Transitioning from Cisco TelePresence Manager to Cisco TelePresence Management Suite

Whitepaper
February 2014
Revision 3

Contents

This document applies to Cisco TMS version 14.3.2 and Cisco TMSXE version 3.1.3. These are the minimum versions that should be used for customers transitioning from CTS-Manager. This document is not forward compatible with later releases of Cisco TMS or TMSXE.

Overview

Many traditional Cisco TelePresence customers utilize Cisco TelePresence Manager (CTS-Manager) for scheduling their TelePresence systems and the Cisco TelePresence Multipoint Switch (CTMS) or TelePresence Server (TS) for multipoint conferencing. With the 'End of Sale' announcement of CTS-Manager and CTMS, customers face questions on what transitioning to a new deployment model that utilizes TelePresence Management Suite (TMS) and TelePresence Server (TS) means to their organization. This whitepaper aims to:

- Highlight key benefits of the named replacement products relative to an existing deployment
- Outline key functionality differences to help manage customer expectations through the change
- Provide guidance in preparing and executing the technology transition

The Cisco TelePresence Management Suite (TMS) is a software application designed to improve the TelePresence experience through conference automation and scheduling through Microsoft Exchange, Lotus Notes, its own built in web scheduling tool, or through third party resource booking applications. Cisco TMSXE is the optional extension for TMS that enables the Microsoft Exchange/Outlook integration. More information regarding TMS can be found on the Cisco website

The Cisco TelePresence Server (TS) is a pioneering solution that brings the immersive TelePresence conferencing experience to the office worker and the mobile user. It works with a wide range of endpoints, delivering a smooth, predictable experience for every conference participant. Specifically engineered to deliver the full benefits of immersive conferencing, the Cisco TelePresence Server provides predictable, reliable high-quality video and content-sharing capabilities. The immersive experience is available to users regardless of the type of endpoint they are using. With views optimized for meeting rooms, desktop, mobile devices such as Cisco Jabber running on the Apple iPad tablet, the Cisco TelePresence server delivers any-to-any telepresence conferencing. More information regarding the Cisco TelePresence server can be found on the Cisco website.

Deployment overview

The TelePresence infrastructure is different between a traditional CTS-Manager/CTMS deployment and a TMS/TS deployment. The following diagrams aim to illustrate the differences between the deployments to establish an understanding of how the solution changes as a customer transitions from the classic deployment to the TMS/TS deployment.
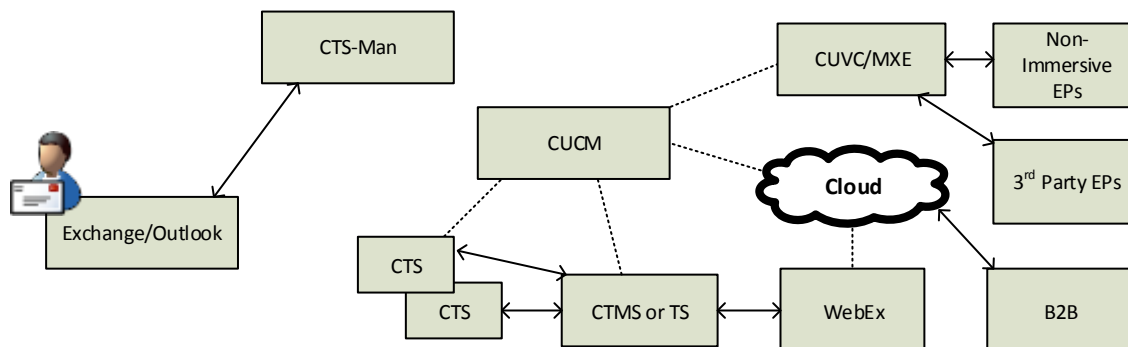
CTS-Manager Deployment

Figure 1 CTS-Manager Deployment

Users request scheduled meetings through their Outlook clients, which are processed by CTS-Manager, with the meetings being facilitated by CTMS. The Cisco CUVC solution provides interoperability to legacy and other non-CTS systems.
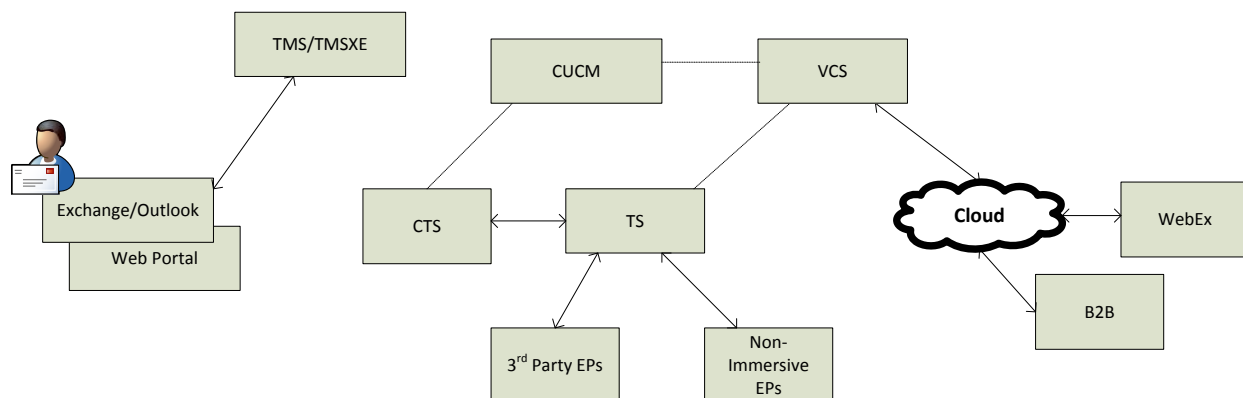
Deployment after transition to TMS/TS

Figure 2 TMS/TS Deployment

Users schedule meetings through their outlook clients (or optional web portal) which are processed by the TMS+TMSXE applications. The TelePresence Server (TS) provides conferencing directly for all endpoint types -- immersive, personal, and 3rd party systems. Cisco VCS provides registration and proxy functionality for the TelePresence Server and 3rd party endpoints. The firewall traversal solution provided by the Cisco VCS Expressway allows connectivity to cloud services such as WebEx and B2B conferencing.

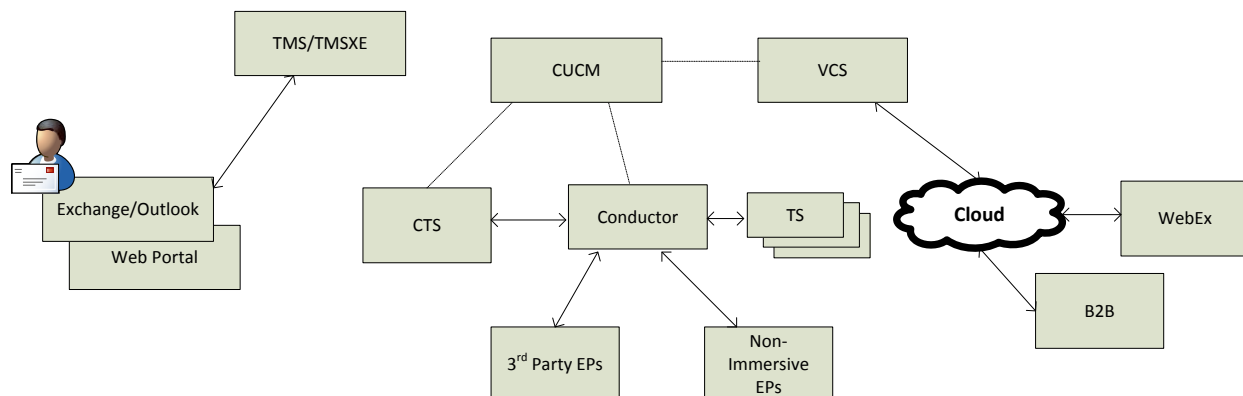**Scheduling Deployment utilizing Conductor**

Figure 3 Conductor Deployment

The next evolution of the conferencing solution augments the TelePresence Server with the TelePresence Conductor which brings high availability and scale to the conferencing solution. Due to limitations in scheduling capabilities, this model is not recommended at this time for conference scheduling and is not covered in this whitepaper. This configuration is included to illustrate the forward looking model for the Cisco TelePresence architecture. Support for deployments of this type is targeted for an upcoming release.

Benefits of transitioning

For CTS-based customer who are familiar with CTS-Manager, there are a number of benefits gained by transitioning to the recommended TMS-based deployment model.

Interoperability - CTMS compatibility is limited to endpoints running TC5.0 or later, or CTS software. TelePresence Server, as a Transcoding solution, supports all Cisco Collaboration single and multiscreen video endpoints including Jabber as well as interoperability with third-party standards base H.264 endpoints. This improved compatibility allows for meetings with more endpoint types without external Interop solutions like the Cisco CUVC or MXE products.

