

JUNOS SPACE STANDARD EDITION

Product Overview

Juniper Networks Junos Space Standard Edition consists of a unified application solution set for network security, switching, and service automation. At the core of the package is Junos Space, an open, comprehensive software platform that allows you to develop and deploy simple, smart network applications for collaboration, productivity, and network infrastructure and operations management. Space includes a scalable runtime environment with multi-tenant, hot-pluggable network application support, a complete rapid network application development framework, and a Web 2.0 user interface—at modular, pay-per-use pricing. Applications include Juniper best practice work flows and predefined templates.

Product Description

Your network is both a strategic and a demanding corporate asset. User demand for smart devices, social media applications, unrelenting expectations of highly secure and available applications, and the growing use of clouds make the network increasingly complex to manage and secure.

Juniper Networks® Junos® Space Standard Edition offers a prepackaged set of applications to help address these challenges. The bundled applications are hosted on the Junos Space platform, a network application platform that is open, secure, and scalable. Space allows customers, partners, and developers to build and deploy simple, smart applications to help them optimize network infrastructure, scale services, and open the network to new business opportunities. Junos Space Standard Edition includes applications for automating security service provisioning, campus and data center deployments, and case and incident management. The applications are designed to work collaboratively and share a point-and-click interface and navigational style, offer the same persona-specific views, include Juniper best practice workflows, and leverage core services such as job scheduling, clustering, role-based access control, and security. They also share common functions like network device discovery, configuration, and device inventory management, as well as a multi-tenant, plug-and-play application environment that enables fast start-up and in-service device upgrades. Junos Space Standard Edition helps customers simplify operations, increase throughput, and improve operator productivity.

Junos Space Network Application Platform

The Junos Space platform is based on service-oriented architecture (SOA) and consists of multilayered network abstractions and workflows that allow users to automate network operations and increase operator efficiency. It includes element management functions which provide total management of Juniper's network security and switching infrastructure when used in conjunction with the bundled applications in the suite.

Junos Space has been architected to be an open, pluggable application platform that uses industry-standard technologies to achieve massive scale and resilience that are transparent to applications. The design objective is to enable applications that are lightweight and can be separately managed to maximize efficiency and performance.

Junos Space applications manage their own data model, and interactions between applications are via public APIs. Junos Space enables programmability at the network application layer, and any application developed and hosted on the Junos Space platform can be upgraded independently.

- Ability to view and select a Juniper best practice for switch and switch port configurations for branch, campus, and data center deployments
- Bulk application and validation of best practice configurations for selected switches across the enterprise network
- Best practice customization
- Standards-based network and endpoint tracking, and location-based topology rendering
- End system management, allowing diverse end devices to be quickly connected to the campus or data center network
- Switch port management, allowing complex switch profiles to be quickly, easily, and accurately applied across an entire network
- A task-oriented paradigm and persona-based workflows to simplify operations
- A solution that makes it as easy to deploy an entire enterprise as it is a single switch

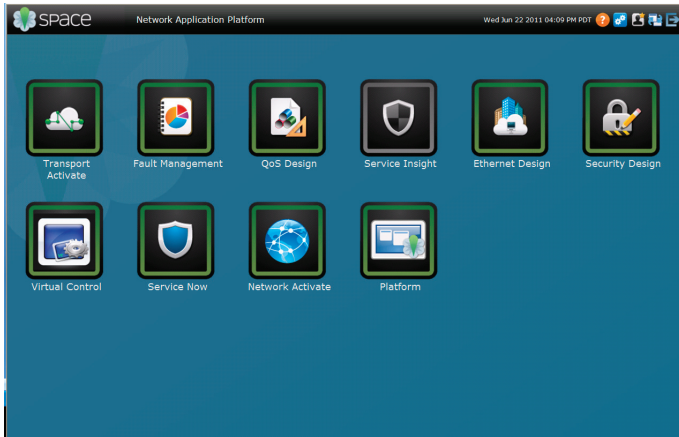


Figure 1: Junos Space user administration

Junos Space Ethernet Design

Ethernet Design is a state-of-the-art, scalable enterprise solution designed to automate the configuration, visualization, monitoring, and administration of large distributed switch networks. Ethernet Design gives you the tools you need to quickly deploy the entire enterprise infrastructure, including headquarters, data center, campus, branch offices, and remote users, making your network highly responsive to the needs of applications and users.

