Oracle® Enterprise Manager Ops Center

Ports and Protocols

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This document contains the latest information on the ports and protocols that Oracle Enterprise Manager Ops Center uses.

Ports and Protocols

Oracle Enterprise Manager Ops Center requires the use of specific ports and protocols.

> **Note:** This document contains the latest information on the ports and protocols that Oracle Enterprise Manager Ops Center uses and supersedes the information that appears in the Installation Guides, Security Guide, and Feature Reference Guide.

The Enterprise Controller's default port is 443. If port 443 is in use, the Enterprise Controller uses Port 11165. Table 1 describes all the required ports and their protocols.

To configure the firewall between the Enterprise Controller and a Proxy Controller or a corporate network, allow the ports and protocols in Table 1.

Table 1 Required Ports and Protocols

Communication Direction	Protocol and Port	Purpose
Enterprise Controller	Port 443, then Port 11165 Port 8005	Enterprise Controller in Disconnected mode
Enterprise Controller	Port 443, then Port 11165	Enterprise Controller in Connected mode
Browser to Enterprise Controller	HTTP, TCP: Port 80	Redirects to port 9443
Browser to Enterprise Controller	HTTPS, TCP: Port 9443	Web interface
Enterprise Controller to Local Database	Port 11176	Oracle Listener port
Enterprise Controller to Proxy Controller	SSH, TCP: Port 22 ICMP ping: Type 8 Code 0 (echo request)	Enterprise Controller installs or upgrades a Proxy Controller through the UI.
Proxy Controllers to Enterprise Controller	HTTPS, TCP: Port 443	Proxy Controller pushes data about assets to Enterprise Controller. Proxy Controller pulls data for jobs, updates, Agent Controllers, and OS images from the Enterprise Controller.
Proxy Controllers to Enterprise Controller	HTTP: Port 8004	WAN Boot traffic

Table 1 (Cont.) Required Ports and Protocols

Communication Direction	Protocol and Port	Purpose
Proxy Controllers to Enterprise Controller	ICMP ping: Type 0 Code 0 (echo reply)	During upgrades, Proxy Controllers use ICMP ping.
Remote Proxy Controller to Enterprise Control through an SSH Tunnel	SSH, Port 21161	When a Proxy Controller is deployed on a network outside of the firewall, the SSH Tunnel and Port 21161 change the direction of communication so that the remote Proxy Controller does not initiate communication with the Enterprise Controller.
Proxy Controller to ALOM Service Processors	SSH, TCP: Port 22 or Telnet, TCP: Port 23 SNMP, UDP: Port 161 UDP: Port 6481 (for discovery by service tags) ICMP, Type 8 Code 0	Proxy Controller discovers, manages, and monitors the service processor.
Proxy Controller to ILOM Service Processors	SSH, TCP: Port 22 SNMP, UDP: Port 161 IPMI, TCP, UDP: Port 623 UDP: Port 6481 (for discovery by service tags) ICMP, Type 8 Code 0	Proxy Controller discovers, manages, and monitors the service processor.
Proxy Controller to ALOM or XCSF Service Processor	FTP, TCP: Port 21	Proxy Controller provisions firmware on an ALOM service processor. Port 21 transfers the firmware image. A transient random port is opened for the duration of the operation.
Proxy Controller to ILOM Service Processor	The transfer of images to targets that use ILOM 3.0 or higher uses HTTP on Port 8003. The transfer of images to targets that use a version of ILOM earlier than 3.0 uses TFTP, UDP and Port 69.	Proxy Controller provisions firmware on an ILOM service processor. For TFTP transfers, a transient random port is opened for the duration of the operation.
Service Processor to Proxy Controller	SNMP, UDP: Port 162 ICMP ping: Type 0 (echo reply)	For monitoring hardware, the service processor sends SNMP traps to the Proxy Controller. For a failed connection, Proxy Controller receives ICMP ping Type 3 (destination unreachable).
Proxy Controller to OS Host	SSH, TCP: Port 22 or Telnet, TCP: Port 23 UDP: Port 6481 (for discovery and monitoring by service tags) ICMP, Type 8 Code 0 (heartbeat)	Proxy Controller discovers, manages, and monitors an asset.
Proxy Controller to OS Host	DHCP, UDP: Port 67	Proxy Controller provisions Oracle Solaris 11 for x86, Oracle Solaris 10, and Linux OS.
Proxy Controller to OS Host	HTTP: Port 8003	Proxy Controller provisions Oracle Solaris 11 for SPARC.

