



How to View the Audit Logs in CUCM

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Our Agenda

- ✓ Overview of Audit logs
- ✓ Enabling Collection of Audit Logs
- ✓ Viewing the Audit Logs
 - View the logs using RTMT
- ✓ Enabling Detailed Audit Logs
- ✓ Downloading Audit Logs
 - View the logs using Notepad or Excel
- ✓ Sending Logs to a Remote Server

Types of Audit Logs

System audit logs

- Records changes to OS users, files or directories
- Disabled by default
- Enabled with the CLI command "utils auditd"



Database audit logs

- Records changes to the Informix Database
- Disabled by default
- Enabled on the Serviceability page in CUCM



Application audit logs

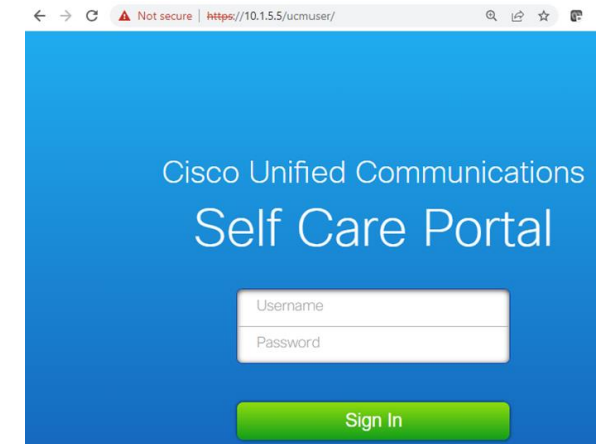
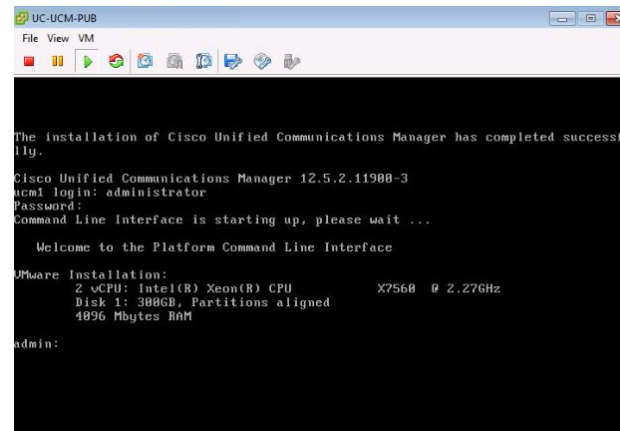
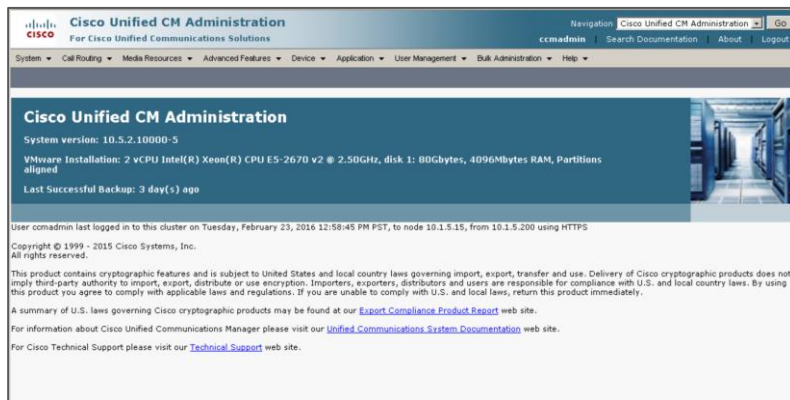
- Records any configuration changes made by a user
- Enabled by default
- Configured on the Serviceability page in CUCM



Application Audit Logs

Can be enabled for Communications Manager, Presence and Unity Connection servers

- Records all changes saved in the GUI
- Records all commands entered in CLI
- Records all changes saved in the end user Self Care Portal





Enabling Collection of Audit Logs



Enabling Collection of Audit Logs




Enabling Collection of Audit Logs (Cont.)

Alarm ▾ Trace ▾ Tools ▾ Snmp ▾ CallHome ▾ Help ▾

Audit Log Configuration

 Save  Set to Default

Status
 Ready

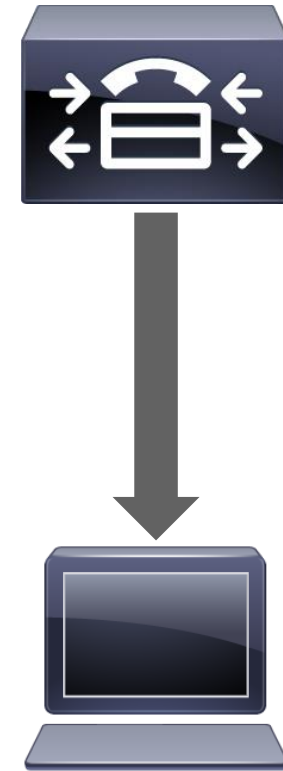
Select Server
Server*
 Apply to All Nodes

