## ..|...|.. cisco

# **Cisco TelePresence Conductor**

## Simple, Natural Conferencing

## **Product Overview**

Cisco TelePresence<sup>®</sup> Conductor software simplifies multiparty video communications, orchestrating the different resources needed for each conference as required. It allows the video network to be configured so that conferences can be easily provisioned, initiated, and accessed.

The Cisco TelePresence Conductor simplifies and enhances conference resource management, making conferences easy to join and administer. It uses knowledge of all available conferencing resources and their capabilities to help ensure dynamic, intelligent conference placement and optimum resource usage. It delivers powerful, comprehensive administrative control, making simple, natural conferencing a reality.

Administrators can specify the exact service level and experience required for each user. For example, administrators can determine whether users enjoy standard- or high-definition video, how many participants may connect, the maximum service level available to attendees, and even which Cisco TelePresence Server or Cisco TelePresence Multipoint Control Unit (MCU) is selected, according to geographic location.

Figure 1 shows a sample deployment of Cisco TelePresence Conductor working with Cisco<sup>®</sup> Unified Communications Manager (Cisco UCM). Cisco TelePresence Conductor also works in conjunction with Cisco TelePresence Video Communication Server (VCS) where required; for example, to support H.323 and Session Initiation Protocol (SIP) interworking and/or provide firewall traversal.



Figure 1. Conference Resource Orchestration with Cisco TelePresence Conductor

Cisco TelePresence Conductor offers many benefits:

- Supports service differentiation, allowing administrators to define specific classes of service for conference attendees to ensure that conferences are effectively delivered to maximize the value each attendee gains
- Eases the administration and management of conference configuration through virtualization and intelligent optimization of multipoint resources (note that intelligent optimization is supported only on Cisco TelePresence Server)
- Supports spontaneous, rendezvous (MeetMe), and scheduled conferencing modes to help ensure that the user experience is always consistent irrespective of user, meeting type, and endpoint
- Allows conferences to dynamically grow and even exceed the capacity of individual conferencing resources; it is ideal for larger conferences, or when the number of participants expected on a conference is unknown
- · Scales from small businesses to large enterprises, supporting expansion as usage increases

Cisco TelePresence Conductor is available as a virtualized application running on Cisco Unified Computing System<sup>™</sup> (Cisco UCS<sup>®</sup>) platforms or third-party server platforms. Alternatively it is available as a dedicated appliance (Figure 2).

#### Figure 2. Cisco TelePresence Conductor Appliance



Features of Cisco TelePresence Conductor include:

- Cisco TelePresence Conductor supports the industry-leading Cisco TelePresence Server and Cisco TelePresence MCUs.
- It offers conference virtualization: Cisco TelePresence Conductor dynamically selects the most appropriate Cisco TelePresence resources for each new conference.
- Pooled resource orchestration and load balancing mean that having a Cisco TelePresence Server or an MCU out of service need not affect service availability.
- The conductor handles the differing demands and service entitlements of conference attendees by providing customizable templates that define the exact characteristics of a conference and are tailored for each participant.
- Conference personalization helps ensure the conferencing experience is tailored to meet each user's
  personal preferences for settings such as layout and personal identification numbers (PINs).
- Supported Cisco conference modes follow:
  - Meeting: The conference has one type of participant, and all participants are given the same priority.
  - Lecture: There are two types of participants with different levels of priority; each participant type has a different alias to dial in to the conference.
  - Role configuration for conference attendees: Roles include chairperson, guest, and participant.
- Cisco TelePresence Conductor supports dynamic conference growth and ad-hoc conference escalations, allowing dynamic two- to three-way conferencing.

## System Capacity

#### **Cisco TelePresence Conductor Essentials**

- Cisco TelePresence Conductor software can be downloaded as a virtualized application and installed without a release key in limited-capacity mode, enabling conference resource orchestration for a single, standalone Cisco TelePresence Server or Cisco TelePresence MCU.
- Support in limited-capacity mode is provided through Cisco Support Community forums.

#### **Cisco TelePresence Conductor Select**

- For small to medium-sized deployments, an option key is available that enables support for up to 50 concurrent call sessions, enabling conference resource orchestration for more than one Cisco TelePresence Server or Cisco TelePresence MCU.
- Two medium sized Conductor virtual machines supporting up to 50 concurrent call sessions can be clustered together to provide resillience.

