

This Sevan White Paper presents the common network configurations for the WSA.

## Single Server

The simplest WSA installation is a WSA in front of a single Web Server. The figure below shows the configuration before the WSA. A single web server is connected to the Internet and a local area network. The Networking Device is typically a router or a layer 2 switch.

The WSA is installed as shown in the illustrations to the right. Logically, the WSA simply interrupts the ethernet cable between the Network Device and the Web Server. We generally suggest that a hub or layer 2 switch is installed between the WSA and the Web Server.

Before the WSA is configured it is a “bump in the wire”, so it is transparent to the network and server. The WSA monitors the traffic between the network and the server to automatically discover the IP address of the web server.

It is important to note that the WSA does not provide networking services (e.g. switching, routing or NATing), so the web server must be reachable from the network in order for a WSA configuration to work. In other words, if the network did not work before the WSA, it will not work after the WSA.

The WSA can be installed with or without an IP address. If the WSA has an IP address, it will generate SNMP traps and will respond to ping requests from the network.

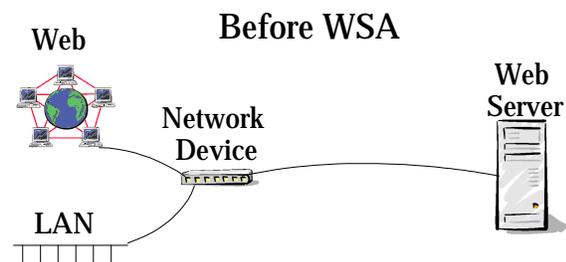


Illustration 1

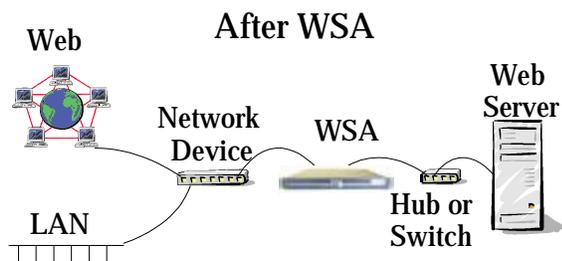


Illustration 2

## Multiple Servers

The figure to the right shows the configuration before the WSA. The servers are connected to a router, hub, or switch, which is connected to the main network via a single ethernet link.

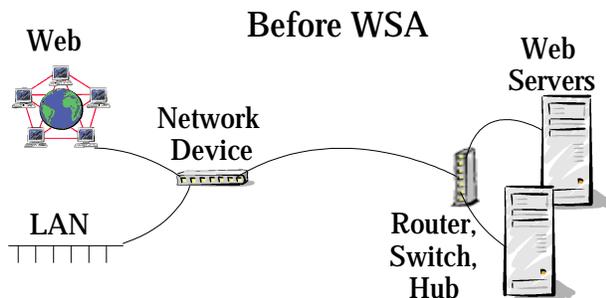


Illustration 3

The WSA is installed as shown in Illustration 4. In this configuration the WSA can handle up to 63 web servers. The WSA discovers the web servers by monitoring the traffic flowing between the network and the servers. As with the WSA and a single server, the WSA does not perform network functions. Therefore, the servers must be reachable from the network before the WSA is installed.

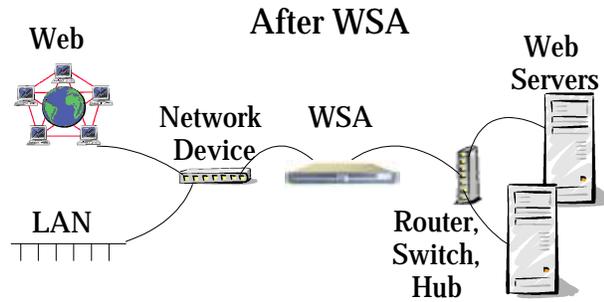


Illustration 4

### WSA with External Network Firewall

The figure below shows how the WSA is installed in conjunction with an external network firewall. This firewall is sensitive to the network features of the traffic: source and destination IP addresses and the protocols. We suggest that the WSA be located between the firewall and the web server.

This configuration means that the firewall rules are applied before the network traffic enters the WSA. Therefore, the WSA does not affect the firewall's security policy.

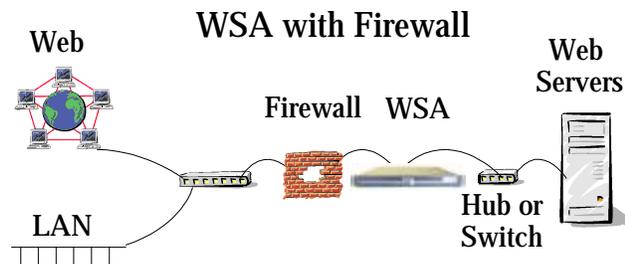


Illustration 5

### WSA with a Content Filter

Some web site have content filters between the network and the servers. These filters are similar to network firewalls (sometimes an integrated component of the firewalls), but they are sensitive to the content (payload) of the traffic. Content filters can be configured to block Java and ActiveX code, worms, viruses, or inappropriate content. Illustration 6 shows that the preferred location of the WSA is between the network and the Content Filter.

In this location, the WSA will convert the most of SSL traffic to clear traffic so the Content Filter can examine the content.

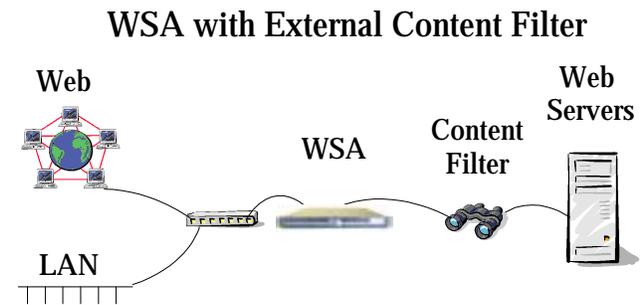
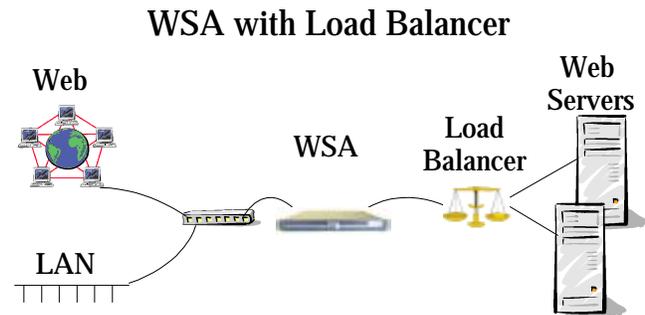


Illustration 6

## WSA with External Load Balancer

Many sites with multiple web servers have dedicated load balancers between the network and the web servers. The figure below suggest that the WSA should be installed between network and the load balancer.

When there is a load balancer between the WSA and the web servers, the WSA does not directly see the servers. Rather the WSA sees the servers as they are mapped through the load balancer. For example, if the load balancer maps all servers to a single virtual IP address, the WSA will think that there is only a single web server of that address behind it. This means that the WSA must be configured for the web servers as they appear through the load balancer.



*Illustration 7*



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