



CHAPTER 16

Cisco Mobile VoIP Clients

Cisco Unified Communications Manager provides certain functionality for Cisco Mobile VoIP Clients that connect directly with Cisco Unified Communications Manager. This chapter discusses the features and the required configurations.

Beginning in Release 8.5(1) of Cisco Unified Communications Manager, Cisco Mobile VoIP Clients register directly with Cisco Unified Communications Manager and no longer need to register with the Cisco Unified Mobility Advantage server.



Note

The name “Cisco Mobile” has also been used for several mobility clients that require a Cisco Unified Mobility Advantage server. Those clients are unrelated to the clients that this chapter discusses. For more information about those clients, see the “[Cisco Unified Mobility Advantage and Cisco Unified Mobile Communicator Integration](#)” chapter.

Cisco Mobile is the name given to a family of clients that run on mobile devices. Different Cisco Mobile clients offer different features. Features may include the following:

- Direct connection from Cisco Unified Communications Manager to mobile client without proxy server
- Dial-via-Office (DVO) optimization settings for toll reduction
- Enable/disable Mobile Connect from mobile phone
- Dial-via-Office Reverse Callback
- Dial-via-Office Forward
- Ability to transfer active Dial-via-Office calls between the mobile device and the desktop phone

Complete configuration details about configuring the Cisco Mobile VoIP Clients, see the following documentation:

- End-user guides for Cisco Mobile VoIP Clients at this URL:
http://www.cisco.com/en/US/products/ps7271/products_user_guide_list.html

See the end-user guide for a particular Cisco Unified IP Phone for procedures that end users follow to configure the Cisco Unified Mobility settings for their phones by using the Cisco Unified CM User Options windows.

This chapter includes information on the following topics:

- [Configuration for Cisco Mobile VoIP Clients, page 16-2](#)
- [Introducing Cisco Mobile VoIP Clients, page 16-2](#)
 - [Definition, page 16-3](#)

- List of Cisco Mobile VoIP Client Features, page 16-3
- Direct Connection from Cisco Unified Communications Manager to Mobile Client Without Proxy Server, page 16-4
- DVO Optimization Settings for Toll Reduction, page 16-5
- Enable/Disable Mobile Connect From Mobile Phone, page 16-6
- System Requirements, page 16-6
- Configuring Cisco Mobile VoIP Clients, page 16-6
- Related Topics, page 16-7

Configuration for Cisco Mobile VoIP Clients

Complete configuration instructions for Cisco Mobile VoIP Clients are found in the following location:

http://www.cisco.com/en/US/products/ps7271/prod_installation_guides_list.html

For more information on Cisco Unified Mobility features that are available upon configuration of the Cisco Unified Mobility Advantage server, see the “List of Cisco Mobile VoIP Client Features” section on page 16-3.

Introducing Cisco Mobile VoIP Clients

Be aware that special configuration in Cisco Unified Communications Manager Administration is required for features that Cisco Mobile VoIP Clients provide.

This section discusses the following topics:

- Definition, page 16-3
- List of Cisco Mobile VoIP Client Features, page 16-3
- Direct Connection from Cisco Unified Communications Manager to Mobile Client Without Proxy Server, page 16-4
- DVO Optimization Settings for Toll Reduction, page 16-5
- Enable/Disable Mobile Connect From Mobile Phone, page 16-6

Additional Information

See the “Related Topics” section on page 16-7.

Definition

Table 16-1 provides the definition of a term that relates to Cisco Unified Mobility with Cisco Mobile VoIP Clients.

Table 16-1 Definition

Term	Definition
Cisco Mobile 8.x	These direct-connect dual-mode clients support voice-over-Wi-Fi (for costing savings) in addition to cellular. They connect to Cisco Unified Communications Manager directly without the need of a proxy server.

Additional Information

See the [“Related Topics”](#) section on page 16-7.

List of Cisco Mobile VoIP Client Features

This section provides a list of Cisco Unified Mobility features that are available to mobile phone users when the Cisco Mobile VoIP Client has been configured. This material discusses configuration within Cisco Unified Communications Manager Administration.

