Overview

This document explains how to install Cisco Security Management Suite (Security Manager) in a high availability (HA) or disaster recovery (DR) environment. The Security Manager HA/DR solution is based on Veritas Storage Foundation and High Availability solutions. The Security Manager HA/DR solutions described in this guide support the following applications:

- Security Manager 4.21
- Auto Update Server (AUS) 4.21

Note Since devices contact the AUS server directly using the AUS server IP address, it is necessary for the device to support defining up to two AUS servers for a DR configuration, where the AUS server at each site has a different IP address. Defining more than one AUS server IP address is supported only by the ASA 5500 Series beginning with release 7.2.1.

The HA solution supports both local redundancy (HA) and geographic redundancy (DR) configurations.

Note Cross-launching the Cisco Prime Security Manager (PRSM) application is supported in both HA and DR configurations; however, seamless, direct access to PRSM from Security Manager using the "single sign-on" (SSO) feature is only supported in HA mode.

This section provides the following overviews:

- Local Redundancy (HA) Process Overview, page 1-2
- Geographic Redundancy (DR) Process Overview, page 1-3
- Veritas Products, page 1-5

Note From version 4.21 onwards, Cisco Security Manager terminates whole support, including support for any bug fixes or enhancements, for all Aggregation Service Routers, Integrated Service Routers, Embedded Service Routers, and any device operating on Cisco IOS software, including the following devices:

- Cisco Catalyst 6500 and 7600 Series Firewall Services Modules (EOL8184)
- Cisco Catalyst 6500 Series Intrusion Detection System Services Module 2 (EOL8843)
- Cisco Intrusion Prevention System: IPS 4200, 4300, and 4500 Series Sensors (EOL9916)
- Cisco SR 500 Series Secure Routers (EOL7687, EOL7657)

- PIX Firewalls (EOL)

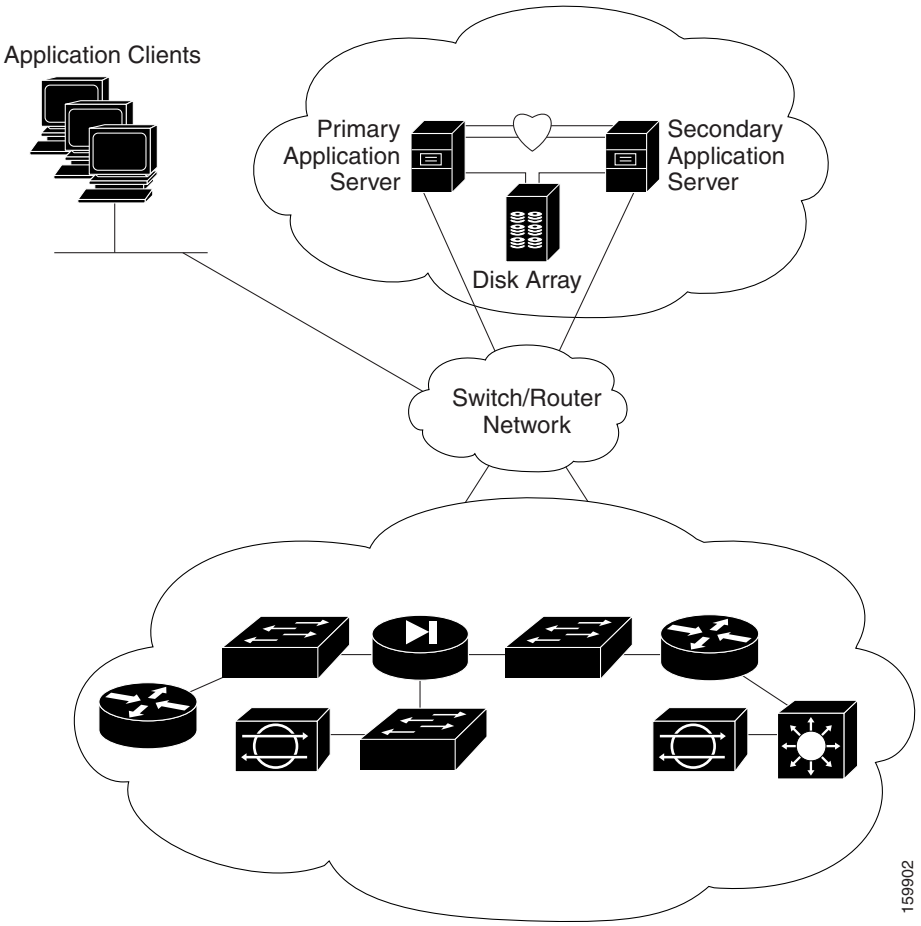
Local Redundancy (HA) Process Overview

The local redundancy configuration provides an automatic failover solution in the event of software or hardware failures without the need to reconfigure IP addresses or DNS entries on your switched/routed network.