Key features and benefits include:

- An intuitive, web-based, point-and-click interface for rapid deployment of switching networks
- Total management of the switching network, including comprehensive inventory management, full configuration of devices and interfaces, automated management and deployment of software images, and Junoscript management

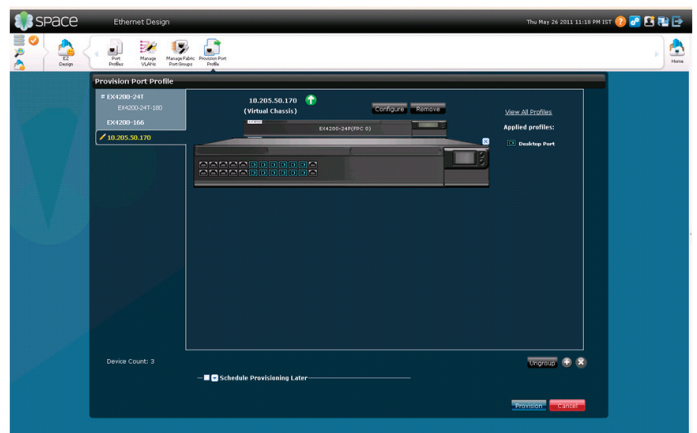


Figure 2: A scalable workflow to group devices and apply Juniper best practice configurations

Table 1: Ethernet Design Features and Benefits

FEATURES	BENEFITS
Single design workspace for switching and routing technologies	• Design replication across multiple network elements for consistent management of switch/router infrastructure to maximize operational efficiency
Integrated solution for end-to-end campus and data center network automation	• Intelligent automation of large campus and data center networks for resource optimization • Reduced operational cost and complexity for rapid deployment • End system management and switch port management for increased user responsiveness
Visualization and customization of Juniper best practice switch and switch port configurations	• Ability to view and customize port-related configuration for ports with desktop, desktop/phone, server, or wireless access points that are connected to it
Device configuration management	• Supports rapid campus and data center network deployment through bulk configuration and provisioning of port profiles, and rapid VLAN/switch port associations • Enables operators to create and apply port profiles • Allows operators to create or extend VLAN switches • Reduces operational complexity through network topology groupings by subnet/location

Table 1: Ethernet Design Features and Benefits (continued)

FEATURES	BENEFITS
Rapid and comprehensive switch, endpoint, and Layer 2 device connectivity discovery	<ul style="list-style-type: none"> • OpEx reduction through accurate identification and updating of switch infrastructure • Sophisticated topology visualization that includes link and device status display based on SNMP polling • Operator flexibility and granularity through visualization control options that include zoom in/out, show status, search options • Dynamic asset inventory for optimal resource utilization
Automation schemes and best practice templates	<ul style="list-style-type: none"> • Comprehensive port profile configurations predefined by port type, security settings, class-of-service (CoS) settings, and Spanning Tree Protocol (STP) settings to enable rapid and accurate deployments
Juniper best practice bulk application	<ul style="list-style-type: none"> • Apply Juniper best practice configuration at scale to hundreds of switches in a single workflow • Use chassis view to select ports on either a single device or a group of switches, and apply port configuration in a few clicks • Reduce time and errors in deploying port and switch configurations
Visualization of end hosts connected to switch ports	<ul style="list-style-type: none"> • Validation of port profile application by being able to view the media access control (MAC) and IP address of all end hosts connected to the switch ports
Views of available spare ports in switches	<ul style="list-style-type: none"> • More efficient capacity planning and asset management
Web 2.0 graphical user interface	<ul style="list-style-type: none"> • Persona-based, intuitive workflows, real-time network status, and statistical dashboard view to increase operator productivity
Features to be included in future releases of Ethernet Design	<ul style="list-style-type: none"> • Reduced time to switch deployment through workflows that create L2 (VLAN, STP) and general settings • Identification of L2 configuration discrepancies