Active Presence – Active Presence offers a view of all attendees in a meeting while giving prominence to the active speaker. CTMS only supports "active speaker" mode, which shows only the active speaker on screen.

Future Roadmap - Version 1.9 is the last major release for CTMS and CTS-Manager, there will be no more new features developed on these products. TMS and TelePresence Server will be required for new features moving forward.

WebEx Enabled TelePresence – Brings together on premise TelePresence with WebEx in the cloud with two-way video, audio, and content sharing capabilities. The latest release is only available to customers using TMS.

New scheduling capabilities – Cisco TMS extends the Outlook scheduling available with CTS-Manager by offering a fully featured web based Smart Scheduler as an alternative portal for scheduling as well. TMS is a mature scheduling platform incorporating over a decade of user feedback and functionality to deliver the type of scheduled meeting abilities customers demand.

Resolutions - CTMS only supports a few resolutions, including: 1080p at 30 frames per second (fps), 720p at 30 fps, 360p (640 x 480/360) at 30 fps, and CIF. TelePresence Server offers a broader range with video resolutions of HD 1080p30 or 720p60 and all standard resolutions to CIF. More flexibility in content sharing options are also available.

Integrated Conference Controls – Cisco TMS offers the Conference Control Center, which allows both end-users and support personal complete control over their ongoing conferences. Controls include participant add/remove, mute controls, messaging to participants, and more.

Flexible scheduling options – Like CTS-Manager, TMS offers the One Button to Push scheduling experience on scheduled endpoints, but also has additional functionality such as automatic connection of conferences, easy dial-in or out for external (non-booked) participants, and full control over how conferences are connected (MCU allocation, call directions, etc) for advanced scenarios.

Increased scale - TMS supports up to 5000 endpoint devices for scheduling, above the 500 device limit of CTS-Manager

Is it the right time to transition?

Cisco TMS and TelePresence Server offer many new benefits in addition to the key functionalities a traditional Cisco CTS scheduling customer would expect: One Button to Push, Outlook Integration, Interoperability with CTS/Cisco Unified CM, and WebEx Integration. However, there are differences in how the solution operates, and there is some functionality that is not available in the replacement solution.

Administrators are encouraged to review the following section noting the differences in functionality to evaluate the impact of these on their deployment. Some differences will be closed with future software releases, while others are architectural differences in the solution. Please contact your local Cisco sales team for up to date roadmap information.

Differences in functionality or deployment

Because these products have different approaches and are not direct descendants of each other, there are specific areas where functionality and behaviors are different, or may not be available. The most significant areas are highlighted below. Administrators should take careful note to ensure any critical functionality they require is addressed before starting a transition of their deployment.

Table 1 Bridges

Area of Interest	Description
Virtualization	CTMS is software based and supports virtualization. The TelePresence Server is deployed as an appliance or blade for the MSE 8000 chassis. The TelePresence server is also available as a virtualized appliance, but not at the same capacity/features as the hardware editions today.

Image Quality	CTMS as a switch does not transcode (encode/decode) which leaves the video stream untouched with low latency. As of version 3.0 TelePresence Server always transcodes video which is the core component of offering broad inter-operability. Transcoding does create slight quality degradation and delay compared to switched video, but the added benefits such as active presence and device interoperability are generally accepted as worthwhile trade-offs.
Segment Switching	Segment switching is when each screen switches in when that segment is active speaker, rather than all three screen switching in at the same time. CTMS supports this today while TelePresence Server does not but instead uses Active Presence to decide which panels are visible. Enhancements for segment switching are planned for TelePresence Server 4.0
Meeting entry protection	TMS scheduling assigns the dial-in number for a conference from a pool of available URI & E.164 number aliases whose size matches the capacity of the bridge. Conferences can be dialed into using the alias, where CTMS conferences required a meeting number in addition to alias. Because of this, there is greater risk of a user joining a meeting inadvertently. This risk can be mitigated if PINs are set to be required on the conference, or by locking a conference once all participants are present.
Director Controls	CTMS's director controls allowed explicit control of the layouts seen by participants. With the TelePresence Server, the same type of control is not available, but you can mark a participant Important, so they will always be seen in the conference. TMS's Conference Control Center also provides additional conference controls to the end-user about the conference as a whole.
Role-based privileges	End-Users had access to CTMS for conference controls. The TelePresence Server's interface is intended only for administrators. End-Users can access their schedule and ongoing conferences through TMS's interface, which does have roles and permissions.
Bridge Registration/Trunking	CTMS is associated directly to Cisco Unified CM for call processing, but the TelePresence Server must be registered with a VCS when using TMS for scheduling. The VCS dependency will be removed with future deployment scenarios from Cisco to use the Conductor or trunking to Call Manager.
Maximum Conference Size	CTMS supports cascading (network multipoint) for up to 11 CTMS. TelePresence Server can cluster up to 4 blades together for a maximum of 48 FullHD or 96 HD, up to 104 devices per conference today.

Scheduled vs Ad-hoc resources	In CTMS, you can designate x number of ports to ad-hoc and y number of ports for scheduled conferences. This ensures that scheduled meeting ports are never consumed by an ad-hoc user. TelePresence Server does not support splitting its capacity in this fashion and does not stop ad-hoc call-in users from using up scheduled ports. This can lead to contention and failed scheduled calls if scheduled and adhoc conferencing are mixed on the same TS. This will be addressed with future releases utilizing the TelePresence Conductor solution.
Call-in meeting behavior (Auto Attendant)	When using Dial-in with the CTMS, participants must enter the meeting ID. Calls into a TelePresence server are routed directly to the conference - No auto attendant is required.
Screen placement (as viewed on 3-screen endpoint)	CTMS: When an endpoint joins a meeting, the endpoint is placed into left, center, or right screen. Thereafter, the endpoint will always switch in to the same screen. TelePresence Server: endpoints can show up on center screen, then move to active presence film strip on left screen, then switch into a different screen when it becomes active speaker. Improvements in this area are planned.

Table 2 Scheduling

Area of Interest	**Description**
Intercompany B2B	There is no explicit B2B scheduling mode with TMS. You can schedule a conference to dial a number provided by a service provider, and if more than one participant is booked, a MCU will be included and dial out to the provided number. Booking B2B with OBTP for multiple endpoints to the Service Provider number is targeted for a future release of TMS.
CTMS Scheduling	TMS does not support the CTMS Multipoint Switch directly. Customers must transition their bridge to TelePresence Server when scheduling via TMS.
CTRS Studio room recording	TMS does not have a direct equivalent of a personal recording as controlled by the phone of a CTS endpoint. Individual meetings can be recorded by scheduling a conference with the Content Server product through TMS.
Private Meetings	The Private Meeting flag in Outlook meetings is not supported by TMS. Customers are advised the meeting subject (title) can be seen on endpoints and in the scheduling system. Customers should be made aware of this change to avoid putting sensitive information in meeting subject fields.

Booking Confirmation Emails	The look and presentation of the emails sent to a meeting organizer differ between CTS-Manager and TMS. Both provide the meeting participant details and links edit further details of the conference. TMS Confirmation emails provide the meeting details and links to edit the meeting via the TMS interface. The TMS email templates can also be customized by the TMS administrator if desired.
WebEx OneTouch Integration	OneTouch Integration has been superseded by the Cisco WebEx Enabled TelePresence functionality, which is supported in TMS. Existing OneTouch customers should contact Cisco Account teams for design guidance in transition from OneTouch to TMS based WebEx Enabled TelePresence solution.
Network Multipoint/Cascading	CTMS supports cascading (network multipoint) for up to 11 CTMS. TelePresence Server does not cascade immersive calls but can cluster up to 4 blades together for a maximum of 48 FullHD or 96 HD per conference.
Confirmation Emails	The emails sent to booking users are different, but updated with fresh styles and information. TMS allows extensive customization of emails from the product itself. Cisco Advanced Services are not required.
Metrics Dashboard	The user survey and specific reports offered by the Metrics Dashboard are not available in TMS. TMS offers reporting on scheduling activity and VCS registered endpoints. Reporting for Cisco Unified CM registered devices is available through Cisco Prime and UCM.
Live Desk	The Live desk button to reach help desk personal has been transitioned to a UCM provisioning setting and is no longer set by the scheduling system
Port Restrictions on Conferences	Conferences are scheduled with a max number of participants, but because the conference is open for dial-in, ports are held by capacity, not by specific participants.
Conference Bridge Selection	In CTS-Manager, bridge selection is influenced by Time Zone settings. In TMS, bridge selection is influenced by 'locality' as defined by IP Zones in TMS. TMS will prefer the bridge based on which bridge shares the IP zone with the most scheduled participants
WebEx OneTouch Scheduling with proxy approval	CTS-Manager and WebEx OneTouch with Productivity Tools supported room proxy approval for meetings saved in Exchange. TMS with WebEx Enabled TelePresence does not support room proxy approval when using Productivity Tools. An alternative to Productivity Tools is the WebEx Scheduling Mailbox or Smart Scheduler which respects Exchange room proxy approval