#### **Cisco TelePresence Conductor**

- For larger deplyoments, a full-capacity version of Cisco TelePresence Conductor is required.
- Up to 2400 concurrent call sessions or up to 30 Cisco TelePresence Servers or TelePresence MCUs are supported by one full-capacity Cisco TelePresence Conductor appliance or cluster.
- Up to three full-capacity Cisco TelePresence Conductors can be clustered to provide resilience.

Table 1 Summarizes capacity and clustering capability of Cisco TelePresence Conductor.

#### Table 1. Capacity and Clustering Capability for Different Sized Deployments of Cisco TelePresence Conductor

|  | Cisco TelePresence Conductor<br>Essentials  | Cisco TelePresence Conductor<br>Select                             | Cisco TelePresence Conductor                                 |
|--|---|--|--|
|  | Limited Capacity Virtual<br>Application   | Medium Capacity Virtual<br>Application                             | Full capacity virtual application<br>or dedicated appliance  |
| Suitable deployment  | Small   | Small to medium-sized  | Medium-sized to large  |
| Total number of conference bridges supported                         | 1 (standalone)  | 30   | 30   |
| Maximum number of concurrent call sessions supported                 | The number of calls supported by the conference bridge  | 50   | 2400   |
| Clustering of TelePresence<br>Conductors supported for<br>resilience | No  | Yes (limited to 2 medium capacity TelePresence Conductors)         | Yes (up to 3 TelePresence<br>Conductors)                     |
| Access to TAC support  | No. (Support in limited-capacity<br>mode is provided through Cisco<br>Support Community forums) | Yes  | Yes  |
| Available as virtual machine or appliance                            | Virtual machine only  | Virtual machine only   | Virtual machine and appliance                                |
| Release and option keys required to install                          | No release or option key required   | Upgrade option key to support 50 concurrent call sessions required | Full capacity TelePresence<br>Conductor release key required |

## System Specifications

Table 2 lists specifications of Cisco TelePresence Conductor.