Table 2: Juniper Predefined Port Profiles

PORT PROFILES	PORT TYPE	SECURITY SETTINGS	COS SETTINGS	STP SETTINGS
Desktop only	Access	<ul style="list-style-type: none"> • MAC limit: 1 • Address Resolution Protocol (ARP) inspection • Dynamic Host Configuration Protocol (DHCP) snooping • Drop traffic on exceeding MAC limit 	No	<ul style="list-style-type: none"> • Rapid Spanning Tree Protocol (RSTP) edge • Root guard • Bridge protocol data unit (BPDU) guard
Desktop and phone	Access	<ul style="list-style-type: none"> • Mac limit: 2 • ARP inspection • DHCP snooping • Drop traffic on exceeding MAC limit 	Yes	<ul style="list-style-type: none"> • RSTP edge • Root guard • BPDU guard
Server	Trunk	None	Yes	<ul style="list-style-type: none"> • RSTP edge • Root guard • BPDU guard
Wireless access point	Access	None	No	<ul style="list-style-type: none"> • RSTP edge • Root guard • BPDU guard
Switch uplink	Trunk	<ul style="list-style-type: none"> • ARP inspection • DHCP snooping 	Yes	<ul style="list-style-type: none"> • BPDU timeout action enabled • Link discovery active
Switch downlink	Trunk	<ul style="list-style-type: none"> • ARP inspection • DHCP snooping 	Yes	<ul style="list-style-type: none"> • Root guard active • Link discovery active

Table 3: Port Profile Customization Options

CUSTOMIZABLE OPTIONS		
PORT PROFILES	COS SETTINGS	ETHERNET SWITCHING OPTIONS
Desktop only	N/A	✓
Desktop and phone	✓	✓
Server	✓	✓
Switch uplink	✓	N/A
Switch downlink	✓	N/A
Wireless access point	N/A	N/A

Junos Space Security Design

Security Design is a powerful, enterprise solution designed to automate the visualization, configuration, and deployment of security architecture across a multi-domain network. It offers unique functionality to help security operators move from a purely device-centric approach to one that allows them to focus on policy lifecycle management and improve their network-wide security posture without increasing complexity.

Key features and benefits include:

- Fast and easy enforcement of security state across the end-to-end network
- Quick, easy translation of business policies into network configuration with minimal manual intervention
- Rapid deployment of thousands of devices with minimal user intervention and truck rolls
- Setup of thousands of IPsec VPNs in minutes rather than days
- Easy point-and-click interface to enable security architects to design, validate, and deploy security policies consistently across a distributed network
- Patent pending technology called security domains to allow security restrictions to be applied to distributed network resources, reducing configuration errors
- Policy abstraction to enable users to simply drag and drop a policy onto security devices
- Topology view of the network for fully automated visualization and configuration of security devices, so that users can easily create and manage network objects for a targeted network domain

