

Advanced Insight Scripts Release Notes

Release 6.0R5.0
9 April 2018
Revision 1

These release notes accompany Release 6.0R5.0 of Juniper Networks® Advanced Insight Scripts (AI-Scripts). 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 <http://www.juniper.net/techpubs/software/management/ais/>.

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Summary of AI-Scripts Release 6.0

This section lists new features, events, and issues resolved in AI-Scripts Release 6.0. Following each feature, event, and resolved issue is the PR number to refer to for further information.

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AI-Scripts Release 6.0R5.0

Features

The following features are new in AI-Scripts Release 6.0R5.0:

- 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. [PR 1253182]
- 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 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 products:

- 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]
- 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 the JMB that is generated for an RMA event, as Event RMA. [PR 1275948]
- While generating an intelligence JMB, AI-Scripts checks for the availability of data about the usage of cache memory of a device before attempting to extract the data. [PR 1288816]
- AI-Scripts reports memory in units of Gigabytes (GB) in all regular expressions related to memory utilization. [PR 1292798]
- AI-Scripts processes RMA data separately from attachment data to indicate the correct FRU in a JMB. [PR 1293634]
- AI-Scripts 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 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 to that attachment when appending to it by using RPC calls, to account for a change with the internal context directory variable definition in SLAX in Junos OS 17.x releases. [PR 1316698]

Events

The following is a new event in AI-Scripts Release 6.0R5.0:

- AI-Scripts generates JMBs for CHASSISD_SNMP_TRAP6 event on EX4300 and EX4200 devices. [PR 1269341]

Modified Events

The following event is modified in AI-Scripts Release 6.0R5.0.

- 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 6.0R5.0.

Resolved Issues

The following issues are fixed in AI-Scripts Release 6.0R5.0:

- 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 does not copy the user-events XML database to backup Routing Engines for processing. [PR 1292355]

AI-Scripts Release 6.0R4.0

Features

There are no new features in AI-Scripts Release 6.0R4.0:

Events

There are no new events in AI-Scripts Release 6.0R4.0:

Modified Events

There are no modified events in AI-Scripts Release 6.0R4.0.

Known Issues

There are no known issues in AI-Scripts Release 6.0R4.0.

Resolved Issues

The following issues are fixed in AI-Scripts Release 6.0R4.0:

- 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]

For more information about the issue and its resolution, see [TSB17049](#).

- 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]

AI-Scripts Release 6.0R3.0

Features

The following features are included in AI-Scripts Release 6.0R3.0:

- 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]
- 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. The maximum number of JMBs that can be processed simultaneously is 16. [PR 1227894]
- 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]

Events

The following is a new event included in AI-Scripts Release 6.0R3.0:

- AI-Scripts monitors unstructured **Major Alarm** messages from alarmd on MX960 devices. [PR 1212901]

Modified Events

There are no modified events in AI-Scripts Release 6.0R3.0.

Known Issues

There are no known issues in AI-Scripts Release 6.0R3.0.

Resolved Issues

The following issues are fixed in AI-Scripts Release 6.0R3.0:

- The **Master-events-struct.slax** file should be modified so that the core file collected for the TFTP_PD_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]
- The hourly clean up performed by AI-Scripts should delete internal files generated during JMB processing. [PR 1236609]
- 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 ais-param-set option should display the correct current setting of the PHDC Enabled flag on devices that do not support PHDC. [PR 1228991]

AI-Scripts Release 6.0R2.0

Features

The following features are included in AI-Scripts Release 6.0R2.0:

- AI-Scripts is enhanced to collect product health data from AFEB-based and TFEB-based MX Series devices—MX5, MX10, MX40, MX80, and MX104 [PR 1202309]
- AI-Scripts is enhanced so that different JMBs generated on a device for the same event are associated with the same incident ID created in Service Now for the event. [PR 1207128]
- AI-Scripts checks whether Junos Node Unifier (JNU)-related commands should be run on satellite devices when upgrading or reinstalling AI-Scripts on MX Series devices. [PR 1208065]
- AI-Scripts is enhanced to include the output of **show system license** in the *_esi_xml.txt attachment of a JMB. [PR 1208332]
- AI-Scripts is enhanced to include the node of an SRX cluster on which the JMB, including the product health data JMB, is generated. [PR 1213606]

Events

There are no new events included in AI-Scripts Release 6.0R2.0:

Modified Events

There are no modified events in AI-Scripts Release 6.0R2.0.

