

BT MeetMe Services with Cisco WebEx - Install Guide

Published by BT Conferencing October 2018

BT MeetMe Services with Cisco WebEx - Install Guide

Content approval

This document is for use by BT Conferencing customers. It should not be discussed, shown or distributed further without prior permission.

Table of Contents

About this guide	4
Product Description	5
Windows Install Guide	6
Introduction	
Wrong default install folder on Windows Vista Unprivileged users cannot alter installation scope through the GUI The user is not notified to shutdown the Citrix Receiver before proceeding with the plugin installation Missing MSVCR100.DLL and MSVCP100.dll when running Citrix Receiver Citrix Receiver doesn't load the BT MeetMe Services with Cisco WebEx Citrix Receiver plug-in after it is installed Citrix Receiver crashes after a fresh install of the BT MeetMe Services with Cisco WebEx Citrix plug-in Server certificate does not provide information about the revocation mechanism Silent installations over an existing installation do not work properly	
Installing BT MeetMe Services with Cisco WebEx on a Local Machine Installation Scope GUI Wizard Installation Command-line Installation Installing BT MeetMe Services with Cisco WebEx through the Network Administrative Repackaging	1
GPO deployment Proxy Support	1
Additional Modules	
Citrix Receiver plug-in	
Windows Installer Footprint	1
Windows Installer Frequently Asked Question	2
MacOS Install Guide	_ 22
Introduction	
Installation	2
Installing BT MeetMe Services with Cisco WebEx with a Disk Image (.DMG)	2
Installing BT MeetMe Services with Cisco WebEx with a Installer Package (.PKG)	2
Configuring BT MeetMe Services with Cisco WebEx from the command line Per-machine configurations	

Per-user configurations	26
Uninstallation	27
Uninstalling the Disk Image (.DMG) based installation	27
Uninstalling the Installer Package (.PKG) based installation	27
Caveats and Workarounds	28
Frequently Asked Questions	29
What happens if I already have an installed version of the BT MeetMe Services with Cisco WebEx Client?	29
APPENDIX A: Customer Readiness Checklist	30

About this guide

This document provides detailed installer documentation for the BT MeetMe Services with Cisco WebEx client, covering both Windows and MacOS operating systems with the goal to aid IT administrators and desktop managers to install and distribute BT MeetMe Services with Cisco WebEx. It is intended to provide guidance only and not intended to replace the customer-specific design documents.

© British Telecommunications plc 2016.

Registered office: 81 Newgate Street, London EC1A 7AJ.

Registered in England No: 1800000.

Product Description

BT MeetMe services with Cisco WebEx allow participants to join BT MeetMe reservationless conferences via VoIP (internet), provided the WebEx was scheduled by a host enabled with BT MeetMe VoIP or BT MeetMe with Dolby Voice integrated with WebEx.

Windows Install Guide

Introduction

The BT MeetMe Services with Cisco WebEx client for Windows can be distributed as a Windows Installer MSI package. The most common installation scenarios required for deployment on a corporate environment are supported.

This document describes the installation steps and key information required when using the MSI package for distribution of BT MeetMe Services with Cisco WebEx for Windows client software.

This section covers all details related to the Windows operating system installer.

Known Issues and Limitations

This section lists currently known issues and limitations.

Wrong default install folder on Windows Vista

When performing per-user installations on Windows Vista, the target installation folder will default to a folder that can only be accessed with administrator privileges, causing the installation to fail.

Workaround: When prompted to select installation folder, users should select a target folder to which they have unprivileged access.

Unprivileged users cannot alter installation scope through the GUI

When performing an installation under a non-admin account, without elevating the installation process, users are not displayed the radio button for installation scope selection.

Workaround: See section Command-line Installation below.

The user is not notified to shutdown the Citrix Receiver before proceeding with the plugin installation

When performing a per-machine installation using the standard installer GUI, if the installer is configured to install the BT MeetMe Services with Cisco WebEx Citrix Receiver Plugin and the Citrix Receiver application is running, the installer does not notify the user to shut down the Citrix Receiver before proceeding with the installation.

Workaround: Once the installation is finished, restart the Citrix Receiver application so that the BT MeetMe Services with Cisco WebEx Citrix Receiver Plugin can be properly loaded by the Citrix Receiver application and made available for use with a Citrix XenDesktop or with a Citrix XenApp.

Missing MSVCR100.DLL and MSVCP100.dll when running Citrix Receiver

Due to the way we redistribute these DLLs, if another virtual channel module installs a different version of them or even uninstalls them, the BT MeetMe Services with Cisco WebEx Citrix Receiver plugin application may

stop working. This is likely to have unwanted side effects, such as the Citrix Receiver application stopping to work on client machines.

Workaround: Repairing or reinstalling the BT MeetMe Services with Cisco WebEx application should reinstall the missing DLLs.

<u>Citrix Receiver doesn't load the BT MeetMe Services with Cisco WebEx Citrix Receiver</u> plug-in after it is installed

Due to the way the Citrix Receiver manages its plug-ins, if the BT MeetMe Services with Cisco WebEx Citrix Receiver plug-in is installed while the Citrix Receiver application is running, the plug-in won't be loaded.

Workaround: For the Citrix Receiver application to load the newly installed plug-in, close the current Citrix Receiver session and start a new one. If restarting the Citrix Receiver application is not possible, a full system reboot is required.

<u>Citrix Receiver crashes after a fresh install of the BT MeetMe Services with Cisco WebEx</u> Citrix plug-in

Versions 15.06.00.117 and 16.01.01.127 share a problem in which, while loading the plug-in on a machine with a fresh installation of the BT MeetMe Services with Cisco WebEx application, the Citrix Receiver will crash. This is due to the plug-in failing to create the required folders to place application logs into.

Workaround: In order to have the Citrix Receiver properly load the BT MeetMe Services plug-in, the required folders need to be manually created. This can be achieved through the following process:

- 1. Open a new Windows Explorer window.
- 2. On the navigation box, type %APPDATA% to navigate to the Roaming application data directory.
- 3. On the newly opened directory, create a new folder and name it BTGS Americas.
- 4. Navigate to the newly created folder and create a new folder named BT MeetMe Services with Cisco WebEx.

Once this folder structure is created, the Citrix Receiver should be able to load the plug-in appropriately.

