

# Juniper Networks Secure Access SSL VPN High Availability Clustering

*Juniper Networks provides native High Availability (HA) solutions, which are imperative for business-critical secure access infrastructure. Juniper has designed a variety of HA clustering options to support the Secure Access (SA) product lines, ensuring redundancy and seamless failover in the rare event of a system failure. These clustering options also provide performance scalability to handle the most demanding usage scenarios. Juniper Networks cluster options can be implemented for failover and performance scalability within a single site or across global deployments, offering enterprises a full range of options.*

## Product Description

High Availability (Cluster) licenses allow you to share licenses from one Secure Access appliance with one or more additional Secure Access appliances (depending on the platform in question) and are not additive to the concurrent user licenses. For example, if a customer has a 100 user license for the SA 4500 and then purchases another SA 4500 with a 100 user cluster license, this will provide a total of 100 users that are shared across both appliances, not per appliance. The simple rule of thumb for a clustering license is you need one for every Secure Access appliance you have in the cluster, with the exception of the primary unit, which would have a standard concurrent user license. For example, if you have a 2-unit cluster, you need one cluster license and one concurrent user license. If you have a 4-unit cluster, you need 3 cluster licenses and one concurrent user license, etc. In general, a cluster license is typically less expensive than the user license that you would need on the primary unit. This results in cost savings to customers when they want to deploy HA capability on the SA appliances.

The HA option is available for the SA 2500, SA 4500 and SA 6500.

## Architecture and Key Components

The Juniper Networks SA 2500, SA 4500 or SA 6500 can be purchased in different cluster configurations, allowing enterprises the flexibility to choose the configuration that best addresses their HA, performance scalability and site deployment needs.

### Multi-Unit Clusters and Cluster Pairs

The SA 2500 and SA 4500 can be purchased in Cluster Pairs and the Secure Access 6500 can be purchased in Multi-Unit Clusters or Cluster Pairs to provide complete redundancy and expansive user scalability. Both Multi-Unit Clusters and Cluster Pairs feature stateful peering and failover across the LAN and WAN, so in the unlikely event that one unit fails, system configurations (like authentication server, authorization groups and bookmarks), user profile settings (like user-defined bookmarks and cookies), and user sessions are preserved.

Failover is often seamless, so there is no interruption to user/enterprise productivity, no need for users to log in again, and no downtime. Multi-unit clusters are automatically deployed in active/active mode, while cluster pairs can be configured in either active/active or active/passive mode. SA cluster configurations are centrally managed for efficiency. Multi-unit clusters also feature user license scalability making it easy to add more users by adding another appliance to the multi-unit cluster. Multi-unit clusters on the Secure Access 6500, for example, enable the enterprise to scale to up to 30,000 simultaneous users. Cluster configurations can work together to provide performance scalability, because the units in an active/active cluster configuration process requests in parallel at all times. This configuration, combined with an external load balancing switch, provides the exceptional aggregate throughput that is essential in the case of high user volume, exceptional usage patterns or use of resource-intensive applications.

In addition, multi-site clusters allow Secure Access 6500 products to be deployed at different locations and even on different IP subnets, while maintaining state information by synching over the WAN and operating on a single usage license. Multi-site clusters feature stateful peering and failover, so in the case of failover or new system setup, gateway settings, user bookmarks and other key data are replicated across the cluster. Secure Access multi-site clusters can be centrally managed, greatly simplifying administration for multi-site deployments, while providing broad access and fault tolerance throughout the campus or around the world.

## Features and Benefits

### Mission-Critical Availability and Redundancy

- Multi-unit clusters and cluster pairs for HA and redundancy across the LAN
  - Cluster pairs supported on SA 2500 and SA 4500
  - Multi-unit cluster or cluster pairs supported on SA 6500
- Multi-site clusters for HA and redundancy across the WAN
- No user session interruption or loss of productivity in the rare event of failure
- No loss of productivity of user downtime in the case of system maintenance
- Stateful peering synchronizes user settings, system settings and user sessions

### Best-in-Class Performance Scalability

- Multiplies aggregate throughput
- Provides premium user experience with optimized response times
- Handles large volumes of users and resource-intensive applications
- Maintains performance in the case of burst traffic or exceptional usage patterns

### Easy to Install and Manage

- Centralized management for multiple Secure Access products with Secure Access Central Manager
- No administrative involvement required in the rare event of failure

### Performance-Enabling Services and Support

Juniper Networks is the leader in performance-enabling services and support, which are designed to accelerate, extend, and optimize your high-performance network. Our services allow you to bring revenue-generating capabilities online faster so you can realize bigger productivity gains, faster rollouts of new business models and ventures, and greater market reach, while generating higher levels of customer satisfaction. At the same time, Juniper Networks ensures operational excellence by optimizing your network to maintain required levels of performance, reliability, and availability. For more details, please visit [www.juniper.net/products\\_and\\_services](http://www.juniper.net/products_and_services)

## Ordering Information

Model Number	Description
SA2500-CL-10U	Clustering: 10 users shared from another SA 2500
SA2500-CL-25U	Clustering: 25 users shared from another SA 2500
SA2500-CL-50U	Clustering: 50 users shared from another SA 2500
SA2500-CL-100U	Clustering: 100 users shared from another SA 2500
SA4500-CL-50U	Clustering: 50 users shared from another SA 4500
SA4500-CL-100U	Clustering: 100 users shared from another SA 4500
SA4500-CL-250U	Clustering: 250 users shared from another SA 4500
SA4500-CL-500U	Clustering: 500 users shared from another SA 4500
SA4500-CL-1000U	Clustering: 1000 users shared from another SA 4500
SA6500-CL-100U	Clustering: 100 users shared from another SA 6500
SA6500-CL-250U	Clustering: 250 users shared from another SA 6500
SA6500-CL-500U	Clustering: 500 users shared from another SA 6500
SA6500-CL-1000U	Clustering: 1000 users shared from another SA 6500
SA6500-CL-2500U	Clustering: 2500 users shared from another SA 6500
SA6500-CL-5000U	Clustering: 5000 users shared from another SA 6500
SA6500-CL-7500U	Clustering: 7500 users shared from another SA 6500
SA6500-CL-10000U	Clustering: 10000 users shared from another SA 6500
SA6500-CL-12500U	Clustering: 12500 users shared from another SA 6500
SA6500-CL-15000U	Clustering: 15000 users shared from another SA 6500
SA6500-CL-20000U	Clustering: 20000 users shared from another SA 6500
SA6500-CL-25000U	Clustering: 25000 users shared from another SA 6500

## About Juniper Networks

Juniper Networks, Inc. is the leader in high-performance networking. Juniper offers a high-performance network infrastructure that creates a responsive and trusted environment for accelerating the deployment of services and applications over a single network. This fuels high-performance businesses. Additional information can be found at [www.juniper.net](http://www.juniper.net).



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