 Table 2.
 Specifications of Cisco TelePresence Conductor

| User Interface  | Supports Internet Explorer 8 or 9, Firefox 3 or later, Google Chrome, and Safari web browsers  |  |  |  |
|---|--|--|--|--|
| Supported Cisco UCM and Cisco<br>VCS versions   | <ul> <li>Supports Cisco UCM 8.6.2 or later (Version 9.1.1 or later is recommended to support encryption of<br/>rendezvous and ad-hoc calls using Secure Real-Time Transport Protocol (SRTP) and SIP Transport<br/>Layer Security (TLS). Refer to the Optimized Conferencing for Cisco Unified Communications Manager<br/>Solution Guide for more information.)</li> <li>Supports Cisco VCS Version X6.0 or later</li> </ul>  |  |  |  |
|   |  |  |  |  |
| Management interfaces   | <ul> <li>Supports industry standards such as RS-232, Secure HTTP (HTTPS), XML, Simple Network<br/>Management Protocol (SNMP), secure copy (SCP), and Secure Shell (SSH) Protocol</li> </ul>  |  |  |  |
|   | <ul> <li>Supports embedded setup wizard on serial port for initial configuration</li> </ul>  |  |  |  |
|   | <ul> <li>Supports management and monitoring of Cisco TelePresence Conductor Conferences with Cisco<br/>TelePresence Management Suite (TMS) (Version 14.3 or later of Cisco TMS is recommended)</li> </ul>  |  |  |  |
|   | <ul> <li>Supports call logging and diagnostics</li> </ul>  |  |  |  |
|   | <ul> <li>Supports logging to a syslog server</li> </ul>  |  |  |  |
| Resilience  | <ul> <li>Full-capacity versions can be deployed in triple-redundant cluster</li> </ul>   |  |  |  |
|   | <ul> <li>Two medium-sized Conductor virtual machines, supporting up to 50 concurrent call sessions, can be<br/>clustered together</li> </ul>   |  |  |  |
|   | <ul> <li>Supports duplicated databases and duplicated data</li> </ul>  |  |  |  |
| Cisco TelePresence Server and   | Supports Cisco TelePresence Server Version 3.0 or later  |  |  |  |
| MCU support   | Supports Cisco TelePresence MCU 4200 Series Version 4.2 or later   |  |  |  |
|   | <ul> <li>Supports Cisco TelePresence MCU 4500 Series Version 4.2 or later</li> </ul>   |  |  |  |
|   | <ul> <li>Supports Cisco TelePresence MCU 5300 Series Version 4.3 or later</li> </ul>   |  |  |  |
|   | <ul> <li>Supports Cisco TelePresence MCU MSE 8420 and 8510 Version 4.2 or later</li> </ul>   |  |  |  |
|   | <b>Note:</b> Cisco TelePresence Server Version 3.1 or later and Cisco TelePresence MCU Version 4.4 software are strongly recommended.  |  |  |  |
| Language  | • English  |  |  |  |
| Cisco TelePresence Conductor Virtualized Application  |  |  |  |  |
| Server requirements for Cisco   | Cisco UCS B- or C-Series Servers or third-party servers that meet the minimum requirements   |  |  |  |
| TelePresence Conductor  | <ul> <li>VMware vSphere or vCentre server running ESXi v4.1 or 5.0 update 1</li> </ul>   |  |  |  |
| Virtualized Application   | <ul> <li>Two 2.8-GHz (minimum) host CPU cores per Cisco TelePresence Conductor Virtual Machine; 6-GB<br/>RAM per virtual machine; 132-GB disk space per virtual machine (4-GB virtual disk 1 plus 128-GB virtual<br/>disk 2)</li> </ul>  |  |  |  |
|   |  |  |  |  |
|   | For full details, refer to the Cisco TelePresence Conductor Deployment Guide.  |  |  |  |
| Cisco TelePresence Conductor A  | For full details, refer to the Cisco TelePresence Conductor Deployment Guide.  |  |  |  |
| Cisco TelePresence Conductor Ap<br>Physical dimensions (H x W x D)  | For full details, refer to the Cisco TelePresence Conductor Deployment Guide.  pliance  1.72 x 16.8 x 18 in. (43.5 x 426 x 457.2 mm)   |  |  |  |
| Cisco TelePresence Conductor Ap<br>Physical dimensions (H x W x D)  | For full details, refer to the Cisco TelePresence Conductor Deployment Guide.<br>ppliance<br>• 1.72 x 16.8 x 18 in. (43.5 x 426 x 457.2 mm)<br>• 1-rack-unit (1RU) rack-mount chassis  |  |  |  |
| Cisco TelePresence Conductor Ap<br>Physical dimensions (H x W x D)<br>Interfaces  | For full details, refer to the Cisco TelePresence Conductor Deployment Guide.<br>ppliance<br>• 1.72 x 16.8 x 18 in. (43.5 x 426 x 457.2 mm)<br>• 1-rack-unit (1RU) rack-mount chassis<br>• Four 10/100/1000BASE-TX Ethernet ports (RJ-45) (front)<br>• One RS-232 console port (RJ-45) (front)   |  |  |  |
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| Cisco TelePresence Conductor Ap<br>Physical dimensions (H x W x D)<br>Interfaces<br>Weight  | For full details, refer to the Cisco TelePresence Conductor Deployment Guide.<br><b>opliance</b><br>• 1.72 x 16.8 x 18 in. (43.5 x 426 x 457.2 mm)<br>• 1-rack-unit (1RU) rack-mount chassis<br>• Four 10/100/1000BASE-TX Ethernet ports (RJ-45) (front)<br>• One RS-232 console port (RJ-45) (front)<br>• 17.6 lb (8 kg) (unpacked)<br>• Auto consists 250W (maximum) 580 BTU ace bout request purply   |  |  |  |
