

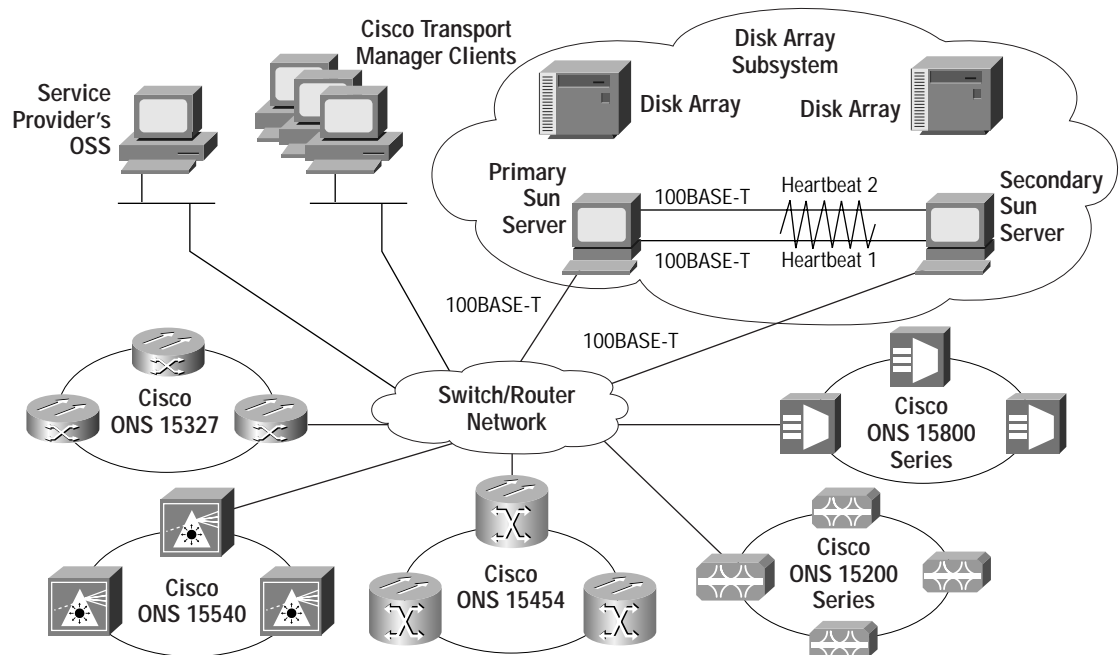
# Cisco Transport Manager High Availability Agent R2.0

## Introduction

As optical networks evolve and grow, service providers are increasingly focused on protecting their element management system (EMS) and optical networks. Cisco has developed a high-availability (HA) solution to address those needs. The Cisco HA solution provides customers with a robust configuration to protect their mission-critical optical EMS.

For customers who are planning to deploy an HA configuration, Cisco now has an intelligent add-on Cisco Transport Manager HA Agent that automatically detects failures. The intelligent Cisco HA Agent interacts with best-of-breed products from Oracle, VERITAS, and Sun to provide customers with a powerful, scalable, and highly robust solution across leading vendors. The Cisco HA Agent monitors redundant heartbeat interfaces, hardware, daemons, Oracle Relational Database Management System (RDBMS), and Cisco Transport Manager, to start and stop processes in an orderly fashion. When the agent detects a failure, it attempts to restart the UNIX process or it interacts with VERITAS Database Edition/HA software to automatically fail over from the primary Sun server to the secondary Sun server, where the secondary server assumes the role of the “master” server. With the intelligent Cisco Transport Manager HA Agent, customers now have the added security of knowing their Cisco Transport Manager platform will continue to operate and re-establish visibility in the event of a critical platform failure.

Figure 1  
 Cisco Transport Manager in an HA Environment





## HA Features

The Cisco optical EMS platform, Cisco Transport Manager, is designed to protect against single hardware failures with mirrored internal boot/root disks, redundant servers, disk arrays, multiple Quad Fast Ethernet (QFE) adapters, redundant fiber channel connections, fiber channel hubs, N+1 power supplies, and multiple IP heartbeat interfaces. The intelligent Cisco HA Agent uses daemon monitoring to protect against specific software failures. When the Cisco HA Agent is combined with VERITAS software storage management and high availability solutions, customers can resize volumes, perform online defragmentation, or even add and remove disks in real time in their mission-critical HA environment. The HA functionality ensures continuous operation during routine or unplanned outages.

The Cisco HA Agent features include:

- Automatic reconnection with Cisco ONS 15000 Series network elements (NEs) and Cisco Transport Manager clients
- Checks for “heartbeat” and status of the primary Sun server
- Monitors the status of specific daemons, RDBMS, and Cisco Transport Manager
- Operates with best-of-breed products—Oracle, VERITAS, and Sun
- Ensures orderly shut-down and startup of processes
- Constantly checks the status of IP interfaces used with the “virtual” IP address
- Is an add-on module to Cisco Transport Manager R3.0

High Availability hardware features include:

- Redundant servers and disk array design
- Optimized with Redundant Array of Independent Disks (RAID) 5+0 disk configuration
- Mirrored internal boot/root disks
- Redundant 100BASE-T IP interfaces
- Redundant fiber channel adaptors and hubs

## Upgrade Path

To install the Cisco Transport Manager HA Agent, customers must install Solaris 8, VERITAS Database Edition/HA 3.0 for Oracle on Solaris, and Oracle Enterprise Database Edition R8.1.7, Cisco Transport Manager R3.0 and Cisco Transport Manager HA Agent R2.0. During the installation process, VERITAS software makes changes to the UNIX file system structure, enabling customers to modify their EMS platform in real time after software installation.

If customers have an older standalone version of Cisco Transport Manager, they should follow the migration steps to upgrade their software to Cisco Transport Manager R3.0 in a standalone configuration. Customers can then back up and import the data to the new HA installation. Customers cannot upgrade from Cisco Transport Manager R2.x or Cisco Transport Manager R3.x when installed as a standalone configuration to an HA configuration.

## Availability

Customers may order the Cisco Transport Manager HA Agent R2.0 when Cisco Transport Manager R3.0 is available. The Cisco Transport Manager HA Agent is an add-on software module designed to work with Cisco Transport Manager R3.0 and future releases of Cisco Transport Manager.

## Ordering Information

Cisco Transport Manager HA Agent products are available from your sales representative. Table 1 lists the applicable product codes.

Table 1

HA Product and Part Numbers

Product Code	Product Description
<b>CTM-HA-R2.0-AGNT</b>	Cisco Transport Manager HA Agent R2.0 Cisco Transport Manager HA Agent included on Cisco Transport Manager R3.x CD ROM <i>Cisco Transport Manager HA Installation Guide</i> , and one Cisco Transport Manager HA right-to-use (RTU) license.
<b>SP-SAU-CTM-HA<sup>1</sup></b> <b>CON-SAU-CTM-HA<sup>2</sup></b>	Support for Cisco Transport Manager HA Agent Includes support for HA Agent agent only. Customers must procure support for their disk array, VERITAS, Oracle, and Sun hardware.

1. Service Providers use SP-SAU-xxx

2. Enterprise customers use CON-SAU-xxx

## More Information

For more information about Cisco Transport Manager Release 3.0, visit [www.cisco.com/go/ctm](http://www.cisco.com/go/ctm).



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