

VoIP Integration

Bulk CTL / ITL Eraser 1.2



Installation and Administration Guide



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Product Overview

VoIP Integration Bulk CTL Eraser is a utility which allows you to remove CTL and ITL files from Cisco phones from anywhere with network connectivity. Bulk CTL Eraser's unique ability to control the phones via the signaling channel allows for the management of CTL/ITL files in circumstance, so long as the phone is registered to CUCM.

Bulk CTL Eraser provides the ability to create groups of phones to update; groups can encompass individual devices, device pools, locations, partitions, calling search spaces and extensions or extension ranges.

Security by Default

With the introduction of Unified Communications Manager 8.0, Cisco has added a feature entitled "Security by Default." This feature has added a number of items to the system to assist in securing the environment from certain types of attacks that could intercept your communications. When these features are configured correctly they can be a great asset, however when misconfigured these features can be problematic. Upgrades or migrations such as moving UC to UCS can be hazardous if security is not performed correctly. Once in a situation where the phone does not trust your CUCM, no configuration changes are passed to the phone as the phone no longer trusts the TFTP file.

CTL and ITL Files

One of the biggest problems that can occur concerns the ITL (Initial Trust List) file on the IP Phone. The ITL file contains a list of trusted servers within the cluster that the phone can communicate with.

A common problem that can occur during a server upgrade or even during configuration changes is for the certificates on the CUCM to be updated. If the certificates on the CUCM servers don't match the certificates in the CTL and ITL files on the phones the phones will no longer trust the CUCM servers.

Phones in a broken state have no alternative than to erase the CTL/ITL files from the phone using the local keypad.

Bulk CTL Eraser fits this need by remotely accessing the IP phone and removing the problematic CTL and ITL files across the phones signaling (SCCP/SIP) channel so that the phones can then trust and download the correct files from the CUCM servers.

Application Requirements

System Requirements

- Windows PC with Microsoft Dot Net 3.5 or greater
- Recommended 2Gb or more RAM.

Call Manager

- Call Manager 5+ (Tested on Call Manager 5 through 8)
- Call Manager user with AXL and User Admin permissions
- AXL Service activated and running on a Call Manager Server in the cluster.
- CTI Service activated and running on a Call Manager Server in the cluster.

Network Connectivity

The following network ports are used by CTL Eraser, please ensure your network or software firewalls allow communication to the ports listed.

Connection	From	To
AXL Access to login, find phones, etc.	CTL Eraser Random Port	CUCM ALX Service TCP / 8443
Local CTI Engine	CTL Eraser Random Port	CTI Engine TCP /6550 to 6560
CTI Engine to CUCM	CTL Engine Random Port	CUCM CTI Service TCP / 2748, TCP / 2749, TCP / 2789

Note: CTL Eraser needs to have the correct windows permissions to open TCP server ports. On some systems, users without admin rights may not be able to start the CTL Engine. Some firewalls also restrict this ability.

Supported Devices

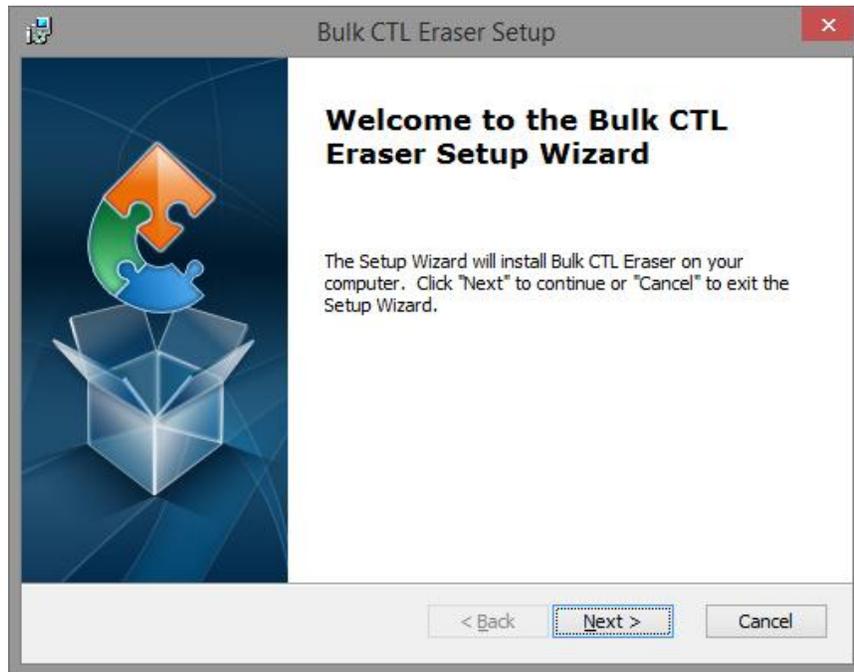
All phones which support CTL/ITL files include the following models:

- 69XX
- 791X
- 792X
- 793X
- 794X
- 796X
- 797X
- 78XX
- 88XX
- 89XX
- 99XX

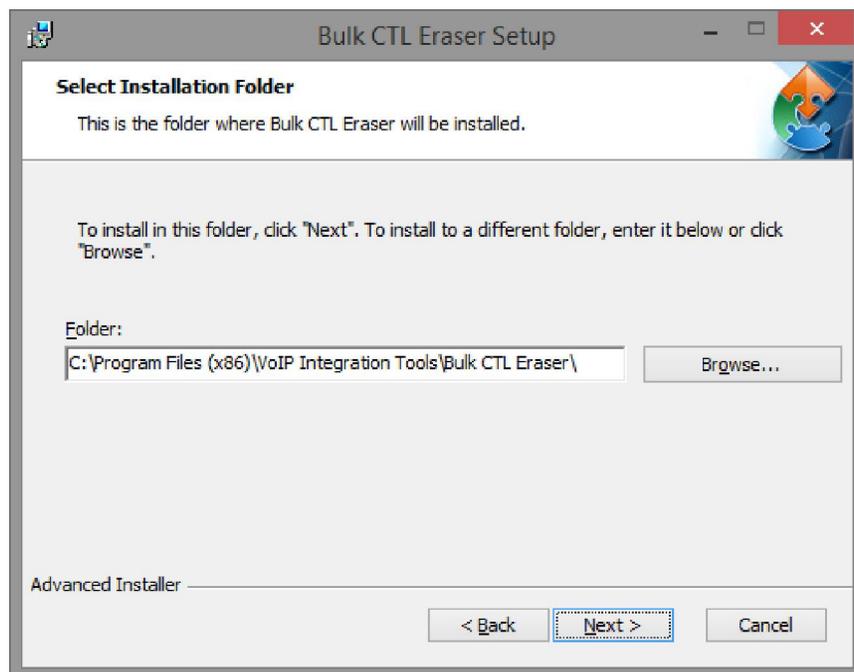
Installation Process

Loading Bulk CTL Eraser

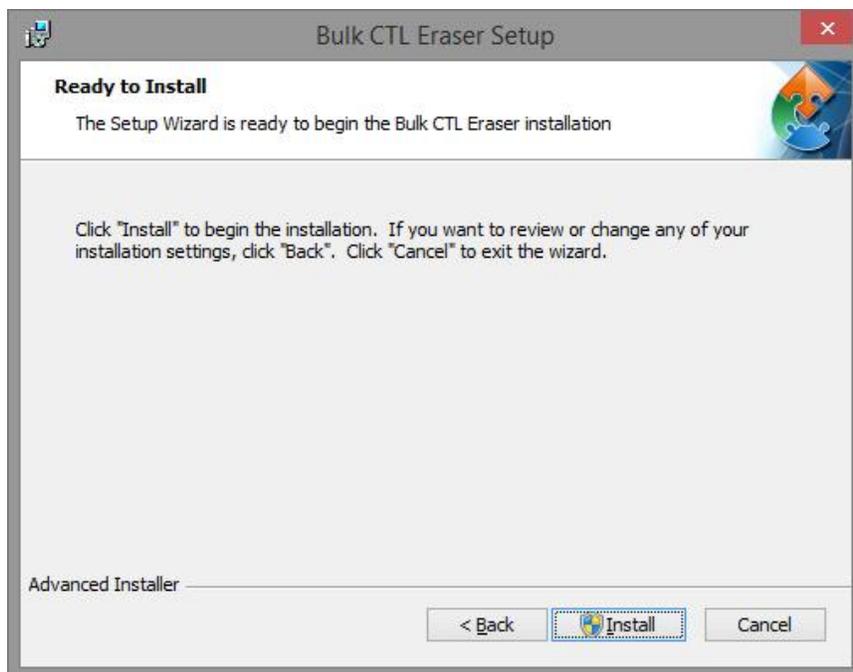
To begin the installation, download the installer from our website at <http://www.voipintegration.com>. Then double-click the saved file.



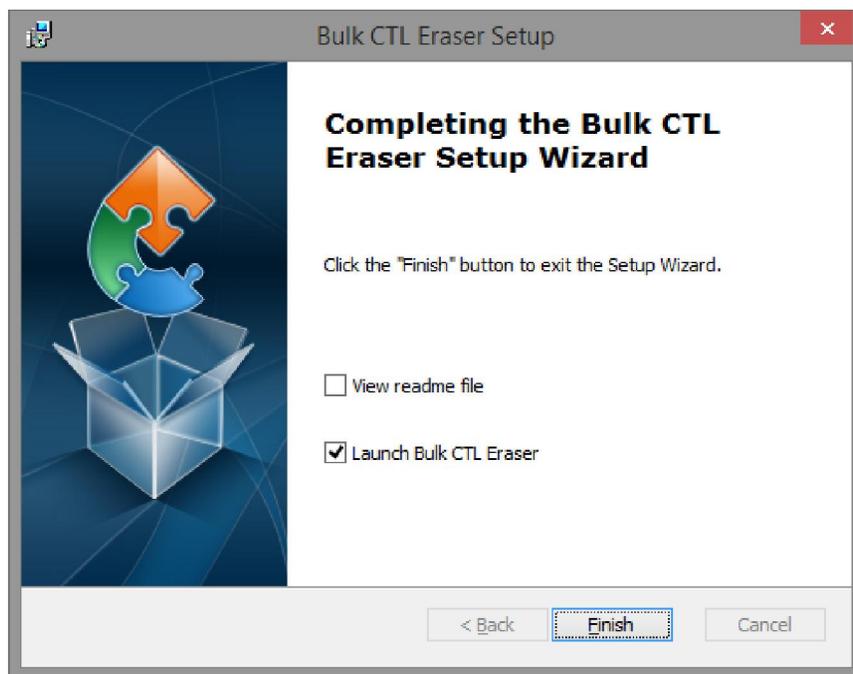
Click "Next >".