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| Cisco TelePresence Conductor Ap<br>Physical dimensions (H x W x D)<br>Interfaces<br>Weight<br>Power<br>Cooling system   | For full details, refer to the Cisco TelePresence Conductor Deployment Guide.<br><b>opliance</b><br>• 1.72 x 16.8 x 18 in. (43.5 x 426 x 457.2 mm)<br>• 1-rack-unit (1RU) rack-mount chassis<br>• Four 10/100/1000BASE-TX Ethernet ports (RJ-45) (front)<br>• One RS-232 console port (RJ-45) (front)<br>• 17.6 lb (8 kg) (unpacked)<br>• Auto-sensing 250W (maximum) 580-BTU-per-hour power supply<br>• 90-264 VAC full range at 47 or 63 Hz<br>• Five 1.58-in. (40-mm) fans for system cooling   |  |  |  |
| Cisco TelePresence Conductor Ap<br>Physical dimensions (H x W x D)<br>Interfaces<br>Weight<br>Power<br>Cooling system<br>System control and indications                       | For full details, refer to the Cisco TelePresence Conductor Deployment Guide.<br><b>opliance</b><br><ul> <li>1.72 x 16.8 x 18 in. (43.5 x 426 x 457.2 mm)</li> <li>1-rack-unit (1RU) rack-mount chassis</li> <li>Four 10/100/1000BASE-TX Ethernet ports (RJ-45) (front)</li> <li>One RS-232 console port (RJ-45) (front)</li> <li>17.6 lb (8 kg) (unpacked)</li> <li>Auto-sensing 250W (maximum) 580-BTU-per-hour power supply</li> <li>90-264 VAC full range at 47 or 63 Hz</li> <li>Five 1.58-in. (40-mm) fans for system cooling</li> <li>One power LED, one alarm LED, and four act/link/10/100/1000 LEDs on Ethernet ports</li> </ul>   |  |  |  |
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| Cisco TelePresence Conductor Ap<br>Physical dimensions (H x W x D)<br>Interfaces<br>Weight<br>Power<br>Cooling system<br>System control and indications<br>Environmental data | For full details, refer to the Cisco TelePresence Conductor Deployment Guide.<br><b>opliance</b><br>1.72 x 16.8 x 18 in. (43.5 x 426 x 457.2 mm)<br>1.rack-unit (1RU) rack-mount chassis<br>Four 10/100/1000BASE-TX Ethernet ports (RJ-45) (front)<br>One RS-232 console port (RJ-45) (front)<br>17.6 lb (8 kg) (unpacked)<br>Auto-sensing 250W (maximum) 580-BTU-per-hour power supply<br>90-264 VAC full range at 47 or 63 Hz<br>Five 1.58-in. (40-mm) fans for system cooling<br>One power LED, one alarm LED, and four act/link/10/100/1000 LEDs on Ethernet ports<br>One power on/off switch (rear)<br>Operating temperatures: 32 to 104°F (0 to 40°C)  |  |  |  |
| Cisco TelePresence Conductor Ap<br>Physical dimensions (H x W x D)<br>Interfaces<br>Weight<br>Power<br>Cooling system<br>System control and indications<br>Environmental data | For full details, refer to the Cisco TelePresence Conductor Deployment Guide.<br><b>opliance</b><br>1.72 x 16.8 x 18 in. (43.5 x 426 x 457.2 mm)<br>1-rack-unit (1RU) rack-mount chassis<br>Four 10/100/1000BASE-TX Ethernet ports (RJ-45) (front)<br>One RS-232 console port (RJ-45) (front)<br>17.6 lb (8 kg) (unpacked)<br>Auto-sensing 250W (maximum) 580-BTU-per-hour power supply<br>90-264 VAC full range at 47 or 63 Hz<br>Five 1.58-in. (40-mm) fans for system cooling<br>One power LED, one alarm LED, and four act/link/10/100/1000 LEDs on Ethernet ports<br>One power on/off switch (rear)<br>Operating temperatures: 32 to 104°F (0 to 40°C)<br>Storage temperatures: -4 to 140°F (-20 to 60°C)   |  |  |  |
| Cisco TelePresence Conductor Ap<br>Physical dimensions (H x W x D)<br>Interfaces<br>Weight<br>Power<br>Cooling system<br>System control and indications<br>Environmental data | For full details, refer to the Cisco TelePresence Conductor Deployment Guide.<br><b>opliance</b><br>1.72 x 16.8 x 18 in. (43.5 x 426 x 457.2 mm)<br>1.rack-unit (1RU) rack-mount chassis<br>Four 10/100/1000BASE-TX Ethernet ports (RJ-45) (front)<br>One RS-232 console port (RJ-45) (front)<br>17.6 lb (8 kg) (unpacked)<br>Auto-sensing 250W (maximum) 580-BTU-per-hour power supply<br>90-264 VAC full range at 47 or 63 Hz<br>Five 1.58-in. (40-mm) fans for system cooling<br>One power LED, one alarm LED, and four act/link/10/100/1000 LEDs on Ethernet ports<br>One power on/off switch (rear)<br>Operating temperatures: 32 to 104°F (0 to 40°C)<br>Storage temperatures: -4 to 140°F (-20 to 60°C)<br>Relative humidity: 10 to 90% (noncondensing)                 |  |  |  |
| Cisco TelePresence Conductor Ap<br>Physical dimensions (H x W x D)<br>Interfaces<br>Weight<br>Power<br>Cooling system<br>System control and indications<br>Environmental data | For full details, refer to the Cisco TelePresence Conductor Deployment Guide.<br><b>opliance</b><br>1.72 x 16.8 x 18 in. (43.5 x 426 x 457.2 mm)<br>1-rack-unit (1RU) rack-mount chassis<br>Four 10/100/1000BASE-TX Ethernet ports (RJ-45) (front)<br>One RS-232 console port (RJ-45) (front)<br>17.6 lb (8 kg) (unpacked)<br>Auto-sensing 250W (maximum) 580-BTU-per-hour power supply<br>90-264 VAC full range at 47 or 63 Hz<br>Five 1.58-in. (40-mm) fans for system cooling<br>One power LED, one alarm LED, and four act/link/10/100/1000 LEDs on Ethernet ports<br>One power on/off switch (rear)<br>Operating temperatures: 32 to 104°F (0 to 40°C)<br>Storage temperatures: -4 to 140°F (-20 to 60°C)<br>Relative humidity: 10 to 90% (noncondensing)<br>LVD 73/23/EC |  |  |  |