Server certificate does not provide information about the revocation mechanism

The BT MeetMe Services with Cisco WebEx will not work if during a TLS handshake, it receives a server certificate in which the information about the revocation mechanism is not available, i.e., when neither the CRL Distribution Points URI nor the Certificate Authority Information Access OCSP URI is specified in the certificate.

The BT MeetMe Services application is silently failing in that scenario and the user will not be able to connect to the meeting. If the property CurlVerbose is set, the BT MeetMe Services application will log the following message: **0x80092012** The revocation function was unable to check revocation for the certificate

The following is a typical scenario: When the corporate web proxy is performing **HTTPs inspection** and it is using a certificate that lacks information about the revocation mechanism.

Workaround: Install the application providing the SSLBYPASSCRV flag via command-line.

Silent installations over an existing installation do not work properly

If a version is already installed on a given machine, running a silent install may silently corrupt the existing installation. This happens because the installer will internally work as if it were performing a repair installation, but since the repair flag was not provided, it will wrongly reinstall files and may override the behaviour of the DISABLECITRIX command.

Workaround: Avoid running silent installations over existing installations with the same version number. If you need to repair an existing installation, please refer to the FAQs on how to do so.

Installing BT MeetMe Services with Cisco WebEx on a Local Machine

This section describes the installation process for the BT MeetMe Services with Cisco WebEx software client on a local machine.

Installation Scope

The BT MeetMe Services with Cisco WebEx Windows Installer Package is a dual-purpose package that can be used to perform both per-user and per-machine installations of the application.

When installed on a per-user basis, only the user who installed the application can then see, install, repair and remove the application from the Control Panel. In this mode, the registry key that tells WebEx where the application is installed will be created under the HKCU registry hive, only for the currently logged-in user. Additionally, the default installation folder will be set to %LOCALAPPDATA%\Programs\BTGS Americas\BT MeetMe Services with Cisco WebEx and the user will be prompted to provide additional personal information at the end of the installation process.

If installed on a per-machine basis, however, all users can see, access and repair the application, but only users with administrative privileges over the machine will be able to remove the application from the machine. In this mode, the registry key that tells WebEx where the application is installed will be created under the HKLM registry hive. Additionally, the default installation folder will be set to %PROGRAMFILES (x86) %\BTGS Americas\BT MeetMe Services with Cisco WebEx on a 64-bit Windows, and %PROGRAMFILES%\BTGS Americas\BT MeetMe Services with Cisco WebEx on 32-bit Windows, and the user will not be prompted to provide additional personal information at the end of the installation process.

Per-machine installations can only be performed if the installer is executing with elevated privileges (see Command-line Installation below for instructions on how to achieve this). Furthermore, in order to have access to the installation scope option in the GUI, one must run the installer as an administrator as detailed in the previously referenced section.

GUI Wizard Installation

This is the most common installation scenario faced by end-users whenever a windows installer package is downloaded and installation is started.

To launch a GUI Wizard installation, double-click the provided MSI package and an installation wizard will appear to guide the installation. Follow the presented steps and the application will be installed in the path provided during the installation wizard.

GUI Wizard installations can also be started from the command-line, as described in the following section.

By default, the application will be installed in a per-user fashion. However, if run with elevated privileges (see Command-line Installation below for instructions on how to achieve this), the scope of the installation can be selected during the first steps of the installation wizard. Gathering user info is skipped for system-wide installations.

Command-line Installation

Microsoft provides a command-line tool, called msiexec that is used to launch Windows Installer based installations via command-line. There are a set of command-line switches to this tool that can be used to alter the behaviour of the installation process.

To launch a new Wizard from the command-line, use the following command:

> msiexec /i \path\to\BTMeetMeWithCiscoWebExSetup.msi

The GUI window can be disabled using the /q switch. In this case, the installation package provides a few command-line options of its own, that should be used to modify the installation process, displayed in the table below. These are passed to the installer using the OPTION=VALUE syntax.

Option	Description
INSTALLFOLDER	Use this to set the location where the application will be installed. If not provided, defaults to: %LOCALAPPDATA%\Programs\BTGS Americas\BT MeetMe Services with Cisco WebEx for per-user installations, %PROGRAMFILES(x86)\BTGS Americas\BT MeetMe Services with Cisco WebEx for per-machine installations on Windows 64-bit, and %PROGRAMFILES%\BTGS Americas\BT MeetMe Services with Cisco WebEx for per-machine installations on Windows 32-bit.
AGREEDEULA	Use this to agree with the end user license agreements. This is required when not displaying a GUI and must be set like AGREEDEULA=YES. If not set to YES the installation will silently fail. If set to YES, on GUI Wizard installations the Wizard will skip the License agreement step. Make sure the license agreements have been perused prior to providing this property, as it is understood that, if you installed and is using the application, you agree with whatever is written on the license agreement.
USERFIRSTNAME	Use this to set the user first name to be used for troubleshooting. This is optional and can be left blank, but may aid troubleshooting by helping to identify individual audio lines. This is ignored for per-machine GUI installations.
USERLASTNAME	Use this to set the user last name to be used for troubleshooting. This is optional and can be left blank, but may aid troubleshooting by helping to identify individual audio lines. This is ignored for per-machine GUI installations.
USEREMAIL	Use this to set the user email to be used for troubleshooting. This is optional and can be left blank, but may aid troubleshooting by helping to identify individual audio lines. This is ignored for per-machine GUI installations.

Option	Description
CITRIX	Use this to override the default failure behavior for the Citrix Receiver plug-in. Set to 1 to force the installation to exit when the plug-in fails to be installed. Set to 0 to allow the installation process to continue when the plug-in fails to be installed (default). Note that this property will be ignored if used together with the DISABLECITRIX property described below.
SSLBYPASSCRV	Use this to instruct the application to bypass the certificate revocation verification (CRV) process during SSL connections (e.g. HTTPS). This can be used as a workaround to make the application work under an environment with very restrictive firewall rules, that may prevent the application from contacting validation servers. Accepted values are integers, where "0" means that the bypass is disabled, hence the CRV will be performed, and any other integer enables the bypass, ignoring CRV. In case non-integer values are provided, the installation process will fail.
DOMAIN	Use this to configure the company domain to be user for on-net tunnel name resolution. If not provided, pre-configured values for previous installations in the registry will be used, in case they exist. These are validated according to the format described in https://support.microsoft.com/en-us/kb/909264.
USESYSTEMPROXY	If enabled (property value is 1), the application will use the system's proxy configuration, ignoring the values of PROXYAUTODETECT, PROXYPACURL and USERCUSTOMPROXY. The system's proxy can be configured by accessing the Internet Options configurations via the Control Panel; these system settings on Windows apply to every network adapter available. To use the proxy overrides, set this value to 0.
PROXYAUTODETECT	If enabled (property value is 1), the application will attempt to use WPAD to find an appropriate proxy.
PROXYPACURL	The URL for a PAC file that will be used by the application when it needs to find a proxy for any URL.
USERCUSTOMPROXY	Manual setting for proxies. Values can be: 1) a proxy address (fully qualified domain name or IP address) optionally containing a port number. For example: proxy.mycompany.com:8080 or 10.100.1.122:8088. 2) a semi-colon separated list of protocol based proxy specs in the form of <pre></pre>
DISABLECITRIX	If set to "yes" (case insensitive), the installer will skip installing the BT MeetMe Services with Cisco WebEx Citrix Receiver plug-in, even if it detects a valid installation of the Citrix Receiver application. This is ignored for per-user installations. Note that to make the plug-in available again, the application will need to be reinstalled with the <code>DISABLECITRIX</code> property set to "No" (case insensitive). Also note that this option invalidates the <code>CITRIX</code> property.