Virtual VC Endpoints	This functionality is replaced by the ability to schedule ports using TMS dial-ins, dial-outs, and the ability to create 'room' devices in TMS.
CUVC or MXE5600 interop scheduling	TMS does not schedule the Cisco Unified Video Conferencing (CUVC) or MXE5600 interop solutions, but this interop functionality is made unnecessary by the native interoperability offered by the TelePresence Server.
Early Join	CTS-Man offered the ability to enable early join for scheduled meetings using ports in the ad-hoc pool. TMS Scheduled meetings are not open for dial-in until the scheduled meeting start time. In a future release of TMS, in conjunction with Conductor, we plan on releasing a feature called "Best Effort Early Meeting Join" which will create the conference 5 minutes before the scheduled start time to allow users to join early.
Meeting Extension 'if resources are available'	CTMS offers meeting extension with a 'if resources are available' option which uses adhoc resources if available when extending a meeting. TMS only allows extending meetings if all scheduled systems and conferencing resources are available. In a future release of TMS, possibly in conjunction with Conductor, the meeting will be extended if the remaining systems and conferencing resources are available.
Differences when a resource cannot be scheduled for TelePresence	If the TelePresence portion of a meeting can not be scheduled, under CTS-Manager the user will get an email with details regarding the failure. Under TMSXE, the user will get an email detailing the failure, but in addition, the resource account that failed to schedule will be updated to decline the invitation. The resources sending declines after they had initially accepted may confuse users conditioned to CTS-Manager's behavior.

More detail on these feature differences can be found in Appendix A.

Transition overview

There is no direct upgrade or migration of CTS-Manager to TMS, or CTMS to TS. Instead customers decommission their existing services and create new installations of TMS and TS.

Cisco TMSXE has the ability to use existing resource calendars when setting up resource accounts so it is possible to automatically recreate most existing TelePresence conferences in the new solution. It should be noted that the reuse of existing calendars is not intended to be a direct migration path between the products and not all functionality or information is retained.

Completing a transition successfully includes several stages an administrator should familiarize themselves with before starting the process. The following sections provide guidance for an administrator to help them understand what is involved and necessary to achieve a smooth transition. A successful transition should include several phases:

1. **Planning** – This phase includes the administrators evaluating the impacted meetings, deployment changes, and estimating the timing/scheduling of changes
2. **Staging** – This phase includes preparing the elements that can be setup without interrupting the current production environment
3. **Decommissioning/Cut-over** – The actual stoppage of services and reconfiguration of equipment from the old deployment model to the new
4. **Post Import evaluation/support** – Once the cut-over is complete, there are opportunities administrators may take to correct meetings that did not import

This document is not intended to be a step-wise deployment guide, but rather an outline to help Cisco customers understand the elements involved, constraints, and general workflow involved in such a transition.

Planning the transition

Targeted software releases

This paper is written for the target use of Cisco TMS version 14.3.2 and Cisco TMSXE version 3.1.3 -- These are the minimum versions you should use for an intended deployment of this type. This document should not be applied to future major releases of these products. Future revisions of this document will cover newer releases as they become available.

Dial plan considerations

You must pay special attention to how your dial plan changes during your transition because end-users were given directory numbers or chose numbers to use when they scheduled their conferences. Changes to the dial plan will invalidate the information previously distributed to users. When importing existing meetings into TMS, the dial plan as TMS knows it is used in creating the new meeting – *not* the dial plan that was in use when the meeting was scheduled through CTS-Man.

Dial plan changes and impacts are unavoidable because you will be changing which bridge hosts the conference and potentially the dial plan for endpoints. If you had deployed TelePresence Servers with CTS-Manager, your dial plan will likely change as you move the TS from a trunk to registering with the VCS[1]. Your dial plan for endpoints is not required to change if you leave them registered to their existing registrar.

Note: Cisco TMS currently does not use the inter-cluster prefix when determining call routes. Your dial plan should be configure for a 'flat dial plan' where a prefix is not required as part of the dial string to route calls to their intended destinations.

Administrators should plan out their new dial plan prior to starting any transition. The dial plan must be in place before the actual import of meetings is done with TMSXE.

---

[1] Requiring the TelePresence Server be registered to VCS is to ensure the full portfolio functionality including WebEx Enabled TelePresence. The bridges will move to Unified CM trunks in future iterations of the solution.

Create a list of endpoints and email addresses

Create a list of all endpoints that are being scheduled through CTS-Manager. Creating a list of endpoints is helpful to ensure you capture all systems when installing the new TMS system. For endpoints that are provisioned through Cisco Unified CM, you should collect the following for each:

- Endpoint Description
- Endpoint MAC Address
- Endpoint Email address (the Room Name field in **Product Specific Settings** that was used for scheduling the endpoint in CTS-Manager)

This information can be obtained from the device's configuration in Cisco Unified CM. To ease collection of this info, you can use the **Bulk Administration ->Phones -> Export** pages in Unified CM to export details of your endpoints to a file.

> *Tip: Make sure you wait a couple minutes after executing the export before downloading the file, if you download the file too early, you might be missing endpoints.*

For CTS-Manager systems that are registered to VCS, you can collect the information from the **Configure -> Endpoints** page in CTS-Manager's web interface. You should collect the following for each system:

- Name
- IP Address/Hostname
- Email ID
- Username
- Password

The Export feature on the **Support -> Endpoints** page in CTS-Manager can assist with this task, but does not include the email or username/password fields – that data will have be collected manually.

Create a list of TelePresence Server information

Collect the following for each of your existing TelePresence Servers:

- IP address/Hostname
- Username
- Password

If you are deploying new TelePresence Servers to replace existing CTMS bridges, include those in your planning notes as well.

TelePresence Server dial plan considerations

Depending on your deployment model, for TMS scheduling a TelePresence Server will need to be registered to VCS and not trunked to Unified CM[2]. These changes can result in the dial plan for the bridges changing. Plan these changes ahead of time but do not execute those changes at this time to avoid impacting your existing production environment.

Export list of existing meetings

The Export function of **Monitor-> Meetings** in CTS-Manager can be used to create a list of the existing telepresence meetings your users have scheduled. Creating such a list is necessary if you chose to reuse existing calendars so you can evaluate the types and how many total meetings you will be importing into TMS/TMSXE. Only meetings that occur in the future are imported by TMSXE. Administrators should use this tool early in their planning to understand the scale of their environment and features in use by their users. Reports can also be ran right before decommissioning CTS-Manager as a form of backup of the meeting history for later troubleshooting if necessary.

---

[2] Requiring the TelePresence Server be registered to VCS is to ensure the full portfolio functionality including WebEx Enabled TelePresence. The bridges will move to Unified CM trunks in future iterations of the solution.

Enhanced CTS-Manager meeting export

The export feature in the CTS-Manager web interface lacks some fields that are of interest for customers transitioning to TMS/TMSXE. An enhanced version of CTS-Manager's export is available through Cisco as a shell script that adds additional details for each exported meeting. The enhanced version includes the standard fields plus:

- Intercompany meeting details including the MCU numbers and intercompany mode
- The MCU number and meeting number for a meeting
- The Exchange ID associated with the meeting

This additional information is useful for recreating meeting details or recreating meetings that are declined during migration.

Running the enhanced export script is only available with the assistance of Cisco TAC due to the need to use the Remote Access account in your CTS-Manager server. Contact the Cisco TAC and reference CDETS CSCum96237 for assistance.

Evaluating impacted meetings

As part of the transition, you can chose to preserve your previously scheduled conferences using the feature to import existing calendars into new TMSXE installations. Existing calendar reservations for linked resources will be rebooked in the new TMS/TMSXE installation, but the new versions of the meetings are impacted by functionality differences and any changes in dial plans. Administrators should use their knowledge of their CTS-Manager deployment and the information in this section to evaluate the feasibility of importing their existing meetings into TMSXE. If the number of impacted meetings is too great, or the existing schedule not worthy of the effort, administrators can alternatively chose to transition using new resource accounts and not import the existing conferences.