Enter the installation path you would Bulk CTL Eraser installed in and click "Next >".



To complete the installation click *"Install"*.



When the install has completed, click *"Finish"* to close the installer.

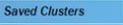
Application Use

Launching Bulk CTL Eraser

Navigate through Windows Start -> *Programs* -> *VoIP Integration Tools* -> *Bulk CTL Eraser* and select *Bulk CTL Eraser*.

Bulk CTL Eraser will start up and check for an upgrade. It is strongly recommended that you click "Yes" to download the upgrade if any are found.

Licenses

A license is required for each cluster that you would like to run Bulk CTL Eraser on. In order to receive a license file, you will need to gather the Cluster ID and MAC address from the cluster that you want to license. Bulk CTL Eraser will gather this information for you after you connect to the cluster. To connect to the cluster, click on the "Saved Clusters" button on the left side. () Under the "Cluster Information" section, fill out all the fields, then click the "Save" button. Once your newly added cluster is saved, click on the "Connect" button. See the image to the right for more details.

Once you have connected to the cluster, the information will be displayed on the "Settings" tab. To purchase a license you can send the information to sales@VoIPintegration.com or click the "Purchase" button to purchase online.

Cluster Information Section

Cluster Information

Cluster Name :

CUCM AXL IP :

Username :

Password :

CUCM CTI IP :

Default Cluster - Connect on Startup

 New
 Delete
 Save
 Connect

Requesting a Demo License

Demo licenses are available to test the software on your cluster. You can request a free trial on our website at <http://www.voipintegration.com/Software/Bulk-CTL-Eraser/#close> . Click on "Free Trial".

Loading your License File

To load your license file, click on the "Settings" tab and locate the "Load License" button. Use the file browser to locate and select the license file and click "Open". If you have purchased additional licenses for additional clusters you can load them using the same method.

Registration Information

Licensing

You must load a license to activate CTL Eraser for this cluster.

Licenses can be purchased online at www.voipintegration.com, An evaluation license for up to 5 phones can be requested online or by contacting sales@VoIPintegration.com

Cluster ID :

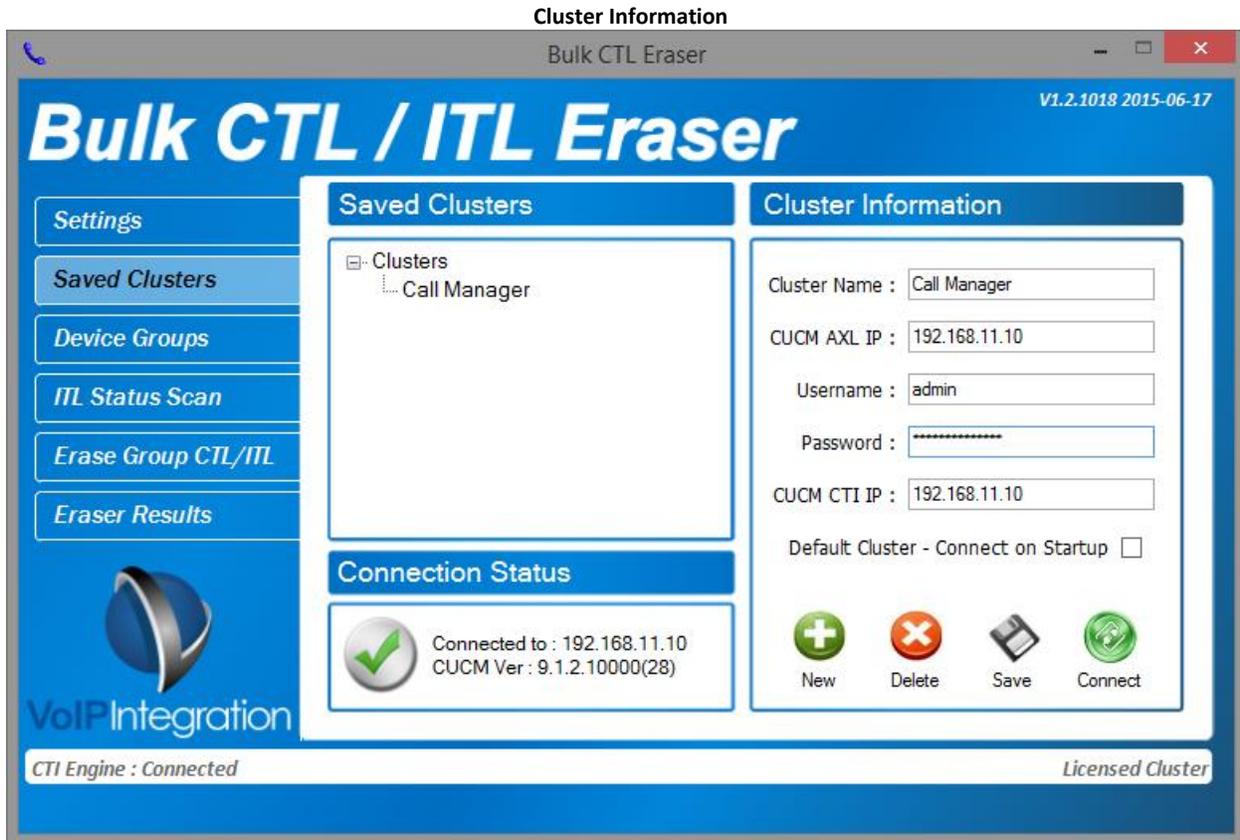
Licensing MAC : [Copy to Clipboard](#)