Known Issues

There are no known issues in AI-Scripts Release 6.0R2.0.

Resolved Issues

The following issues are fixed in AI-Scripts Release 6.0R2.0:

- The fpc-target string in the event database list of CLI commands are not being replaced with the correct hardware string. [PR 1206924]
- The version of the command file used to collect product health data should be included only in the JMB generated for product health data. [PR 1209835]

AI-Scripts Release 6.0R1.0

Features

The following features are included in AI-Scripts Release 6.0R1.0:

- The AI-Scripts package is released as a ***tar** file instead of a ***tgz** file. The package should be uploaded to Junos Space Service Now and Junos Space Service Now must be used to install AI-scripts on devices. Manual installation of AI-Scripts on devices is not supported.
- AI-Scripts is enhanced to allow users to set thresholds for percentage of disk used before warning and dampening generation of a JMB attachment. [PR 968797]
- AI-Scripts is enhanced to generate JMBs on JCS1200 devices. [PR 1103283]
- AI-Scripts is enhanced to execute the **show pfe statistics traffic** command for collecting product health data from SRX Series devices. [PR 1120556]
- AI-Scripts is enhanced to support Product Health Data Collection on all QFX Series devices. [PR 1143413]
- AI-Scripts is enhanced to execute the following additional commands on M Series, T Series, and MX Series devices for collecting product health data: [PR 1144167]
 - The following command is added to M10i and M7i devices:
 - **show pfe statistics error**
 - The following commands are added to M320 and T Series devices:
 - **show chassis fabric fpcs**
 - **show chassis fabric sibs**
 - **show chassis ethernet-switch**
 - **show pfe statistics error**
 - The following commands are added for the MX Series devices:
 - **show chassis fabric fpcs**
 - **show chassis ethernet-switch**
 - **show pfe statistics error**
 - The following commands are added for the M120 device:
 - **show pfe statistics error**
 - **show chassis fabric feb**
 - **show chassis fabric map**
 - **show chassis fabric plane-location**
 - **show chassis fabric summary**
 - **show chassis fpc-feb-connectivity**
 - **show chassis ethernet-switch**
 - The following command is added for the T1600 device:

- **show chassis fabric plane-location**

- AI-Scripts is enhanced to allow a user to define the day and time of a week for generating intelligence JMBs (iJMBs) on a device. [PR 1146303]
- AI-Scripts is enhanced to execute the **show krt queue** and **show krt state** commands every hour for collecting product health data on SRX Series devices. [PR 1147933]
- AI-Scripts is enhanced to generate JMBs on SRX300, SRX320, SRX320-POE, SRX340, and SRX345 devices. [PR 1151549]
- AI-Scripts is enhanced to dampen an event if a JMB is already in the process of being generated for the same event. [PR 1153993]
- AI-Scripts is modified to handle output of the **request pfe execute** command in a new format output by Junos OS Release 16.1 and later. [PR 1156055]
- AI-Scripts is enhanced to provide an option for collecting log archive files from all nodes of a virtual chassis. [PR 1162952]
- AI-Scripts is enhanced to collect the output of **show isis database** command for RPD_ISIS_OVERLOAD events. [PR 1167435]
- AI-Scripts is modified so that an iJMB does not collect output of the **show services application-identification application-system-cache** command to improve performance of device CPU. [PR 1173994]
- AI-Scripts is modified to include output of **ais-param-set event-list text** so that the list of events monitored is included in the ESI attachment of a JMB. [PR 1176311]
- AI-Scripts installer is modified so that uncommitted AI-Scripts configuration changes on a device can be committed after installing AI-Scripts on the device (applicable only for AI-Scripts Release 5.0R1 and later). [PR 1177313]
- AI-Scripts is modified to implement workaround for Junos 14.1 issue with **show version detail** RPC call from SLAX. [PR 1181933]
- AI-Scripts is modified so that the percentage of disk used can be obtained from the new format of **show system storage** output of Junos OS Release 16.1 and later which is different from the output of earlier Junos OS releases. [PR 1183620]
- AI-Scripts installer is modified so that the required permissions to run scripts are set for the **scripts** directory on SRX devices. [PR 1184016]
- AI-Scripts is modified so that the **shd** JMB attachment is generated by using the **show chassis hardware** command instead of **show chassis hardware node local** so that data from both nodes of an SRX cluster are available in the attachment. [PR 1186356]
- The regular expression for monitoring the CRC Link Error Detected event is modified so that AI-Scripts can detect variations in the log message for the event. [PR 1187077]
- AI-Scripts is enhanced to generate JMBs on EX2300 and EX3400 devices. [PR 1187085]
- AI-Scripts is modified to detect whether the **chown** utility can function normally on a device. If the utility does not function normally on a device, the utility is not installed while installing AI-Scripts on the device. [PR 1191094]