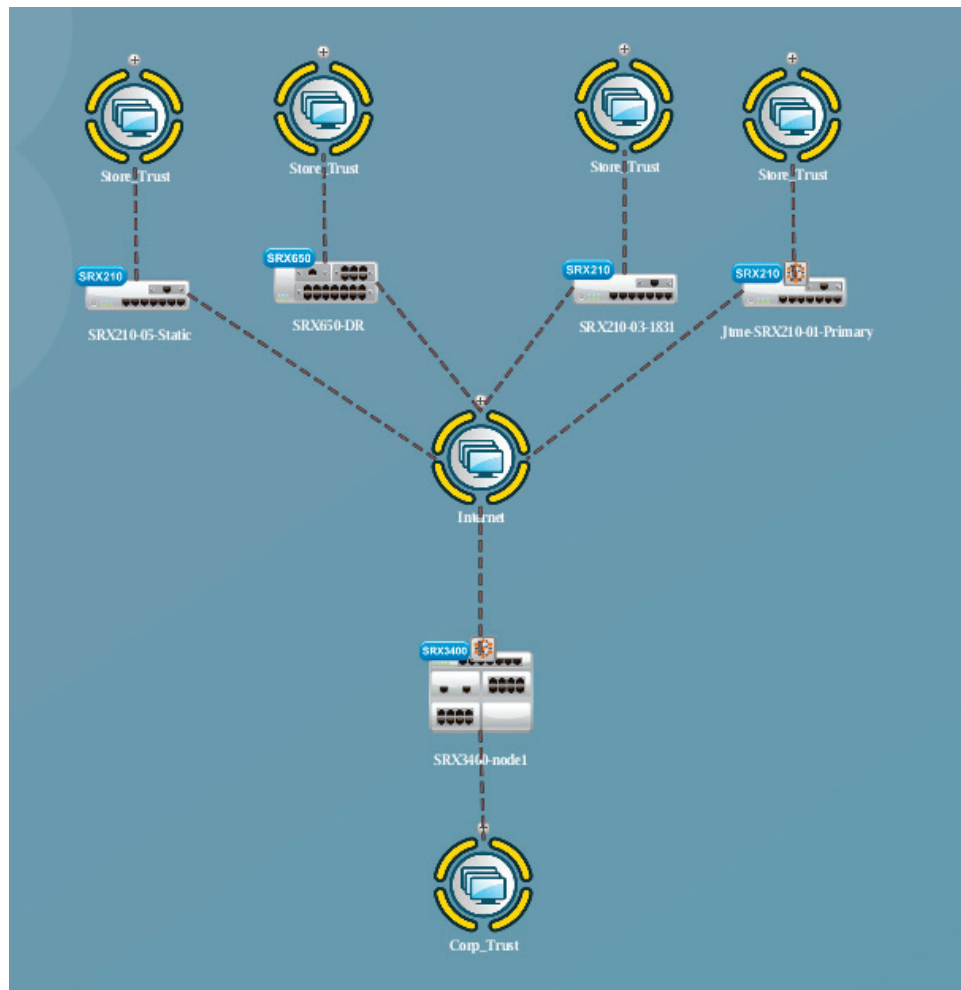


Figure 3: Topological Domain—Allows users to consolidate their topology into a logical domain view

Table 4: Security Design Features and Benefits

FEATURES	BENEFITS
Web-based interface	<ul style="list-style-type: none"> Provides a simple to use but sophisticated browser interface with familiar design tools. Users can focus on their specific tasks, better apply their knowledge, and interact within a familiar environment. A consistent interface among applications, whether it is a Juniper or a third-party application, lets users accomplish tasks with greater productivity.
Granular device configuration	<ul style="list-style-type: none"> Anywhere in the workflow, each object provides a rich set of property information. In-depth property information helps the architect make accurate design decisions.
Device-level policies	<ul style="list-style-type: none"> Granular mapping of business policies to device-level security configurations supports business objectives without compromising security.
Security sub-domains and policy lifecycle management	<ul style="list-style-type: none"> Provides orchestration of policy design, configuration, and granular visibility of policies. Leveraging policy abstraction, operators are provided with efficient ways to optimize policies, clean up unused rules, and design and enforce policy compliance mandates when handling thousands of devices. Policy abstraction benefits include: <ul style="list-style-type: none"> Elimination rule-by-rule policy definitions that promote accuracy and simplicity. Simplified, fast policy management of protected network resources Granular control of security policies. Sub-domain policy creation built on a parent-child relationship, eliminating duplications and errors
IPsec VPN configuration wizard	<ul style="list-style-type: none"> IPsec VPN wizard helps users easily design and provision otherwise complex VPN configurations. Enables configuration of thousands of VPNs in hub-and-spoke, full mesh, or site-site topologies.
VPN customization	<ul style="list-style-type: none"> Provides monitoring and troubleshooting of these VPN tunnels. Allows customization of VPN-specific endpoint information to align with a customer's specific security policy for users and their entitlements. Enables security operators to scale VPN design, particularly for hub-spoke environments with a large number of spokes.
Network topology visualization	<ul style="list-style-type: none"> Calculates the path between endpoints and determines impact on policy enforcement point to be impacted. Allows the user to design the security policy and let the system intelligently establish which device gets affected.
Job management	<ul style="list-style-type: none"> Tasks such as VPN deployment or policy application can be provisioned immediately or at a scheduled date and time. Provides the flexibility of deciding when to deploy a particular function and monitor its progress. Facilitates additional control over the readiness and deployment schedule.
Rapid deployment wizard	<ul style="list-style-type: none"> Application of configuration does not require an onsite security architect and, when applied, the device is simply commissioned to the network with a preset configuration. Accelerates the deployment of a network device with controlled configuration settings. Greatly reduces or eliminates the risk of security configuration errors.
Firewall services	<p>Flexible visualization options to increase operator productivity:</p> <ul style="list-style-type: none"> Topological and tabular 5-tuple view Intra-domain policies in tabular view Policy publish workflow Tabular view per device (device view) IPv6 firewall policies Address group optimization
IPS/AppSecure services	<p>Integration into AppSecure services:</p> <ul style="list-style-type: none"> Signature management for intrusion prevention system (IPS) Signature management for AppSecure Policies for IPS integrated with firewall policy view IPS policy templates
Network Address Translation (NAT) services	<p>Enable addresses to be NATed across devices for branch and data center environments with:</p> <ul style="list-style-type: none"> Destination and multilevel NAT Multiple NAT Source NAT port support
Other services:	<ul style="list-style-type: none"> Enable users to map their existing zone configurations to the Security Design topology. Enable users to do quick searches by indexing all contents in Security Design to enable rapid response time and give users a query language that can be used for granular search options.
<ul style="list-style-type: none"> Topology zone for interface connection Global search for security design Image management for Juniper Networks ScreenOS® Software 	

