	PR 1335008

Modified Events

AI-Scripts Release 7.0R3.1 has removed or modified the following events:

- The event policy for monitoring Event ID 670 is updated to only monitor **LUCHIP.*DDR.*VERIFY_RETRY_LIMIT of.*exceeded.** events. [PR 1329428]

The event policy will not monitor **LUCHIP.*no TCAM installed, intr state not changed** and **Starting luchip.*TOE** events.

Known Issues

There are no known issues in AI-Scripts Release 7.0R3.1.

Resolved Issues

AI-Scripts Release 7.0R3.1 fixes the following issues:

- When Junos OS installed on a device is upgraded to Release 17.4R1 and AI-Scripts is reinstalled on the device, AI-Scripts sometimes generates JMB iteration number as **NaN**. [PR 1336428]

AI-Scripts Release 7.0R2.0

Features

AI-Scripts Release 7.0R2.0 introduces the following new features:

- AI-Scripts uses **ais-p0#** parameteres instead of **ais-p#** parameters in structured event policies and events database to avoid confusion between **ais-p#** and **ais-p#0** parameter (for example, confusion between **ais-p1** and **ais p10** parameters). [PR 1256959]
- AI-Scripts includes information about Return Materials Authorization (RMA) in a Juniper Message Bundle (JMB) so that Junos Space Service Now can mark the incident created for a JMB that is generated for an RMA event as **Event RMA**. [PR 1275948]
- AI-Scripts checks the availability of data about the usage of cache memory of a device before attempting to extract the data while generating an intelligence JMB. [PR 1288816]
- AI-Scripts reports memory in units of Gigabytes (GB) in all regular expressions related to memory utilization. [PR 1292798]
- AI-Scripts monitors XMCHIP on SRX5400 and SRX5600 devices. [PR 1293557]
- AI-Scripts processes RMA data separately from attachment data to indicate the correct FRU in a JMB. [PR 1293634]
- Event policies **problem-event-luchip_rambist_rld.slax** and **problem-event-luchip_rambist_ddr.slax** for LUCHIP BIST errors refer to [KB31732](#). [PR 1293969]
- The event policy for **LUCHIP.*RMC.*Correctable ECC** events does not trigger on the first occurrence of the event. [PR 1295008]
- Event policy for **LUCHIP.*PPE.*CBO.*mismatch events** does not trigger on the first occurrence of the event. [PR 1295010]
- AI-Scripts now generates JMB attachments on a vSRX device when Junos OS Release 12.1X47-D15.4 is installed on it. [PR 1296093]

- AI-Scripts includes the system log message that triggered an event on the device in structured event JMBs. [PR 1298600]
- AI-Scripts uses the comments provided by a user to commit AI-Scripts configuration on a device when AI-Scripts is uninstalled on the device. [PR 1303150]
- AI-Scripts processes internal cookies without causing the master Routing Engine to hang when the **commit synchronize scripts** command is executed on a device with dual Routing Engines. [PR 1303215]
- AI-Scripts includes the AI-Scripts version used to monitor events on a device, in the system log messages, when AI-Scripts starts to process an event. [PR 1303422]
- AI-Scripts updates the **statusmsgs** attachment by including the full path name when appending to a file, to account for a change with context directory in SLAX in Junos OS 17.x releases. [PR 1316698]

New Events

AI-Scripts Release 7.0R2.0 includes new events listed in table [Table 2 on page 6](#):

Table 2: New Events Introduced in AI-Scripts Release 7.0R2

Event Policy File Name	Event	PR Number
problem-event-LUCHIPuncorrectECC.slax	LUCHIP[(,)] . *RMC .*Uncorrectable ECC . * EDMEM	PR 1288154
problem-event-xmchip_ocmlo_parerr.slax	XMCHIP.*OCM: . *parity error - Parity Error Address	PR 1295726
problem-event-ea_mqss_bcmf_cbuf_sramprotpar.slax	EACHIP MQSS.*BCMF CBUF.*SRAM Protect.*Parity error	PR 1296030
problem-event-ea_mqss_drd_protpar_alloc.slax	EACHIP MQSS.*DRD.*Protect.*Parity error corrected for alloc state memory	PR 1296165
problem-event-ea_mqss_li_unroll_taillen.slax	EACHIP MQSS.*LI.*Unroll TAIL length overflow	PR 1296174
problem-event-ea_hmcif_chunkix_woread.slax	EACHIP EA.*HMCIF.*HMCIF has no chunk index available for incoming WO read	PR 1296234
problem-event-ea_hmcif_rxlink_respfifo.slax	EACHIP EA.*HMCIF Rx.*Link.*Response FIFO . overflow	PR 1296587
problem-event-ea_hmcif_rxretry_failed.slax	EACHIP EA.*HMCIF Rx.*Link.*HMCIF Rx retry attempts failed	PR 1297858

Table 2: New Events Introduced in AI-Scripts Release 7.0R2 (*continued*)