- AI-Scripts is modified to reload event policies to the eventd table before logging an error message when the **reload** command does not complete as expected. [PR 1191874]
- AI-Scripts is modified to echo syslog message to AIS_DATA_AVAILABLE for Service Now processing when AI-Scripts are installed and uninstalled from a device. [PR 1192540]
- AI-Scripts is enhanced to generate JMBs on SRX1500 devices. [PR 1032879]
- AI-Scripts is modified so that JMBs are not generated when a device is in maintenance mode. [PR 1115778]
- AI-Scripts is modified to include the **show task memory fragmentation** command on EX Series Switches and SRX Series Services Gateways for collecting product health data. [PR 1120559]
- AI-Scripts is enhanced to execute the **show chassis fabric sibs** command for collecting product health data. [PR 1122520]
- AI-Scripts is enhanced to execute the **show chassis fpc-feb-connectivity** command for collecting product health data. [PR 1122525]
- AI-Scripts should update the **jais-activate-scripts.slax** script to delete the commit configuration incorrectly added to the device by Service Now Release 15.1R1.0. [PR 1137975]
- AI-Scripts is modified to collect **show isis database** data for RPD_ISIS_OVERLOAD events. [PR 1167435]

Events

The following events are included in AI-Scripts Release 6.0R1.0:

- An event script is added to AI-Script to generate a JMB when **SMQ Chip:SMQCHIP(0) Fabric RED drops** message is logged on T Series devices. [PR 1052922]
- An event script is added to AI-Script to generate a JMB when **CMALARM: Error (code: 1219, type:Major)** message is logged on a device running Junos OS. [PR 1094795]
- An event script is added to AI-Scripts to generate a JMB when the **MQCHIP(0): Possible Remote PFE fault detected, err_cell total/rate** system message is logged on MX Series devices. [PR 1130523]
- An event script is added to AI-Scripts to generate a JMB when the **XMCHIP(1): FI: Cell underflow at the state stage** message is logged on a device running Junos OS. [PR 1142278]
- An event script is added to AI-Scripts to generate a JMB when the **LUCHIP(1) RMC 0 Uncorrectable ECC syslog messages** message is logged on a device running Junos OS. [PR 1142283]

- An event script is added to AI-Scripts to generate a JMB when the **CHIP_STREAM_BLOCKED: ICHIP (0) one or more stream blocked detected** message is logged on a device running Junos OS. [PR 1157068]
- An event script is added to AI-Scripts to generate a JMB when the **CHASSISD_IFDEV_GET_BY_NAME_FAIL: Unable to retrieve information for interface device: Cannot allocate memory** message is logged on a device running Junos OS. [PR 1053669]

Modified Events

The following events are modified in AI-Scripts Release 6.0R1.0.

- The event script for detecting LCHIP LISF errors is modified to collect CLI outputs as listed in [KB 19004](#). [PR 1100036]
- The **problem-event-SFPlowpower.slax** script is updated to be triggered by low power supply to a card instead of the device. [PR 1135764]

Known Issues

There are no known issues in AI-Scripts Release 6.0R1.0.

Resolved Issues

This section lists the issues fixed in AI-Scripts Release 6.0R1.0:

- AI-Scripts changes needed to create user-defined event JMBs. [PR 1157055]
- For a QFX5100 Virtual Chassis configuration, the log files are not included in the JMB. [PR 1162357]
- The multiple invocation test must be run on the **ais_jmb_chm.sh** shell script immediately after the script is called. [PR 1169920]
- Event activation fails on the master Routing Engine if BIOS is configured to be enabled on newly discovered devices in Service Now. [PR 1160270]
- AI-Scripts Health Report JMB contains an unknown tag in the filename when an alternative Routing Engine is not reachable. [PR 1162062]
- JMB generated on a QFX5100 Virtual Chassis does not include log files. [PR 1162357]
- The **ais_jmb_chm.sh** background shell process is in an endless loop and not completing as expected. [PR 1170982]
- On an EX4300 device, uninstallation of AI-Scripts fails when background shell script is not running. [PR 1171346]
- AI-Scripts manifest should provide the correct path to **ESWD_ST_CTL_ERROR_IN_EFFECT.slax** file. [PR 1190070]
- AI-SCRIPTS MISMATCH ERROR is logged even if AI-Scripts are installed on the backup Routing Engine. [PR 1191971]
- AI-Scripts must handle unprocessed event RSI files on completion of background process. [PR 1192267]

