Junos Space SDK

Product Overview

Application development has generally meant long, expensive development cycles, limited cross-application development leverage, and a network engineering-centric approach. This has forced developers to focus on costs, cycle times, and foundational code rather than innovative applications.

Juniper Networks Junos Space SDK is an open, network-centric application development toolkit explicitly designed to enable developers to use the information embedded in the network to create unique, differentiated applications quickly, easily, and economically, providing endless possibilities for network intelligence, such as:

- Real-time policy management
- Energy usage and tracking
- Custom workflows
- Network insight for business intelligence
- Correlation of user subscribed services
- Policy and QoS management

Product Description

Juniper Networks® Junos® Space SDK is the industry's most complete developer toolkit specifically designed for easy creation of network-aware applications. Junos Space SDK enables developers to fully leverage network intelligence and services from the Junos Space Network Management Platform to develop differentiated applications. Building sophisticated workflow engines, core business logic, streamlined interfaces for operational tools or a new fully integrated Junos Space application is all possible with the Junos Space SDK.

Junos Space SDK is a developer toolkit that is part of Junos Space, a comprehensive network management solution that simplifies management of Juniper's switching, routing, and security devices. With Junos Space, you can simplify and automate the network, improve network agility, and deliver new services quickly all from a single console. Junos Space is composed of the following three software elements:

1. **Junos Space Network Management Platform**—Provides comprehensive FCAPS and element management of Juniper devices which improves operator efficiencies, providing a programmable interface and exposable APIs that enable the development and integration of 3rd party applications.

2. **Junos Space Management Applications**—Plug-n-play, domain-specific applications to help you provision new services and optimize workflow tasks across thousands of Juniper devices

3. **Junos Space SDK (software development kit)**—A programmable network solution that enables you to leverage the connections and intelligence embedded in the network to create customized management solutions for your specific needs

Architecture and Key Components

Junos Space SDK leverages well-known technologies and constructs to create an extremely flexible software development environment.

Applications— Language independent web services are used to create or enhance applications with insight from Junos Space.

Web Services APIs—This abstraction layer presents harmonized access to the underlying capabilities of Junos Space through HTTP interfaces.
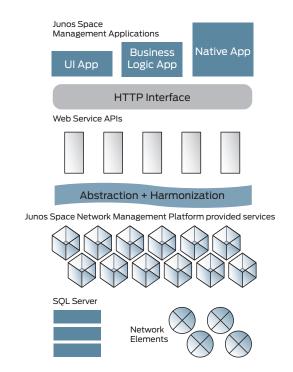
Your ideas. Connected.™

Info Service—A dedicated service for use in discovering available APIs provided by the platform and hosted applications.

Infrastructure Services—Access the platform's fundamental capabilities for use in creating applications that leverage network services.

Network and Device Services—These services provide a model for interacting with devices that abstracts away the specifics of the device connection and communication protocols.

Database Access—Applications have abstracted access to the underlying Junos Space database.

Building an Application

The Junos Space SDK offers developers flexible options for creating applications. These include:

Data Applications – Build applications that use and combine data, insight or functionality from the Junos Space Network Management Platform, its Management Applications or external sources to create new services. It's a fast and easy way to integrate open APIs and data sources to produce enriched results that were not necessarily the original reason for producing the raw source data.

Workflows—Create new application logic to add capabilities to Junos Space Network Management Platform, while at the same time expressing through APIs for use in other Space-hosted or external applications. It's a great way to collect insight, process and make it available to others.

Rich Applications—Design and implement fully native Junos Space Management applications that add capabilities to the platform, create new APIs for use by others and integrate open APIs and data sources to further enrich their capabilities and experience. It's a robust way to own the experience, gather insight and take action.

Integration—Access insight and take actions from external applications and services—Junos Space web services allow you to access the capabilities of the platform through HTTP to further enrich the capabilities and experience of your stand-alone or externally hosted applications. It's a language independent method to access Junos Space Network Management Platform and to make your applications and services network aware.

Features and Benefits

Features	Benefits
Junos Space plug-in for wizard-based Eclipse IDE	Simplified application development of Junos Space Management Applications • Rapid creation of the primary Junos Space Management Application types • Increased efficiency with custom features including REST Explorer, REST wizard, grouping views, auto completion and syntax check
Ext designer, Custom UI designer	Rapid user interface prototyping • Easy, fast collaboration with development team members • Quick, easy integration of data stores into your interface from any data source (JSON, XML, or custom) • Building rich Internet applications with industry standard JavaScript library • Ease of design and configuration with drag-and-drop designer components
RESTful Web services	• Reusable across popular platforms • Easily consumable services using basic XML rather than SOAP • Support for all typical CRUD (create, update, and delete) operations through HTTP methods
Simulators, virtual machine included with the developer environment	Fast, easy application performance and scale optimization by simulating Juniper runtime environment • Reduced test/staging costs with a fully functional instance of the Junos Space Network Management Platform for test/deployment of Junos Space SDK-based applications • Ability to test applications against virtual Junos OS with the device and element simulators

Juniper Networks Services and Support

Juniper Networks is the leader in performance-enabling services that are designed to accelerate, extend, and optimize your high-performance network. Our services allow you to maximize operational efficiency while reducing costs and minimizing risk, achieving a faster time to value for your network. Juniper Networks ensures operational excellence by optimizing the network to maintain required levels of performance, reliability, and availability. For more details, please visit www.juniper.net/us/en/products-services.

Program Information

For more information on the Junos Space SDK offering, please visit www.juniper.net/us/en/products-services/software/junos-platform/junos-space/.

About Juniper Networks

Juniper Networks is in the business of network innovation. From devices to data centers, from consumers to cloud providers, Juniper Networks delivers the software, silicon and systems that transform the experience and economics of networking. The company serves customers and partners worldwide. Additional information can be found at www.juniper.net.

Corporate and Sales Headquarters

Juniper Networks, Inc.

1133 Innovation Way

Sunnyvale, CA 94089 USA

Phone: 888.JUNIPER (888.586.4737)

or +1.408.745.2000

Fax: +1.408.745.2100

www.juniper.net

APAC and EMEA Headquarters

Juniper Networks International B.V.

Boeing Avenue 240

1119 PZ Schiphol-Rijk

Amsterdam, The Netherlands

Phone: +31.0.207.125.700

Fax: +31.0.207.125.701

1000330-003-EN Oct 2014

JUNIPER
NETWORKS