Table 1: BT MeetMe Services with Cisco WebEx custom installer command-line options.

Additionally, the MSIINSTALLPERUSER and ALLUSERS properties can be used to control the scope of the installation. Depending on which version of the Operating System and Windows Installer, different values should be used to select the scope.

On Windows Installer 4.5, present by default on Windows Vista and Windows XP with SP3, the MSIINSTALLPERUSER is ignored. Thus, per-machine installations can be achieved by setting the ALLUSERS property to 1, while for per-user installations, the ALLUSERS property should be left unset.

On Windows Installer 5.0, default for Windows 7 and later, the installation can be controlled by combining different values for these properties. For per-machine installations, the ALLUSERS property should be set to 1, while MSIINSTALLPERUSER should be left unset. For per-user installations, however, ALLUSERS should be set to 2, while MSIINSTALLPERUSER should be set to 1.

As these are standard Windows Installer properties, the Windows Installer Documentation¹ can be referred to for further information regarding the behaviour of the windows installer engine for each of their different values.

Note that per-machine installations can only be achieved when started from a command-prompt with elevated privileges. In order to do this, follow these steps:

- 1. Open the windows Start menu.
- 2. Type cmd.exe in the search box.
- 3. Hold the Control and Shift keys and press enter.
- 4. When prompted to run with Administrative privileges, click yes.

Alternatively, follow these steps:

- 1. Open the windows Start menu.
- 2. Type cmd.exe in the search box.
- 3. Right-click the cmd.exe link and select "Run as administrator".
- 4. When prompted to run with Administrative privileges, click yes.

Installing BT MeetMe Services with Cisco WebEx through the Network

Network administrators can normally perform large-scale deployments of the BT MeetMe Services with Cisco WebEx client software. This section clarifies the relevant deployment process aspects when distributing through the network.

Some of the currently known issues and limitations of the installer package are noted.

Administrative Repackaging

¹ https://msdn.microsoft.com/en-us/library/windows/desktop/dd408068(v=vs.85).aspx

Network administrators can generate a custom, smaller, installation image that can be provided to the endusers via a network share. It is necessary that the network administrator agree with the EULAs in order to generate the repackaged installer. The administrator will also need to select the installation scope of the repackaged installer during the first steps of the wizard.

The new installation package will then automatically skip the license agreement screen when installed by endusers using the GUI wizard installation model. BT MeetMe Services with Cisco WebEx allows network administrators to generate their own installation images and verify the contents of the distributed Windows Installer package, using the administrative mode of the Windows Installer engine. This can be achieved, for example, using the following command-line:

> msiexec /a C:\path\to\BTMeetMeWithCiscoWebExSetup.msi

The same options, behaviour and limitations described in the Command-line Installation section above apply to the administrative repackaging command-line usage as well. Additionally, any provided values for the ALLUSERS and MSIINSTALLPERUSER properties will be persisted in the repackaged installer.

Below are important remarks when generating repackaged installer images:

- 1. The new installer will not be signed, as its contents are not verified by BTGS Americas. The newly generated image is a property of the user who created it and can be modified to their needs.
- 2. The repackaged installer will not be UAC-compliant and may ask for elevated privileges during installation. This can be circumvented by modifying the installer database using the Orca tool for windows installer developers2, by marking the package UAC-compliant under the 'Summary Information' menu.
- 3. The INSTALLFOLDER option is also available when generating the repackaged installer image. The following files and folders will then be generated by the administrative repackaging inside the folder pointed by the INSTALLFOLDER property. Before running the repackaging command-line make sure that these files and folders don't exist under the target folder:
 - 3.1. Citrix\ICA Client
 - 3.2. Microsoft\Event Viewer\Views
 - 3.3. BTGS Americas\BT MeetMe Services with Cisco WebEx
 - 3.4. BTMeetMeWithCiscoWebExSetup.msi

GPO deployment

Network administrators can limit Windows Installer MSI package installation on end-user machines through Group Policy Objects (GPO).

Using GPO, users can be granted privileges to install certain packages as defined by the network administrator. These packages are then Published over the network for users to install, and show up on the "Install software from the network" section of their Add/Remove Programs Control Panel. Double-clicking the program entry in this section will then launch a Standard GUI Wizard installation. The published packages may either be the

² https://msdn.microsoft.com/en-us/library/aa370557(v=vs.85).aspx

original package provided by BT³ or an administrator repackaged version of it. If the original package is shared, the end-user will have to accept the license agreements. If a repackaged installer is shared, the Wizard will skip the license agreement window.

A note when publishing a repackaged installer: the INSTALLFOLDER property can be used to select the target directory where the repackaged installer will be created, along with the extracted application files as described in item 3 of section Administrative Repackaging above. The administrator can move the generated assets to a new folder and share or publish the repackaged MSI from the new location if necessary.

Group Policy Objects allow IT administrators to automatically install applications upon system initialization and/or user login. These types of installations are performed either on a per-machine or on a per-user basis. In order for the BT MeetMe Services with Cisco WebEx client to work, the GPO installation should either provide the appropriate values for the ALLUSERS and MSIINSTALLPERUSER properties via command-line (see section Command-line Installation above), or the IT admin can use a repackaged installer with the appropriate installation scope selected during the repackaging process (see section Administrative Repackaging above).