Junos Space Service Now

Junos Space Service Now is the centerpiece of the Juniper service automation solution, enabling users to automatically detect incidents, collect diagnostic data, and simplify incident escalation. Service Now automates inventory management, thus reducing time spent on manual asset tracking. These capabilities increase efficiency and uptime while decreasing downtime and mean time to resolution (MTTR). With Service Now included as a part of Juniper Care support, customers can take advantage of these benefits with every support contract.

Key features and benefits include:

- Automates key operational tasks of delivering incident prevention, detection, and diagnostics
- Employs the automation capabilities embedded in the Juniper Networks Junos operating system to deliver an early warning system that detects errors in devices and collects required diagnostic data for analysis and troubleshooting

- Provides a uniform solution that can scale to all devices running Junos OS
- Presents information collected in an easily accessible format that automates and speeds troubleshooting and ultimately the resolution of problems
- Simplifies operational processes and increases operational efficiency with the ability to open cases with Juniper Networks Technical Assistance Center (JTAC) from the Service Now console, and by sending the necessary information to JTAC to quickly and effectively identify and resolve problems
- Provides a centralized platform that stores and tracks detected incidents, maintains the troubleshooting information collected, and tracks the status of associated cases escalated to JTAC
- Saves time by automating time-consuming manual tasks such as asset inventory details

