Release Notes: Junos® PyEZ Release 1.0

Release 1.0
29 September 2014

Junos PyEZ can be used with the following Juniper Networks® hardware: ACX Series, EX Series, M Series, MX Series, PTX Series, QFabric, QFX Series, SRX Series, and T Series.

These release notes accompany Juniper Networks Junos PyEZ Release 1.0. They describe new and changed features, limitations, and known and resolved problems in the software.

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Contents

New and Changed Features

This section describes the new features in Junos PyEZ Release 1.0.

- **Junos PyEZ jnpr.junos package**—Junos PyEZ is a microframework for Python that enables you to remotely manage and automate devices running Junos OS. Junos PyEZ enables you to perform operational and configuration tasks on devices running Junos OS and is designed to provide the capabilities that a user would have on the Junos OS command-line interface (CLI) in an environment built for automation tasks. Junos PyEZ consists of the **jnpr.junos** package, which contains modules that handle device connectivity and provide operational and configuration utilities.
- **Junos PyEZ modules**—The following modules are included in Junos PyEZ Release 1.0:
  - **jnpr.junos.device**—Defines the **Device** class, which represents the device running Junos OS, and provides methods for connecting to and retrieving facts from the device.
  - **jnpr.junos.exception**—Defines exceptions encountered when accessing, configuring, and managing devices running Junos OS.
  - **jnpr.junos.factory**—Contains code pertaining to Tables and Views, including the **loadyaml()** method, which is used to load custom Tables and Views.
  - **jnpr.junos.op**—Includes Tables and Views that can be used to filter output for common operational commands.
  - **jnpr.junos.utils**—Includes configuration utilities, file system utilities, shell utilities, software installation utilities, and secure copy utilities.

Installation

This section contains information about installing Junos PyEZ on the configuration management server.

- **Python version**—Junos PyEZ has been tested with Python 2.6 and 2.7. Junos PyEZ is not supported in Python 3.x environments. This restriction is due to dependencies on other Python modules, such as ncclient, that do not support Python 3.x.
- **Installation from PyPI**—Junos PyEZ can be installed directly from the PyPI repository by typing **pip install junos-eznc** at the system command line. The pip installation process also installs any related dependent Python modules and libraries. Depending on your specific system, you might need to have the prerequisite build tools installed as well. See Installing Junos PyEZ.
- **Supported devices**—Junos PyEZ can be used with any device running Junos OS, because they all support the NETCONF and Junos XML APIs.
- **Junos OS Releases**—To take full advantage of the Junos PyEZ features, we recommend using Junos PyEZ with devices running Junos OS Release 11.4 or later release. See"Known Behavior" on page 4 for additional details.

Known Behavior

This section contains the known behavior, system maximums, and limitations in software in Junos PyEZ Release 1.0.

Junos PyEZ API

- **Device.timeout**—Junos PyEZ maintains a timeout mechanism for each executed command and response pair. The default timeout is 30 seconds. You can override the default by setting the **Device.timeout** property. If a timeout does occur, a timeout exception is raised.
- **cli() method**—The **Device** class **cli()** method is intended to be used in Python interactive mode and as a means to facilitate the interactive experience as needed. It should not be used for "screen-scraping" the CLI output for automation purposes.
- **load() method**—The **Config** class **load()** method should only use the Junos OS **set** command format to configure devices running Junos OS Release 11.4 and later releases. The ability to load configuration changes using Junos OS **set** commands is not supported in earlier releases.
- **Command execution is synchronous and blocking**—The underlying NETCONF transport library is the ncclient module. If your application requires asynchronous or nonblocking execution logic, you should investigate other libraries to wrap around the PyEZ framework such as Twisted or Python Threads.

Managing Devices

- **Connecting to devices with multiple Routing Engines**—For devices with multiple Routing Engines, you can only connect to the primary Routing Engine. If you attempt to connect to the backup Routing Engine, the **Device.open()** method fails with an exception.
- **Disconnect due to inactivity**—Some devices running Junos OS might disconnect the NETCONF session due to inactivity. This behavior has been observed on SRX Series Services Gateways. In such cases, an exception is raised upon execution of the next command. The Junos PyEZ library does not reconnect to the device in these inactivity scenarios. However, you can call the **Device open()** method to reconnect.
- **Software installation**—The software installation process provided by the **jnpr.junos.utils.sw** module is currently designed to support simple deployment scenarios. The expected use case for this software is deploying new equipment.

  The following scenarios are supported:

  - Standalone devices with a single Routing Engine
  - Standalone devices equipped with dual Routing Engines

- EX Series Virtual Chassis in non-mixed-mode configurations (all devices use the same Junos OS software package)
- Deployment configurations that do not have any form of "in-service" features enabled, such as unified ISSU and NSSU

The following scenarios are known *not* to be supported:

- EX Series Virtual Chassis in mixed-mode configurations (devices use different Junos OS software packages)
- MX Series Virtual Chassis
- SRX Series chassis clusters
- Virtual Chassis Fabric (VCF)
- Deployment configurations that have some form of "in-service" features enabled, such as unified ISSU or NSSU

Known Issues

There are no outstanding issues with the software for Junos PyEZ Release 1.0.

Documentation and 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/.

If the information in the latest release notes differs from the information in the documentation, follow the product Release Notes.

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- E-mail—Send your comments to techpubs-comments@juniper.net. Include the document or topic name, URL or page number, and software version (if applicable).

Requesting Technical Support

The Juniper Networks Technical Assistance Center (JTAC) does *not* provide support for the Junos PyEZ software.

You can obtain support for Junos PyEZ through the Junos PyEZ Google Groups forum at http://groups.google.com/group/junos-python-ez .

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: https://tools.juniper.net/SerialNumberEntitlementSearch/

Revision History

29 September 2014—Revision 1, Junos PyEZ Release 1.0