The following entities and features require configuration of Cisco Unified Mobility in Cisco Unified Communications Manager Administration:

- Direct connection from Cisco Unified Communications Manager to mobile client without proxy server—This feature provides server-side support for Cisco Mobile VoIP Clients to connect to Cisco Unified Communications Manager directly and thus eliminate Cisco Unified Mobility Advantage in the deployment. Cisco Unified Communications Manager adjusts to support direct connection with the Cisco Mobile VoIP Client. See the [“Direct Connection from Cisco Unified Communications Manager to Mobile Client Without Proxy Server”](#) section on page 16-4 for a detailed discussion.
- DVO Optimization Settings for Toll Reduction—This feature supports a pre-configured policy to determine which mobile origination call (DVO-R or DVO-F) yields the least cost to the enterprise; this determination is typically based on locations. Administrators assign a profile based on the user location and any other available information. Least cost routing negotiates with Cisco Unified Communications Manager to determine whether DVO-R or DVO-F generates the least cost, then chooses the less costly method for making the call. See the [“DVO Optimization Settings for Toll Reduction”](#) section on page 16-5 for a detailed discussion.
- Enable/Disable Mobile Connect From Mobile Phone—This feature allows the Cisco Mobile VoIP Client to change the Mobile Connect status dynamically and keep the Mobile Connect Status between Cisco Unified Communications Manager and the client in sync. This feature provides the flexibility to the end user: the end user can change the user Mobile Connect status from the user mobile phone, not just from the GUI website. See the [“Enable/Disable Mobile Connect From Mobile Phone”](#) section on page 16-6 for a detailed discussion. See the [“Methods for Enabling and Disabling Mobile Connect”](#) section on page 14-8 of the [“Cisco Unified Mobility”](#) chapter for a list of the various methods for updating Mobile Connect status.

The following features, which were originally part of Cisco Unified MobilityManager, now reside in Cisco Unified Communications Manager:

- Mobile Connect—See the [“Cisco Unified Mobility”](#) chapter for details.
- Desktop Call Pickup—See the [“Cisco Unified Mobility”](#) chapter for details.

- Access List—See the “[Cisco Unified Mobility](#)” chapter for details.

Cisco Unified Communications Manager also supports the following Cisco Unified Mobility features:

- Midcall Enterprise Feature Support Using DTMF—See the “[Cisco Unified Mobility](#)” chapter for details.
- Dual-mode Phone Support—See the “[Cisco Unified Mobility](#)” chapter for details.
- Manual Handoff of Calls on a Dual-mode Phone—See the “[Cisco Unified Mobility](#)” chapter for details.
- Time-of-Day Access—See the “[Cisco Unified Mobility](#)” chapter for details.
- Directed Call Park via DTMF—See the “[Cisco Unified Mobility](#)” chapter for details.
- SIP URI Dialing—See the “[Cisco Unified Mobility](#)” chapter for details.

See the “[Other Benefits of Cisco Unified Mobility Features](#)” section on page 14-7 for a discussion of other benefits of Cisco Unified Mobility features, such as simultaneous desktop ringing, single enterprise voice mailbox, system remote access, caller ID, remote on/off control, call tracing, security and privacy for Mobile Connect calls, and smartphone support.

Additional Information

See the “[Related Topics](#)” section on page 16-7.

Direct Connection from Cisco Unified Communications Manager to Mobile Client Without Proxy Server

Registration between the Cisco Mobile VoIP Client and Cisco Unified Communications Manager takes place over a separate TCP port. (The shared or pooled connection that was used by the Cisco Unified Mobility Advantage server is not used.) Keepalive messages between the Cisco Mobile VoIP Client and Cisco Unified Communications Manager remain the same as those passed between Cisco Unified Communications Manager and Cisco Unified Mobility Advantage. Cisco Mobile VoIP Client registration with Cisco Unified Communications Manager introduces no new alarms, and registration takes place over the SIP channel.

If the client is running on the iPhone and the Cisco Mobile VoIP Client is unable to complete the SIP dialog, the Cisco Unified Communications Manager retains the PSTN call. (The PSTN call does not drop even if the SIP stat times out.) For example, if Cisco Unified Communications Manager does not receive an ACK message after it sends a 200 OK message, the PSTN call gets retained.

Limitation for Direct Connection From Cisco Unified Communications Manager to Mobile Client

This feature specifies the following limitation:

- If the SIP dialog between Cisco Unified Communications Manager and the Cisco Mobile VoIP Client is not complete, the dialog cannot be used for further midcall feature invocations. The user can, however, invoke midcall features through the DTMF interface.

Additional Information

See the “[Related Topics](#)” section on page 16-7.

DVO Optimization Settings for Toll Reduction

This feature supports a pre-configured policy to determine which mobile origination call (DVO-R or DVO-F) yields the least cost to the enterprise; this determination is typically based on locations. This feature benefits the mobile user by allowing the user to find the least cost when making a mobile call. The DNIS pool provides a list of Direct Inward Dialing (DID) numbers so that the user, if roaming, can choose a non-international number for the mobile call. Least cost routing negotiates with Cisco Unified Communications Manager to determine whether DVO-R or DVO-F generates the least cost, then chooses the less costly method for making the call.

