

Product Datasheet

TSSO Extension Mobility Single-Sign-On



1 TSSO description

1.1 Overview

Telisca SSO (TSSO) is a Single Sign-On application for Cisco Extension Mobility. TSSO may be installed on Windows. It facilitates the use of Extension Mobility by login-in, enforces security by automatic session logout in the evening or when the workstation is locked. TSSO also reduces Help Desk tasks in managing forgotten PIN codes.

When opening a Windows session, TSSO logs in on the IP Phone, without requiring entry of a PIN code. Depending on your configuration, the process can be made completely invisible to the user.

Depending on the configuration, TSSO will also logout from the IP Phone when closing the session, on session lock; on hibernate; on LAN disconnect, at a defined time of the day or on user demand.

Several modes are available to detect the CUCM user (UserID) and to identify the IP phone on which one wants to log in.

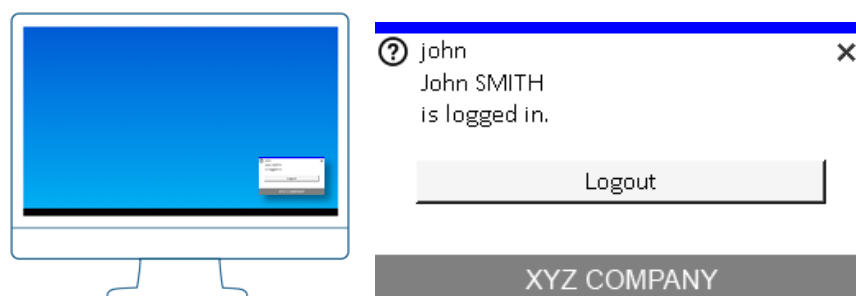
When Extension Mobility log-in is completed, TSSO can launch an external application, such as a Call Center agent banner.

The administrator may execute a report which displays the workstation-IP Phone associations and the positions connected in Extension Mobility.

1.2 Determining which CUCM UserID to connect

TSSO obtains the Windows user identifier of the user logged on the workstation. If the CUCM user is synchronized with the login, it may be used directly.

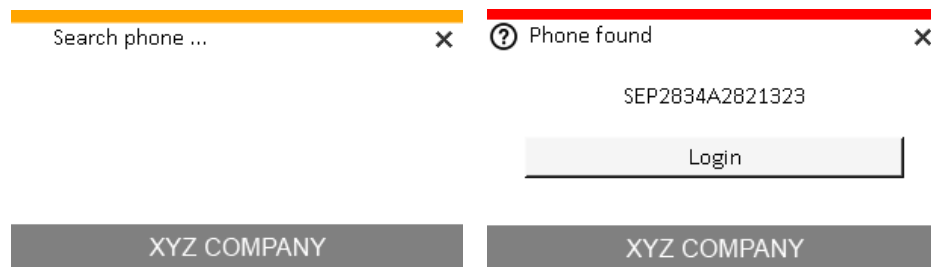
Otherwise, TSSO may use the Windows login to affect a search in a directory (Active Directory or LDAP) and retrieve the CUCM UserID on the basis of the login.



It is also possible, at the initial utilization of TSSO, to save the CUCM user connected (logged in) on the detected IP Phone. Finally, it is also possible to enter the CUCM user, with validation by password or PIN code, which is then registered in the user configuration.

1.3 Determining on which IP Phone to connect

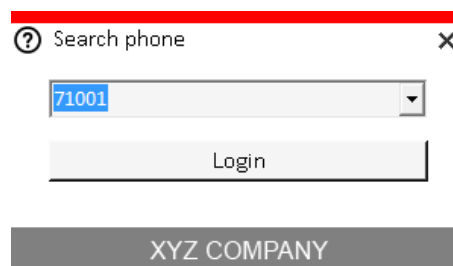
If the computer is connected to the LAN through the IP Phone, TSSO can automatically detect the IP Phone name. This is done by capturing CDP or LLDP broadcast from the IP Phone. The average time to detect an IP Phone is 30s.



If the user is connected to his normal telephone, he may optionally be connected on the telephone, after a certain delay.

If the PC is not connected to the IP Phone switch or when running TSSO on a virtual PC environment, the user may enter the IP Phone's directory number displayed on the Phone (which is usually not logged). Based on this number entered, TSSO determines which IP Phone to use. The application also proposes the last IP Phone numbers on which the user has logged, in order to avoid re-entering the number every time. TSSO memorizes the last five telephones used.

In most cases, the user will be able to log-in directly on the last IP Phone used. TSSO keeps track of the last 5 phones used.