Event Policy File Name	Event	PR Number
problem-event-ea_hmcif_rxhmc_tokenov.slax	EACHIP EA.*HMCIF Rx.*Link.*HMC token overflow	PR 1298241
problem-event-xmchip_queueunderrun.slax	XMCHIP CPQ1: Queue un[r]*derrun indication	PR 1299045
problem-event-ea_cpqw_fast_req_empty.slax	EACHIP CPQW Fast request is asserted for empty Queue	PR 1299099
problem-event-ea_cpqw_freelist_man_runout.slax	EACHIP CPQW Freelist Manager run out of available fl pointers	PR 1299329
problem-event-ea_hmcif_snglbiterr.slax	EACHIP total number of corrected single-bit errors from HMC	PR 1299392
em-event-ea_reqtimeouterr.slax	EACHIP MQSS FO: Request timeout error	PR 1300317
problem-event-ea_underflowstate.slax	EACHIP MQSS FI: Cell underflow at the state stage	PR 1300646
problem-event-ea_fatalhmc.slax	EACHIP response packet with a FATAL state is received from HMC	PR 1304687
problem-event-xmchip_preclxmpar.slax	XMCHIP PRECL XM_engine instmem parity error detected	PR 1308012
problem-event-eaxlchip_filteralphaprot.slax	flr.pf0_1.alpha[0].protect	PR 1309640
problem-event-eaxlluchip_syncctxn.slax	Errors sync ctxn error	PR 1309658
problem-event-eaxlluchip_asyncctxn.slax	Errors async ctxn	PR 1311793
problem-event-eaxlchip_prisectimeout.slax	SECONDARY_TIMEOUT or PRIMARY_TIMEOUT	PR 1314705
problem-event-eaxlchip_prbevenodd.slax	PRB_EVENERR or PRB_ODDERR	PR 1314955
problem-event-eaxlchip_dblbitecc.slax	Double-bit ECC error	PR 1315007
problem-event-xmchip_cellpackintrfc.slax	Cell packing interface error	PR 1315099
problem-event-eaxlluchip_lmemaddr.slax	lmem addr error	PR 1315217

Modified Events

AI-Scripts Release 7.0R2 has removed or modified the following events:

- AI-Scripts **problem-event-mqchip_pt_cpt_parerr.slax** event policy is removed from the AI-Scripts bundle as eventd does not detect the system log message, **QCHIP.*PT Stream context parity error detected**, for which the event policy is created. [PR 1285448]
- AI-Scripts event policy **problem-event-xmchip_ddrif_cksumerr_wochan.slax** for **XMCHIP.*DDRIF.*Checksum error for** event is removed from the AI-Scripts bundle as it is a duplicate of the **problem-event-xmchip_ddrif_cksum_fowo.slax** event policy. [PR 1286406]
- AI-Scripts event policy **problem-event-luchip_Uncorr_ecc_edmem.slax** for the **PFE:Uncorrectable ECC.*EDMEM** event is removed from the AI-Scripts bundle as it is a duplicate of the **problem-event-LUCHIPUncorrectECC.slax** event policy. [PR 1286483]
- AI-Scripts event policy **problem-event-xmchip_fi_aliasing.slax** for the **PFE:XMCHIP.*FI.*Aliasing on allocates error.*Pipe count|XMCHIP.*FI.*Reorder cell timeout** event is removed from the AI-Scripts bundle as it is a duplicate of the **problem-event-xmreordercell.slax** event policy. [PR 1286486]
- AI-Scripts event policy **problem-event-xmchip_pt_stream_emptywait.slax** for event **PFE:xmchip_pt_stream_empty_wait.*Timeout occurred while waiting for the PT stream.*to become empty** and event policy **problem-event-xmchip_ddrif_wrrdprot.slax** for event **PFE:XMCHIP.*DDRIF.*WR.*RD Protect: Multiple Errors|XMCHIP.*DDRIF.*WR.*RD Protect: Parity error for RUNN checksum SRAM** are removed from the AI-Scripts bundle due to the latest updates to MPC playbook. [PR 1289010]
- AI-Scripts event policy **problem-event-luchip_ppe_zone.slax** for events **LUCHIP.*PPE.*Zone.*is not bound to a context** and **LUCHIP.*PPE.*Zone.*Context.*PC.*State.*Traps** are removed from the AI-Scripts bundle as the events need not be monitored. [PR 1289511]
- AI-Scripts event policy **problem-event-xmchip_fi_cell_underflow_state.slax** is referencing [KB30722](#) instead of [KB31611](#). [PR 1290449]
- AI-Scripts event policy **problem-event-luchip_ppeerr_lmem_data.slax** for events **PPE.*Errors lmem data error** and **LMEM errors require LUCHIP.*PPE.*Zone.*disable** is removed as it is a duplicate of the **problem-event-luchip_err_thread_timeout_lmem.slax** event policy. [PR 1291613]
- The regular expression for the **PFE:LUCHIP.*DDR.*VERIFY_PASSED at retry** event is updated to **LUCHIP.*DDR.*VERIFY_RETRY_LIMIT of.*exceeded** in the **problem-event-luchip_ddr_verfpass.slax** event policy. [PR 1291617]
- Regular expression **PFE:LUCHIP.*TOE Read** is updated to **LUCHIP.*RD_NACK.*TOE Read** in the **problem-event-luchip_toeread_uncor_ecc_edmem.slax** event policy to match with the event description mentioned in the [KB31714](#) article. [PR 1291621]
- AI-Scripts event policy **problem-event-luchip_bist_rldram.slax** for event **PFE:LUCHIP.*Bist RLDram.*failed** is merged with AI-Scripts event policy **problem-event-luchip_rambist_ddr.slax** for event **RambIST:LU-CHIP.*BIST: Memory**