Proxy Support

As of version 18.04.00.256 BT MeetMe Services with Cisco WebEx features support for media over proxy for Dolby Voice in addition to data over proxy which already existed in previous versions. On the Table 1, there is a list of the corresponding registry keys for the data over proxy configuration. The proxy support for data accepts the following authentication methods: no-authentication, Basic, Digest, NTLM and SPNEGO.

The media over proxy has a separated set of registry keys to enable and configure the proxy settings for the application. The feature is disabled by default to assure the best audio quality and it must be explicitly enabled by setting the registry key TunnelEnableProxy. The set of registry keys for media over proxy is listed on Table 2. The client supports the following authentication methods for media over proxy: no-authentication, Basic and Digest. Support for NTLM and SPNEGO proxy authentication methods is on the product roadmap.

For both data and media the proxy server configuration may be provided to BT MeetMe Services with Cisco WebEx either through system-wide configuration (e.g. LAN settings) or application-specific configuration using registry keys listed on Table 1 and Table 2.

To use system configuration for proxy the registry keys USESYSTEMPROXY (if proxy for data) or TunnelUseSystemProxy (if proxy for media) must be set. Application-specific registry keys may be specified depending on the proxy discovery mechanism to use. The supported proxy discovery features are:

- Web Proxy Autodiscovery Protocol (WPAD)
- Proxy auto-config (PAC) file
- Manual configuration

³ Available at http://www.btconferencing.com/downloads-library/apps/voipservices/

Based on the proxy discovery features, if multiple application-specific proxy configurations registry keys are used for media over proxy, BT MeetMe Services with Cisco WebEx try to obtain a valid proxy configuration in the following order:

- 1. If the registry key TunnelAutoDetectProxy (AutoDetectProxy for data requests) is enabled, the application will try to auto discover a PAC file via WPAD;
- 2. If that does not resolve to a PAC URL then the application will use the PAC URL manually configured via the TunnelPacUrlProxy (ProxyPacUrl for data requests) key;
- 3. If the Operating System is not able resolve a valid proxy configuration from the PAC file, then the application will try using a proxy configuration from the manually configured proxy defined on the key TunnelUserCustomProxy (UserCustomProxy for data requests). May require the TunnelProxyUsername and TunnelProxyPassword registry keys as well.

It is important to notice that for application-specific settings to take place the USESYSTEMPROXY (if proxy for data) or/and TunnelUseSystemProxy (if proxy for media) must not be set.

If the proxy server requires authentication, the BT MeetMe Services with Cisco WebEx will show a dialog prompting the user for credentials. This dialog can appear multiple times, for either data or media over proxy.

Additional Modules

Citrix Receiver plug-in

As of version 15.06.00.117, the BT MeetMe Services with Cisco WebEx features an additional plug-in to be used with Citrix VDI environments.

In order for the BT MeetMe Services with Cisco WebEx Citrix Receiver Plug-in to be used the following setup should be in place:

- 1. The Citrix Remote Desktop must have the BT MeetMe Services with Cisco WebEx application properly installed, either in a per-machine fashion or in a per-user fashion.
- 2. The Windows local PC must have BT MeetMe Services with Cisco WebEx application properly installed in a **per-machine** fashion having the BT MeetMe Services with Cisco WebEx Citrix Receiver Plug-in properly installed.
- 3. The Citrix Receiver application must allow the usage of third-party Virtual Drivers, by having the AllowVirtualDriverEx value set to true, as explained in the Citrix Receiver documentation.

In order for the plug-in to be properly installed, two conditions must be met:

- 1. The Citrix Receiver application, from Citrix, must be installed on a per-machine basis.
- 2. The BT MeetMe Services with Cisco WebEx Windows Installer MSI package must be running a per-machine installation, which requires administration privileges when running the installer as described earlier in this document.

If all of the above conditions are met, the installer will ALWAYS try to install the plug-in. If this is not the desired behaviour, this can be overridden through the <code>DISABLECITRIX</code> property when launching the installer via command-line, in both UI-driven and silent install modes.

If any of the above conditions are not met, the installer will silently skip installing the plug-in. This behaviour can be overridden via the CITRIX command-line option listed in the Command-line Installation section.

The plug-in can also be elected for installation during a repair process, if the Citrix Receiver was installed after the BT MeetMe Services with Cisco WebEx application was installed.

Alternatively, the application can be reinstalled after the Citrix Receiver installation to have the plug-in installed.

Please refer to the known issues section for known issues with the installation of the BT MeetMe Services with Cisco WebEx Citrix Receiver plug-in.

Windows Installer Footprint

This section lists all modifications performed on the host system by the installer package.

Files and folders

The following files and folders are created on the application's target installation folder:

BT MeetMe Services with Cisco WebEx o cert (Windows XP only) cacert.pem (Windows XP only) o modules ■ mod mme.dll mod pa.dll Resources audio ■ piano.wav o btmmlogger.dll o btmmtapi.dll o btmmwbx.dll o defaults.cfg o DirectShowLib-2005.dll o dvconference client-2.dll o dvsipclient-2.dll o libantlr3c.dll o libbellesip-0.dll o libcurl.dll o libeay32.dll o libgcc s dw2-1.dll o libjansson-4.dll o liblinphone-5.dll o libmediastreamer base-3.dll o libmediastreamer voip-3.dll

```
o libortp-9.dll
o libstdc++-6.dll
o libtsc.dll
o libxml2-2.dll
o log4cpp.dll
o msvcp100.dll
o msvcr100.dll
o NTEventLogAppender.dll
o portaudio x86.dll
o pthreadGC2.dll
o ssleay32.dll
o TSPClient.exe
o TSPHybridSDK.dll
o TSPPhone.exe
o TSPPhone.exe.config
o WpfAnimatedGif.dll
```

The following files and folders are created by the installer on the Application Data folder (

C:\Users\[username]\AppData\Roaming for per-user installations and C:\ProgramData for per-machine installations):

- Microsoft
 - o Event Viewer
 - Views
 - BT MeetMe Services with Cisco WebEx.xml

The following files and folders are created on the Citrix folder, under the ICA Client directory:

- btmmtvd.dll
- msvcr100.dll
- msvcp100.dll

Registry entries

Per-machine installations

For per-machine installations, the following keys and values are created by the installer in the registry under HKLM.

Note that on 64-bit operating system versions the base path will be HKLM\SOFTWARE\Wow6432Node.