Figure 1-1 illustrates the local redundancy HA configuration.

Note The servers in Figure 1-1 optionally contain mirrored internal boot disks. We recommend that they be the same make, model, and storage capacity. We recommend a fault-tolerant switched/routed network for communicating with the HA servers.

Figure 1-1 Local Redundancy HA Configuration



Local Redundancy (HA) Configuration Steps

The following table lists the steps required to configure a locally redundant installation of Cisco Security Manager.

	Task	References
Step 1	Make physical connections.	Making Ethernet Connections, page 3-1
Step 2	Install Microsoft Windows Server and all necessary drivers.	Installing Microsoft Windows Server, page 3-2
Step 3	Make storage connections.	Connecting the Servers to External Storage, page 3-2
Step 4	Install and configure the Veritas products and components.	Installing Veritas Products, page 3-2
Step 5	Mirror the boot disk.	Mirroring the Boot Disk (Optional), page 3-3
Step 6	Setup required volumes on the shared array.	Veritas Volume Manager Configuration Tasks, page 3-4
Step 7	Install Cisco Security Manager on the shared volume on the primary server.	Installing Security Manager, page 3-6
Step 8	Install Cisco Security Manager on the spare (dummy) volume on the secondary server.	Installing Security Manager, page 3-6
Step 9	Update permissions on secondary server.	Updating Permissions on the Working Volume, page 3-14
Step 10	Create and configure clusters.	Veritas Cluster Server Tasks, page 3-16

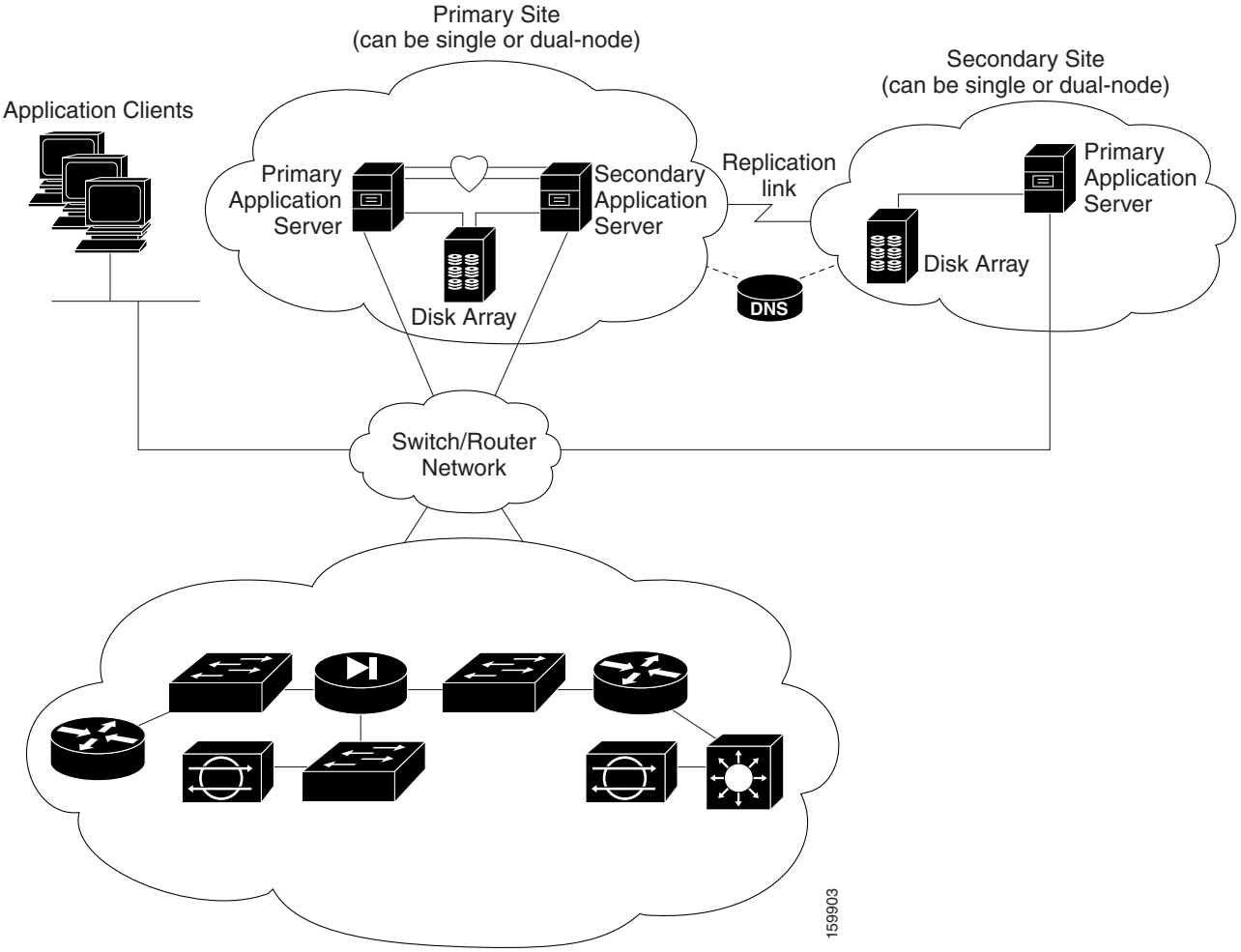
Geographic Redundancy (DR) Process Overview