Error, as the two events are triggered when similar type of system log message is generated. [PR 1292012]

- AI-Scripts event policy **problem-event-mqDDRIFckerr.slax** for event **PFE: MQCHIP(.) DDRIF FOO Checksum Error** is merged with event policy **problem-event-mqchip_ddrif_fo_cksum.slax** and therefore deprecated. [PR 1307999]
- AI-Scripts event policy **problem-event-luchip_ppeerr_lmem_data.slax** is updated to collect information from EACHIP when **Errors lmem data error** system log message is logged for EACHIP. [PR 1314256]
- AI-Scripts event policy **problem-event-luchip_ppeerr_lmem_data.slax** is updated to collect information from EACHIP and XLCHIP when variations of **Errors lmem data error** system log message is logged by EACHIP and XLCHIP.

The event policy is not called when **LMEM errors require LUCHIP.* PPE.* Zone.* disable** system log messages as this event is handled by the **problem-event-luchip_reorder_intr.slax** event policy. [PR 1315327]

Known Issues

There are no known issues in AI-Scripts Release 7.0R2.0.

Resolved Issues

AI-Scripts Release 7.0R2.0 fixes the following issues:

- AI-Scripts does not copy the user-events XML database to backup Routing Engines for processing. [PR 1292355]
- Backup Routing Engine hangs due to node-to-node communication by AI-Scripts while generating intelligence JMBs (iJMBs). [PR 1300092]
- Threshold is spelled incorrectly in the options **disk-warning-threshold** and **disk-full-threshold** provided by **ais-param-set.slax**. [PR 1315246]

AI-Scripts Release 7.0R1.0

Features

The following features are new in AI-Scripts Release 7.0R1.0:

- AI-Scripts supports AFEB-based and TFEB-based MX systems—MX5, MX10, MX40, MX80, and MX104. [PR 1202309]
- When a technical support case exists for an event, AI-Scripts is enhanced to allow on-demand JMBs for the same event to be associated with the same technical support case. [PR 1207128]
- When Junos OS is upgraded in devices on which AI-Scripts is installed, AI-Scripts performs an additional check so that AI-Scripts does not execute satellite-related or Junos Node Unifier (JNU)-related commands on MX Series devices if the system is not configured for satellite or JNU operation. [PR 1208065]

- AI-Scripts adds the output of the **show system license** command to the ESI attachment of a JMB to record the software serial number on a virtual or a physical device running Junos OS. [PR 1208332]
- AI-Scripts is enhanced to report the version of the Product Health Data Collection (PHDC) commands file only as a part of PHDC JMB instead of all JMBs. [PR 1209835]
- AI-Scripts is enhanced so that JMBs generated on an SRX cluster include information about the node from which the attachments are generated. [PR 1213606]
- System log messages recording the JMB creation process have consistent terminology and indicators specifying the start and end of JMB attachment processing. [PR 1221365]
- After AI-Scripts is upgraded on a device running a Junos OS release susceptible to PR 1222068, AI-Scripts checks the result of the call to the activation op script **ais_ev_pol_update.slax** and calls the op script again if the earlier call fails. [PR 1222100]
- AI-Scripts automatically reactivates event monitoring when AI-Scripts reinstalls itself on a device after upgrade of Junos OS. [PR 1222338]
- AI-Scripts can be accessed and managed by a restricted user account which does not have maintenance or super user class privileges. [PR 1222341]
- AI-Scripts allows you to configure the maximum number of JMBs that can be processed simultaneously on a device. [PR 1227894]

The maximum number of JMBs that can be processed simultaneously is 16.

- Event activation is tried multiple times on devices running Junos OS Releases susceptible to PR 1222068 so that the activation op script **ais_ev_pol_update.slax** completes execution successfully. [PR 1229645]
- AI-Scripts is enhanced to filter SNMP community strings from XML configuration attachments. [PR 1238656]
- To reduce load on the event daemon, AI-Scripts does not monitor certain events as these events are mere warnings or self-correcting. [PR 1245897]

See [“Events Disabled in AI-Scripts Release 7.0R1” on page 18](#) for the list of events that AI-Scripts does not monitor from this release.