Licenses Installed : **4** [Copy to eMail](#)

[Request Evaluation License](#)

Saving and Connecting to Clusters

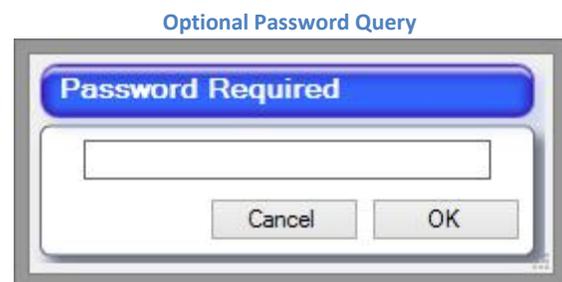
In order to use Bulk CTL Eraser you must first connect to a cluster. The cluster information is saved for future use. If you do not want to save the password field for security purposes you may leave it blank and you will be prompted for the password each time you connect to the cluster.



Call Manager Administration User

Ensure you have met the requirements for enabling AXL and assigning permission described in Appendix A.

- Enter a Cluster Name to describe the Cluster.
- In the in the "Username" field, enter the username with Admin/AXL permissions.
- In the "Password" field, enter the password.
- Click the "Default Cluster" option to connect to this Cluster at startup. (optional)
- Specify the CTI server in the cluster for CTL Eraser to connect to.
- Click "Save" or "Connect".



The status will indicate a successful connection and display the version of the connected Call Manager.

Use of Bulk CTL Eraser Features

Settings

The Settings page contains the following sections...

Licensing

You must load a license to activate CTL Eraser for this cluster.
Licenses can be purchased online at www.voipintegration.com. An evaluation license for up to 5 phones can be requested online or by contacting sales@VoIPIntegration.com

Cluster ID :

Licensing MAC : [Copy to Clipboard](#) [Request Evaluation License](#)

Licenses Installed : [Copy to eMail](#)

User Feedback

Have you come across a bug you would like to report or feature request?

We appreciate all feedback and feature requests as it helps make the program better for everyone!

Program Version

Version : **V1.2.1018 2015-06-17** Check for upgrade on start

- *Licensing*

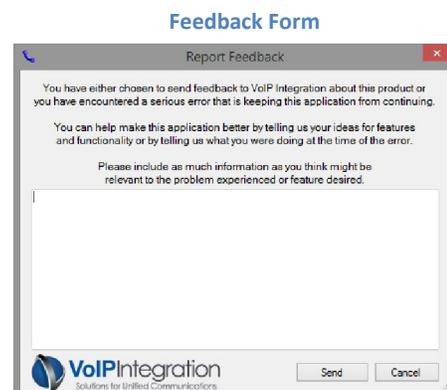
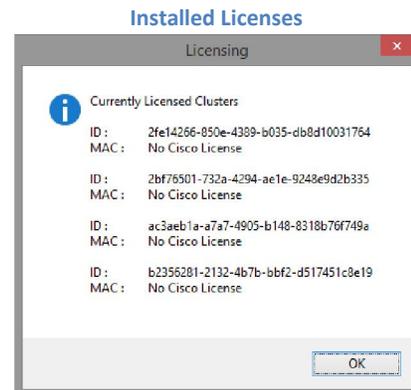
This area allows you to retrieve your Cluster ID and MAC address needed for licensing as well as install your license files to unlock all of the features in Bulk CTL Eraser. A count of installed licenses is also displayed.

- *User Feedback*

The feedback form can be used to notify us of feature requests or software bugs. Please include as much detail as possible in bug reports including what you were doing, how the application reacted and anything else that you think might be relevant.

- *Program Version*

The Program Version section shows you what version of Bulk CTL Eraser you are running and allows you to shut off the upgrade check at program startup. You can also do a manual upgrade check here.