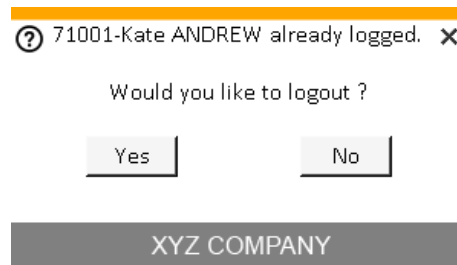


For fixed workstations not connected to an IP Phone, it is also possible to define fixed associations PC-IP Phone based upon the user host or MAC address of the PC. This association is defined either from administration, or from TSSO by activating the exploitation mode, protected by password.

1.4 Additional features

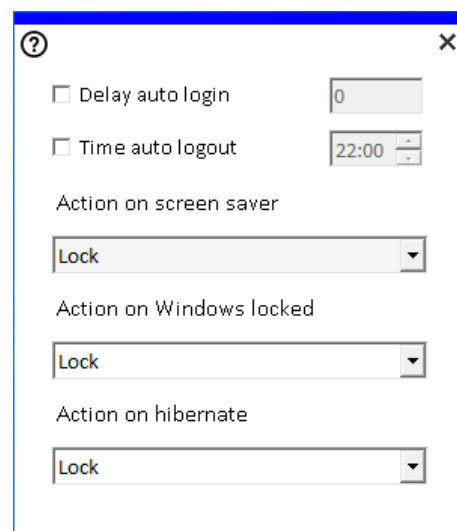
If the IP Phone is connected with another CUCM UserID, the application detects this and prompts the user to delog the currently logged UserID. Optionally, it is possible to send a message to the logged in IP Phone in order to confirm the delogging on the screen of the IP Phone. This permit, in the case where the identification of the IP phone is affected only by the number, to check that it is indeed the right IP Phone.

If the user is the same, the application directly displays the logged in user.



In the case where several Device Profiles are defined for the user, the most appropriate device profile, according to the IP Phone model, is used automatically (the closest in terms of the IP Phone family and number of buttons). If no device profile is associated with the user, no connection attempt is initiated.

It is possible to give the user the ability to configure an automatic logout time (starting with a default hour). TSSO then calculates the appropriate login duration left, furnished as a parameter of the Extension Mobility login.



TSSO is able to monitor when the IP Phone is actually logged in and launch an executable (for instance a Call Center agent banner). This is useful since the time of login on the IP phone may be variable and some application will fail if the login is not completed.

It is possible to automate the connection with call parameters and, if desired, to hide the TSSO user interface.

When closing the Windows session, or system shutdown, TSSO is closed which initiates an immediate logout, asynchronously. If locking the Windows is initiated by the user, it is also possible to initiate logout. Logout may also be affected upon disconnection from the network, either from TSSO, if it concerns a portable computer connected in WIFI, or from the application server.

If the line of the IP Phone is part of a group (Line Group), it is possible to force the Available state (HLog) upon reconnection.

With the option, "**telisca lock**", the IP telephone may be locked or unlocked upon all events managed by TSSO:

Auto logout parameters

Action when closing Windows session	Logout	?
Action on TSSO logout/lock button click	Logout	?
Action when user closes TSSO	Ask to confirm logout-lock	
Enable user to define auto logout time, logout on Windows lock/hibernate	<input checked="" type="checkbox"/>	
Enable logout at defined time	<input type="checkbox"/>	?
Logout at defined time of day (hh:mm)	22:00	
Action on hibernate	Lock	
Action on Windows Lock	Lock	?
Action on on screen saver	Lock	?
Action when Windows session unlock	Unlock	
TSSO server logs out when TSSO disconnected from server	<input checked="" type="checkbox"/>	?
Action when no more receiving CDP/LLDP	Lock	?
Clear call history when locking	<input type="checkbox"/>	
Enable user to set clear call history when locking	<input type="checkbox"/>	
Logout CUCM 12 with userId	<input checked="" type="checkbox"/>	

1.5 Optional module: Extension Mobility Cross Cluster

With the module EMCC (Extension Mobility Cross Cluster), TSSO can provide automatic connection / disconnection on a CUCM visitor cluster.

Further, it detects automatically the home cluster of the user as well as the CUCM cluster on which the IP Phone is defined. This permit using TSSO with a single configuration file whatever be the CUCM cluster. Administration is thus simplified, and it is possible to install TSSO in Windows Terminal Server, Citrix, or VMWare Horizon environments.

In addition, telisca offers a solution providing automatic disconnection of the users of the other distant cluster when they connect in an EMCC environment (not a standard feature of CUCM). This module may be provided separately from TSSO.