- AI-Scripts considers the available space in **/var/tmp** instead of **/var** while generating JMBs when Junos OS Release 17.2 is installed on a device to avoid JMB dampening when JMBs need not be dampened. [PR 1253182]
- After an upgrade or downgrade of Junos OS on a device to a release earlier than 14.1R3, AI-Scripts is reinstalled on the device by using a cron job. [PR 1254104]
- AI-Scripts collects product health data (PHD) from MX2020, MX2010 and all PTX Series devices. [PR 1258101]
- The **remove-jais.slax** script enters the reason for commit failure in system logs if it is unable to remove AI-Scripts configuration from a device. [PR 1262252]
- AI-Scripts generates JMBs for CHASSISD_SNMP_TRAP6 event on EX4300 and EX4200 devices. [PR 1269341]

- AI-Scripts provides the **op ais-param-set low-end-event-limit** option to allow monitoring of a greater number of events on low-end platforms. [PR 1269541]

Low-end platforms include the following:

- EX2200, EX2200-C, EX2300, EX2300-C, and EX2500
 - EX3200, EX3300, and EX3400
 - EX4200, EX4300, EX4500, EX4550, and EX4600
 - SRX100 and SRX110
 - SRX210, SRX220, and SRX240
 - SRX300, SRX320, SRX320-poe, SRX340, and SRX345
 - SRX550
 - SRX650
 - ACX500
 - ACX1000 and ACX1100
 - ACX2000, ACX2100, and ACX2200
- AI-Scripts prevents failure in JMB generation when an error is returned on executing the **show heap** command on the Packet Forwarding Engine. [PR 1270692]
 - When subscriber management services are enabled on MX Series devices, AI-Scripts uses the **request support information brief** command for generating the request support information (RSI) attachment of a JMB. [PR 1271836]

New Events

The following are new events included in AI-Scripts Release 7.0R1.0:

- AI-Scripts monitors unstructured **Major Alarm** messages from alarmd on MX devices. [PR 1212901]
- AI-Scripts monitors new events for MPC cards in MX Series devices. [PR 1246982]

For the list of new events introduced for MPC cards, see [“Events introduced in AI-Scripts Release 7.0R1 for the MPC Card” on page 14](#).

- AI-Scripts is updated to generate JMBs for the following subscriber management resource threshold events: [PR 1257793]
 - **dprof_process_request**: Resource usage of the FPC exceeded threshold
 - **Resource Monitor**: FPC 11 HEAP has exceeded set threshold 70

Modified Events

The following event is modified in AI-Scripts Release 7.0R1.0.

- The **Master-event-struct.slax** script is modified to report VLAN name instead of client address in the problem description of the JMB generated for the ESWD_DHCP_UNTRUSTED event. [PR 1256137]

Known Issues

There are no known issues in AI-Scripts Release 7.0R1.0.

Resolved Issues

The following issues are fixed in AI-Scripts Release 7.0R1.0:

- Outputs of PFE CLI commands that are collected in the ESI attachment files of a JMB should always reference the correct target FPC. [PR 1206924]
- The **Master-events-struct.slax** file should be modified so that the core file collected for the TFTPD_RECVCOMPLETE_INFO event is associated with the event. [PR 1229091]
- The ais-param-set option should be fixed to work with On-demand JMB generation to collect logs from all Routing Engines of a device. [PR 1231240]
- AI-Scripts should replace the % character in event description of system log messages with the word percent so that the event description is output correctly. [PR 1232665]
- The hourly clean up performed by AI-Scripts should delete internal files generated during JMB processing. [PR 1236609]
- AI-Scripts attachment processing in an SRX210 device should check if there is a **statusmsgs** file when a dampen flag is detected to ensure that additional processing is executed to generate attachment data. [PR 1241251]
- If Junos OS is upgraded on a device while AI-Scripts Releases 5.0R5, 6.0R1, 6.0R2, or 6.0R3 are installed on it, or if there is a failure uninstalling any of these versions from the device, the Routing Engine of the device may later reset or become unresponsive. [PR 1245536]
- AI-Scripts Installer should output messages to indicate that parameters are being configured instead of messages that indicate parameters are being set. [PR 1248309]
- AI-Scripts sometimes generates ESI timeout error messages from the **ais_jmb_chm.sh** process when the ESI attachment process completes correctly. [PR 1249181]
- Log archive received from a backup Routing Engine when the backup Routing Engine switches over to primary Routing Engine is not listed in the table of contents of the JMB generated for the switch over event. [PR 1266202]
- Duplicate variable definitions in the JMB post processing script (**ais_change_perm.slax**) should be removed. [PR 1281276]

AI-Scripts Compatibility Matrix and Issues

- [AI-Scripts Compatibility with Junos OS on page 13](#)
- [AI-Scripts Compatibility with Junos Space Service Now on page 13](#)

- [Junos OS PRs That Affect AI-Scripts on page 13](#)
- [Platforms Supported by AI-Scripts on page 13](#)

AI-Scripts Compatibility with Junos OS

AI-Scripts Install Package 7.0R2.0 is compatible with Junos OS Release 11.4R1.0 and later. However, for QFX10000 Series devices, AI-Scripts is compatible with Junos OS Release 15.1X53-D63 and later.

