



# Deployment Configuration

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This section describes the parameters used to configure deployments for your corporate environment.

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## Create Group Configurations

Cisco UC Integration for Microsoft Lync retrieves the names of group configuration files from the CSF device configuration on Cisco Unified Communications Manager.



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**Restriction**

If you do not configure CSF devices for users, you cannot apply group configurations to those users.

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## Before You Begin

You must complete the following steps on Cisco Unified Communications Manager version 8.6.x or lower:

- 1 Download the Cisco UC Integration for Microsoft Lync administration package from Cisco.com.
- 2 Copy `ciscocm.addcsfsupportfield.cop` from the administration package to your file system.
- 3 Deploy `ciscocm.addcsfsupportfield.cop` on Cisco Unified Communications Manager.

See the Cisco Unified Communications Manager documentation for instructions on deploying COP files.

The **Cisco Support Field** field is available for CSF devices in the **Desktop Client Settings** section on the **Phone Configuration** window in Cisco Unified Communications Manager.

## Procedure

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- Step 1** Create an XML group configuration file with any text editor.  
The group configuration file can have any appropriate name; for example, `cucilync-groupa-config.xml`.
- Use lowercase letters in the filename.
  - Use utf-8 encoding.
- Step 2** Define the required configuration parameters in the group configuration file.
- Important** If the structure of your configuration file is not valid, Cisco UC Integration for Microsoft Lync cannot read the settings you define. See the sample XML in this chapter for an example of the structure your configuration file must have.
- Step 3** Host the group configuration file on your TFTP server.
- a) Open the **Cisco Unified OS Administration** interface.
  - b) Select **Software Upgrades > TFTP File Management**.
  - c) Select **Upload File**.
  - d) Select **Browse** in the **Upload File** section.
  - e) Select the group configuration file on the file system.
  - f) Do not specify a value in the **Directory** text box in the **Upload File** section.  
If you specify a value for the **Directory** text box, make a note of the value. You must specify the path and filename when you specify the group configuration file in the CSF device configuration on Cisco Unified Communications Manager.
  - g) Select **Upload File**.
- Step 4** Specify the name of the group configuration file in the **Cisco Support Field** field.
- Timesaver** Use the Bulk Administration Tool for multiple users.
- a) Open the **Cisco Unified CM Administration** interface.
  - b) Select **Device > Phone**.
  - c) Find and select the appropriate CSF device to which the group configuration applies.
  - d) Locate the **Product Specific Configuration Layout** section of the **Phone Configuration** window.
  - e) Locate the **Desktop Client Settings** section.
  - f) Enter `configurationfile=group_configuration_file_name.xml` in the **Cisco Support Field** field; for example, `configurationfile=cucilync-groupa-config.xml`

**Note** Use a semicolon to delimit multiple entries in the **Cisco Support Field** field. However, do not specify multiple group configuration files. If you specify multiple group configuration files, Cisco UC Integration for Microsoft Lync uses the first group configuration available.

If you host the group configuration file on your TFTP server in a location other than the default directory, you must specify the path and the filename in the **Cisco Support Field** field; for example, `configurationfile=/customFolder/cucilync-groupa-config.xml`.

g) Select **Save**.

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## Create Global Configurations

This topic provides a high-level overview of the steps to create a global configuration file and explains how to host the file on your TFTP server.

### Procedure

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**Step 1** Create a file named `jabber-config.xml` with any text editor.

- Remember**
- Use lowercase letters in the filename.
  - Use utf-8 encoding.

**Step 2** Define the required configuration parameters in `jabber-config.xml`.

**Important** If the structure of your configuration file is not valid, Cisco UC Integration for Microsoft Lync cannot read the settings you define. See the sample XML in this chapter for an example of the structure your configuration file must have.

**Step 3** Host `jabber-config.xml` on your TFTP server.

- Open the **Cisco Unified OS Administration** interface on Cisco Unified Communications Manager.
- Select **Software Upgrades > TFTP File Management**.
- Select **Upload File**.
- Select **Browse** in the **Upload File** section.
- Select `jabber-config.xml` on the file system.
- Do not specify a value in the **Directory** text box in the **Upload File** section. Leave the value of the **Directory** text box empty to host `jabber-config.xml` in the default directory of your TFTP server. If you host `jabber-config.xml` in a directory other than the default directory, you must specify the path and filename as the value of the following command line argument during deployment:  
`TFTP_FILE_NAME`.

g) Select **Upload File**.