During the import performed by TMSXE, all future meeting reservations in the imported Exchange calendars are rebooked in TMS and modified in Exchange noting the following:

Table 3 Re-use constraints

- Setting the default reservation type to 'One Button to Push' in TMS is strongly recommended to maintain the conference dialing experience for end-users. This document is written assuming this setting is used.
- During an import, meeting organizers do not get the booking confirmation email containing their conference's dialing information to avoid flooding users with emails. OBTP handles the new dialing information for managed endpoints. Meeting details can also be retrieved from TMS's web interfaces, or by editing a meeting post import.
- While importing, meeting details/options that are not compatible with TMS are ignored and dropped.
- If an existing reservation for a resource/endpoint cannot be scheduled in TMS due to incompatibilities or lack of resources, TMSXE will downgrade the TelePresence conference to reservation-only and no OBTP info or bridge resources are scheduled. Any resource in the meeting that cannot be booked as reservation-only (due to already being booked, permissions, or unknown errors) will have its resource calendar changed to decline the invitation for that meeting[3].
- Bridge availability will be different in your new deployment so it is possible meetings that were scheduled successfully before will not be able to be scheduled in the new deployment due to lack of bridge resources. Hosting an immersive conference require free TelePresence Server capacity on a single bridge or cluster. If sufficient resources are not available, TMSXE will downgrade the TelePresence conference to reservation-only and no OBTP info or bridge resources are scheduled[3].
  - Example 1: If you had a 48 port bridge previously, and replaced it with two 24 port TS bridges, you could not schedule a 30 port immersive conference as neither TS is sufficiently large alone to handle the conference. To minimize this, deploy larger TS bridges with clustering
  - Example 2: If you had a 48 port bridge previously, and replaced it with two 24 port TS bridges. If existing reservations are using up 14 ports of both TS bridges, it is not possible to create a new

---

[3] The TMSXE configuration wizard administrator has the option to enable/disable the sending of email notices for declines or downgrades during import. For large imports of meetings, Cisco recommends not sending notices due to the risk of confusing users with intermediate information and instead have administrators intervene post-import to reconfigure user's meetings that were impacted

conference larger than 10 participants even though there are 20 port free across the network combined. To minimize this, deploy larger TS bridges with clustering

Because of these changes, some of your imported meetings may not function as the user expected when they booked the original meeting. The following outlines the potential meeting scenarios and their outcome from an import. Guidance on how an administrator or user can mitigate the import differences is included where appropriate.

Table 4 Meeting Import Compatibility

Meeting Type	Compatible?	Details
Single room reservation	Yes	Booked the same in TMS
Studio Recording	No	Room reservation will be maintained but recording aspect of reservation is dropped. Post-import mitigation is possible by adding Recording to the meeting if you have a Cisco Content Server.
Point to Point call	Yes	OBTP meeting will be created, dial plan changes will be handled automatically by OBTP
Point to Point call - inter-cluster prefix in dial plan	No	OBTP meeting will be created, but the inter-cluster prefix is ignored. If your dial plan requires the prefix, your OBTP initiated dial will fail. TMS requires a flat dial plan for inter-cluster dialing
Multi-party CTMS conference and no extra options	Yes	New meeting will be scheduled with TS/MCU resources available to TMS. OBTP handles all dialing info
Multi-party CTMS conference with call-in defined	Partial	Call-in property of reservation will be ignored. Meeting will be booked based on how many telepresence resource accounts are included in the meeting invite. Post-import mitigation is possible by adding external dial-in participants to the scheduled meeting and sharing the new dial-in information.
Multi-party CTMS conference with interop enabled	Partial	Interop portion of reservation will be dropped. Meeting will be booked based on how many telepresence resource accounts are included in the meeting invite. Post-import mitigation is possible by adding external dial-in participants to the scheduled meeting and sharing the new dial-in information.
Intercompany call – Our company hosts	Partial	Conference will be booked with only the endpoints explicitly added to the reservation. Resources for 'all other companies' are ignored. Post-import mitigation is possible by adding external dial-in participants to the scheduled meeting and sharing the new dial-in information.
Intercompany Call – Another company hosts	No	Endpoints scheduled for the conference will be booked into a new multi-party call hosted by a TMS scheduled bridge, and the dial-out to the intercompany service is ignored. Post-import mitigation is possible by adding an external dial-out participant to the scheduled meeting to the intercompany number.
Multi-Party CTMS conference using Network Multipoint	No	TMS will try to schedule all reserved endpoints into a single multi-party call hosted by a TMS scheduled bridge. No cascading will be used. If the meeting exceeds the bridge capacity available, the meeting cannot be scheduled and will be downgraded to Reservation-Only by TMSXE. Post-import mitigation is to find any downgraded meetings and reschedule as appropriate.

WebEx OneTouch enabled conferences	No	The WebEx portion of the conference will be ignored and dropped. The remainder of the conference will be scheduled as a normal OBTP TelePresence conference. Post-import mitigation is possible by adding WebEx Enabled TelePresence to the scheduled meeting if available.
Meetings with dates beyond the TMS Booking window	No	Any meeting or meeting occurrence set to a date beyond the defined Booking Window in TMS will not be scheduled in TMS and the resource accounts will be updated to decline the existing meeting
Recurring meeting with no end date	No	TMS does not support recurring series that are defined to have no end-date. These meeting series will not be scheduled in TMS and the resource accounts will be updated to decline the existing meeting. To preserve these meetings, prior to import users must change their meetings to end within the TMS Booking Horizon and number of instance limits.
Recurring meeting with more than 100 instances	No	TMS does not support recurring series with more than 100 instances. These meeting series will not be scheduled in TMS and the resource accounts will be updated to decline the existing meeting. To preserve these meetings, prior to import users must change their meetings to end within the TMS Booking Horizon and number of instance limits.
User modified OBTP Dial numbers	Partial	If a user booked a single resource account, and manually added OBTP number to the meeting, the OBTP is ignored and the meeting will be booked as a single room reservation only. Post-import mitigation is possible adding an external dial-out participant into the meeting with the previously scheduled OBTP number.
Meetings marked as Private	Partial	Meetings marked as private will be imported into TMS, but the solution will not respect the privacy setting. Meeting details will be shown in TMS, bridges, and OBTP displays.

Using CTS-Manager's meeting data and the information from the above table, Administrators should review:

1. How many future meetings they have scheduled – This will help in the planning how long the import will take
2. If they are any recurring series, evaluate how many series and how many instances each series has to ensure they fall within the TMS/TMSXE constraints
3. What features (Interop, B2B, etc) are used in their future conferences? Use to gauge what differences users will see and evaluate how many meetings would not be imported or only partially imported by TMSXE
4. Summarize how many meetings you expect to require post-import intervention due to incompatibilities or needing mitigation steps to restore requested functionality

Tips for exported meeting data

The exported meeting data from CTS-Manager is a tab separated list of meetings with column headers. Loading the file into a spreadsheet program will make the information easier to review and sort. The following provides some tips for interpreting the meeting data as it ties into the information provided in Table 4 Meeting Import Compatibility

Table 5 Tips for exported meeting data

Column in exported file	Details
Status	This column should be ignored for planning purposes. The Start Time column is more relevant to planning because TMSXE will import anything with a Start Time after the current time when the import is actually performed

Endpoint	The list of resource accounts scheduled for the meeting, each separated by || The following Excel array formula (use control+shift+enter when saving) can count how many endpoints are listed in the endpoint cell[4] =SUM(LEN(cell)-LEN(SUBSTITUTE(cell,"||","")))/LEN("||") +1
Organizer	Email address of the meeting organizer as booked in Exchange
Video Conferencing	If *yes*, Interop was enabled for this meeting
Recording	If *yes*, CTRS recording was enabled for this meeting
WebEx	If *yes*, OneTouch v1 was enabled for this meeting
Number to Dial	If not empty, a user had manually added a OBTP number to the meeting
Intercompany Hosted By	If not empty, Intercompany calling was enabled for this meeting. The additional Intercompany … columns contain the details necessary to reconstruct the meeting post-import if desired
MCU Call In Number / MCU Meeting Number	The dialing details for the bridge if the conference included a bridge
System ID	The Exchange ID for the meeting. Any meetings that are part of the same recurring series will have the same Exchange ID. Sorting or grouping by SystemID allows you to see how many recurring meetings exist and how many instances each series has. This ID is also seen in the TMSXE logs and is used as a cross-reference when trying to find the original meeting details from CTS-Manager

Determine meeting mitigation strategy

Up front, administrators should decide how they will manage or mitigate meeting changes that impact end-users. Will end-users be responsible for updating meetings on their own, or will staff proactively intervene after the cut-over? End-users can be automatically notified if their meetings are downgraded or declined during the import, but will not be notified automatically about other functional changes.

When coming from an existing TelePresence solution, Cisco recommends that administrators not rely on the automatic notifications to users and instead manually intervene post-migration to correct impacted meetings. Not using the notifications reduces the email 'noise' to the end user and allows administrators to correct all multiple aspects of a meeting in a single update to the user.