The geographic redundancy configuration provides disaster recovery by replicating application data between two sites. Failover between sites can be initiated manually or performed automatically.

Figure 1-2 illustrates a geographic redundancy (DR) configuration.

Note The servers in Figure 1-2 optionally contain mirrored internal boot disks. We recommend that they be the same make, model, and storage capacity. We recommend a fault-tolerant switched/routed network for communicating with the servers.

Figure 1-2 Geographic Redundancy (DR) Configuration



Geographic Redundancy (DR) Configuration Steps

The following table lists the steps required to configure a geographically redundant installation of Cisco Security Manager.

	Task	References
Step 1	Make physical connections.	Making Ethernet Connections, page 3-1
Step 2	Install Microsoft Windows Server and all necessary drivers.	Installing Microsoft Windows Server, page 3-2
Step 3	Make storage connections.	Connecting the Servers to External Storage, page 3-2
Step 4	Install and configure the Veritas products and components.	Installing Veritas Products, page 3-2
Step 5	Mirror the boot disk.	Mirroring the Boot Disk (Optional), page 3-3

	Task	References
Step 6	Setup required volumes on the shared array.	Veritas Volume Manager Configuration Tasks, page 3-4
Step 7	Install Cisco Security Manager on the shared volume on the primary server.	Installing Security Manager, page 3-6
Step 8	Install Cisco Security Manager on the spare (dummy) volume on the secondary server.	Installing Security Manager, page 3-6
Step 9	Configure replication.	Veritas Volume Replicator Tasks, page 3-12
Step 10	Update permissions on secondary server.	Updating Permissions on the Working Volume, page 3-14
Step 11	Create and configure clusters.	Veritas Cluster Server Tasks, page 3-16

Veritas Products

The Security Manager HA/DR solutions described in this document are based on Veritas products. This section gives a brief summary of each specific Veritas application.

- Veritas Storage Foundation for Windows (VSFW)

  VSFW provides volume management technology, quick recovery, and fault tolerant capabilities to Windows enterprise computing environments. VSFW provides the foundation for VCS and VVR.

- Veritas Cluster Server (VCS)

  VCS is a clustering solution for reducing application downtime. The Global Cluster Option (GCO) for VCS supports managing multiple clusters (such as used in a DR configuration).

- Veritas Volume Replicator (VVR)

  VVR provides a foundation for continuous data replication over IP networks, enabling rapid and reliable recovery of critical applications at remote recovery sites.

- Veritas Enterprise Administrator (VEA GUI) console

  The VEA GUI console window provides a graphical way to view and manipulate all the storage objects in your system.

- Cluster Manager (Java Console)

  Cluster Manager (Java Console) offers complete administration capabilities for your cluster. Use the different views in the Java Console to monitor clusters and VCS objects, including service groups, systems, resources, and resource types:

  - Cluster Monitor

    Cluster Monitor displays general information about actual or simulated clusters. Use Cluster Monitor to log on to and off of a cluster, view summary information on various VCS objects, customize the display, use VCS Simulator, and exit Cluster Manager.

  - Cluster Explorer

    Cluster Explorer is the main window for cluster administration. From this window, you can view the status of VCS objects and perform various operations.