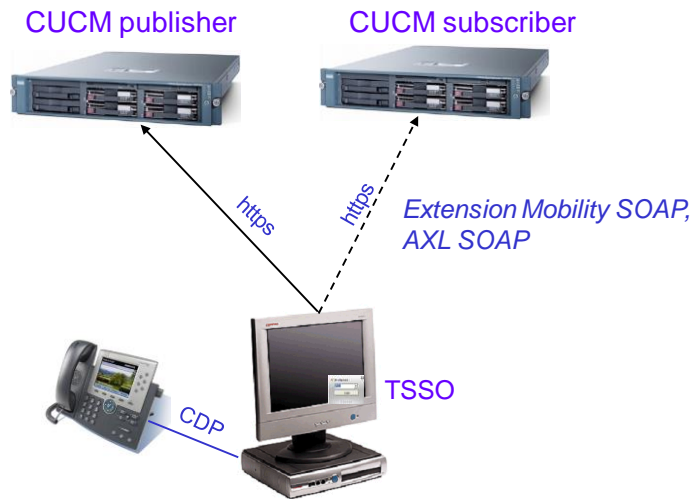
1.6 Architecture and requirements

TSSO is an application that run on the PC or on a Citrix virtual machine. It can be deployed on the PC by simply copying or run from the network, if the IP Phone Recognition option is not enabled. TSSO is based on .Net 2.0.

TSSO takes advantage of CUCM Extension Mobility API and uses a Proxy user authentication for Extension Mobility.

TSSO execute also AXL SOAP read queries.

Note: An AXL Write is necessary only if the reset HLOG option is enabled.



It is possible to execute a login / logout, even if the CUCM Publisher is stopped. Also, TSSO can be configured to support a primary and backup CUCM server. The number of login / logouts per minute is directly related to the size of the cluster (without loss of performance due to the use of the API). TSSO can also operate in load balancing mode with multiple CUCM servers.

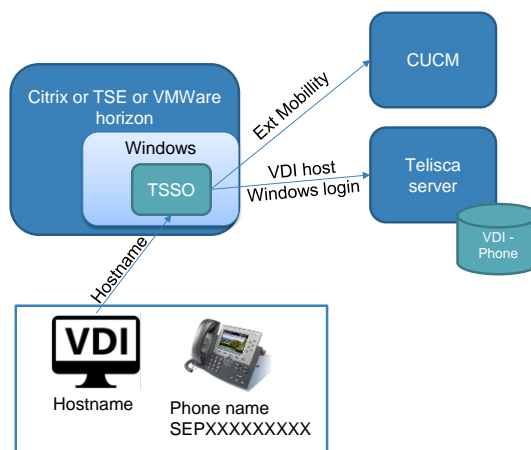
To detect automatically the IP Phone on which the PC is connected, TSSO relies on the 'pcap' library (to access to network layer) and retrieves the name of the IP Phone to which the PC is connected.

If the name of the IP Phone is granted by entering the telephone number of the IP Phone, or for certain options, the TSSO application also effects read-only AXL SOAP queries

The following functions require the use of the telisca IPS Framework and CTI server which may be configured, if desired, in a fault tolerant architecture:

- Fixed PC-IP Phone association
- Usage statistics
- Reports on PC-IP Phone associations and connection status
- Sending a message to the IP Phone to confirm the disconnection of another user.
- Disconnection Extension Mobility upon disconnection from a WIFI network
- Waiting for CTI events following connection, before executing another application.

TSSO can be used from a thin client terminal (VDI). In this case TSSO executes in the user's session on the server. However, it can detect the VDI from which it is used. So, it is possible to detect automatically the IP Phone to login by associating the VDI to the IP Phone either from the administration or from TSSO. This avoids to enter the IP Phone directory number each time the user login.



1.7 Administration, deployment

The administration interface is a Web-type interface, running on a Windows server with.

The administration interface permits the definition of the TSSO configuration, which may be deployed and updated via a URL. It is possible to define several profiles according to usage.