Application Audit Log Settings

Filter Settings

- Enable Audit Log
- Enable Purging
- Enable Log Rotation
- Detailed Audit Logging

Remote Syslog
Server Name¹



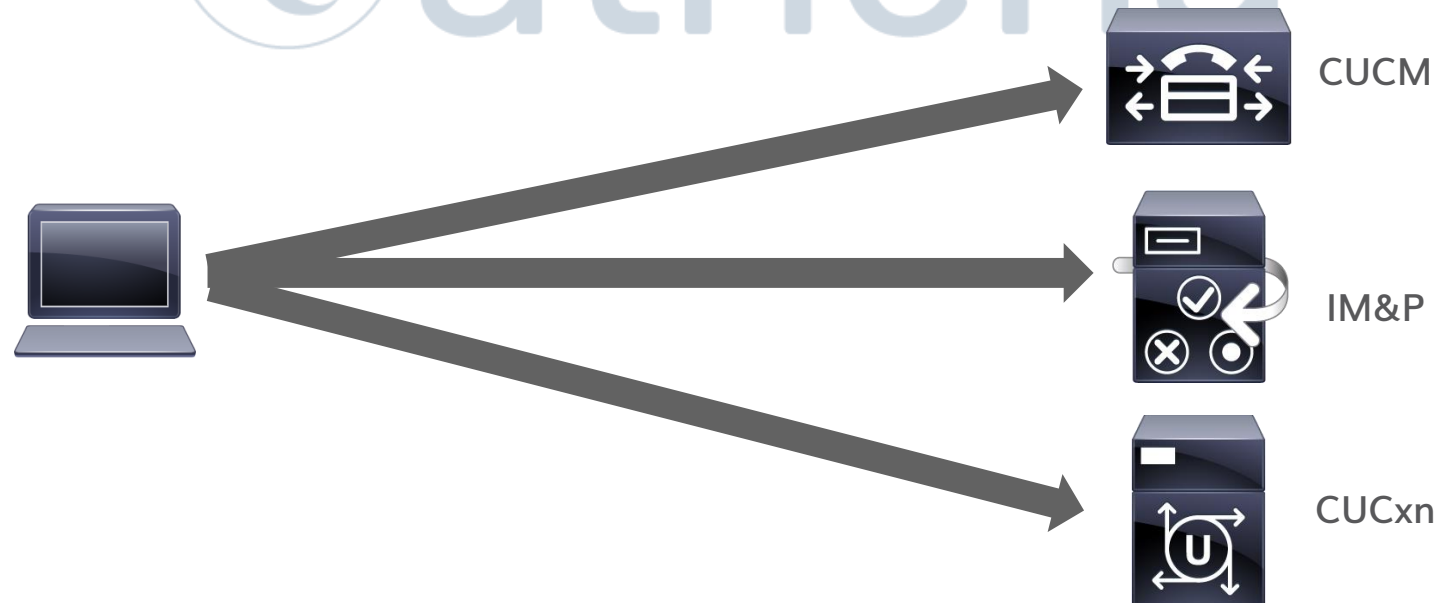


Viewing the Audit Logs

Logs are Viewed Using RTMT

The Real Time Monitoring Tool is a stand-alone program that can monitor server performance and device status in real time

Can be used with Communications Manager, Presence and Unity Connection servers



Download RTMT

From CUCM Administration select Application > Plugins

The screenshot shows the CUCM Administration interface. The top navigation bar includes: System, Call Routing, Media Resources, Advanced Features, Device, Application, and User Management. The 'Application' menu is open, showing 'Cisco Unified CM Assistant Configuration Wizard' and 'Plugins'. The 'Plugins' sub-menu is also highlighted with a red box. Below the navigation, the 'Find and List Plugins' section displays a table of plugins. The 'Download' link for the 'Cisco Unified Real-Time Monitoring Tool - Windows' plugin is highlighted with a red box.

Download	Plugin Name	Description
Download	Cisco TAPS	applications to play announcements and their device. TAPS works in conjunction with Cisco Unified Communications Manager (UCCX). Install this component on a UCCX server release that is compatible with the UCCX release.
Download	Cisco Unified CM Assistant Console	Cisco Unified CM Assistant Console helps assistants handle calls for their manager to the Cisco Unified Communications Manager IP Manager Assistant (IPMA) Service. Assistant consoles can connect to a single Cisco Unified CM IPMA Service. Install on desktop computers.
Download	Cisco Unified Real-Time Monitoring Tool - Linux	Cisco Unified Real-Time Monitoring Tool (RTMT) is a client tool that monitors device CTI applications running on the Unified Communications Manager cluster in real-time for troubleshooting. Install this client on Administrative workstations running Linux if desired. This RTMT client can also be used to connect to Intercompany Media Engine server.
Download	Cisco Unified Real-Time Monitoring Tool - Windows	Cisco Unified Real-Time Monitoring Tool (RTMT) is a client tool that monitors device CTI applications running on the Unified Communications Manager cluster in real-time for troubleshooting. Install this client on Administrative workstations running Windows if desired. This RTMT client can also be used to connect to Intercompany Media Engine server.