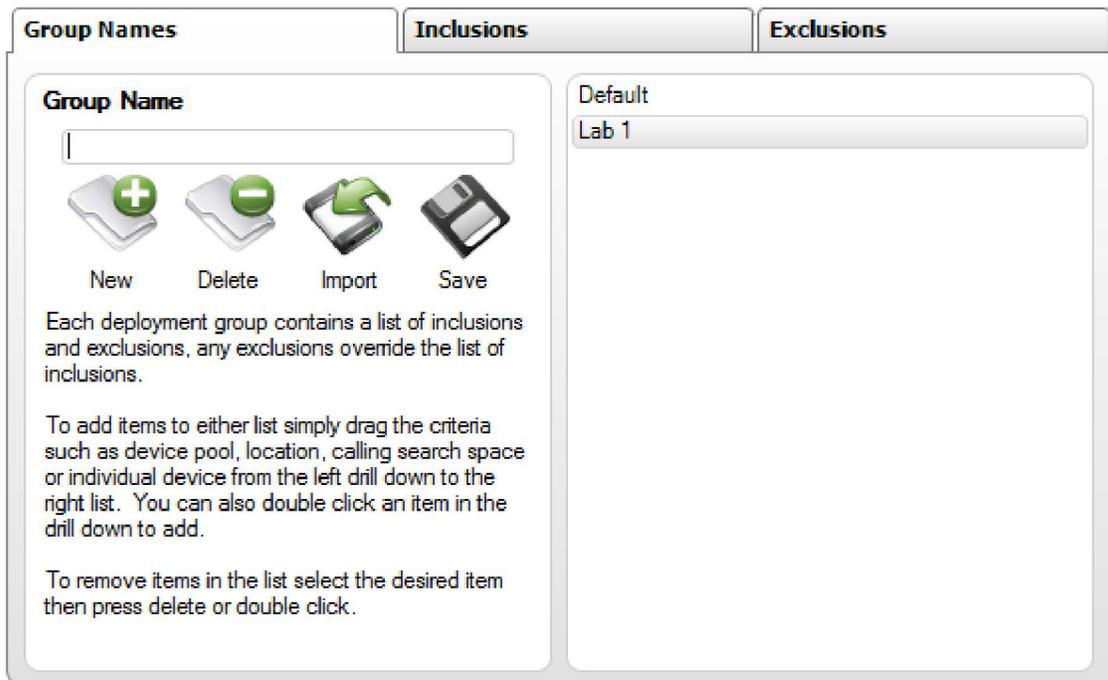
Device Groups

Groups Names

Bulk CTL Eraser allows you to create specific groups of phones to remove CTL and ITL files from by grouping phones by several criteria. To start categorizing your phones you need to add a group.

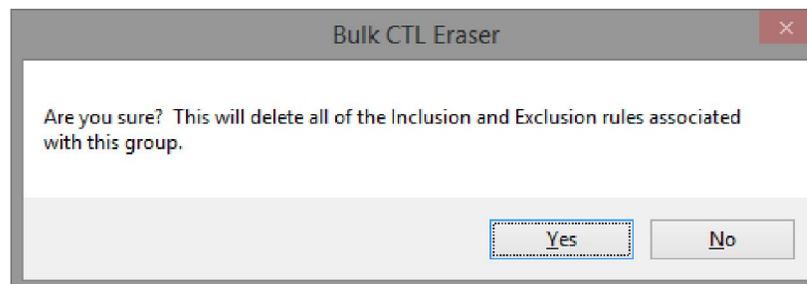
Adding a Group

Click on the “New” button. Enter a desired group name in the field provided. Click on the “Save” button when finished. The newly added group name should appear in the section to the right.



Deleting a Group

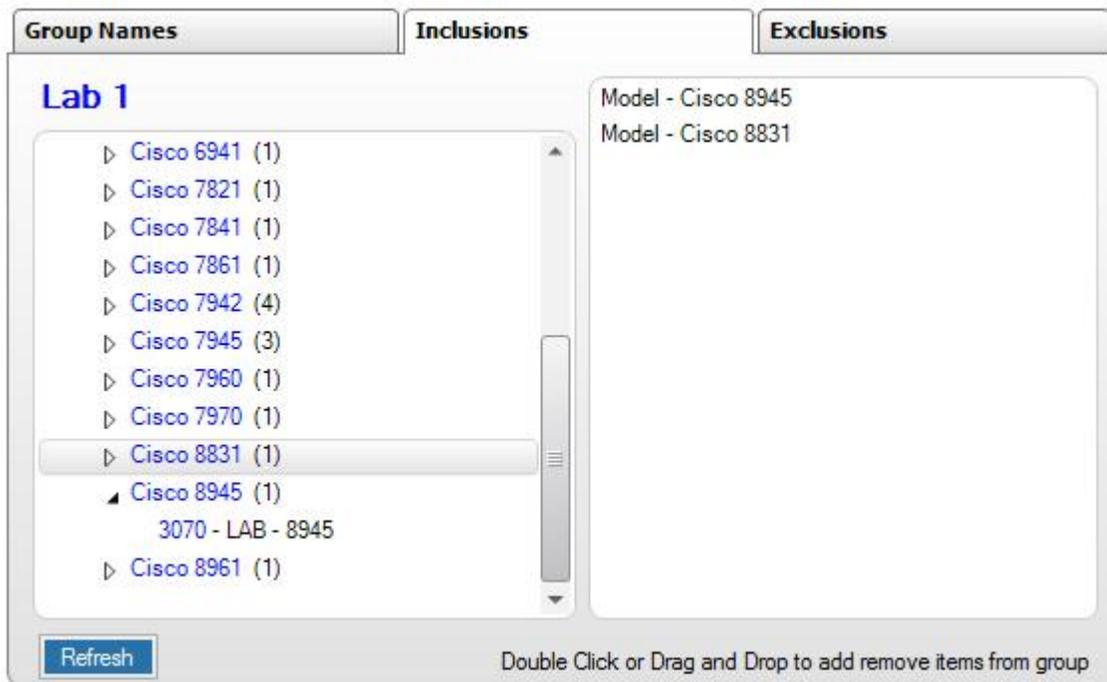
To remove a group, highlight the Group Name on the right. Click on the “Delete” button. You will get a warning message indicating:



Click on the “Yes” button to confirm that the group is to be deleted. The group will then be deleted and will no longer show on the left side.