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# Restart Your TFTP Server

You must restart your TFTP server before Cisco UC Integration for Microsoft Lync can access the configuration files.

## Procedure

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- Step 1** Open the **Cisco Unified Serviceability** interface on Cisco Unified Communications Manager.
  - Step 2** Select **Tools > Control Center - Feature Services**.
  - Step 3** Select **Cisco Tftp** from the **CM Services** section.
  - Step 4** Select **Restart**.  
A window displays to prompt you to confirm the restart.
  - Step 5** Select **OK**.  
The **Cisco Tftp Service Restart Operation was Successful** status displays.
  - Step 6** Select **Refresh** to ensure the **Cisco Tftp** service starts successfully.
- 

## What to Do Next

To verify that the configuration file is available on your TFTP server, open the configuration file in any browser. Typically, you can access the global configuration file at the following URL:

`http://tftp_server_address:6970/jabber-config.xml`

# Configuration File Structure

## XML Structure

The following XML snippet shows the basic structure of a configuration file:

```
<?xml version="1.0" encoding="utf-8"?>
<config version="1.0">
  <Client>
    <parameter_name>value</parameter_name>
  </Client>
  <Options>
    <parameter_name>value</parameter_name>
  </Options>
  <Policies>
    <parameter_name>value</parameter_name>
  </Policies>
  <Phone>
    <parameter_name>value</parameter_name>
  </Phone>
</config>
```

The following table describes the elements in the basic structure of a configuration file:

Element	Description
<?xml version="1.0" encoding="utf-8"?>	XML declaration. Your configuration file must conform to the standard XML format.

Element	Description
config	Root element of the configuration XML that contains the available configuration groups. The root element must also contain the version attribute.
Client	Parent element that contains client configuration parameters.
Directory	Parent element that contains directory configuration parameters.
Options	Parent element that contains user option configuration parameters for user options.
Policies	Parent element that contains policy configuration parameters.

## Client Parameters

Parameter	Value	Description
PrtLogServerUrl	URL	Specifies the custom script for submitting problem reports. For more information about problem reports, see <i>Configure Problem Reporting</i> .

### Client Configuration Example

The following is an example client configuration:

```
<Client>
  <PrtLogServerUrl>http://server_name.cisco.com/cucilync/prt/my_script.php</PrtLogServerUrl>
</Client>
```

## Directory Attribute Mapping Parameters

You can change the default attribute mappings for Cisco UC Integration for Microsoft Lync. For example, by default, Cisco UC Integration for Microsoft Lync maps the BusinessPhone parameter to the telephoneNumber attribute in your directory. The result of this mapping is that Cisco UC Integration for Microsoft Lync retrieves the value of the telephoneNumber attribute from your directory for a particular user. Cisco UC Integration for Microsoft Lync then displays this value as the user's work phone in that user's profile. If your organization uses an attribute other than telephoneNumber for business phone numbers, you should change the mapping in the configuration file.

The following table describes the parameters for mapping directory attributes:

Parameter	Default Value
CommonName	cn
DisplayName	displayName

Parameter	Default Value
Firstname	givenName
Lastname	sn
EmailAddress	mail
SipUri	msRTCSIP-PrimaryUserAddress
PhotoSource	thumbnailPhoto
BusinessPhone	telephoneNumber
MobilePhone	mobile
HomePhone	homePhone
OtherPhone	otherTelephone
Title	title
CompanyName	company
UserAccountName	sAMAccountName
DomainName	userPrincipalName
Location	co
Nickname	nickname
PostalCode	postalCode
State	st
StreetAddress	streetAddress

## Directory Connection Parameters

The following table describes parameters for configuring your directory connection:

Parameter	Value	Description
ConnectionType	0 1	Specifies if Cisco UC Integration for Microsoft Lync connects to a Global Catalog server or Domain Controller.  <b>0</b> Connect to a Global Catalog server. This is the default value.  <b>1</b> Connect to a Domain Controller server.