AI-Scripts Compatibility with Junos Space Service Now

AI-Scripts Install Package 7.0R1.0 and later are compatible with Junos Space Service Now 14.1R1.0 and later.

For information about compatibility of Service Now and AI-Scripts, refer to the full compatibility matrix at <https://www.juniper.net/support/downloads/serviceautomation/compatibility.html>.

Junos OS PRs That Affect AI-Scripts

The complete list of Junos OS PRs that affect AI-Scripts can be found at <https://kb.juniper.net/KB19155>.

Service Now also provides a proactive warning when an event profile is installed on a device to notify any known issues.

Platforms Supported by AI-Scripts

For the list of platforms running Junos OS supported by AI-Scripts 7.0R2.0, refer to [Devices Supported by Service Now](#).

Appendix

- [Events introduced in AI-Scripts Release 7.0R2 on page 13](#)
- [Events introduced in AI-Scripts Release 7.0R1 for the MPC Card on page 14](#)
- [Events Disabled in AI-Scripts Release 7.0R2 on page 18](#)
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Events introduced in AI-Scripts Release 7.0R2



NOTE: The string *PFE:* in the matching pattern or regular expression of an event indicates the component for which the event is applicable. The string is not a part of the actual matching pattern or regular expression of an event.

This section lists the event matching pattern for the new events detected by AI-Scripts Release 7.0R2.0 for the MPC card.

- PFE: LUCHIP[({.})] RMC .*Uncorrectable ECC .* EDMEM
- PFE:XMCHIP.*OCM: .*parity error - Parity Error Address

- PFE:MQSS.*BCMF CBUF.*SRAM Protect.*Parity error detected for Bank.*Sub-Bank.*memory
- PFE:MQSS.*DRD.*Protect.*Parity error corrected for alloc state memory
- PFE:MQSS.*LI.*Unroll TAIL length overflow
- PFE:EA.*HMCIF.*HMCIF has no chunk index available for incoming WO read
- PFE:EA.*HMCIF Rx.*Link.*Response FIFO . overflow
- PFE:EA.*HMCIF Rx.*Link.*HMCIF Rx retry attempts failed
- PFE:EA.*HMCIF Rx.*Link.*HMC token overflow
- PFE:XMCHIP([.].[]): (%PFE-.*:)?CPQI: Queue un[r]*derrun indication
- PFE:XQSS.*CPQW Fast request is asserted for empty Queue
- PFE:XQSS.*CPQW Freelist Manager run out of ava[il]*able fl pointers
- PFE:EA.*HMCIF Rx: Link.: total number of corrected single-bit errors from HMC . exceeded threshold
- PFE:MQSS.*FO: Request timeout error - Number of timeouts .*, RC select .*, Stream
- PFE:MQSS.*FI: Cell underflow at the state stage [(]+Cell behind reorder window[.])+ - Stream
- PFE:EA.*HMCIF Rx: Link.: A response packet with a FATAL state is received from HMC
- PFE:PRECL.*XM_engine.*instmem parity error detected
- PFE:EACHIP MQSS BCMW ICM Invalid cell sequence Packet start without SOP
- PFE:filr.pf0_1.alpha[0].protect
- PFE:Errors sync xtxn error
- PFE:Errors async xtxn error
- PFE:SECONDARY_TIMEOUT or PRIMARY_TIMEOUT
- PFE:PRB_EVENERR or PRB_ODDERR
- PFE:Double-bit ECC error
- PFE:Cell packing interface error
- PFE:Imem addr error

Events introduced in AI-Scripts Release 7.0R1 for the MPC Card

This section lists the event matching pattern for the new events detected by AI-Scripts Release 7.0R1.0 for the MPC card.

- PFE: MQCHIP.*FI Cell underflow at the state stage
- PFE: MQCHIP.*DDRIF FO.*Checksum Error
- PFE: MQCHIP.*FO Request time-out error
- PFE: MQCHIP.*DDRIF WO Checksum Error