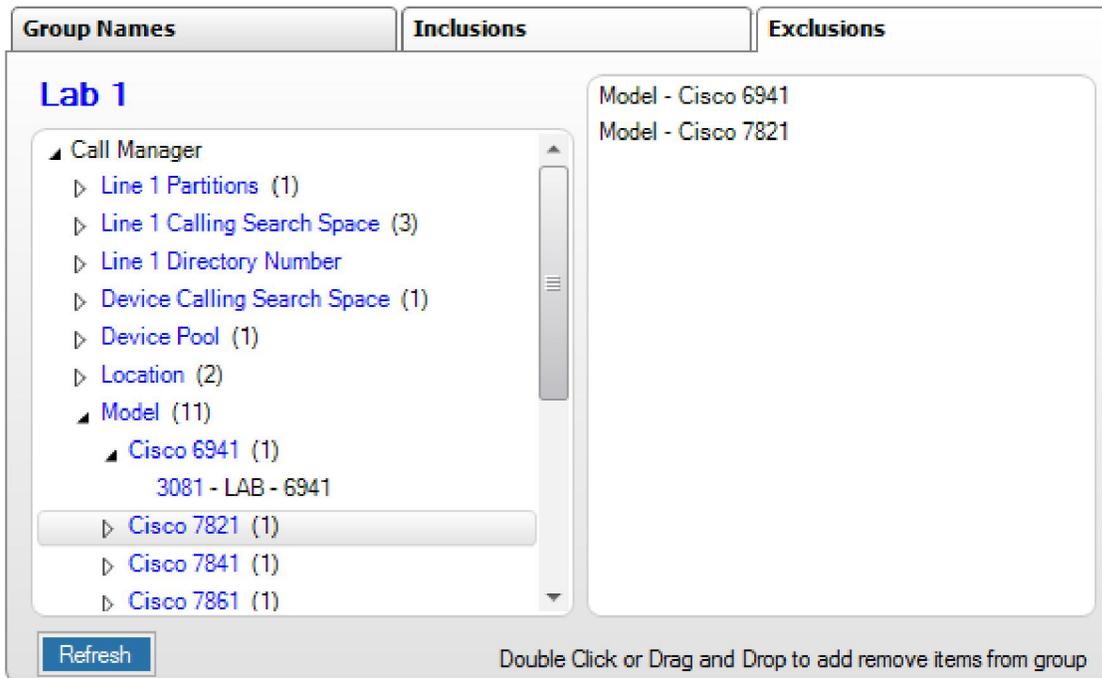
Inclusions

The Inclusions tab is where you add rules that will include phones into the group. Use the Call Manager tree on the left to drill down and add the rules that encompass all of the phones you want to deploy to in a single group. To add rules either double click on the rule or drag it into the list on the right. To remove a rule that has been added previously, simply double click the item or select the item and press the delete key.



Exclusions

The Exclusions tab is where you add rules that will exclude phones from the group of inclusions that have been configured. This gives you the ability to add an entire device pool and exclude an individual device instead of trying to add all of the phones individually. To add rules either double click on the rule or drag it into the list on the right.