Parameter	Value	Description
PrimaryServerName	Fully qualified domain name IP address	Specifies the fully qualified domain name or IP address of the primary server connection for directory access.  You must specify this parameter if Cisco UC Integration for Microsoft Lync cannot automatically discover the primary server.
SecondaryServerName	Fully qualified domain name IP address	Specifies the fully qualified domain name or IP address of the backup server connection for directory access.  You must specify this parameter if Cisco UC Integration for Microsoft Lync cannot automatically discover the backup server.
ServerPort1	Port number	Specifies the primary server port.  You must specify this parameter if Cisco UC Integration for Microsoft Lync cannot automatically discover the primary server.
ServerPort2	Port number	Specifies the backup server port.  You must specify this parameter if Cisco UC Integration for Microsoft Lync cannot automatically discover the backup server.
UseWindowsCredentials	0 1	Specifies if Cisco UC Integration for Microsoft Lync uses Microsoft Windows user names and passwords.  <b>0</b> Use credentials you specify as the values for the ConnectionUsername and ConnectionPassword parameters.  <b>1</b> Use Microsoft Windows credentials. This is the default value.

Parameter	Value	Description
ConnectionUsername	Username	<p>Specifies a username to connect to the directory server.</p> <p><b>Important</b> The client transmits and stores this username as plain text. Using this parameter is not a secure method of authenticating with the directory server.</p> <p>In most deployment scenarios, you do not need to specify a username to connect to the directory server.</p> <p>This parameter enables you to authenticate with a directory server that requires a well-known or public set of credentials. You should include this parameter in the client configuration only if it is not possible to authenticate with the directory server with the user's credentials.</p>
ConnectionPassword	Password	<p>Specifies a password to connect to the directory server.</p> <p><b>Important</b> The client transmits and stores this password as plain text. Using this parameter is not a secure method of authenticating with the directory server.</p> <p>In most deployment scenarios, you do not need to specify a password to connect to the directory server.</p> <p>This parameter enables you to authenticate with a directory server that requires a well-known or public set of credentials. You should include this parameter in the client configuration only if it is not possible to authenticate with the directory server with the user's credentials.</p>
UseSSL	0 1	<p>Specifies if Cisco UC Integration for Microsoft Lync uses SSL for secure connections to the directory.</p> <p><b>0</b> Disable SSL. This is the default value.</p> <p><b>1</b> Enable SSL.</p>

Parameter	Value	Description
UseSecureConnection	0 1	<p>Specifies if Cisco UC Integration for Microsoft Lync uses simple authentication for the connection to the directory service.</p> <p><b>0</b> Use simple authentication. This is the default value.</p> <p><b>1</b> Do not use simple authentication.</p>

## Directory Query Parameters

The following table describes parameters for configuring how Cisco UC Integration for Microsoft Lync queries your directory:

Parameter	Value	Description
BaseFilter	Base filter	<p>Specifies a base filter for Active Directory queries.</p> <p>Specify a directory subkey name only to retrieve objects other than user objects when you query Active Directory.</p> <p>The default value is (&amp;amp;(objectCategory=person).</p> <p>Configuration files can contain only valid XML character entity references. Use &amp;amp; instead of &amp; if you specify a custom base filter.</p> <p>In some cases, base filters do not return query results if you specify a closing bracket in your Cisco UC Integration for Microsoft Lync configuration file. For example, this issue might occur if you specify the following base filter: (&amp;amp;(memberOf=CN=UCFilterGroup,OU=DN))</p> <p>To resolve this issue, remove the closing bracket; for example, (&amp;amp;(memberOf=CN=UCFilterGroup,OU=DN))</p>

Parameter	Value	Description
PredictiveSearchFilter	Search filter	<p>Defines a filter to apply to predictive search queries.</p> <p>The default value is <code>anr=</code></p> <p>When Cisco UC Integration for Microsoft Lync performs a predictive search, it issues a query using Ambiguous Name Resolution (ANR). This query disambiguates the search string and returns results that match the attributes that are set for ANR on your directory server.</p> <p><b>Important</b> If you want Cisco UC Integration for Microsoft Lync to search for attributes that are not set for ANR, you must configure your directory server to set those attributes for ANR.</p> <p>See the following Microsoft documentation for more information on ANR:</p> <ul style="list-style-type: none"> <li>• <i>Ambiguous Name Resolution for LDAP in Windows 2000</i></li> <li>• <i>LDAP Referrals</i>, see the <i>Ambiguous Name Resolution</i> section</li> <li>• <i>Common Default Attributes Set for Active Directory and Global Catalog</i></li> </ul>
DisableSecondaryNumberLookups	0 1	<p>Specifies whether users can search for alternative contact numbers if the work number is not available, such as the mobile, home, or other number.</p> <p><b>0</b></p> <p>Users can search for alternative contact numbers. This is the default value.</p> <p><b>1</b></p> <p>Users cannot search for alternative contact numbers.</p>