- PFE: MQCHIP.*FI Enqueuing error.*type.*seq.*stream
- PFE: MQCHIP.*CPQ Sram parity error, errlog
- PFE: MQCHIP.*chan-rx.*read errors.crc_error.*failed
- PFE: MQCHIP.*FI Error-cell sent to reorder engine
- PFE: MQCHIP.*OCM Fo.*Ddrif Parity Error
- PFE: MQCHIP.*OCM Parity Error Log.*rddst.*bnk_vec.*addr.*bank.*data
- PFE: MQCHIP.*MALLOC Pre-Q Reference Count underflow.*decrement below zero
- PFE: MQCHIP.*MALLOC Q Reference Count Memory parity error
- PFE: MQCHIP.*MALLOC Two or more Q Ref-Count Memory parity errors
- PFE: MQCHIP.*CPQ RLDRAM double bit ECC error.*bank.*addr
- PFE: XMCHIP.*DRD0.*Reference count memory decrement error.*PCT
- PFE: XMCHIP.*Scheduler.*Protect.*Parity error for TDM table single port SRAM
- PFE: XMCHIP.*DRD0.*Command sequence error
- PFE: XMCHIP.*MALLOC: SChunk allocation memory parity error
- PFE: XMCHIP.*WI CPQ Free Pointer SRAM Protect: Parity error
- PFE: XMCHIP.*Scheduler: Protect: Parity error for tick table single port SRAM
- PFE: XMCHIP.*FI.*Protect.*Parity error for .* freepool SRAM
- PFE: XMCHIP.*FI.*Cell underflow at the state stage
- PFE: XMCHIP.*DRD.*Fabric parcel timeout error
- PFE: XMCHIP.*DRD.*Protect.*Parity error for DRD memory
- PFE: XMCHIP.*LI.*Received a parcel from the HSL2 interface with EOPE
- PFE: XMCHIP.*WI.*Input pause buffer exceeded.*Check if the transmitter respects pause frames
- PFE: XMCHIP.*XXLCE.*Port Interrupts.*Ethernet Rx Stats Parity Error
- PFE: xmchip_pio_read_u32.*Reading 32-bit register failed
- PFE: xmchip_xxlce_mtip_cge_read.*Reading MTIP register failed
- PFE: XMCHIP.*FO.*Request timeout error.*Number of timeouts
- PFE: XMCHIP.*DDRIF.*Checksum error for WO.*Channel.*Address
- PFE: XMCHIP.*MALLOC.*DMEM allocation memory parity error
- PFE: XMCHIP.*MALLOC.*Two or more DMEM allocation memory parity error
- PFE: XMCHIP.*EPM.*Enqueue upon free pool empty
- PFE: XMCHIP.*EPM.*Dequeue upon free pool full or eQ empty
- PFE: XMCHIP.*FI.*Aliasing on allocates error.*Pipe count
- PFE: XMCHIP.*FI.*Reorder cell timeout

- PFE: XMCHIP.*FI.*Link sanity checks.*Type
- PFE: XMCHIP.*FI.*Protect.*Parity error for CP freepool SRAM
- PFE: XMCHIP.*FI.*Protect.*Log Error
- PFE: XMCHIP.*FI.*Protect.*Parity error for L2 freepool SRAM
- PFE: XMCHIP.*DDRIF.*Checksum error for FO/WO.*Channel.*Address.*Checksum Errors
- PFE: XMCHIP.*FO.*Packet error.*Error Packets
- PFE: XMCHIP.*OCM.*DDR0 parity error.*Parity Error Address.*Bank
- PFE: XMCHIP.*OCM.*Parity Error Counter
- PFE: MQCHIP.*CPQ RLD RAM single bit ECC error.*bank.*addr
- PFE: MQCHIP.*WI parity error detected when read from ibuf
- PFE: XQSS.*Qdepth underrun error in Drop engine 0
- PFE: XMCHIP.*MALLOC.*DREF memory parity error
- PFE: XMCHIP.*MALLOC.*SRef.*SChunk Reference Count.*memory parity error
- PFE: XMCHIP.*PT.*Protect.*Parity error for CPFIFO data memory
- PFE: xmchip_pt_stream_empty_wait.*Timeout occurred while waiting for the PT stream.*to become empty
- PFE: XMCHIP.*DDRIF.*WR.*RD Protect: Multiple Errors
- PFE: XMCHIP.*DDRIF.*WR.*RD Protect: Parity error for RUNN checksum SRAM
- PFE: XMCHIP.*DRD.*Wan parcel timeout error
- PFE: XMCHIP.*FI.*Packet CRC error
- PFE: XMCHIP.*PT.*Missing SOP.*EOP errors from input blocks
- PFE: cmic_vsc8248_ready_for_dfe.*CMIC.* - VSC8248 EDC FW unexpectedly in state.*toggling mode to reset FW
- PFE: vsc8248_firmware_variable_rd_wr.*cmic-vsc8248.*channel.*vsc8248 firmware control register.*is not ready to accept new command
- PFE: LUCHIP.*PPE.*Errors KMB.* parity error
- PFE: LUCHIP.*PPE.*Errors thread timeout error
- PFE: PPE HW Fault Trap: Count.*PC.*init_xtxn_fields_drop_or_clip
- PFE: LUCHIP.*PPE.*Zone.* is not bound to a context
- PFE: LUCHIP.*PPE.*Zone.* Context.* PC.* State.* Traps
- PFE: SHARED LMEM errors require LUCHIP.*PPE.*disable
- PFE: LUCHIP.*Display trap-info logic not initialized
- PFE: PPE.*Errors sync xtxn error