- HKLM\SOFTWARE\BTGS Americas\BT MeetMe Services with Cisco WebEx
 - o [REG SZ] EventViewerCustomView
 - o [REG_DWORD] SslBypassCrv (only if provided via command-line or the value was present on a previous per-user installation)
 - o [REG_SZ] Domain (only if provided via command-line or the value was present on a previous per-user installation)
 - o [REG_DWORD] UseSystemProxy (only if provided via command-line or the value was present on a previous per-user installation)

- o [REG_DWORD] ProxyAutoDetect (only if provided via command-line or the value was present on a previous per-user installation)
- o [REG_SZ] ProxyPacUrl (only if provided via command-line or the value was present on a previous per-user installation)
- o [REG_SZ] UserCustomProxy (only if provided via command-line or the value was present on a previous per-user installation)
- o [REG SZ] DisableCitrix
- HKLM\SOFTWARE\WebEx\TSPSDK
 - o [REG SZ] BTMeetMeServicesWithCiscoWebEx

In case the Citrix Receiver application is already installed when a per-machine installation of the BT MeetMe Services with Cisco WebEx is performed, the following keys and values will be created or modified by the installer in the registry under HKLM as part of the installation of the BT MeetMe Services with Cisco WebEx Citrix Plugin.

On 64-bit operating system versions, the base path will be HKLM\SOFTWARE\Wow6432Node.

- HKLM\SOFTWARE\Citrix\ICA Client\Engine\Configuration\Advanced\Modules\btmmtvd
 - o [REG SZ] ApplicationInstallationPath
 - o [REG SZ] DriverName
 - o [REG SZ] DriverNameWin16
 - o [REG SZ] DriverNameWin32
- HKLM\SOFTWARE\Citrix\ICA Client\Engine\Configuration\Advanced\Modules\ICA 3.0
 - o [REG_SZ] VirtualDriverEx (Modified: string btmmtvd is appended to the value's data)

Per-user installations

For per-user installations, the following keys and values are created by the installer in the registry under HKCU.

- HKCU\Software\BTGS Americas\BT MeetMe Services with Cisco
 - o [REG SZ] EventViewerCustomView
 - o [REG SZ] UserEmail (only if informed during installation)
 - o [REG SZ] UserFirstName (only if informed during installation)
 - o [REG SZ] UserLastName (only if informed during installation)
 - o [REG_DWORD] SslBypassCrv (only if provided via command-line or the value was present on a previous per-user installation)
 - o [REG_SZ] Domain (only if provided via command-line or the value was present on a previous per-user installation)
 - o [REG_DWORD] UseSystemProxy (only if provided via command-line or the value was present on a previous per-user installation)
 - o [REG_DWORD] ProxyAutoDetect (only if provided via command-line or the value was present on a previous per-user installation)
 - o [REG_SZ] ProxyPacUrl (only if provided via command-line or the value was present on a previous per-user installation)
 - o [REG_SZ] UserCustomProxy (only if provided via command-line or the value was present on a previous per-user installation)
- HKCU\Software\WebEx\TSPSDK
 - o [REG SZ] BTMeetMeServicesWithCiscoWebEx

Common entries created during runtime

In addition to the registry entries covered above which are created during the installation process alone, the following entries may be created by the application itself during runtime.

- HKCU\Software\BTGS Americas\BT MeetMe Services with Cisco
 - o [REG SZ] UserCaptureDevice
 - o [REG_DWORD] UserCaptureVolume
 - o [REG SZ] UserPlaybackDevice
 - o [REG DWORD] UserPlaybackVolume
 - o [REG_SZ] UserFirstName
 - o [REG_SZ] UserLastName
 - o [REG SZ] UserEmail
 - o [REG SZ] SkipVersion

Media Over Proxy Configuration

As of the version 18.04.00.0 and later, the BT MeetMe Services with Cisco WebEx features support for media over proxy for establishing media connection when using Dolby Voice as detailed in the Proxy Support Section. The media over proxy registry keys should be created prior to running the application. The entries are:

Registry entry	Туре	Description
TunnelEnableProxy	REG_DWORD	In order to activate the proxy feature, this key should be enabled (set value to 1). Otherwise, the proxy feature for the ACME tunnel will be completely disabled regardless of the system or application proxy configurations.
TunnelUseSystemProxy	REG_DWORD	Set this to the value 1 to indicate to the application that it should fetch the proxy system configuration (set via IE). To enable the application override, set the value to 0 and configure on of the application overrides, e.g.: via PAC or custom proxy server. This is the default behaviour.
TunnelAutoDetectProxy	REG_DWORD	If enabled (property value is 1), the application will attempt to use WPAD to find an appropriate proxy.
TunnelPacUrlProxy	REG_SZ	The URL for a PAC file that will be used by the application when it needs to find a HTTP/HTTPS proxy for any URL.
TunnelUserCustomProxy	REG_SZ	Manual setting for proxies. Values can be: 1) a proxy address (fully qualified domain name or IP address) optionally containing a port number. For example: proxy.mycompany.com:8080 or 10.100.1.122:8088. 2) a semi-colon separated list of protocol based proxy specs in the form of <pre></pre>
TunnelProxyUsername	REG_SZ	Username used for proxy authentication. If set, the value will be used to authenticate with a proxy server obtained either from system configuration (via IE) or application override (via registry). This key can be set regardless of the value of TunnelUseSystemProxy.
TunnelProxyPassword	REG_SZ	Password used for proxy authentication. If set, the value will be used to authenticate with a proxy server obtained either from system configuration (via IE) or application override (via registry). This key can be set regardless of the value of TunnelUseSystemProxy.

Table 2 BT MeetMe Services with Cisco WebEx Registry keys for media over proxy configuration

As an example, in order to use a manually defined proxy via application override, one should define the following entries on a per-user installation:

- HKCU\Software\BTGS Americas\BT MeetMe Services with Cisco
 - o [REG DWORD] TunnelEnableProxy (value: 1)
 - o [REG DWORD] TunnelUseSystemProxy(value: 0)

```
o [REG SZ] TunnelUserCustomProxy(value: proxy.mycompany.com:8080)
```

With this configuration if the proxy server requires authentication, the user will be probed to enter his credentials. Optionally, to avoid the credentials prompt for every connection, the entries TunnelProxyUsername and TunnelProxyPassword could be specified. Although, it is not recommended to set the username and password on the registry keys, except for testing purposes. E.g.

```
    HKCU\Software\BTGS Americas\BT MeetMe Services with Cisco
        o [REG_DWORD] TunnelEnableProxy (value: 1)
        o [REG_DWORD] TunnelUseSystemProxy(value: 0)
        o [REG_SZ] TunnelUserCustomProxy(value: proxy.mycompany.com:8080)
        o [REG_SZ] TunnelProxyUsername (value: myUsername)
        o [REG_SZ] TunnelProxyPassword (value: myPassword)
```

Windows Installer Frequently Asked Question

What happens if I already have an installed version of the BT MeetMe Services with Cisco WebEx Client?