Parameter	Value	Description
PhoneNumberMasks	Mask string	<p>Specifies masks to use when users search for phone numbers.</p> <p>For example, a user receives a call from +14085550100. However, this number in Active Directory is +(1) 408 555 0100. The following mask ensures that the contact is found: +14081+(#) #### #### #####</p> <p>The length of mask strings cannot exceed the size restriction for registry subkey names.</p>
SearchTimeout	Number of seconds	<p>Specifies the timeout period for queries in seconds.</p> <p>The default value is 5.</p>
UseWildcards	0 1	<p>Specifies whether to enable wildcard searches.</p> <p><b>0</b></p> <p>Do not use wildcards. This is the default value.</p> <p><b>1</b></p> <p>Use wildcards.</p> <p>If you set 1 as the value, the speed of searches on the LDAP might be affected, especially if users search for directory attributes that are not indexed.</p> <p>You can use phone number masks instead of wildcard searches.</p>

Parameter	Value	Description
SearchBase1 SearchBase2 SearchBase3 SearchBase4 SearchBase5	Searchable organizational unit (OU) in the directory tree	<p>Specifies a location in the directory server from which searches begin. In other words, a search base is the root from which Cisco UC Integration for Microsoft Lync executes a search.</p> <p>By default, Cisco UC Integration for Microsoft Lync searches from the root of the directory tree. You can specify the value of up to five search bases in your OU to override the default behavior.</p> <p><b>Important</b></p> <ul style="list-style-type: none"> <li>• Active Directory does not typically require you to specify a search base. If you use Active Directory, you should specify search bases only if you have specific performance requirements.</li> <li>• You must specify a search base for directory servers other than Active Directory. Directory servers other than Active Directory require search bases to create a binding to a specific location in the directory.</li> </ul> <p><b>Tip</b> You can specify an OU to restrict searches to certain user groups. For example, if you want to search only for users who have instant messaging enabled, you can include those users in an OU and then specify that as the value of a search base.</p>

### Phone Masks

You can set masks to use when Cisco UC Integration for Microsoft Lync searches your directory for a phone number with the PhoneNumberMasks parameter.

Phone masks apply to phone numbers before Cisco UC Integration for Microsoft Lync searches your directory. If you configure phone masks correctly, directory searches succeed as exact query matches and prevent any impact to performance of your directory server.

The following table describes the elements you can include in a phone mask:

Element	Description
Phone number pattern	<p>Provides a number pattern to retrieve phone numbers from your directory.</p> <p>To add a phone mask, you specify a number pattern that applies to the mask.</p> <p>For example, to specify a mask for searches that begin with +1408, you can use the following mask: +1408 +(#) ### ## ##</p> <p>To enable a mask to process phone numbers that have the same number of digits, but different patterns, use multiple masks with the same number of digits.</p> <p>For example, your company has site A and site B. Each site maintains a separate directory in which the phone numbers have different formats, such as the following:</p> <p style="padding-left: 40px;">+(1) 408 555 0100 +1-510-5550101</p> <p>The following mask ensures you can use both numbers correctly: +1408 +(#) ### ## ## +1510 +##-###-#####.</p>
Pipe symbol ( )	<p>Separates number patterns and masks.</p> <p>For example, +1408 +(#) ### ## ## +34 +(##) ### ##.</p>
Wildcard character	<p>Substitutes one or more characters for a subset of possible matching characters.</p> <p>Any wildcard character can exist in a phone mask.</p> <p>For example, an asterisk (*) represents one or more characters and can apply to a mask as follows: +3498 +##*##*##*#####. Using this mask with the wildcard, a phone number search can match any of the following formats:</p> <p style="padding-left: 40px;">+34(98)555 0199 +34 98 555-0199 +34-(98)-555.0199</p>
Reverse mask	<p>Applies a number pattern from right to left.</p> <p>For example, a mask of +3498 R+34 (98) 559 ##### applied to +34985590199 results in +34 (98) 559 0199.</p> <p>You can use both forward and reverse masks.</p>

## Contact Resolution

### Contact Resolution Parameters

The following table describes parameters for configuring intradomain federation:

