

Junos Space Cross Provisioning Platform

Product Overview

Junos Space Cross Provisioning Platform (CPP) is a Junos Space application that acts like a “manager of managers” to provision services across multivendor devices. CPP facilitates provisioning of E-LINE, L2/L3 VPN, and virtual private LAN services (VPLS) between Juniper and third-party devices. Its framework can also be extended to support other vendors’ products through incremental research and development efforts.

Product Description

Traditional IT platforms such as operations/business support systems (OSS/BSS) are typically customized to meet a service provider’s specific service provisioning needs. These platforms and IT projects require huge upfront CapEx investments. Implementing a new service, or tweaking a small feature in an existing service profile, is an expensive endeavor that can take more than a year to accomplish in a typical service provider environment; by the time it is implemented, the service is often no longer relevant.

As a Juniper Networks® Junos® Space application, Junos Space Cross Provisioning Platform (CPP) provides a “one-size-fits-all” solution that breaks the existing IT model by enabling service providers to quickly design and deploy new services in a multivendor network with minimal financial overhead.

Service providers who need to provision services in a multivendor environment face multiple challenges, including:

- Tying together element/network management systems (EMS/NMS) from different vendors and orchestrating services across a multivendor network
- Quickly reacting to customer needs to deliver new services
- Troubleshooting and maintaining services in a multivendor network

Architecture and Key Components

Junos Space CPP uses a script-based approach to service provisioning through the Flex Services framework, which facilitates flexible service creation and design without requiring a complicated software development cycle. Complex configurations such as quality of service (QoS), firewall policies, and business logic can be accommodated easily through the use of predefined scripts that allow network operators to:

- Create a data model for a new service
- Create a user interface to define new services
- Define business logic for deploying the new service on Juniper and non-Juniper devices
- Implement complex workflows that provide orchestration and service chaining functionality

Junos Space CPP supports the following key functionality:

- Common UI for managing services provisioned across only Juniper devices, only non-Juniper devices, or a combination of both Juniper and non-Juniper devices
- Multivendor service provisioning, including:
 - Service resource management (route descriptor, route targets, etc.)
 - Device and service discovery
 - Templates for a variety of services
 - Managed carrier Ethernet services (E-LINE/VLL, E-LAN, L3VPN, and IPTV L3VPN)

- Service modification
- Service migration (for instance, moving a service from port x to port y)
- Service- and device-level monitoring and troubleshooting
- Service audits
- Support for provisioning more than 500,000 services

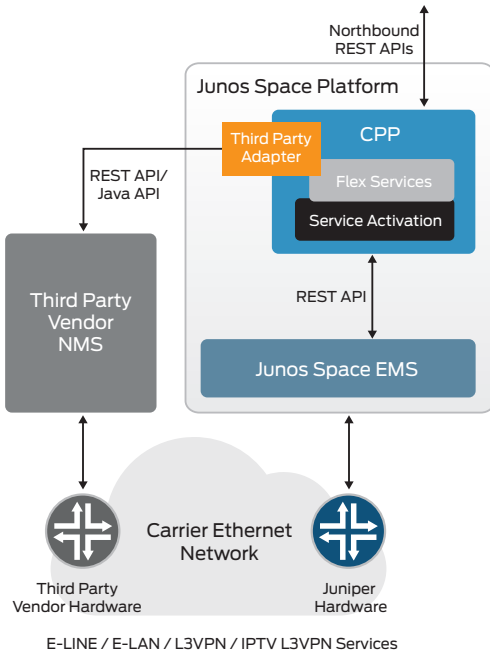


Figure 1. Junos Space Cross Provisioning Platform overview

Device and Service Life Cycle Management Through Junos Space CPP

The typical life cycle of Juniper and third-party devices and services consists of four administrative tasks:

- **Discovery:** Before a network operator can provision services, the targeted devices must be discovered. While Junos Space CPP natively discovers Juniper devices through the Junos Space infrastructure, it uses a third-party adapter to make appropriate calls into third-party network management systems to retrieve device inventory information.
- **Provisioning:** Junos Space CPP provides the functionality required to apply default configurations to Juniper devices depending on their roles, and it includes a flexible framework for provisioning services across multivendor devices. The third-party adaptor invokes provisioning services using the northbound interface (NBI) of the third-party device's NMS, which also pushes the required configuration to Juniper devices through the Junos Space Service Activation infrastructure.
- **Modification:** Junos Space CPP allows service operators to easily modify already deployed services. With Juniper devices, this can be done for device and service configurations. With third-party devices, modifications can be applied to existing service configurations. In addition, CPP also allows modifications to be made against a set of services or a set of devices. Alternatively, operators can decommission individual or sets of services deployed on third-party devices. Modifications can include migrating services from one port to another or across different chassis.