If the version that is about to be installed is **older** (e.g. 15.03.00.50) than the installed version (e.g. 16.02.00.153), the installer **will NOT install the old version** and the user will be notified.

If the version that is about to be installed is **newer** (e.g. 16.02.00.153) than the installed version (e.g. 15.03.00.50), the installer will update the older to the newer version. In the example provided, version 16.02.00.153 will be installed and version 15.03.00.50 will be uninstalled.

It is important to note the following during upgrades and fresh installations:

- 1. If the older version is installed for the current user and the new installation is set to be installed for all users, both will show up on the Control Panel, i.e. the version will not be upgraded.
- 2. If the older version is installed for all users and the new installation is set to be installed for the current user, only the new version will be kept
- 3. If a user has a version of the application installed on a per-user scope and a second user installs the application for all users, the following can happen:
 - 3.1. If both users installed the same version, the first user will only see the instance that's installed for her (per-user), whereas the second user will only see the instance that's installed for all users (permachine)
 - 3.2. If both users install different versions, the first user will see both entries in his control panel, whereas the second user will only see the instance that's installed for all users (per-machine), as long as the per-user installation is done BEFORE the per-machine one

In all of the above cases, WebEx will favour the one that is tied to the narrower scope, i.e. if a user has a peruser installation, that is the one WebEx will use.

My installation is corrupt! How do I repair it?

In order to repair an installation, you will need a copy of the installer used In order to repair a corrupt installation; there are a few different options, described below.

- Repair using the maintenance console from the cached installer package via "Add/Remove Programs" Control Panel
 - 1.1. Open the "Add/Remove Programs" Control Panel
 - 1.2. Find the "BT MeetMe Services with Cisco WebEx" entry on the list
 - 1.3. Right-click the entry and select "Change"
 - 1.4. On the dialog that will open, select "Repair" and click next.
 - 1.5. Wait until the process finishes and click close
- 2. Automatic repair using the cached installer package via "Add/Remove Programs" Control Panel
 - 2.1. Open the "Add/Remove Programs" Control Panel
 - 2.2. Find the "BT MeetMe Services with Cisco WebEx" entry on the list
 - 2.3. Right-click the entry and select "Repair"
 - 2.4. Wait for the Windows Installer window to exit
- 3. Repair using the maintenance mode from the original installer package
 - 3.1. Using Windows Explorer, navigate to the folder where you keep the BT MeetMe Services with Cisco WebEx installer
 - 3.2. Double-click the installer package
 - 3.3. On the dialog that will open, select "Repair" and click next.
 - 3.4. Wait until the process finishes and click close
- 4. Repair via command-line using the original installer package
 - 4.1. Using Windows Explorer, navigate to the folder where you keep the BT MeetMe Services with Cisco WebEx installer
 - 4.2. Hold down the shift-key and right-click the white area of the window
 - 4.3. Select "Open command window here"
 - 4.4. Type in the following command and press enter:
 - > msiexec /i BTMeetMeWithCiscoWebExSetup? .msi REINSTALL=ALL /qn

MacOS Install Guide

Introduction

The BT MeetMe Services with Cisco WebEx client for Mac OS X can be distributed as a Mac OS X Disk Image (.DMG) or an Installer Package (.PKG). The most common installation scenarios required for a corporate environment are supported by the Installer Package distribution.

This document describes the installation steps and key information required when installing BT MeetMe Services with Cisco WebEx for Mac OS X client software.

Installation

Installing BT MeetMe Services with Cisco WebEx with a Disk Image (.DMG)

This section describes the installation process for the BT MeetMe Services with Cisco WebEx software client for Mac OS X using a custom installer app distributed in a Mac OS X Disk Image (.DMG). This is the most common installation scenario faced by end-users. End-users download the client installer directly from the BT Conferencing website, as noted below.

- 1. Navigate to the download site http://www.btconferencing.com/downloads-library/apps/voipservices/
- 2. Choose to download the Mac OS X version of the client
- 3. Depending on your browser the file can be saved into your Downloads folder
- 4. To launch the GUI Wizard installation double-click the downloaded DMG file
- 5. A new window will be displayed, like a folder, with one application available: Install BT MeetMe Services with Cisco WebEx.
- 6. Double-clicking the Install BT MeetMe Services with Cisco WebEx application, a wizard will appear to guide the installation.
- 7. Follow the presented steps and the application will be installed in the current user's Application Support folder at /User/<your username>/Library/Application Support/com.bt.meetme.voip.webex.

Installing BT MeetMe Services with Cisco WebEx with a Installer Package (.PKG)

This section describes the installation process for the BT MeetMe Services with Cisco WebEx software client for Mac OS X using a Mac OS X Installer Package (.PKG) distribution.

This kind of distribution allows both for GUI based installation as well as command-line based installations that are usually leveraged by software deployment management tools used by IT administrators.

GUI Wizard Installation

To launch a GUI Wizard installation, double-click the provided PKG file.

This installer performs some validations that require special permissions, so a prompt will be displayed stating:

This package will run a program to determine if the software can be installed.

You should click in Continue to start the installation and an installation wizard will appear to guide the installation.

The first screen is a Welcome screen, without anything to configure. Just make sure that the version being installed is the one you desire.

In the following step, you will be presented to two license agreements, one for the BT MeetMe VoIP product and one for the Dolby Voice Client Software. Read it thoroughly and click in Continue. If you accept those terms, click in Agree; otherwise, click in Disagree and this installer will be closed.

The next step will ask you where you want to install the application:

Option	Value	Description
1	Install for all users of this computer	Installs the application in the /Applications folder, making it available to all users (requires administrative privileges).
2	Install for me	Installs the application to your Applications folder (/Users/ <your< th=""></your<>
	only	username>/Applications).
3	Install on a	Installs the application to the Applications folder of the selected OSX-installed
	specific disk	disk (/Volumes/ <volume name="">/Applications) making it available to</volume>
		users of the selected system (requires administrative privileges).