- PFE: RMC.*Uninitialized EDMEM.*Read
- PFE: Uncorrectable ECC.*EDMEM
- PFE: Secondary PPE.*zone.*timeout
- PFE: LUCHIP.*TOE Read
- PFE: LUCHIP.*IDMEM.*read error
- PFE: PPE.*Errors lmem data error
- PFE: LUCHIP.*Bist RLDRAM.* failed
- PFE: RamBIST:LU-CHIP.*RLDRAM.*BIST: Memory Error
- PFE: RamBIST:LU-CHIP.*RLDRAM.* BIST: Error Count:
- PFE: RamBIST:LU-CHIP.*RLDRAM.* BIST: Error Address:
- PFE: RamBIST:LU-CHIP.*RLDRAM.* BIST: Actual Data:
- PFE: RamBIST:LU-CHIP.*RLDRAM.* BIST: Expected Data:
- PFE: RamBIST:LU-CHIP.*RLDRAM.* BIST: Vector Data:
- PFE: LUCHIP.*PPE.*CBO.*mismatch.*rd.*exp
- PFE: LUCHIP.*pio_handle.*pio_read_u64.*failed.*IDMEM
- PFE: LUCHIP.*pio_handle.*jspec_pio_read_u256 failed.*gumem
- PFE: LUCHIP.*GUMEM.*ucode.instr.*read error
- PFE: trinity_pio.*PIO errors occurred
- PFE: LUCHIP.*HASH INT Status FPM Error
- PFE: LUCHIP.*HASH FPM ERROR: Alloc OMI Ram IF Error, TID.*FP_ID
- PFE: PPE HW Fault Trap: Count.*PC.*init_xtxn_fields
- PFE: PPE Thread Timeout Trap: Count.*PC.*handle_trap_write_pc
- PFE: LUCHIP.*PPE.*Errors.*KMA.*parity error
- PFE: LUCHIP.*PPE.*Errors thread timeout error lmem data error
- PFE: LUCHIP. PPE Thread Timeout Trap: Count.*PC.*handle_ppe_hw_fault
- PFE: LMEM errors require LUCHIP.*PPE.*Zone.*disable
- PFE: LUCHIP.*RMC.*Correctable ECC.*cnt.*syn.*EDMEM
- PFE: RamBIST:LU-CHIP.*BIST: Memory Error
- PFE: RamBIST:LU-CHIP.*BIST: Test Name:Unique Address
- PFE: LUCHIP.*Bist.* failed
- PFE: CMT.*LU.*init failed.*generic failure
- PFE: CMT: Failed to init LU chip
- PFE: XMCHIP.*LI.*Received a parcel from the HSL2 interface with EOPE

- PFE: XMCHIP.*FI.*Link sanity checks.*Type
- PFE: XMCHIP.*LI.*Received parcel with more than 512B
- PFE: XMCHIP.*PT.*Protect.*Log Error.*Log Address.*Multiple Errors
- PFE: XMCHIP.*PT.*Protect.*Parity error for CPT freelist memory
- PFE: XMCHIP.*WO.*Packet error - Error Packets
- PFE: XMCHIP.*WO.*Protect.*Parity error for Output buffer data
- PFE: MQCHIP.*PT.*PCT parity error detected
- PFE: MQCHIP.*PT CPT parity error detected
- PFE: toe_interrupt_errors.*LU TOE chip.*Memory Error Thread.*INSTR Addr
- PFE: toe_coredump_read_regs.*failed.*read
- PFE: TOE ERROR.*DETECTED IN PFE.*TOE LU Stats
- PFE: TOE:TOE LU.*SetErr - LU TOE chip.*Memory Error Thread.*INSTR Addr
- PFE: LUCHIP.*DDR.*VERIFY_PASSED at retry
- PFE: LUCHIP.*no TCAM installed, intr state not changed
- PFE: Starting luchip.*TOE

Events Disabled in AI-Scripts Release 7.0R2

This section lists the event matching pattern for the events disabled in AI-Scripts Release 7.0R2.0. To know the reasons for disabling the events, see [Modified Events on page 8](#).

- PFE:QCHIP.*PT Stream context parity error detected
- PFE:XMCHIP.*DDRIF.*Checksum error for
- PFE:Uncorrectable ECC.*EDMEM
- PFE:XMCHIP.*FI.*Aliasing on allocates error.*Pipe count
- PFE:XMCHIP.*FI.*Reorder cell timeout
- PFE:xmchip_pt_stream_empty_wait.*Timeout occurred while waiting for the PT stream.*to become empty
- PFE:LUCHIP.*PPE.*Zone.* is not bound to a context
- PFE:LUCHIP.*PPE.*Zone.* Context_* PC .* State
- PFE:PPE.*Errors lmem data error and LMEM errors require LUCHIP.*PPE .* Zone .* disable

Events Disabled in AI-Scripts Release 7.0R1

This section lists the event matching pattern for the events disabled in AI-Scripts Release 7.0R1.0.