Parameter	Value	Description
UseSIPURIToResolveContacts	true false	<p>Specifies whether Cisco UC Integration for Microsoft Lync retrieves contact information using the value of the attribute you specify in the SipUri parameter.</p> <p><b>true</b></p> <p>Retrieve contact information using the value of the attribute you specify in the SipUri parameter.</p> <p>You should specify true if the contact user names in your directory do not conform to the following format <i>username@domain</i>.</p> <p><b>false</b></p> <p>Cisco UC Integration for Microsoft Lync does not use the SipUri parameter. This is the default value.</p>
UriPrefix	Text string	<p>Defines the prefix that applies to the value of the attribute you specify in the SipUri parameter.</p> <p>The prefix is any text that exists before the username of the contact ID. For example, you specify msRTCSIP-PrimaryUserAddress as the value of SipUri. In your directory the value of the msRTCSIP-PrimaryUserAddress attribute has the following format: <i>sip:username@domain</i>.</p> <p>The default value is blank.</p>
PresenceDomain	Text string	<p>Specifies the domain name used for creating instant messaging addresses for directory contacts. <i>username@domain</i></p>

**Note**

The Active Directory attribute msRTCSIP-PrimaryUserAddress must contain the SIP URI in the format sip:username@domain and the configuration file must have the following entry in the Directory section for contact resolution to perform properly.

```
<Directory>
  <UseSIPURIToResolveContacts>true</UseSIPURIToResolveContacts>
  <SipUri>msRTCSIP-PrimaryUserAddress</SipUri>
  <UriPrefix>sip:</UriPrefix>
  <PresenceDomain>example.com</PresenceDomain>
</Directory>
```

# Phone Parameters

The following table describes the parameters you can specify within the Phone element:

Parameter	Value	Description
TFTPServer1	IP address Hostname FQDN	Specifies the address of your TFTP server. Set one of the following as the value:  <b>Hostname</b> For example, hostname  <b>IP address</b> For example, 123.45.254.1  <b>Fully qualified domain name</b> For example, hostname.domain.com
CtiServer1	IP address Hostname FQDN	Specifies the address of your CTI server.  This parameter is required only if the address of your CTI server is not the same as the address of your TFTP server. If both server addresses are the same, you do not need to specify this parameter in your configuration file.
CcmcipServer1	IP address Hostname FQDN	Specifies the address of your CCMCIP server.  This parameter is required only if the address of your CCMCIP server is not the same as the address of your TFTP server. If both server addresses are the same, you do not need to specify this parameter in your configuration file.

## Phone Configuration Example

The following is an example phone configuration:

```
<Phone>
  <TftpServer1>tftpserver.domain.com</TftpServer1>
  <CtiServer1>ctiserver.domain.com</CtiServer1>
</Phone>
```

## Registry Key Configuration

The application supports obtaining the location of TFTP and CCMCIP servers from the Microsoft Windows registry. The following registry values can be used to specify these servers:

- CcmcipServer1
- CcmcipServer2
- TftpServer1
- TftpServer2

The application will first search for these values in `HKEY_CURRENT_USER\Software\Cisco Systems, Inc.\Client Services Framework\AdminData` and then `HKEY_CURRENT_USER\Software\Policies\Cisco Systems, Inc.\Client Services Framework\AdminData`. Values located in these registry keys will override information specified in the configuration file. Values will be read from the configuration file if they cannot be found in either of these registry locations.

**Note**


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Configuration through the registry is only supported with these four values.

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## CTI Load Balancing

CTI Load Balancing allows Cisco UC Integration for Microsoft Lync to use Cisco Unified Communications Group information to determine which CTI server to use.

A CTI device typically has a one to one mapping to a Device Pool and each pool has a one to one mapping with a Cisco Unified Communications Manager group. That group has one or more Cisco Unified Communications Manager servers associated with it. Cisco UC Integration for Microsoft Lync will use the first two highest priority servers in the group when CTI Load Balancing is enabled. These two servers become the primary and secondary CTI servers. These servers override any other CTI server settings.

**Note**


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Select **Admin > System > Cisco Unified CM Group** in Cisco Unified Communications Manager to view group information.

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This feature is enabled by creating the registry key **UseCUCMGroupForCti** and setting the value to **true**. The application will first search for this value in `HKEY_CURRENT_USER\Software\Cisco Systems, Inc.\Client Services Framework\AdminData` and then `HKEY_CURRENT_USER\Software\Policies\Cisco Systems, Inc.\Client Services Framework\AdminData`.