Table 3 MacOS PKG installer destination options.

Select a destination and click in Continue.

This next screen displays more information about what is going to happen: the size of the files that are going to be installed, and where this is going to take place. You can change your selected destination by clicking in Change Install Location... or in Go Back, and you can proceed to the installation by clicking in Install.

After a while, the installation will show a summary screen.

If you opted for installing this application only for your user, you will be presented with an additional step asking for some personal information. Notice the description:

Your information will:

- * Never be used for marketing purposes nor sold to third parties
- * Only be used when troubleshooting technical issues with BT
- * Can be shared with other parts of BT and vendors supporting this service

You don't have to use your real name. You can use something more descriptive such as "John Doe's Windows Laptop @ home"

They are completely optional, but if you will, insert your data in the respective fields, and click Continue to move to the last step.

In the last step, you will see a summary of the installation's result. In case of error, check the Troubleshooting section. Otherwise, you can now join meetings using BT MeetMe Services with Cisco WebEx.

Command-line Installation

Apple provides a tool, called installer that is used to install Installer Packages via command-line. It's most common usage follows this format:

> installer -package <pathToPackage> -target <device>

where pathToPackage is the full path of the .PKG file to be used, and device will usually be one of the following:

Option	Value	GUI Analogy	Description
1		Install for all users of this computer	Installs the application in the /Applications folder, making it available to all users (requires root privileges).
2	CurrentUserHomeDirectory	Install for me only	Installs the application to your Applications folder (/Users/ <your username="">/Applications).</your>
3	/Volumes/ <volume name=""></volume>	Install on a specific disk	Installs the application to the Applications folder of the selected OSX-installed disk (/Volumes/ <volume name="">/Applications), making it available to users of the selected system (requires root privileges).</volume>

Table 4 Apple's installer tool valid command-line values for the -target parameter.

The installation should proceed, and either a success message (The install was successful.) or an error (The installer encountered an error that caused the installation to fail. Contact the software manufacturer for assistance.). In the latter case, refer to Troubleshooting section.

Note: By using this form of installation, it is assumed that the license agreement for the product has already been perused and agreed upon before installing the software.

Troubleshooting

In case of an error during the installation process, check for a file named according to the pattern "/tmp/BTMeetMeWithWebExSetup_<date>_<epoch time>_failure.log" inside the /tmp folder.

If you can find a file like that, the problem is clear: the installer found more than one application installation available for some users, and that is not allowed. Inside the file, you will find a list of paths leading to installations that would conflict with the attempted one. Most likely, the solution is to remove any conflicting installations and try again. In some cases, it might be interesting to adopt a destination that matches a conflicting installation, maintaining the system as it was.

If that is not the case, the problem probably is related to an issue in your particular system:

1. Your system must be running a compatible Mac OS X version;

- 2. There must be enough space in disk for the application to be installed;
- 3. The installation must be made by a user that has access to the selected destination
- 4. etc.

Configuring BT MeetMe Services with Cisco WebEx from the command line

BT MeetMe Services with Cisco WebEx can be configured from the command line, using Apple's defaults command. The following sections will describe configurations in per-machine and per-user levels.

Per-machine configurations

To check the current configured values:

> defaults read /Library/Preferences/com.bt.meetme.voip.webex [<preferenceKey>]

The list of per-machine preferences is:

Preference Key	Туре	Description
SslBypassCrv	0 or 1	When enabled (1), Certificate Revocation Verification won't be performed.
Domain	String	The customer company domain. This information is used by BT servers to locate
		the appropriate tunnel through which the VoIP call will be performed, essential
		for customers that use dedicated tunnel URLs.

Table 5 MacOS BT MeetMe Services with Cisco WebEx client per-machine configuration options

You can define values for those preferences from the command line using the following command:

> defaults write /Library/Preferences/com.bt.meetme.voip.webex <preferenceKey>
<preferenceValue>

Per-user configurations

To check the current configured values:

> defaults read com.bt.meetme.voip.webex [<preferenceKey>]

The list of per-user preferences is:

Preference Key	Туре	Description
SslBypassCrv	0 or 1	Use this to instruct the application to bypass the certificate revocation verification (CRV) process during SSL connections (e.g. HTTPS). This can be used as a workaround to make the application work under an environment with very restrictive firewall rules, that may prevent the application from contacting validation servers. Accepted values are integers, where "0" means that the bypass is disabled, hence the CRV will be performed, and "1" (or any other integer) enables the bypass, ignoring CRV. In case non-integer values are provided, the application will crash.
UserCaptureDevice	String	The name of the capture device to be used during the calls.
UserCaptureVolume	0-100	The volume of the capture device to be used during the calls.
UserPlaybackDevice	String	The name of the playback device to be used during the calls.
UserPlaybackVolume	0-100	The volume of the playback device to be used during the calls.
UserFirstName	String	The user's first name, used for troubleshooting.
UserLastName	String	The user's last name, used for troubleshooting.
UserEmail	String	The user's e-mail, used for troubleshooting.
SkipVersion	String	The version number of the application's update that is being skipped.
ClientLogFile	String	The path to the file where the application will log it's messages.
ClientLogLevel	0-5	The level of verbosity of the application's logs. The verbosity increases with the number.
VoipTunnelLogFile	String	The path to the file where the tunnel's log messages will be saved.
VoipTunnelLogLevel	0-9	The level of verbosity of the tunnel's logs. The verbosity increases with the number.
VoipTunnelPcapFile	String	The path to the file where the tunnel's capture will be saved.
Domain	String	The company's e-mail domain. BT servers use this information to locate the appropriate tunnel through which the call will be performed. This is essential when working on companies that use private tunnels.
UseSystemProxy	0 or 1	If enabled (property value is 1), the application will use the system's proxy configuration, ignoring the values of PROXYAUTODETECT, PROXYPACURL and USERCUSTOMPROXY. The system's proxy can be accessed via the Network settings via the System Preferences tool; on Mac OS X these system settings apply to a specific network adapter. To use the proxy overrides, set this value to 0.
ProxyAutoDetect	0 or 1	If enabled (property value is 1), the application will attempt to use WPAD to find an appropriate proxy.