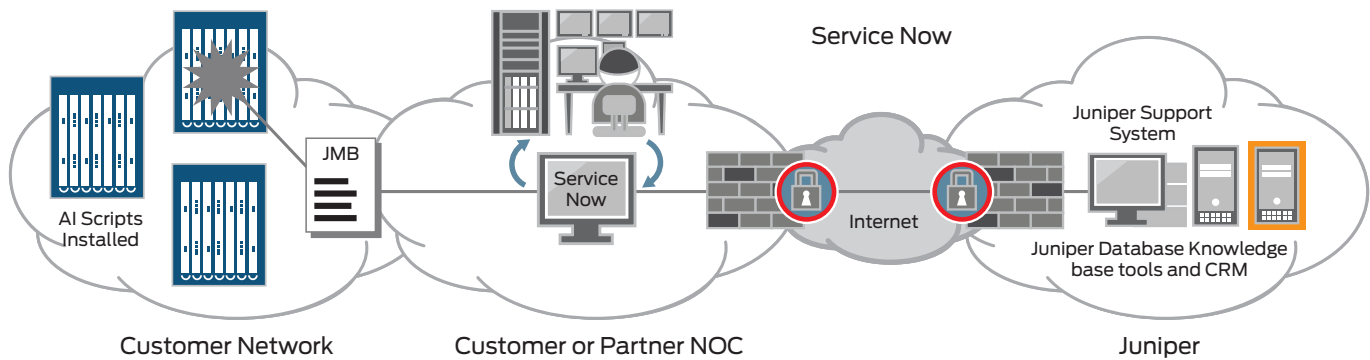


Figure 4: Juniper service automation architecture

Table 5: Service Now Features and Benefits

FEATURES	BENEFITS
Automated incident detection and diagnostic data collection	<ul style="list-style-type: none"> • Higher network uptime via early warnings detected, reduced MTTR, and higher resolution effectiveness • Reduced OpEx as your staff no longer has to spend time in diagnostic data collection • Increased effectiveness to detect and diagnose intermittent faults • Time to earliest fix reduced dramatically
Automated case opening	<ul style="list-style-type: none"> • Faster MTTR • Less time spent in case management tasks leading to increased productivity of staff with operational efficiency
Event filtering	<ul style="list-style-type: none"> • Focus on the right events and reduce network noise
Automated script management	<ul style="list-style-type: none"> • Low touch configuration process and very little time spent in training and enablement
Messaging and alerting	<ul style="list-style-type: none"> • Ability to receive messages and alerts from Juniper and scan to assess for devices that may be impacted by the same
User and system notifications of device faults and case updates	<ul style="list-style-type: none"> • Ability to configure notification policy to notify users or other tools/systems about issues detected or case updates received from JTAC
Technical support case updates	<ul style="list-style-type: none"> • Ability to view status and latest updates for all technical support cases open with JTAC
Automated inventory management	<ul style="list-style-type: none"> • Automates inventory management, providing asset details for managed devices, along with details such as serial number, part number, and description

Junos Space Service Insight

Junos Space Service Insight enables proactive maintenance and maximizes uptime by delivering actionable network intelligence. Service Insight automates impact analysis of end of life notifications to your network, thus saving you precious time spent in analysis and allowing your network teams to focus on planning and proactive management. It delivers targeted bug notifications for issues that may impact your network before a problem occurs. Proactive maintenance and problem avoidance enabled with Service Insight means that uptime is maximized and less time is spent managing network issues. This gives your team more time to evolve and optimize the network to meet your business needs.

With Service Insight included as a part of Juniper Care Plus support, customers can now take advantage of actionable network intelligence.



Figure 5: Service Now incident screen

Table 6: Service Insight Features and Benefits

FEATURES	BENEFITS
Proactive bug notification	<ul style="list-style-type: none"> • Reduced risk of network device issues • Higher network uptime
End of life impact analysis	<ul style="list-style-type: none"> • Reduced risk of running unsupported hardware or software in networks
Ability to automate scanning for impact of bug notifications	<ul style="list-style-type: none"> • Time saved in risk assessment and exposure to known issues • Improvement in uptime • Reduced risk of downtime due to known issues
User and systems notifications of new bugs and end of life	<ul style="list-style-type: none"> • Ability to configure notification policy to alert users or other tools/systems about new proactive bug notifications or end of life notifications received

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.

Specifications

Junos Space Standard Edition consists of Ethernet Design, Security Design, Service Now, and Service Insight. For specifications information and to learn more about these applications and the Junos Space platform, please refer to the **Ethernet Design, Security Design, Service Now, Service Insight, and Junos Space platform** datasheets.

Ordering Information

Junos Space Standard Edition includes element management functions, image management, script management, configuration management, Ethernet Design, Security Design (firewall/VPN/NAT), Service Now, and support and software updates.

DESCRIPTION	SUBSCRIPTION LICENSING		PERPETUAL LICENSING
	FIRST TIME PURCHASE SKU	RENEWAL SKU	PERPETUAL SKU
Junos Space Standard Edition for 25 devices	JS-STD-25-1	JS-STD-25-1-R	JS-STD-25
Junos Space Standard Edition for 50 devices	JS-STD-50-1	JS-STD-50-1-R	JS-STD-50
Junos Space Standard Edition for 100 devices	JS-STD-100-1	JS-STD-100-1-R	JS-STD-100
Junos Space Standard Edition for 500 devices	JS-STD-500-1	JS-STD-500-1-R	JS-STD-500
Junos Space Standard Edition for unlimited devices	JS-STD-U-1	JS-STD-U-1-R	JS-STD-U

For more information about Juniper Networks Junos Space applications, please visit <http://www.juniper.net>.

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.

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