**Note**


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If the desktop phone device configuration file is encrypted but the software phone device configuration file is not encrypted, the CUCM Group information contained in the software phone device configuration file will be used. If no software phone device configuration file is present, the CTI server information cannot be obtained by this method.

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## Internet Explorer Pop-up Parameters

A new Internet Explorer window or tab can be opened to display information about an incoming caller. This information is displayed after the incoming call is accepted. The behavior of the new window or tab and the information it displays are controlled using the configuration file. The following table lists the parameters used to display the new window or tab.

Parameter	Value	Description
BrowserContactURI		The base URI used to open Internet Explorer. Must have an %ID% key marker.
BrowserFallbackURI		A fall back URI used when the <b>BrowserIDType</b> information does not arrive within a period of time.
BrowserBehavior	The behavior of the browser when opening new URIs.	
	NewTab	Open the URI in a new tab if available. Open a new browser window if tabs are not supported.
	Navigate	Navigate to the new URI in the browser window already open.
	NewWindow	Always open a URI in a new browser window.
BrowserIDType	The type of ID supplied to the URI defined in the registry.	
	CallNumber	The media address of the participant
	CallDisplayName	The display name of the participant
	ContactBusinessNumber	The business number of the contact
	ContactMobileNumber	The mobile number of the contact
	ContactHomeNumber	The home number of the contact
	ContactOtherNumber	The other number of the contact
	ContactDisplayName	The display name of the contact
	ContactURI	The URI of the contact (user@domain.com for example)
	ContactEmail	The email of the contact (email@work.com for example)
	ContactUsername	The user logon name of the contact.

Parameter	Value	Description
BrowserIDFilter	Regular expression	<p>A filter applied to the chosen <b>BrowserIDType</b> that will prevent a new browser window or tab if a match is made. The following are examples of regular expressions:</p> <ul style="list-style-type: none"> <li>• Phone number that has four digits and doesn't start with number 7: <b>(?!7)\d{4}</b></li> <li>• Phone number that doesn't start with the digits 1, 2, 3 or 4: <b>[5-90]\d+</b></li> <li>• Phone number that doesn't end with 49: <b>\d+(?!49)\d{2}</b></li> </ul> <p>Any valid regular expression supported by the Microsoft <b>std::tr1::regex</b> library can be used.</p>

Note the following items when implementing this feature:

- A new browser window or tab is displayed when the user accepts a transferred call from an established incoming call.
- A new browser window or tab is displayed for each additional, unique call participant added to a conference call.
- A filter can be created that controls when a browser window or tab is opened. This enables the identification of internal and external contacts. This feature is typically implemented to display information about an external contact. This can be achieved by:
  - 1 Creating a regular expression that distinguishes internal and external contacts.
  - 2 Applying the regular expression to the incoming caller ID (typically the phone number).
  - 3 Opening the new browser window or tab when the regular expression is matched for an external contact.



#### Important

This feature can only be implemented with Microsoft Internet Explorer 7.0, 8.0, or 9.0. No other browser is supported.

#### Example

The following examples demonstrate configuration file entries for this feature.

```
<BrowserPop>
  <BrowserContactURI>www.example.com/%ID%.html</BrowserContactURI>
```

```

        <BrowserIDType>ContactUsername</BrowserIDType>
        <BrowserFallbackURI>www.example.com</BrowserFallbackURI>
        <BrowserBehavior>NewTab</BrowserBehavior>
    </BrowserPop>

    <BrowserPop>
        <BrowserContactURI>www.example.com/%ID%.html</BrowserContactURI>
        <BrowserIDType>ContactEmail</BrowserIDType>
        <BrowserFallbackURI>www.example.com</BrowserFallbackURI>
        <BrowserBehavior>NewWindow</BrowserBehavior>
    </BrowserPop>

    <BrowserPop>
        <BrowserContactURI>www.example.com/%ID%.html</BrowserContactURI>
        <BrowserIDType>CallNumber</BrowserIDType>
        <BrowserIDFilter>[^7]\d{3}</BrowserIDFilter>
        <BrowserFallbackURI>www.example.com</BrowserFallbackURI>
        <BrowserBehavior>Navigate</BrowserBehavior>
    </BrowserPop>

```

## Configure Automatic Updates

To enable automatic updates, you create an XML file that contains the information for the most recent version, including the URL of the installation package on the HTTP server. Cisco UC Integration for Microsoft Lync retrieves the XML file when users sign in, resume their computer from sleep mode, or perform a manual update request from the **Help** menu.