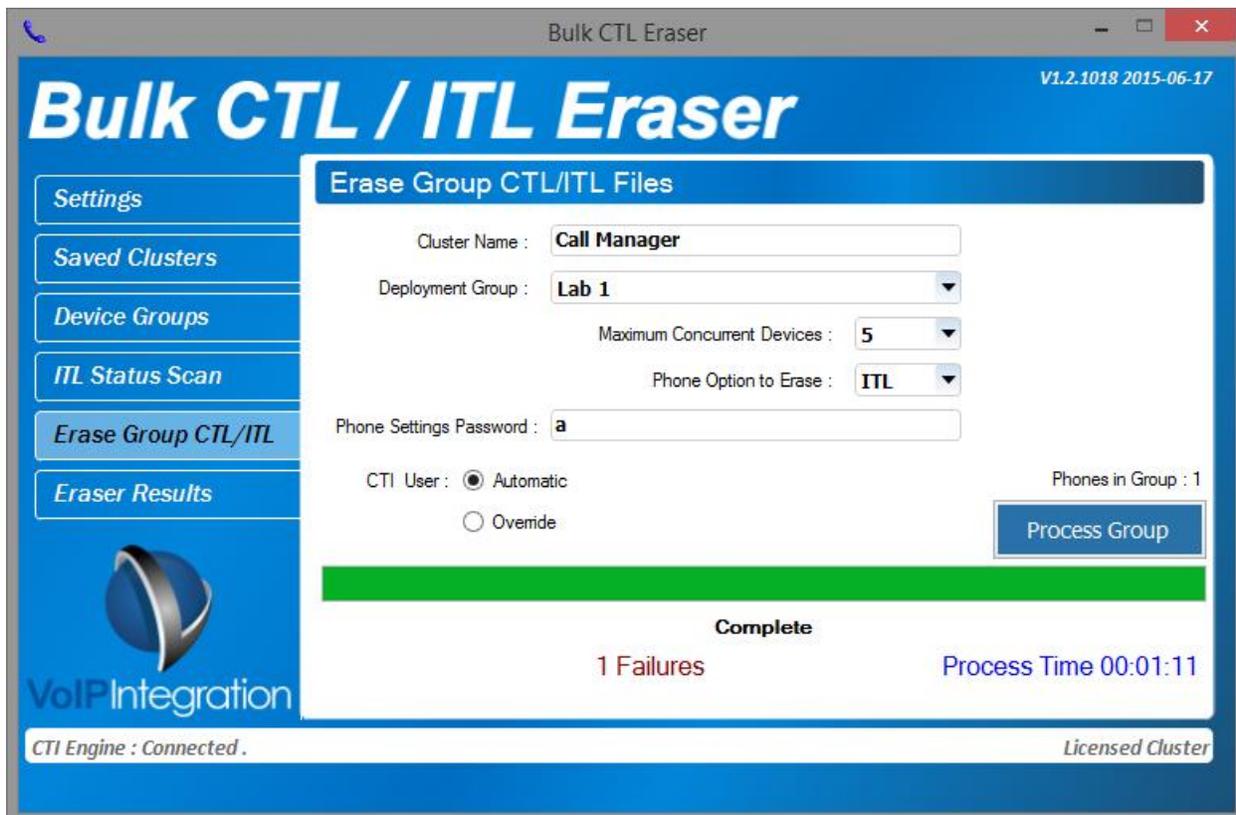


Refresh

A refresh button is found on the “Inclusion” and “Exclusion” tabs. The refresh button will poll the cluster to update the devices in the lists.

Erase Group CTL/ITL

To remove the CTL and ITL files from a group of phones all you need to do is select the group name from the drop down list and click the Process Group button. Once a group has been selected, the number of devices that match the group criteria will be displayed next to the group name.



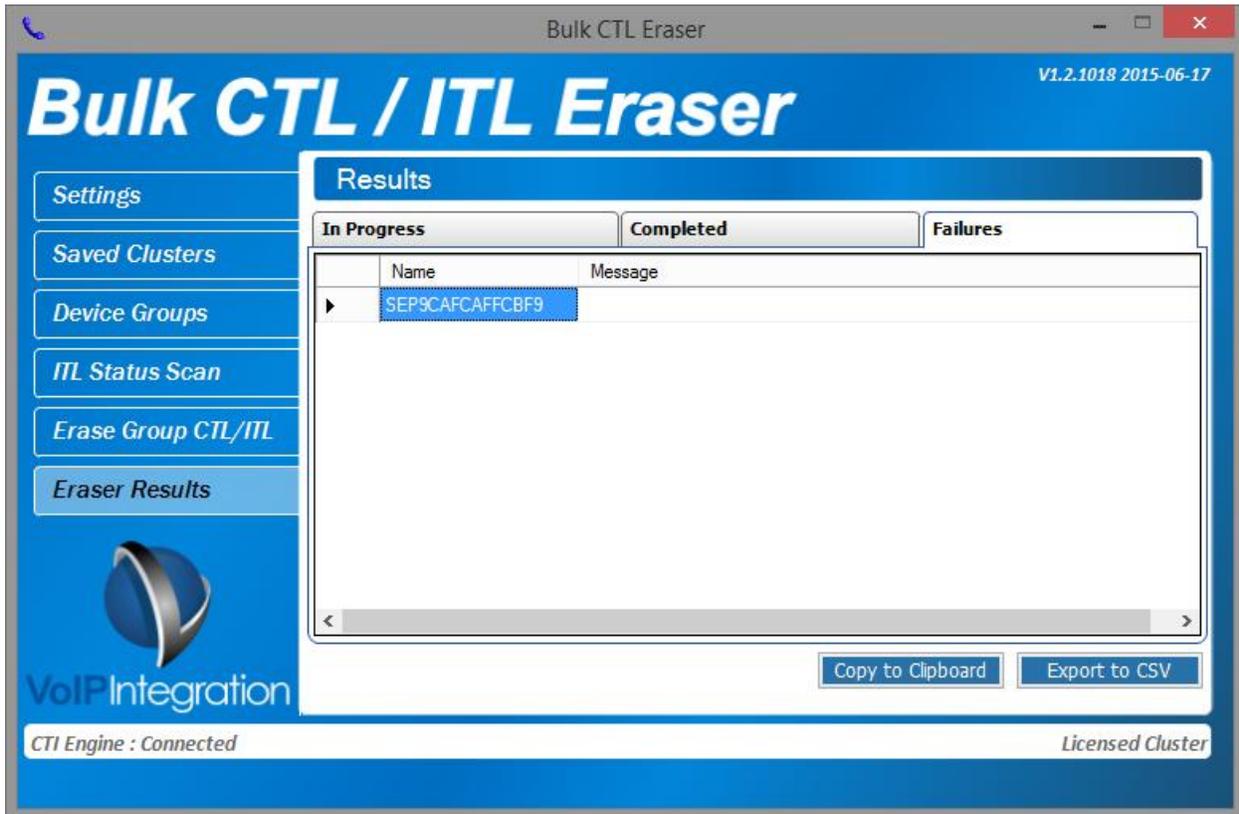
CTL/ITL Removal Process

During the process the Results tab will show the phones which are currently being processed along with the current stage of the process as outlined below.

