



Directory Number Alias Lookup and Sync Setup

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About Directory Number Alias Lookup and Sync Setup

In Cisco Unified Communications Manager Administration, use the submenus under the **Advanced Features** > **Directory Number Alias Lookup/Sync** menu path to configure directory number alias lookup and sync servers.

The Directory Number Alias Lookup and Sync setup enables you to route the commercial calls to an alternate number. Routing the commercial calls to an alternate number reduces the commercial cost of calling an external number. You must configure the LDAP server for Directory Number Alias Sync (sync server) if you need to synchronize users from Cisco Unified Communications Manager database to the sync server. You must configure the LDAP server for Directory Number Alias Lookup (lookup server) if you need to route the commercial calls to an alternate number.

**Note**

- This feature works only with IBM Tivoli LDAP servers.
- To enable routing the commercial calls to the internal numbers of the called parties, ensure that Cisco Directory Number Alias Lookup Service is activated. To synchronize users from the Cisco Unified Communications Manager database to the LDAP server for Directory Number Alias Sync server, ensure that Cisco Directory Number Alias Sync Service is activated.
- You can configure the primary and secondary lookup and sync servers to support failover. If a primary server goes down and if the secondary server is configured, lookup/sync services automatically connect to the secondary server. The failover is supported for both lookup and sync services. When the primary server is restored, the network administrator must restart the lookup/sync service so that the services can connect back to the primary server.
- A commercial call is routed to an internal number only if Confidential Access Level (CAL) resolution succeeds on that call. If the CAL resolution fails, the call is redirected to the original destination.

Directory Number Alias Lookup and Sync Settings

Field	Description
LDAP Directory Information	
LDAP Configuration Name	Enter a unique name (up to 40 characters) for the LDAP directory.
LDAP Manager Distinguished Name	Enter the user ID (up to 128 characters) of the LDAP Manager, who is an administrative user that has access rights to the LDAP directory in question.
LDAP Password	Enter a password (up to 128 characters) for the LDAP Manager.
Confirm Password	Reenter the password that you provided in the LDAP Password field.
LDAP User Search Base	Enter the location (up to 256 characters) where all LDAP users exist. This location acts as a container or a directory. This information varies depending on customer setup.

Field	Description
LDAP Directory Server Usage	<p>Specify if the LDAP directory server should be used as:</p> <ul style="list-style-type: none"> • Directory Number Alias Sync and Lookup • Directory Number Alias Sync Only • Directory Number Alias Lookup Only <p>By default, Directory Number Alias Sync and Lookup option is selected. If you choose the <i>Directory Number Alias Sync and Lookup</i> option, you cannot add another sync or lookup server.</p>
Directory Number Alias Server Configuration	
Keepalive Search User Distinguished Name	<p>Enter the user ID (up to 128 characters) of the administrative user for which you need to perform the keepalive search and to determine connectivity to server.</p> <p>Note If this field is left blank, then the connectivity to the server is determined based on whether the LDAP bind request to the server is successful.</p>
Keepalive Time Interval in Minutes	<p>Specify the time interval at which keepalive messages should be sent to lookup/sync servers to check if those servers are active or not.</p> <p>For example, if you specify the keepalive time interval as 10 minutes and select the LDAP directory server as <i>DN Alias Lookup only</i>, keepalive messages will be sent every 10 minutes to all the lookup servers that are configured.</p> <p>If you specify the keepalive time interval as zero, the keepalive messages are not sent to the lookup servers.</p>
SIP Alias Suffix	<p>Enter the SIP alias suffix. The SIP Alias Suffix that you specify is appended to the E.164 directory number.</p> <p>This field is used by the DN Alias Lookup service only.</p>

Field	Description
Enable Caching of Records for Directory Number Alias Lookup	<p>Check this check box to enable caching of records for directory number alias lookup. If you check this check box, you can specify Record Cache Size for Directory Number Lookup Alias and Record Cache Age for Directory Number Alias Lookup in Hours.</p> <p>Note If you specify the LDAP directory server as a sync server, the system disables this check box.</p> <p>This field is enabled only if the Lookup server or both (Lookup and Sync) the servers are used as LDAP directory servers. If the Sync server is used as LDAP directory server, this field is disabled.</p>
Record Cache Size for Directory Number Alias Lookup	<p>Specify the number of records that should be cached. You can specify any number within a range of 3000-10000.</p> <p>Note This field is enabled only if 'Enable Caching of Records for Directory Number Alias Lookup' check box is checked.</p>
Record Cache Age for Directory Number Alias Lookup in Hours	<p>Specify the time for which the records should be held in the record cache.</p> <p>Note This field is enabled only if 'Enable Caching of Records for Directory Number Alias Lookup' check box is checked.</p>
LDAP Server Information	
Host Name or IP Address for Server	Enter the host name or IP address of the server where the data for this LDAP directory resides.
Port	Specify the port number as 389. This is the port on which the LDAP routing database receives the LDAP requests. TLS is supported on this port.
Add Another Redundant LDAP Server	Click this button to add a redundant LDAP server.

Configure Directory Number to Synchronize to LDAP Directory Server

Procedure

- Step 1** From Cisco Unified Communications Manager Administration, select **Call Routing > Directory Number**.
- Step 2** Perform one of the following:
- Select **Add New** to create a new directory number.
 - Open an existing directory number entry.
- Step 3** Enter an E.164 mask.
- Step 4** Enter an enterprise alternative number (EAN).
- Step 5** Select a Call Control Agent Profile from the drop-down list box to create a new Call Control Agent Profile.
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What to do next

Configure the LDAP server for Directory Number Alias Sync (sync server) if you need to synchronize directory numbers from the Unified Communications Manager database to the sync server.

Access Cisco Directory Number Alias Lookup Service Over HTTPS Connection Using Self-signed Certificate

To access Cisco Directory Number Alias Lookup service over https connection using a self-signed certificate, perform the following steps:

Procedure

Configure External Call Control (ECC) in any of the Cisco Unified Communication Manager clusters.

Enter the web service URL as `https://<localhost>:8443/dnaliaslookup` or `https://<hostname of the CUCM>:8443/dnaliaslookup`.

Note The hostname is the Common Name (CN) of the tomcat certificate of Cisco Unified Communications Manager.

Access Cisco Directory Number Alias Lookup Service Over HTTPS Connection Using CA Signed Certificate

To access Cisco Directory Number Alias Lookup service over https connection using Certificate Authority (CA) signed certificate, perform the following steps:

Procedure

Step 1 Get the tomcat certificate of Cisco Unified Communications Manager signed by Certificate Authority (CA) and restart the tomcat service.

Step 2 Configure External Call Control (ECC) in any of the Cisco Unified Communication Manager clusters.

Enter the web service URL as `https://<localhost>:8443/dnaliaslookup` or
`https://<hostname of the CUCM>:8443/dnaliaslookup`.

Note The hostname is the Common Name (CN) of the tomcat certificate of Cisco Unified Communications Manager.