Preference Key	Type	Description
ProxyPacUrl	String	The URL for a PAC file that will be used by the application when it needs to find a proxy for any URL.
UserCustomProxy	String	Manual setting for proxies. Values can be: 1) a proxy address (fully qualified domain name or IP address) optionally containing a port number. For example: proxy.mycompany.com:8080 or 10.100.1.122:8088. 2) a semi-colon separated list of protocol based proxy specs in the form of <pre>protocol>=<fqdn ip="">[:<port>]</port></fqdn></pre> , where can be one of http, https, socks or socks5. For example: https=proxy.mycompany.com:8080; http=10.100.1.122:80 88. When using option #2 BT MeetMe Services with Cisco WebEx will use the appropriate proxy setting for the protocol in the request it will make, e.g. if requesting via https it will use the proxy specified for the https protocol. If more than one proxy for a given protocol is listed, BT MeetMe Services with Cisco WebEx will use the first one.

Table 6 MacOS BT MeetMe Services with Cisco WebEx client per-user configuration options

You can define values for those preferences from the command line using the following command:

> defaults write com.bt.meetme.voip.webex <preferenceKey> <preferenceValue>

Uninstallation

Uninstalling the Disk Image (.DMG) based installation

The DMG based installer will also install an app called BTMeetMe-Uninstaller.app found within the /User/<your username>/Library/Application Support/com.bt.meetme.voip.webex folder.

To uninstall all that is needed is to navigate to the /User/<your username>/Library/Application Support/com.bt.meetme.voip.webex folder and double click the BTMeetMe-Uninstaller.app icon. This will launch a wizard that will guide the uninstallation process.

Note: There might be configurations save in a file located at

/Library/Preferences/com.bt.meetme.voip.webex.plist. This file won't be removed by the uninstaller, and should be manually removed.

Uninstalling the Installer Package (.PKG) based installation

Regardless if the installation has been made via GUI or command-line, what this installer does essentially is place the TSPPhone.app application in the appropriate target as described earlier. To uninstall the app simply follow the steps below:

- 1. Navigate to the appropriate location of your installation according to the -target parameter informed during the installation.
- 2. Move the TSPPhone.app to the trash bin
- 3. If you prefer to also remove the configuration and log files:
 - 3.1. Per-machine configuration (requires administrative privileges)

- 3.1.1. Navigate to the path /Library/Preferences/
- 3.1.2. Move the file ${\tt com.bt.meetme.voip.webex.plist}$ to the trash
- 3.2. Per-user configuration
 - 3.2.1. Navigate to the path /Users/<username>/Library/Preferences/
 - 3.2.2. Move the file com.bt.meetme.voip.webex.plist to the trash
- 3.3. Log files
 - 3.3.1.Navigate to the path /Users/<username>/Library/Application Support/
 - 3.3.2. Move the folder com.bt.meetme.voip.webex to the trash

As an additional step if needed the PKG receipts recorded by the Apple installer tool can also be removed. The packages involved in this installation can be identified by com.bt.meetme.voip.webex. Please refer to Apple's pkgutil command documentation for your specific version of Mac OS X for details. Note that some software administration tools used by IT administrators will leverage the installer receipts and tampering them may cause inconsistencies.

Caveats and Workarounds

Ref	Issue	Workaround
1	Installing the BT MeetMe Services with Cisco WebEx client on alternate volumes will fail if you have a client installation in your current system.	Remove the installation from the current system, install the client on the alternate volume again, and reinstall it in your current system.
2	Installing the BT MeetMe Services with Cisco WebEx client on alternate volumes might leave the target system inconsistent if there were already previous installations in other destinations on that system.	Boot in the target system and remove any conflicting installations.
3	The DMG installer is unable to upgrade a PKG based install, and a PKG installer is unable to upgrade a DMG based install.	Use PKG based installations if there is an installation that was made using a PKG, and a DMG if there is an installation that was made using DMG.

Table 7 MacOS installer caveats and workarounds.

Frequently Asked Questions

What happens if I already have an installed version of the BT MeetMe Services with Cisco WebEx Client?

This depends on the type of installer you are using, DMG or PKG.

Note: Trying to perform a new installation with a different type of installer from the previous one is not supported (see the Caveats and Workarounds section).

DMG installer

This installer will always override the previous installation.

The following table exemplifies the possible scenarios:

Installed version	Currently installing version	Result
15.06.00.18	16.02.00.37	Upgrade
16.02.00.37	15.06.00.18	Downgrade

Table 8 DMG installer behaviour when there is already a previous version of the client installed

PKG installer

This installer allow per-user or per-machine installations. Any attempt to install in a different scope from the previous installation will result in an error, since the PKG Installer does not allow multiple installations (see the PKG installer Troubleshooting section for further details). If the scope matches, the version being installed will override the previous installed version if the scope (per-user or per-machine) is the same of the previous installation.

The following table exemplifies the possible scenarios:

Installed version	Currently installing version	Scope	Result
15.06.00.18	16.02.00.37	Same	Upgrade
16.02.00.37	15.06.00.18	Same	Downgrade
15.06.00.18	16.02.00.37	Different	Error
16.02.00.37	15.06.00.18	Different	Error

Table 9 PKG installer behaviour when there is already a previous version of the client installed

APPENDIX A: Customer Readiness Checklist

Category	Customer Selections	
Desktop or Mac	https://www.btconferencing.com/downloads-library/apps/voipservices/checked for the most current	
Mobile (Android or IoS)	https://www.btconferencing.com/downloads-library/apps/voipservices/checked for the most current	
Minimum Computer Hardware: Processor	☐ Intel Processor ☐ Intel Core2 Duo-class 1GHz Other – Please discuss with BT Account Manager	
Computer Hardware: Memory	☐ 2 Gigabytes (GB) + If less than 2GB please discuss with BT Account Manager	
Web Browser	https://www.btconferencing.com/downloads-library/apps/voipservices/checked for the most current	
Firewall Configuration (Internet Connectivity)	□ https://www.btconferencing.com/downloads-library/apps/voipservices/ checked for the most current Customer has run the test utility to ensure all is working as expected: https://my.webjoin.com/dolby/connectivity	
Media over Proxy Support	☐ If Media over Proxy support is required, Customer IT Team have checked requirements contained within the document	
Internet Connectivity Tested	☐ Can navigate to and have made trusted <u>ALL</u> the URLs stated in the Required Firewall Settings section in this document	
Recommended USB Stereo Headsets	http://www.btconferencing.com/downloads-library/apps/dolby-voice/ checked for the most current	
Cookies	☐ Cookies are enabled	
JavaScript	☐ JavaScript is enabled	