The screenshot shows the 'telisca' administration interface. The left sidebar contains a menu with items: Dashboard, Global configuration, Support, Attendant Console, Conference Center, Silent Monitoring, Desktop Popup, Busy Alerter Callback, IPS Global Directory, IPS Lock, IPS Manager Assistant, IPS Phone Config, IPS Pager, Manager Assistant SFB, Missed Calls Alerter, Morning Check, TAnnounce, Phone Robot, Phone Remote, PIN & Pwd Manager, and TSSO. The 'TSSO' menu item is selected. The main content area is titled 'Home / TSSO / Profile' and displays the configuration for a profile named 'Standard'. The configuration includes: Profile Name (Standard), IP Phone selection mode (By entering IP Phone line number), Auto IP Phone switch detection (checked), CUCM user selection (Is identical to Windows userid), Userid authentication mode (None), Check user has a device profile to login (checked), TSSO automatic clear delay (30), Enabled smooth hiding of TSSO (checked), Clear last directory number and phones logged on (unchecked), Auto start TSSO when login on Windows (checked). The 'Auto login parameters' section includes: Action on phone detection, after delay or by pressing button (Login), Execute action automatically when phone is first found (checked), Action when re-connecting on IP Phone (Disabled), Execute action automatically on previous IP Phone (Manual), Auto action delay on previous IP Phone (0), Hide TSSO while login (unchecked), Hide login button (unchecked), Enable user to enable automatic action on previous phone (unchecked), Ask to confirm when the user is already logged on another phone (checked), Ask to confirm before login out another user (checked), Confirm logout of other user from IP Phone (checked), Auto select device profile depending on IP Phone model (checked), Enable user to select device profile manually (unchecked), Set Line Group status to available when login (HLog) (checked). The 'Auto logout parameters' section includes: Action when closing Windows session (Logout), Action on TSSO logout/lock button click (Hide button), and Action when user closes TSSO (Ask to confirm logout-lock).

Deployment is normally affected by launching a silent MSI, with, as a command parameter, the URL which permits downloading the configuration file.

1.8 Requirements

TSSO is supported on CUCM 10.5, 11, 11.5, 12, 12.5, 14

TSSO run on Microsoft Windows 8, Windows 8.1, Windows 10 and Windows 11.

TSSO uses .Net 2.0. It may be installed by running an MSI or just copying TSSO or executing it from a LAN drive (when pcap module is not required). TSSO communicates with CUCM via https.

TSSO can run on a TSE, Citrix, VMWare Horizon virtual terminal.

TSSO communicates with the Cisco CUCM server, and in some cases telisca server, via https.

For standard configuration, no server is required to run TSSO.

If a server is used, the requirement is the following:

Supported Cisco CUCM:

- CUCM version 10.5, 11.5, 12, 12.5, 14

Available on private cloud company.telisca.cloud

On premise installation:

Windows servers supported:

- Windows Server 2012 R2 Essentials or Standard
- Windows Server 2016 Essentials or Standard
- Windows Server 2019 Essentials or Standard
- Windows Server 2022 Standard
- Minimum configuration: 1 vCPU, 4GB RAM, 70GB disk
- Virtual Machine VMware vSphere, Hyper-V or Cisco UCS, Cisco UCS-E

2 Features list summary

Requirements
PC based, server optional.
Small footprint, stored in notification bar.
Supported on Windows XP SP2, SP3 (requires minimum .Net 2.0)
Supported on Windows 7, Windows 8, Windows 8.1, Windows 10
Supported on virtual PC (TSE, Citrix, VMWare)
Automatic configuration update (configuration file stored on web server or network drive)
Supports CUCM 8.5 to 12, BE 6000, BE 7000
Supports fault tolerant or load balancing CUCM's servers
Some extended features may require a telisca server, optionally in Fault Tolerance
IP Phone, CUCM userId detection
Detects IP Phone by CDP or LLDP
Can search IP Phone by entering the IP Phone line number
Fixed PC – IP Phone coupling (administrator's definition)
Store last used IP Phones, auto login on last used
Detects IP Phone change when plugin a laptop on a new IP Phone
Can use windows login as CUCM userId
Can search CUCM userId in LDAP or AD, by Windows login
CUCM userId can be configured manually, checked by password or PIN code
Extension mobility login/logout
Login when opening Windows session
Login when unlocking session
Login on user demand
Auto detects best suited Device Profile
Ask confirmation if user already logged in
Ask confirmation if another user is logged on this phone
Supports user with fixed phone association
Logout when closing session
Logout on user demand
Logout when Windows session locked by user
Logout when Windows session locked by screen saver
Logout on Windows hibernate
Logout on network disconnect using Wifi
Logout on network disconnect by server

Logout on defined time of day
Auto logout or on user confirmation of previously logged user
Additional features
Launch external application on login
Launch external application on login failure
Launch external application on logout
Launch external application on close
Activate Hlog status when in a Line Group
Several profiles defined by administrator
Help messages can be customized by administrator
Available in English, French, German, Dutch
Optional Extension Mobility Cross Cluster module
Automatic detection of user's home CUCM cluster
Automatic detection of IP Phone's CUCM cluster
Login/Logout on Visitor CUC cluster
When login, logout automatically the user from remote cluster