Administrators can identify which meetings lose functionality using the meeting details gathered during planning. Administrators can identify which meetings are declined or downgraded using the TMSXE logs generated during import. An administrator can intervene on the user's behalf and edit/delete/create meetings via TMS's web interface as part of the post-import steps. Your project plan should include estimates for this work based on how many meetings are expected to be impacted.

Estimate project time and downtime

Because a transition can require a potentially lengthy interruption of service to your end-users, administrators are strongly encouraged to make a detailed project plan for their move including all staging, installation, and cutover steps. Launching and scheduling conferences will be disrupted until the existing calendars are completely imported. This process can be very intense on TMS and Exchange if you have a large number of future meetings. It is recommended to plan for a cutover where an extended suspension of services is acceptable, such as over a weekend.

---

[4] Count example from http://support.microsoft.com/kb/213889

The time required for the task will depend heavily on the size and complexity of your deployment, but some notable elements that can be time intensive include:

- Updating Exchange Resource account settings
- Taking a backup of the TMS and CTS-Manager databases
- Adding systems to TMS – Depends on network and device type, but can take 5-30 seconds per device when done in bulk.
- Linking systems in TMSXE – The time required depends on if you can effectively use the pattern matching feature in the Configuration App and total number of systems being added.
- TMSXE importing of future meetings – A sufficiently powered TMS installation can book on average approximately 4 meetings per second. Use your exported meeting details from CTS-Manager to estimate your future meeting count and add 20% to your total to account for overhead in how TMSXE and Exchange Web Services interact.
- Startup time for services – The amount of time it takes for TMSXE to start increases as the number of linked system increases. Service startup takes approximately one minute per 55 linked systems.
- Post import mitigations – Plan time for administrators to rebook or modify impacted meetings if desired

For installations using more than 500 linked systems in TMSXE, there are additional caveats and timing implications that significantly impact the deployment. Customers looking to deploy more than 500 linked systems should contact Cisco and reference CDETS CSCum00849 for more installation requirements and guidance.

Notify users of upcoming changes

Keeping users informed is essential to managing a successful transition. Notify end-users of your upcoming downtime and prepare them by educating them on the upcoming changes including differences in their booking experience.

For the transition, make sure end-users are aware of the change in functionality for their existing meetings, what meetings may need to be rebooked, and prepare users for getting emails from TMS and resource accounts about their imported meetings. TMSXE allows the email templates used to be customized. If you are using the decline/downgrade notices on import, you may want to customize the email templates for Downgrades and declines specifically for the transition to provide additional or specific information to ensure end-users do not overlook important information. Refer to the TMSXE Administration Guide for information on customizing email-templates. The migration-specific email templates will be used when importing your existing meetings.

Do not forget to educate your end-users with information about new functionality that you will enable post transition, such as Smart Scheduler, or WebEx Enabled TelePresence.

Staging the new environment

These steps can be completed at any time prior to your planned cutover.

Check Endpoint Configurations

- Provisioning Mode must be configured correctly on all endpoints (Cisco EX/C/SX/MX series). This setting is not checked by CTS-Manager so you should verify this directly with the systems. Inaccuracies here will lead to errors when adding the systems to TMS.

    o Mode must set to "Cisco Unified CM" for Cisco Unified CM registered endpoints and "TMS" or "Off" for VCS registered endpoints

- For Cisco EX/C/SX/MX series endpoints registered to Cisco Unified CM, username and password information configured in Cisco Unified CM is not enforced onto the endpoint. Please ensure that the username and password configured on Cisco Unified CM matches the configuration on the actual endpoint.

Install TMS and add required licenses

Install TMS if it does not already exist in your environment. See http://www.cisco.com/en/US/products/ps11338/prod_installation_guides_list.html for documentation on installing TMS.

Note: You should not have any existing systems or bookings in TMS for the calendars you intend to import from your CTS-Manager installation.

Add your TMS license information to TMS including the TMS release key, system licenses, integration licenses, and options you have purchased. Make sure you have enough licenses for the number of endpoints and bridges you are moving into TMS.

You should configure your basic TMS settings and preferences, but do not add the endpoints or bridges that are to be transitioned yet. Under **Administrator Tools -> Configuration -> Conference Settings**, Set **Default Reservation Type for Scheduled Calls** to *One Button to Push* to ensure a similar experience for CTS-Manager users.

You are encouraged to complete configuration such as defining zones, folders for systems, and user groups/permissions at this time to reduce the workload during the actual cutover.

Install TMS Extension for Microsoft Exchange (TMSXE)

Install TMSXE on a Windows Server meeting the TMSXE requirements. See http://www.cisco.com/en/US/products/ps11472/prod_installation_guides_list.html for TMSXE documentation.

While installing TMSXE configure the TMS information and Exchange information but do not add any systems at this point. When prompted, do not start the TMSXE service. The TMSXE service should remain stopped or disabled until you are ready to import the existing calendars.

Install TMS Provisioning Extension (Optional)

TMS Provisioning Extension (TMSPE) can be installed on the same server as TMS if you wish to use the TMS Smart Scheduler.

See http://www.cisco.com/en/US/products/ps11472/prod_installation_guides_list.html for TMSPE documentation.

Add your Cisco Unified CM into TMS

Add your Cisco Unified CM into TMS using its network address and the Unified CM application user used previously for CTS-Manager but do add any endpoints into TMS yet. Reference Page 64 - http://www.cisco.com/en/US/docs/telepresence/infrastructure/tms/admin_guide/Cisco_TMS_Admin_Guide_14-1.pdf

Verify UCM Endpoints in TMS

Give TMS sufficient time to discover all your endpoints from Unified CM before proceeding.   TMS will discover up to 100 endpoints per minute from Unified CM.

In TMS's web interface, click **Add System** page in System Navigator, select the **From List** tab, and select *Unified CM*. Do not add any systems at this time[5], but use the listing displayed to ensure all endpoints are visible to TMS. Compare this list with the list of endpoints from your planning and investigate any that are missing before proceeding with your transition.

Note: Endpoints that are registered in UCM but are offline and status *Unknown* will not be seen by TMS and must be registered with Call Manager to be added into TMS.

Prepare the Cisco VCS

Cisco VCS will be used for the TelePresence Server SIP registrar and Collaboration Edge functionalities. If you had not deployed VCS previously, it should be added to the network at this time. Configure or update VCS and the Unified CM as necessary for your intended dial plan. Defer any changes may disrupt ongoing production systems to your scheduled cutover day that if you have VCS registered endpoints in production. You can also add the VCS to Cisco TMS at this time. Refer to the Cisco VCS documentation for more information:

http://www.cisco.com/en/US/products/ps11337/products_installation_and_configuration_guides_list.html

---

[5] Systems are not added at this time to prevent conflicting with the existing CTS-Manager installation

Configure new TelePresence Servers

If you are deploying additional TelePresence Servers as part of your transition, you should install and configure those bridges at this time. Do not make any dial plan changes that may impact existing production systems. Refer to the Cisco TelePresence Server documentation for more information on installation and configuration:

http://www.cisco.com/c/en/us/support/conferencing/telepresence-server/tsd-products-support-series-home.html

Exchange Configurations

The commands to configure resource accounts in Exchange for CTS-Manager are similar to the ones necessary for TMSXE, however there are several additional considerations for TMSXE.

The `RemovePrivateProperty` mailbox setting removes the *Private* flags for all meetings accepted by the mailbox. The setting does not need to be enabled, but must be identical for all mailboxes added to Cisco TMSXE. Also note that the *Private* flag is not supported by Cisco TMS, see Deployment Best Practices in the TMSXE Installation Guide for more information.

TMSXE requires `Full Access Permission` to the resource mailboxes the TMSXE service account. In a CTS-Manager deployment full access was not mandatory and could have been configured with just the read permission in Exchange.

Run the following Exchange PowerShell commands for your version of Exchange against all resource accounts that will be transitioned replacing the [mailbox] and [service user] placeholders as appropriate.

Exchange 2007
```
Set-MailboxCalendarSettings -id [mailbox] -RemovePrivateProperty $True

Add-MailboxPermission [mailbox] -User "[service user]" -AccessRights FullAccess
```

Exchange 2010
```
Add-MailboxPermission -identity [mailbox] -User [service user] - AccessRights
FullAccess

Set-CalendarProcessing -identity [mailbox] -RemovePrivateProperty $true
```

Configure WebEx Enabled TelePresence

If you were using Webex OneTouch and wish to transition to WebEx Enabled TelePresence, this may be a convenient time to configure and deploy the new WebEx Enabled TelePresence. This does not have to be completed prior to your transition, but is recommended you do it before opening up scheduling to end-users.

http://www.cisco.com/en/US/docs/telepresence/infrastructure/tms/config_guide/webex_enabled_telepresence/cts_webex_solutions.pdf

Testing the new environment

Add test endpoints (non-production) into TMS and TMSXE

It is highly recommended that you add several test endpoints to your deployment to confirm that TMS is functioning correctly and providing OBTP to endpoints. These test endpoints can either be VCS or Unified CM registered.