Reasons for Least Cost Routing and DNIS Pool

The following reasons make this feature desirable:

- Administrator can decide upon the DVO call type, DVO-F or DVO-R, for least cost call routing. In certain regions and with certain service providers, DVO-F can be more economical for mobile users; in other regions, DVO-R can be more economical. For example, in regions where incoming calls are free for mobile phone users, configuring a DVO-R call for mobile phone users achieves least cost call routing.
- Scalability—Multiple users in a given region can use a single mobility profile, which comprises region, service provider, location, and so forth. Here, “users” refers to the clients under actual end users. The administrator does not need to create a mobility profile for each end user.
- Single DID within a cluster for all DVO-F calls—For such DVO-F calls, the client makes an incoming call to Cisco Unified Communications Manager by using a particular DID.
- Multisite cluster—For a multisite cluster, a client in cluster A (such as the UK) uses the DID of cluster B (such as San Jose) for DVO-F calls, which incurs costs.
- DVO-R—Trunk allows calls that originate from a local DID. At times, when a client makes an outgoing DVO-R call, the client trunk may not allow an outgoing call if the caller ID does not lie in a specific range. For example, if a UK client invokes DVO-R, the callback call from the trunk at the San Jose cluster shows 408. When this call reaches the UK, the service provider trunk may not recognize the 408 and therefore not allow the call. Therefore, the caller IDs need to specify the local identifiable values.

Characteristics of DVO Optimization Settings for Toll Reduction

This feature involves the use of mobility profiles, which the administrator configures by using the **Call Routing > Mobility > Mobility Profile** menu path in Cisco Unified Communications Manager Administration. See the [“Mobility Profile Configuration”](#) section on page 14-58 for additional details about mobility profiles.

The DVO Optimization Settings for Toll Reduction feature does not change the alternate callback mechanism that DVO-R calls use: the client continues to control alternate callback.

Limitation of DVO Optimization Settings for Toll Reduction

The DVO Optimization Settings for Toll Reduction feature specifies the following limitation:

- Least Cost Routing (LCR) rules are applied after application dial rules. Called party transformations and call forward scenarios do not get considered for LCR.

Additional Information

See the [“Related Topics”](#) section on page 16-7.

Enable/Disable Mobile Connect From Mobile Phone

Prior to Release 8.5(1) of Cisco Unified Communications Manager, Cisco Unified Communications Manager sent Mobile Connect status updates to the Cisco Unified Mobile Communicator client via Cisco Unified Mobility Advantage by AXL messages. Direct SIP messages between the Cisco Mobile VoiP Client and Cisco Unified Communications Manager now allow the client to change the client Mobile Connect status.

Beginning with Release 8.5(1) of Cisco Unified Communications Manager, the Cisco Mobile VoiP Client can update its Mobile Connect status directly.

Additional Information

See the “[Related Topics](#)” section on page 16-7.

Interactions and Limitations

Be aware that most standard Cisco Unified Communications Manager features are fully compatible with Cisco Unified Mobility features. See the following sections of the “[Cisco Unified Mobility](#)” chapter for details of any exceptions:

- [Interactions](#), page 14-28
- [Limitations](#), page 14-30

Additional Information

See the “[Related Topics](#)” section on page 16-7.

System Requirements

See the following documentation for detailed system requirements:

Release Notes for Cisco Mobile at

http://www.cisco.com/en/US/products/ps7271/prod_release_notes_list.html

Additional Information

See the “[Related Topics](#)” section on page 16-7.

Configuring Cisco Mobile VoiP Clients

Complete configuration details about configuring the Cisco Mobile VoiP Clients, see the following documentation:

- Configuration guides for Cisco Mobile VoiP Clients at this URL:
http://www.cisco.com/en/US/products/ps7271/prod_installation_guides_list.html

Additional Information

See the “[Related Topics](#)” section on page 16-7.

Related Topics

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- [Interactions and Limitations, page 16-6](#)
- [System Requirements, page 16-6](#)
- [Configuring Cisco Mobile VoIP Clients, page 16-6](#)
- [End User Configuration, Cisco Unified Communications Manager Administration Guide](#)
- [Service Parameter Configuration, Cisco Unified Communications Manager Administration Guide](#)
- [Licenses for Cisco Unified Mobility, Cisco Unified Communications Manager Features and Services Guide](#)

Additional Cisco Documentation

- [Cisco Unified Serviceability Administration Guide](#)
- [Cisco Unified Communications Manager Security Guide](#)
- [Applicable Cisco Unified IP Phone User Guides](#)
- [Applicable Cisco Unified IP Phone Administration Guides](#)
- [Applicable Cisco Mobile VoIP Client installation, upgrade, and end-user documentation](#)