The XML file for automatic updates uses the following format:

```

<JabberUpdate>
  <LatestBuildNum>value</LatestBuildNum>
  <LatestVersion>value</LatestVersion>
  <Message><![CDATA[your_html]]></Message>
  <DownloadURL>value</DownloadURL>
</JabberUpdate>

```

### Before You Begin

To configure automatic updates for Cisco UC Integration for Microsoft Lync, you must have an HTTP server installed and configured to host the XML file and installation package.

### Procedure

- 
- Step 1** Host the appropriate installation package on your HTTP server.
  - Step 2** Create an update XML file with any text editor.
  - Step 3** Specify the build number of the update as the value of the LatestBuildNum element.
  - Step 4** Specify the version number of the update as the value of the LatestVersion element.
  - Step 5** Specify HTML as the value of the Message element in the format: <![CDATA[*your\_html*]]>
  - Step 6** Specify the URL of the installation package on your HTTP server as the value of the DownloadURL element.
  - Step 7** Save and close your update XML file.
  - Step 8** Host your update XML file on your HTTP server.
  - Step 9** Specify the URL of your update XML file as the value of the UpdateUrl parameter in your configuration file.
- 

The following is an example of XML to configure automatic updates:

```

<JabberUpdate>
  <LatestBuildNum>12345</LatestBuildNum>

```

```
<LatestVersion>9.2.1</LatestVersion>
<Message><![CDATA[<b>This new version of Cisco UC Integration for Microsoft Lync lets you
do the following:</b><ul><li>Feature 1</li><li>Feature 2</li></ul>For
more information click <a target="_blank"
href="http://cisco.com/go/cucilync">here</a>.<]]></Message>
<DownloadURL>http://server_name/CUCILyncSetup.msi</DownloadURL>
</JabberUpdate>
```

## Configure Problem Reporting

Setting up problem reporting enables users to send a summary of issues that they encounter while using Cisco UC Integration for Microsoft Lync. There are two methods for submitting problem reports as follows:

- Users submit the problem report directly through Cisco UC Integration for Microsoft Lync.
- Users save the problem report locally and then upload it at a later time.

Cisco UC Integration for Microsoft Lync uses an HTTP POST method to submit problem reports. Create a custom script to accept the POST request and specify the URL of the script on your HTTP server as a configuration parameter. Because users can save problem reports locally, you should also create an HTML page with a form to enable users to upload problem reports.

### Before You Begin

Complete the following steps to prepare your environment:

- 1 Install and configure an HTTP server.
- 2 Create a custom script to accept the HTTP POST request.
- 3 Create an HTML page to host on the HTTP server to enable users to upload problem reports that are saved locally. Your HTML page should contain a form that accepts the problem report saved as a .ZIP archive and contains an action to post the problem report using your custom script.

The following is an example form that accepts problem reports:

```
<form name="uploadPrt" action="http://server_name.com/scripts/UploadPrt.php" method="post"
enctype="multipart/form-data">
<input type="file" name="zipFileName" id="zipFileName" /><br />
<input type="submit" name="submitBtn" id="submitBtn" value="Upload File" />
</form>
```

### Procedure

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- Step 1** Host your custom script on your HTTP server.
  - Step 2** Specify the URL of your script as the value of the `PrtLogServerUrl` parameter in your configuration file.
- 

## Configuration File Example

The following is an example of a configuration file.

```
<?xml version="1.0" encoding="utf-8"?>
<config version="1.0">
  <Client>
    <PrtLogServerUrl>http://server_name.domain.com/prt_script.php</PrtLogServerUrl>
    <UpdateUrl>http://server_name.domain.com/update.xml</UpdateUrl>
    <Forgot_Password_URL>http://server_name.domain.com/password.html</Forgot_Password_URL>
```

```
</Client>
<Directory>
  <DirectoryServerType>EDI</DirectoryServerType>
  <BusinessPhone>aNonDefaultTelephoneNumberAttribute</BusinessPhone>
  <PhotoUriSubstitutionEnabled>>true</PhotoUriSubstitutionEnabled>
  <PhotoUriSubstitutionToken>cn</PhotoUriSubstitutionToken>
  <PhotoUriWithToken>http://staffphoto.example.com/cn.jpg</PhotoUriWithToken>
</Directory>
</config>
```