After adding the test endpoints to TMS, add the test endpoints into Exchange and TMSXE. Refer to the TMSXE documentation and enable the TMSXE service.

http://www.cisco.com/en/US/docs/telepresence/infrastructure/tmsxe/install_guide/Cisco_TMSXE_Install_Guide_3-1.pdf

Add a test TelePresence Server (non-production) into TMS

If a bridge is available, add a test TelePresence Server into TMS. If you have TelePresence Servers in CTS-Manager you could potentially remove a TelePresence Server from CTS-Manager and add it to TMS if the remaining TelePresence Servers can cover the conferencing load.

Book test meetings from TMS and Outlook

At this point you should confirm that TMS scheduling is functioning properly. You should book meetings from the TMS administrative booking page, Smart Scheduler(optional), and Outlook.

Using the TMS web interface, create some test bookings using the endpoints in point to point calls, and using the TelePresence Server (if available). Ensure the OBTP information is displaying correctly on endpoints, that the TelePresence Server is included when necessary, and that you are receiving booking confirmation emails. You may want to edit the TMS email templates to match your corporate branding.

Create test meetings using Outlook including the test endpoints. Ensure the meetings book successfully in TMS and you get the confirmation emails. Note that you will not be able to book a meeting in Outlook that includes endpoints from both TMS and CTS-Manager. Use only your TMS enabled test endpoints for these tests.

Optional: Create a rendezvous TS so users can get used to TS experience

Since the user experience between CTMS and TelePresence Server can be different, you may want to test out a TelePresence Server in an existing CTMS meeting booked in CTS-Manager. This will help your users get comfortable with any changes between CTMS and TelePresence Server. To replace CTMS with TelePresence Server for an individual meeting, first create a permanent rendezvous conference on a TelePresence Server. Using CTS-Manager's web interface or confirmation emails, edit an existing meeting to be an Intercompany meeting hosted by another company, and enter the alias you created for the TelePresence rendezvous conference.

Service Cutover (Downtime)

These steps outline the actions necessary for the actual service transition and should be taken when you are ready for the scheduling services to be interrupted.

Notify your end users

Send out emails to users notifying them that you are starting your cutover and provide them with the information they need to know about your planned downtime and post transition information.

Shutdown CTS-Manager

Obtain the most recent list of your future meetings by exporting your future meetings from **Monitor -> Meetings** or the enhanced export script – see Enhanced CTS-Manager meeting export.

Perform a backup of CTS-Manager from **Configure -> Database** . The backup is a preventative step that can be used by Cisco TAC to assist you at a later point.

After saving your backup and list of meetings, shutdown CTS-Manager completely and remove or disable CTS-Manager from connecting to the network. You cannot have TMS and CTS-Manager managing endpoints simultaneously.

Complete dial plan changes

Complete any dial plan reconfiguration in Cisco VCS or Unified CM that were deferred during staging to avoid impacting ongoing production usage.

Add TelePresence Servers to TMS

If you need to do any reconfiguration of TelePresence Servers into clusters or expanding existing clusters, do so before adding the bridges into TMS. Add all your TelePresence Servers into TMS using the information collected during planning and register them with your VCS. Once added into TMS, edit the alias settings under **Settings -> Extended Settings** for each TelePresence Server to match your dial plan.
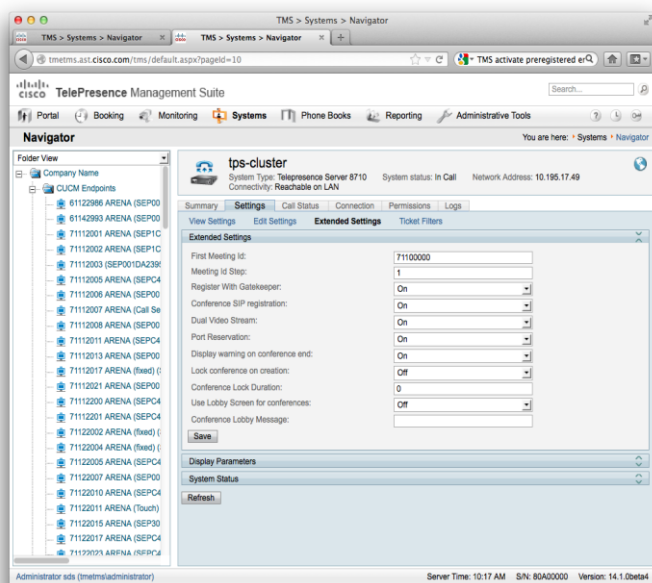
Figure 4 TS Extended Settings

The "First Meeting ID" and "Meeting Id Step" control the numeric aliases TMS will use for scheduled calls for that bridge. Confirm the aliases TMS will use on the **View Settings** page for the bridge.

Consolidate endpoints on Call Manager (optional)

If you had any VCS registered endpoints in CTS-Manager and wish to consolidate those endpoints in Unified CM, provisioning them for Unified CM should be done now before their calendars are imported.

Add Endpoints into TMS

Using the information you collected in the planning phase of your transition, create folders in TMS and add all your endpoints into TMS. VCS registered systems should be added directly, while Unified CM registered systems are added using the **Add from List** option in **Add Systems**.

Note: It is recommended to use the mailbox name as the endpoint's configured display name in Unified CM. This will simplify the process when configuring TMSXE.

Note: Endpoints must be active and registered to Cisco Unified CM in order to be added in TMS
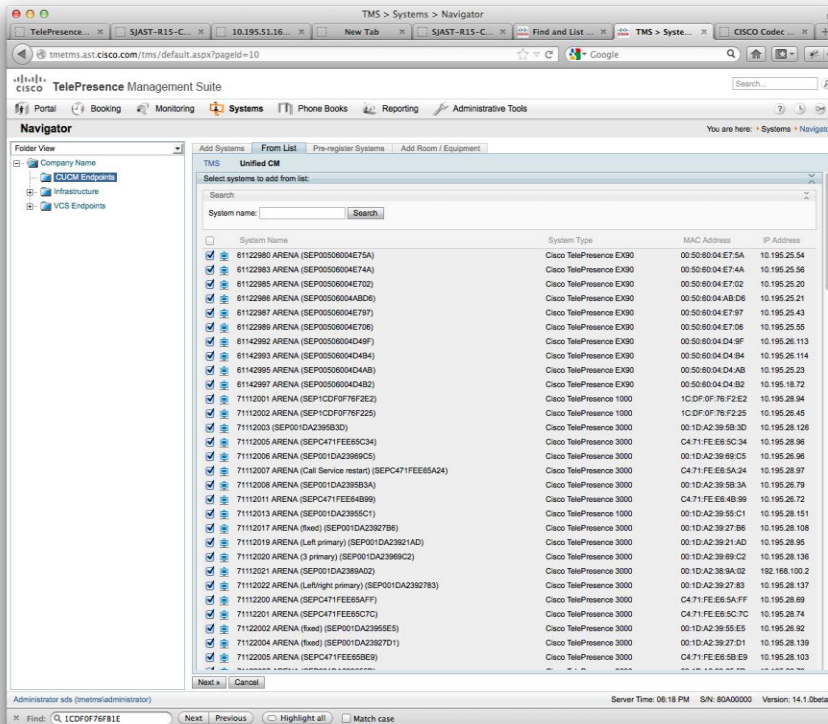
Figure 5 Adding Systems

Address any alarms or configuration errors identified for all the added systems before proceeding. Registration status, IP Zones, time zones, and scheduling options should all be verified before continuing.

Warning: It is essential that all endpoint and bridge alias information, registration status, IP Zones, and scheduling settings are accurate and current before proceeding to the TMSXE import.

Failure to do so will result in meetings being downgraded to reservation-only or declined on import.

Schedule a test meeting

At this point, you are able to schedule meetings directly from the TMS scheduling interface. Schedule a test call with several endpoints and TelePresence Server to verify the endpoint's configuration in TMS, OBTP information, and your dial plan. Delete any test calls from TMS before proceeding to avoid any conflicts with imported meetings.

Note the current TMS meeting ID

To assist you later in monitoring the TMSXE import progress, take note of the numeric ID for the last test call you made. This will be the starting value to compare how many meetings have been added to TMS.