| Approvals and compliance | <ul> <li>Directive 73/23/EEC (Low Voltage Directive)</li> <li>Directive 89/336/EEC (EMC Directive)</li> </ul> |  |
|--------------------------|---|--|
|                          |   |  |
|                          | <ul> <li>Standards EN 60950, EN 55022 Class A, EN 55024, and EN 61000-3-2/-3-3</li> </ul>                     |  |
|                          | <ul> <li>Approved according to UL 60950 and CAN/CSA C22.2 No. 60950</li> </ul>                                |  |
|                          | Compliance with FCC15B Class A  |  |

## **Ordering Information**

To place an order, visit the <u>Cisco Ordering Home Page</u> and refer to Table 3.

#### Table 3.Ordering Information

| Product Name  | Part Number   |  |  |  |
|---|---|--|--|--|
| Cisco TelePresence Conductor Essentials   |   |  |  |  |
| Limited capacity Virtual TelePresence Conductor; supports a single standalone TelePresence Server or TelePresence MCU | N/A (TelePresence Conductor .ova software can be downloaded from<br>http://software.cisco.com/download) |  |  |  |
| Cisco TelePresence Conductor Select   |   |  |  |  |
| Mid-market Virtual TelePresence Conductor , supports up to 50 Call Sessions   | R-VMCNDTRM-K9   |  |  |  |
| Upgrade from TelePresence Conductor Select for Mid-market to<br>Full Capacity Virtual TelePresence Conductor          | L-CNDTR-UG-PAK  |  |  |  |
| Full Capacity Cisco TelePresence Conductor  |   |  |  |  |
| Cisco TelePresence Conductor-30 MCUs/2400 Call Sessions (Virtualized Application)                                     | R-VMCNDTR-K9  |  |  |  |
| Cisco TelePresence Conductor-30 MCUs/2400 Call Sessions (Appliance)   | CTI-CNDTR-K9  |  |  |  |

## Service and Support

Cisco offers a wide range of services programs to accelerate customer success. These innovative services programs are delivered through a unique combination of people, processes, tools, and partners, resulting in high levels of customer satisfaction. Cisco Services help you protect your network investment, optimize network operations, and prepare your network for new applications to extend network intelligence and the power of your business. For more information about Cisco Services, visit <u>Cisco Technical Support Services</u> or <u>Cisco Telepresence Services</u> online.

## For More Information

For more information, visit the Cisco <u>TelePresence Conductor</u> homepage at <u>http://www.cisco.com/go/telepresenceconductor</u> or contact your local Cisco account representative.

This product includes software developed by Computing Services at <u>Carnegie Mellon University</u>. This product includes software developed by the University of California, Berkeley, and its contributors.



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