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T-Server for Cisco UCM Deployment Guide

Extend and connect

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Extend and connect

The Cisco UCM *extend and connect* feature enables an agent to use a remote phone, such as a mobile phone, to connect to the CUCM. The feature associates a remote number with a special CiscoRemoteTerminal number in the switch. This terminal essentially acts as the agent's terminal but calls end up at the remote number (remote destination) instead. Calls can be both made from and received by this remote number.

Calls made to the remote terminal can be answered through a CTI request on the remote terminal, or manually on the remote destination. Calls made from the remote terminal can be made only through CTI on the remote terminal.

This topic covers only T-Server support for extend and connect. For details, see the [Extend and Connect chapter](#) of the *Cisco Unified Communications Manager Features and Services Guide*.

Service state

All remote terminals remain out of service until both are:

- Indicated to be in service by JTAPI, and
- Successfully extended to a remote destination.

An EventDNBackInService is generated when both of these become true and an EventDNOutOfService occurs when either become false. Calls made to remote terminals that are not extended to a remote destination result in destination busy from the switch.

Activation and deactivation

To activate extend and connect on a remote destination from a remote terminal, a T-Server client performs a RequestRegisterAddress on the remote terminal address with the extension REMOTE_DEST and REMOTE_NAME set to the desired remote destination number and name, respectively. Only REMOTE_DEST is required, as T-Server uses REMOTE_DEST for both if REMOTE_NAME is not provided. The client receives an EventRegistered immediately. An EventDNBackInService is distributed with REMOTE_DEST and REMOTE_NAME extensions if the extend and connect is successful. An EventHardwareError is generated if an error occurs.

To deactivate extend and connect, a T-Server client performs a RequestUnregisterAddress or simply disconnects, causing an EventUnregistered and an EventDNOutOfService on the remote terminal.

Multiple Clients

If multiple clients request extend and connect on the same remote terminal, the last one determines the remote destination. Only this client can deactivate the extend and connect by either RequestUnregisterAddress or client disconnection, in which case all remaining clients receive an EventDNOutOfService. Clients can use REMOTE_DEST and REMOTE_NAME extensions in EventDNBackInService to determine if they have control.

High Availability

The switch notifies both primary and backup servers of extend and connect connectivity. However, synchronization is needed from primary to backup:

- In cases where a backup starts after extend and connect is already established in the primary, and
- To inform the backup of which client has control of extend and connect for a specific remote terminal.

This communication is accomplished through the primary-to-backup synchronization connection, enabling T-Server to ensure that extend and connect to remote destinations is maintained upon switchover. A switchover results in the remote terminal temporarily going out of service while the newly promoted T-Server reconnects the remote destination. The client receives an EventDNOutOfService followed by an EventDNBackInService with remote extensions.

Limitations

T-Server support for extend and connect has these limitations:

- A call to a remote terminal can be answered only manually at the remote destination. RequestAnswerCall is not supported at the remote terminal.
- Originating a call or consult from a remote terminal must be done through a CTI request. Manual origination is not supported.
- When making calls from a remote terminal, setting the delay-dialing option to true does not produce the desired effect of providing the dialed digits in the AttributeDNIS and AttributeOtherDN of EventDialing.

Configuration

To configure T-Server for extend and connect, configure the switch with CiscoRemoteTerminal addresses, one for each active agent. Configure each remote terminal as an Extension in Configuration Server.