Link systems in TMSXE

Using the endpoint information collected earlier, open the Configuration Application for TMSXE and using the **Systems** tab, associate each endpoint with its corresponding mailbox. If the endpoint's display name was configured to match the mailbox name, by filling in the domain name, you can simply move the endpoint from left-hand-side to right-hand-side. If not, edit the email pattern field or each mailbox entry as appropriate.

At the bottom of the window are options to enable or disable the sending of notifications to meeting organizers for imported meetings. Cisco recommends setting the options to not send notices to meeting organizers[67] if you plan for administrators to intervene post-import to correct impacted meetings. Once all endpoints are configured with the correct email address click *Save* and exit the configuration application.

TMSXE will start a verification process for all of the linked accounts to check their mailbox configuration. This process can take a significant amount of time depending on how many linked systems are configured. In a well configured deployment, the validation process takes approximately 1 minute for every 180 endpoints linked.

Upon closing the configuration application, you will be prompted if you wish to start the TMSXE service. Selecting *Yes* will cause TMSXE to startup and begin the import of the existing meetings from the linked resource mailboxes. If you are not ready for this intensive step, you can select *No*, and start the import later by manually starting the TMSXE service from the Windows Services Control Panel when you are ready.

Monitoring the import

Once started, the TMSXE service will continue importing meetings in the background until all future meetings have been processed. You should keep the system off-limits for end-users until the import is complete to minimize risk of conflicts for existing meetings and performance reasons.

There is no explicit indicator that all meetings have been imported. For an approximation of progress, TMS's meeting ID value can be compared to the meeting ID value noted before the import was started. The Id is incremented every time a meeting instance is created in TMS. To check to current meeting ID, connect a SQL client to your TMS database server, connect to the TMSNG database and run the query

```
select top 1 Id from ScheduledCall order by Id desc
```

The difference between this value and your start value will approximate how many meetings have been imported into TMS. Once your meeting ID stabilizes and you see no new additions after several minutes, you can assume TMSXE has finished booking the imported meetings.

Identifying downgraded or failed meetings

The most direct way to find impacted meetings is to search for key text in the log files. For each participant that is declined or meeting downgraded, an entry in the TMSXE log will be created. The default TMSXE log location is on the TMSXE server under C:\ProgramData\Cisco\TMSXE\Logs . The TMSXE-log-file.txt file is automatically rotated to a new file when the size limit is hit, so be sure to check all parts of the log.

Any participant that had their existing meeting declined will generate a line including "Cancelling reservation" and will include the participant name, meeting organizer, date of meeting, and the Exchange ID. Cross-reference this information with your exported meeting details and compare the resulting meeting in TMS to see what corrective action is necessary.

Example log entry for delete/decline for resource *mig-E20-A*

```
2014-02-05 21:56:57,865 [21] INFO  ConferenceSendEmailState - Cancelling reservation:
[24  O=Added T=meeting 10]. Owner: mig-e20-b@mig.local StartUTC: 02/06/2014 22:51:00
Reason: The system is not available for booking at the requested time  (2/6/2014)
(mig-E20-A) EId: 1d2d97fc-cc50-40b0-b320-c7a2ccf8866c
```

Any meeting that is downgraded will generate a line including "conference downgraded" but will only include the meeting organizer and subject. The meeting can be searched for in TMS's List Conference page and cross-reference this information with your exported meeting details to determine what corrective action is necessary.

---

[6] Installations with a very large number of future meetings may be guided to disable these notifications to avoid sending excessive amounts of emails to users. Administrators can use their planning materials and TMSXE logs to analyze which meetings need reconfiguration after the import is completed.

[7] These declines and downgrade notices are only for meetings that could not be scheduled in TMS based on the reserved endpoints. These notices are not sent for meeting differences caused by ignoring CTS-Manager specific features that may have been booked with the meeting.

Example log entry for downgrade of the meeting "Joes Quarterly Call" booked by joe@mig.local

```
2014-02-05 21:56:26,963 [20] INFO  ConferenceSendEmailState - Preparing mail to
organizer joe@mig.local notifying "Joes Quarterly Call" conference downgraded to res
only.
```

Post Transition

Notify users of cutover completion and next steps

After importing the existing meetings, end-users and administrators should be encouraged to review their upcoming meetings and ensure all the participants are booked as intended. Special care should be paid to any meeting where logged as declined or downgraded. The import does not touch any meeting organizer's calendars, so meeting organizers cannot rely on text information in the body of calendar entries that were imported. The meeting title, date, time, and participant accept/deny tracking details of the Outlook meeting will be accurate[8], but any additional features or meeting details are not in the calendar text and must be looked up in TMS.

Meetings that had features that were not imported, such as dial-in, intercompany, WebEx, etc will need to be edited to be updated to reflect the intended needs. The meeting organizer or administrator should log into TMS and edit any meetings as necessary.

---

[8] Tracking Details will be accurate only if send decline notifications was enabled during import

Caveats and Gotchas

Caveats:

- Conference options and preferences are lost

    - Refer to Table 4 Meeting Import Compatibility for a full breakdown on information impacted

- Some meetings may be rejected due to lack of resources

    - Refer to Table 3 Re-use constraints for more details on when conferences may not be able to be rebooked

- The body of meeting calendar entries for meeting organizers is not touched and will have stale information in them. End-users must ignore the old data or update it themselves

Gotchas:

- When adding endpoints into TMS:

    - Make sure you have enough system licenses. If you don't have enough system licenses, TMS will not let you add more systems.

    - Endpoint's actual username and password must match the username and password configured in Cisco Unified CM. Cisco Unified CM does not enforce this setting onto the endpoint. If the credentials do not match, TMS will throw an error.

    - Endpoint must be in the correct provisioning mode. For example, a Cisco Unified CM registered endpoint must be configured with provisioning mode "Cisco Unified CM", otherwise TMS will throw an error.

    - Cisco Unified CM endpoints must be active and registered in order to be added into TMS

- When modifying meetings post-import, recognize the organizer's view of the meeting may be out of date if decline notices were not sent during import. If fixing a meeting requires creating a new meeting, notify the end-user to delete their original meeting to avoid confusion. They will get email notices from TMS for the new meeting, and can add participants to that meeting when saving it in their Outlook calendar.

Appendix – Feature Difference Details

Intercompany B2B Scheduling

CTS Manager had a feature call Intercompany B2B. An Intercompany B2B call is a conference that uses a conferencing device outside of the CTS Managers control. Usually these types of calls were hosted on a Service Provider's network, an adhoc bridge not under the control of TMS, or potentially a conferencing device from an outside organization. Intercompany B2B calls enable the CTS Manager to push OBTP to all the CTS systems which directs the TelePresence systems to call this off network conferencing device.

Steps

In a traditional CTS environment you would normally make B2B calls through a service provider.

1. Contact your service provider and schedule a call on their service for the number of systems needed in the call
2. The service will then provide via email a 'multipoint call in number' and a 'meeting number'
3. A user at Customer A would book their TP systems in Exchange for that time
4. Once the user receives their confirmation email from CTS-Man they click the "Intercompany meeting" button and enter the conference details they received in step 2.
5. CTS-Manager then provides OBTP to the TP systems directing them to call directly into the conference hosted by the service provider
6. Customer B would repeat steps 3-5

TMS does not route calls in this fashion. If you schedule local TelePresence systems to call an address outside of your network, TMS will route that call through an bridge that TMS manages. Essentially TMS treats any external address as an external participant, not an external bridge.

Figure 6 B2B Meetings
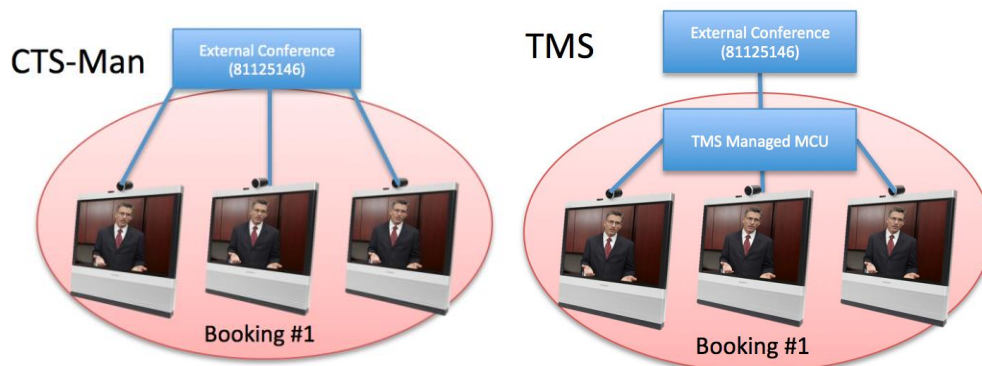
Until B2B calling is supported natively in TMS there is a workaround. You can schedule individual meetings in TMS for each TelePresence system and have them call this external address. In these point to point calls TMS will route the call directly and not through an bridge. While this workaround will provide the proper functionality, it would be cumbersome since each TelePresence meeting would have multiple TMS bookings; one per endpoint.