- ASP_IDS_INV_CLEAR_QUERY
- ASP_IDS_INV_CLEAR_QUERY_VER
- ASP_L2TP_NO_MEM
- ASP_L2TP_OBJ_CAC_FAIL
- PFE:CCHIP: (%PFE-.*:)?SRAM parity error .* bank
- PFE:CCHIP: (%PFE-.*:)?prolonged abnormal discard seen
- CHASSISD_FM_ERROR_SIB_S_FB_SMF
- CHASSISD_GBUS_NOT_READY
- CHASSISD_HSR_FIFO_ERROR
- CHASSISD_SBE_DETECTED
- CHASSISD_SIB_INVALID_SLOT
- PFE:CMG: (%PFE-.*:)?Fatal JBUS error, chip
- PFE:cm_read_i2c errno is 5
- PFE:DDR SDRAM Error: (%USER-.*:)?Multi-bit ECC error
- PFE:DFW: (%PFE-.*:)?tree cutover failed [()memory allocation failure()] for filter
- ESPTASK_PARSE_BAD_SWITCH
- ESPTASK_PARSE_CMD_ARG
- ESPTASK_PARSE_CMD_EXTRA
- ESWD_STP_BASE_MAC_ERROR
- PFE:Failed to find MC RT_NH entry
- PFE:IA_PCIIF[(.)]: (%PFE-.*:)?.*MHz clock error
- JCS_BBD_LOAD_FAILURE
- JCS_BBD_LOCAL_MISMATCH
- JCS_BBD_NOT_FOUND
- JCS_BBD_NOT_VALID
- JCS_BBD_PARSE_ERROR
- JCS_BBD_PEER_MISMATCH
- JCS_KERNEL_RSD_LINK_DOWN
- KERNEL: (%KERN-.*:)?cksum: out of data WR[()]: Voltage Fail Shutdown, device
- PFE:LCHIP[(.)]: (%PFE-.*:)?.* new errors in LSIF
- LLDPD_SYSTEM
- PFE:parity error detected, flr reinit: mpfe
- PFE_PACKET_DISCARD_ERROR

- PFE:pfestat_req_receive: request type .* did not expect ipc reply type
- PFE:Packet drop in lchip pktwr,rate:
- PFE:RSMON: (%PFE-.*)?Resource Category:jtree Instance.*less than LWM limi
- PFE:VCCPD_PROTOCOL_OVERLOAD
- SNMPD_SEND_FAILURE
- PFE:SFP receive power low.*warning set
- RPD_KRT_Q_RETRIES
- MIB2D_RTSLIB_READ_FAILURE
- MIB2D_SNMP_INDEX_ASSIGN
- PFE:vlan MAC filter:. * from port.* rejected

Finding More Information

For the latest, most complete information about known and resolved issues with Junos Space Network Management Platform and Junos Space Management Applications, see the Juniper Networks Problem Report Search application at: <https://prsearch.juniper.net>.

Juniper Networks Feature Explorer is a Web-based application that helps you to explore and compare Junos Space Network Management Platform and Junos Space Management Applications feature information to find the correct software release and hardware platform for your network. Find Feature Explorer at: <https://pathfinder.juniper.net/feature-explorer/>.

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Requesting Technical Support

Technical product support is available through the Juniper Networks Technical Assistance Center (JTAC). If you are a customer with an active J-Care or Partner Support Service support contract, or are covered under warranty, and need post-sales technical support, you can access our tools and resources online or open a case with JTAC.

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For quick and easy problem resolution, Juniper Networks has designed an online self-service portal called the Customer Support Center (CSC) that provides you with the following features:

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- Download the latest versions of software and review release notes: <https://www.juniper.net/customers/csc/software/>
- Search technical bulletins for relevant hardware and software notifications: <https://kb.juniper.net/InfoCenter/>
- Join and participate in the Juniper Networks Community Forum: <https://www.juniper.net/company/communities/>
- Open a case online in the CSC Case Management tool: <https://www.juniper.net/cm/>

To verify service entitlement by product serial number, use our Serial Number Entitlement (SNE) Tool: <https://entitlementsearch.juniper.net/entitlementsearch/>

Opening a Case with JTAC

You can open a case with JTAC on the Web or by telephone.

- Use the Case Management tool in the CSC at <https://www.juniper.net/cm/>.
- Call 1-888-314-JTAC (1-888-314-5822 toll-free in the USA, Canada, and Mexico).

For international or direct-dial options in countries without toll-free numbers, see <https://www.juniper.net/support/requesting-support.html>.

Revision History

8 March, 2018—AI-Scripts Release 7.0R3.1

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