In Progress Message	Task
CTI Open - Device out of service	CTI Communication with Call Manager is Active Waiting for CTI state to change to In Service. Timeout means phone is unregistered
Reset Requested (79xx models)	Initial reboot of phone to ensure settings page is locked and phone is idle. Waiting for phone to re-register
Sending keys (x)	Sending the key press sequence to the phone, x number of key strokes remaining.
CTL Erased - Waiting for phone to reset	Key sequence is complete, waiting for the phone to reset
Complete - Waiting for phone to register	CTL Erase is complete and phone has reset Waiting for phone to re-register

Results

The results tab displays information from the last or current deployment.



In Progress

The phones currently in process will show the current status.

Completed

The Completed page displays the devices that reported to have successfully deleted their CTL and ITL files.

Failures

The "Failure Page" displays the devices that Bulk CTL Eraser was unable remove the CTL/ITL files. The list will contain the device name, the device IP address if we were able to determine it and the reason for the failure.

Appendix A: Call Manager Pre Requisite Configuration

AXL Service

For Bulk CTL Eraser to function with Call Manager you will need to ensure you have the AXL service and CTI Service active and running on at least one server in your cluster.

To Validate you have the AXL service running:

- Use a web browser to access the Call Manager Serviceability web page.
- <https://<Call Manager>/ccmservice>
- Select the **Tools > Service Activation** menu
- Under the Database and Admin Section
- Ensure that the Cisco AXL Web Service is activated. If not, click the checkbox and then click the save button at the top of the page.
- Ensure that the Cisco CTI Server is activated. If not, click the checkbox and then click the save button at the top of the page.
- Select **Tools > Control Center - Feature Services** menu
- Ensure that the Cisco AXL Web Service is running. If not, click the radio button and then click the start service button at the top of the page.
- Ensure that the Cisco CTI Server is running. If not, click the radio button and then click the start service button at the top of the page.

Service Activation

Database and Admin Services		
	Service Name	Activation Status
<input checked="" type="checkbox"/>	Cisco AXL Web Service	Activated
<input type="checkbox"/>	Cisco UXL Web Service	Activated
<input type="checkbox"/>	Cisco Bulk Provisioning Service	Activated
<input type="checkbox"/>	Cisco TAPS Service	Deactivated

Control Center – Feature Services

Database and Admin Services					
	Service Name	Status	Activation Status	Start Time	Up Time
<input checked="" type="radio"/>	Cisco AXL Web Service	Started	Activated	Mon Feb 15 13:38:55 2010	20 days 20:56:57
<input checked="" type="radio"/>	Cisco UXL Web Service	Started	Activated	Mon Feb 15 13:38:55 2010	20 days 20:56:57
<input checked="" type="radio"/>	Cisco Bulk Provisioning Service	Started	Activated	Mon Feb 15 13:37:17 2010	20 days 20:58:35
<input type="radio"/>	Cisco TAPS Service	Not Running	Deactivated		

AXL User

You may choose to use a Call Manager administrator username and password with Bulk CTL Eraser or assign the required permissions to new or existing users.

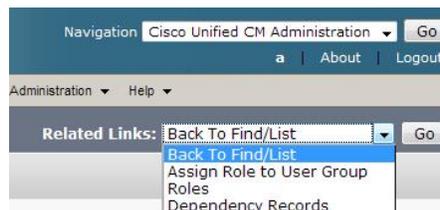
Any user who has the group membership of **Standard CCM Super Users** will be able to use Bulk CTL Eraser to search and control phones without adding the following process.

If you choose to add a user new group for permissions and want to restrict permissions to the minimum required. You will need to work through the following process. This new group can then be added to new or existing end users in Call Manager.

From within Call Manager Administration

- Select User Management
- Select User Groups
- Click Add New

- Enter a Group Name such as (AXL Access)
- Click Save
- Select the Assign Role to User Group from the related links



- Click Assign Role to Group button
- Add the following Role

Standard AXL API Access

Status	
Status: Ready	
User Group Information	
Name* AXL Access	
Role Assignment	
Role	Standard AXL API Access
Assign Role to Group	
Delete Role Assignment	
Save	

- Click Save

Now find your user in Call Manager Administration, User Management, End Users and add the group created above and the Standard CCM Admin Users group. This will allow the user to access the AXL service but no access to any of the Call Manager Admin web pages

Permissions Information	
Groups	AXL Access Standard CCM Admin Users
Add to User Group	
Remove from User Group	
View Details	
Roles	Standard AXL API Access Standard CCM Admin Users Standard CUReporting
View Details	
Save Delete Add New	

- Click Save.