Figure 7 B2B TMS Workaround
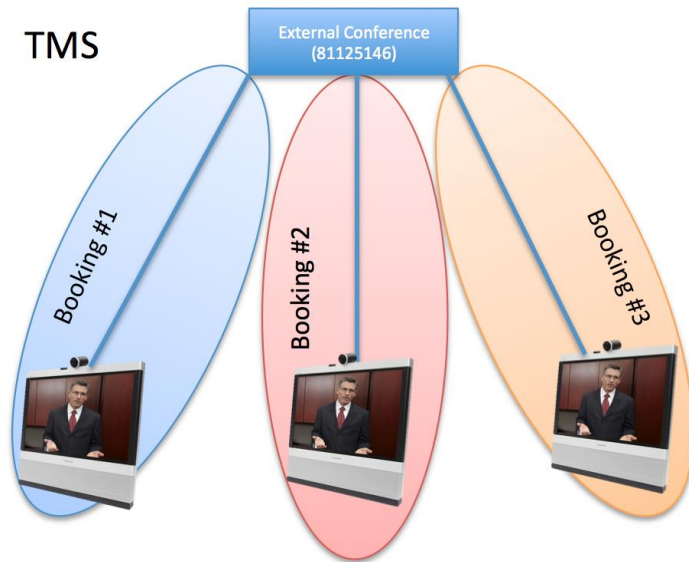
Future

An upcoming TMS Project will have a feature called 'External Conference' which will provide similar functionality to Inter-company B2B. Exact details of functionality can be discussed closer to the feature's release.

CTMS Scheduling Support

The Cisco TelePresence Multipoint Switch is not supported in Cisco TelePresence Management Suite. The recommendation is to transition from CTMS to the Cisco TelePresence Server, which is fully supported by Cisco TelePresence Management Suite.

Future

An upcoming TMS Project will have a feature called 'External Conference' which will provide similar functionality to schedule an 'External MCU' which allows an administrator to define a representation of a conferencing device that TMS does not natively support. This feature requires the conferencing device to have permanent static conferences. TMS then uses these static conferences in its call routing logic. PIN, reporting, and monitoring are not provided on an 'External MCU'.

This doesn't change the fact the CTMS is not natively supported by TMS. However, if the customer would like to keep using their CTMS, External MCU can provide some basic scheduling functionality.

Exact details of functionality can be discussed closer to the feature's release.

CTRS Support

The Cisco TelePresence Recording Server is not supported in Cisco TelePresence Management Suite. The recommendation is to transition from CTRS to the Cisco Telepresence Content Server which is fully supported by Cisco TelePresence Management Suite.

Private Meetings

CTS Manager had the option to book a meeting as private. CTS Manager was also aware of any Outlook meetings that were tagged as private. CTS Manager would not display the meeting title (subject field) of the private meeting in public TelePresence rooms OBTP information. This was designed so that the subject of a private meetings was not publicly accessible.

TMS does not have a concept of private meetings. While the *Private* flag will be respected within the Outlook client, it is not supported by Cisco TMS, and meeting subjects will be freely viewable in TMS and in any room with OBTP. The body of the meeting request and the list of attendees are not sent to Cisco TMS.

If a booking that has a *Private* flag in Exchange has its participants or recurrence pattern modified in Cisco TMS, the *Private* flag will be removed when these changes are replicated to Exchange.

As a best practice, Cisco recommends not relying on the *Private* flag for security. If allowing the flag on accepted meetings, make sure to restrict access to opening the resource calendars, or users will still be able to see to all meeting information in Outlook.

It is recommended that sensitive data should not be included in the Outlook meeting subject field.

WebEx enabled TelePresence (OneTouch)

WebEx OneTouch 1.0 and 1.1 are built around CTS Manager for management and scheduling, and CTMS as the conferencing device. Cisco TMS will not support WebEx OneTouch 1.x as CTMS is the conferencing device.

WebEx OneTouch has been superseded by the functionality named *Webex Enabled TelePresence.* WebEx Enabled TelePresence is a superior experience over WebEx OneTouch enabling two-way video, audio, presentation sharing and more between TelePresence and WebEx conferences. WebEx Enabled TelePresence utilizes Cisco Expressway, Cisco TMS, and Cisco TelePresence Server/MCU to connect customer's TelePresence meetings to their WebEx site.
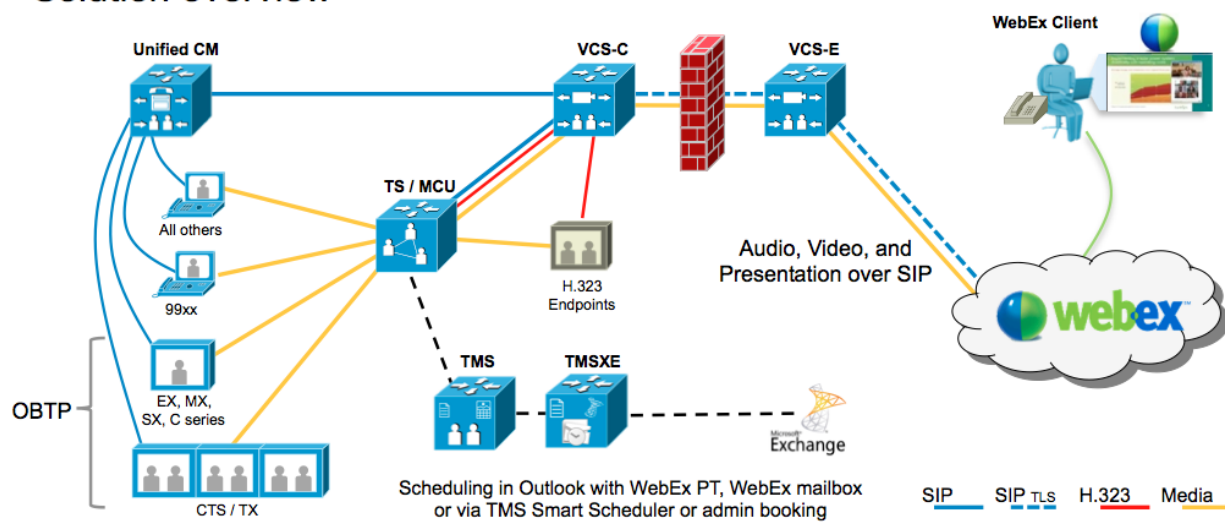
Cisco WebEx Enabled TelePresence is not available for CTS-Manager or CTMS, so customers will have to transition to TMS and TelePresence Server or MCU prior to deployment.

More information on Webex Enabled TelePresence can be found here - http://cisco.com/go/seamlessconferencing

Figure 8 WebEx Enabled TelePresence

Reporting for CTS endpoints

CTS-Manager has basic reporting capabilities for calls and endpoints. TMS does not get reporting information from Cisco Unified CM registered endpoints. When transitioning to TMS, and administrator would have to reference Cisco Unified CM or Cisco Prime Collaboration Reporting for collecting and reporting of CDR information.

Live Desk

Previously Live Desk was configured from CTS Manager for CTS and TX endpoints. It has now been incorporated into Cisco Unified CM provisioning.

TC endpoints offer same feature, configured locally on each endpoint.
http://www.cisco.com/en/US/docs/telepresence/cts_admin/1_9/release/notes/cts_1_9_release_notes.html#wp242117

Time zone dependent bridge selection

When multiple CTMS devices are available in a multipoint deployment, it is important that multipoint meetings are hosted on the appropriate CTMS based on proximity to CTS endpoints. This helps regionalize multipoint meetings, conserve bandwidth between regions, and ensure the lowest latency for each meeting. Managing large, distributed multipoint deployments without geographical resource management is an unmanageable task.

Geographical resource management requires CTS Manager and is only available for scheduled meetings. CTS-Manager geographical selection is based on time zones. For each scheduled multipoint meeting, CTS-Manager selects the CTMS whose GMT timezone is closest to the calculated mean GMT, checks for available resources on the selected CTMS, and schedules the meeting. If there are no resources available on the selected CTMS, CTS-Manager works its way down the list of CTMS devices until available resources are found.

In TMS you can create "IP Zones" that match different geographical areas (potentially time zones). Systems in a specific IP Zone will prefer conferencing devices in that specific IP Zone. This is potentially an improvement over CTS-Manager when you have endpoints and TS in New York and Florida which are in the same time zone.