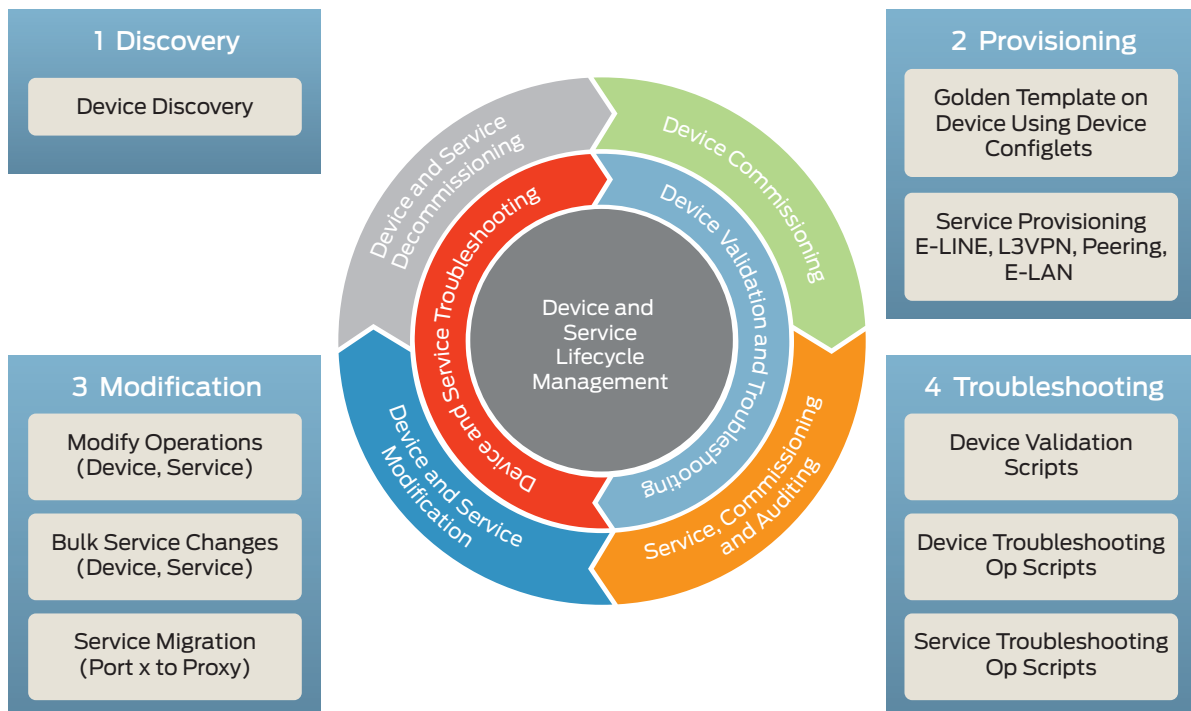


Figure 2. Service life cycle management

- **Troubleshooting:** Junos Space CPP provides the ability to troubleshoot Juniper devices through the use of operational scripts. Troubleshooting provides granular, service-specific details and enables service providers to quickly pinpoint network problems. Periodic reports can also be generated that provide important service-related statistics.

Multivendor Provisioning—Currently Supported Functionality

In order to provision end-to-end services between Juniper and Alcatel-Lucent devices, Junos Space CPP invokes service provisioning templates in Junos Space and Alcatel-Lucent’s 5620 SAM server for configuring the Juniper and Alcatel-Lucent devices, respectively. Communication with the 5620 SAM is via SOAP API calls.

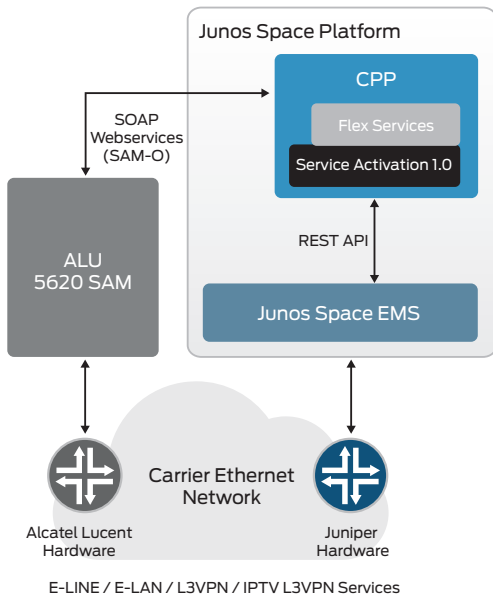


Figure 3. CPP integration with Alcatel-Lucent 5620 SAM

Features and Benefits

Junos Space CPP offers the following benefits to service providers:

- Design and manage services spread across Juniper and other third-party vendor devices through a single, unified management console
- Rapidly develop and deploy new revenue-generating services
- Lower the OpEx required to introduce new services or make changes to existing services

Product Options

A typical Junos Space CPP installation requires a license for base software functionality. Additional optional licenses are required for the number and types of ports being managed by the application. For customers who wish to automate the services provisioning process, a REST API library option is also available for purchase.

Specifications

Junos Space Cross Provisioning Platform

Client browser support

- Mozilla Firefox 26
- Chrome 26
- Internet Explorer 8.0 and 9.0

VMware version

- Junos Space works with VMware vSphere 4.0 and above.

Junos release support

- Junos Space CPP runs on Juniper Networks devices running Junos OS 10.3 and later releases.

Junos Space platform

- Junos Space 13.1, 14.1 or later

Ordering Information

Cross Provisioning Platform runs on Junos Space and requires Junos Space Network Management Platform (JS-PLATFORM) to be installed.

Model Number	Description
CPP-BASE	Includes base CPP functionality, a standard set of templates for E-LINE, VPLS, and L3VPN services
CPP-API	REST API option—must have CPP-BASE in order to use this
CPP-1G	Per-port license to manage services on a 1GbE port
CPP-10G	Per-port license to manage services on a 10GbE port
CPP-40G	Per-port license to manage services on a 40GbE port
CPP-100G	Per-port license to manage services on a 100GbE port

About Juniper Networks

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