Table 1 (Cont.) Required Ports and Protocols

Communication Direction	Protocol and Port	Purpose
OS Host to Proxy Controller	HTTP, TCP: Port 8004 Oracle Solaris 11 Automated Installer Web Server: Port 5555 to accept requests from the OS Host during provisioning ■ For provisioning by DHCP, the opened port is on the Proxy Controller. ■ For provisioning by WAN Boot, the opened port is on the Enterprise Controller or a Proxy Controller.	OS Host reports status of OS updates and status of Agent Controller installation. OS Host downloads Agent Controller archive file. To change the port, modify the SMF service. `svccfg -s system/install/server:default setprop all_services/port=`*`newportID`* `svccfg refresh system/install/server:default` To ensure that WAN Boot downloads the miniroot, the OS profile, and the OS manifest from the same server, disable multicastDNS on the Proxy Controller.
OS Host to Proxy Controller	DHCP, UDP: Port 68 TFTP, UDP: Port 69 TCP+UDP: Port 37 HTTP, TCP: Port 8004	OS Host responds to Proxy Controller inquiries during bare-metal OS provisioning
Agent Controller to Proxy Controller	HTTPS, TCP: Port 21165	Agent Controllers push asset data to Proxy Controller. Agent Controllers pull data for jobs.
Agent Controller to Proxy Controller	HTTPS, TCP: Port 8002	Agent Controllers pull updates from Proxy Controller.
Agent Controller on Oracle Solaris OS or on Oracle hardware to co-located Proxy Controller	SNMP: Port 1162, or a port in the range of 1100 through 1200	For monitoring assets, the Agent Controller sends trap notifications and fault management alerts (FMA) to the Proxy Controller as local traffic. Because the Proxy Controller is using Port 162, a co-located Agent Controller uses Port 1162, if it is available, or a port in the range of Ports 1100 through 1200.
Java client to public APIs	TLS: Port 11172	JMX access from clients
WMI client on Proxy Controller to Agent Controller	Port 11162	WMI client resides on the Proxy Controller and communicates with the WMI server on the Agent Controller. The Proxy Controller uses the DCOM protocol to monitor a Windows system. The Proxy Controller opens a TCP connection to the Windows DCOM registry port, TCP 135, which provides a lookup service to the WMI scripting DCOM object. The Proxy Controller connects to the DCOM object. The port number for this connection is allocated by the Windows system.

Table 1 (Cont.) Required Ports and Protocols

Communication Direction	Protocol and Port	Purpose
Proxy Controller to NFS server	Use an NFS server that is on the same side of the firewall as the Proxy Controller. Refer to your OS documentation to set up the NFS server.	Proxy Controller pulls provisioning images from NAS Library
Global Zones or Oracle VM Servers to NFS server	Use an NFS server that is on the same side of the firewall as the Proxy Controller. Refer to your OS documentation to set up the NFS server.	Global Zones and Oracle VM Servers push their metadata and virtual host images to NAS Library
OCDoctor to `java.net`	HTTPS, TCP: Port 80	Acquires product updates.

Related Articles and Resources

The ports and protocols described in this document are the most current. The following documentation contains references to ports and protocols:

- *Oracle Enterprise Manager Ops Center Installation Guide for Oracle Solaris Operating System Guide*
- *Oracle Enterprise Manager Ops Center Installation Guide for Linux Operating Systems Guide*
- *Oracle Enterprise Manager Ops Center Security Guide*
- *Oracle Enterprise Manager Ops Center Feature Reference Guide*

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