AI-Scripts Compatibility Matrix and Issues

- [Junos Space Service Now and AI-Scripts Compatibility Matrix on page 12](#)
- [Junos OS PRs That Affect AI-Scripts on page 12](#)
- [Platforms Supported by AI-Scripts on page 12](#)

Junos Space Service Now and AI-Scripts Compatibility Matrix

AI-Scripts Install Package 6.0R1.0 and later are compatible with Junos Space Service Now 14.1R1.0 and Junos OS 11.4R1.0 and later. However, new features introduced in 6.0R1.0 and later are available only when AI-Scripts Install Package 6.0R1 is used with Junos Space Service Now 15.1R1.0 and later.

For information about compatibility of Service Now and AI-Scripts, refer to the full compatibility matrix at

<http://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

<http://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 6.0R4.0, refer to [Devices Supported by Service Automation](#).

Junos OS Documentation and Release Notes

For a list of related Junos OS documentation, see <http://www.juniper.net/techpubs/>.

If the information in the latest release notes differs from the information in the documentation, follow the *Junos OS Release Notes*.

To obtain the most current version of all Juniper Networks® technical documentation, see the product documentation page on the Juniper Networks website at <http://www.juniper.net/techpubs/>.

Juniper Networks supports a technical book program to publish books by Juniper Networks engineers and subject matter experts with book publishers around the world. These books go beyond the technical documentation to explore the nuances of network architecture, deployment, and administration using the Junos operating system (Junos OS) and Juniper Networks devices. In addition, the Juniper Networks Technical Library, published in conjunction with O'Reilly Media, explores improving network security, reliability, and availability using Junos OS configuration techniques. All the books are for sale at technical bookstores and book outlets around the world. The current list can be viewed at <http://www.juniper.net/books>.

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 JNASC support contract, or are covered under warranty, and need postsales technical support, you can access our tools and resources online or open a case with JTAC.

- JTAC policies—For a complete understanding of our JTAC procedures and policies, review the JTAC User Guide located at <http://www.juniper.net/us/en/local/pdf/resource-guides/7100059-en.pdf>.
- Product warranties—For product warranty information, visit <http://www.juniper.net/support/warranty/>.
- JTAC Hours of Operation —The JTAC centers have resources available 24 hours a day, 7 days a week, 365 days a year.

Self-Help Online Tools and Resources

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:

- Find CSC offerings: <http://www.juniper.net/customers/support/>
- Search for known bugs: <http://www2.juniper.net/kb/>
- Find product documentation: <http://www.juniper.net/techpubs/>
- Find solutions and answer questions using our Knowledge Base: <http://kb.juniper.net/>
- Download the latest versions of software and review release notes: <http://www.juniper.net/customers/csc/software/>
- Search technical bulletins for relevant hardware and software notifications: <http://kb.juniper.net/InfoCenter/>
- Join and participate in the Juniper Networks Community Forum: <http://www.juniper.net/company/communities/>
- Open a case online in the CSC Case Management tool: <http://www.juniper.net/cm/>

To verify service entitlement by product serial number, use our Serial Number Entitlement (SNE) tool located at <https://tools.juniper.net/SerialNumberEntitlementSearch/>.

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 <http://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, visit us at <http://www.juniper.net/support/requesting-support.html>.

If you are reporting a hardware or software problem, issue the following command from the CLI before contacting support:

```
user@host> request support information | save filename
```

To provide a core file to Juniper Networks for analysis, compress the file with the **gzip** utility, rename the file to include your company name, and copy it to **ftp.juniper.net/pub/incoming**. Then send the filename, along with software version information (the output of the **show version** command) and the configuration, to **support@juniper.net**. For documentation issues, fill out the bug report form located at <https://www.juniper.net/cgi-bin/docbugreport/>.

Revision History

9 April, 2018—AI-Scripts 6.0R5.0 release

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