Set Up a User To Log In To RTMT

User must be defined in CUCM

User must be part of the "Standard CCM Super Users" and "Standard Audit Users" groups

User Information

User Status	Enabled Local User
User ID*	<input type="text" value="kkoeper"/>
Password	<input type="password" value="....."/> Edit Credential
Confirm Password	<input type="password" value="....."/>
Self-Service User ID	<input type="text"/>
PIN	<input type="password" value="....."/> Edit Credential
Confirm PIN	<input type="password" value="....."/>
Last name*	<input type="text" value="Koeper"/>
Middle name	<input type="text"/>
First name	<input type="text" value="Kevin"/>
Display name	<input type="text"/>

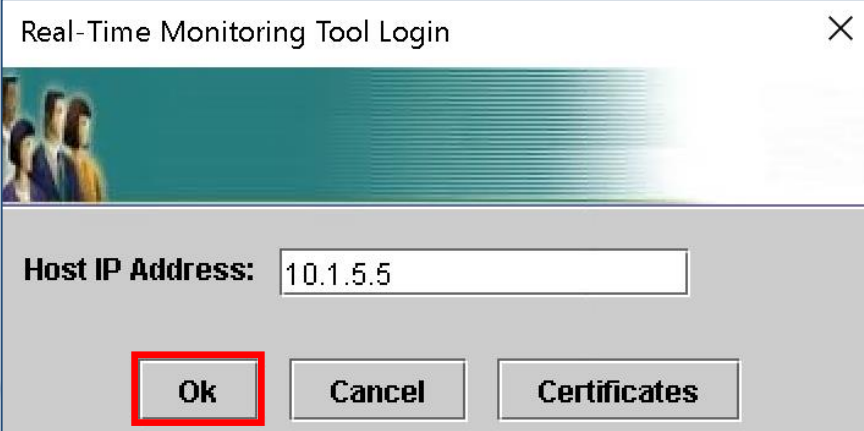
Permissions Information

Groups	<input type="text" value="Standard Audit Users"/> <input type="text" value="Standard CCM Super Users"/>	Add to Access Control Group Remove from Access Control Group
Roles	<input type="text" value="Standard AXL API Access"/> <input type="text" value="Standard Admin Rep Tool Admin"/> <input type="text" value="Standard Audit Log Administration"/> <input type="text" value="Standard CCM Admin Users"/> <input type="text" value="Standard CCMADMIN Administration"/>	View Details View Details



Connecting To RTMT

Real-Time Monitoring Tool Login



Host IP Address:

The dialog box has a title bar with a close button (X). Below the title bar is a banner image showing three people. The main area contains a label 'Host IP Address:' followed by a text input field containing '10.1.5.5'. At the bottom are three buttons: 'Ok', 'Cancel', and 'Certificates'. The 'Ok' button is highlighted with a red border.

Authentication Required

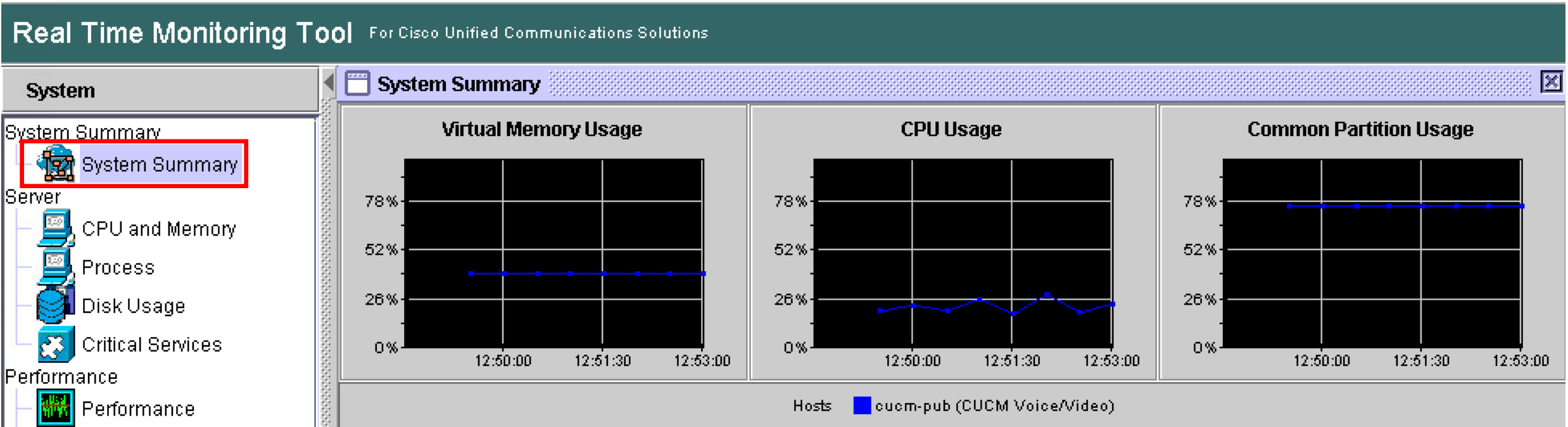
A username and password are being requested by <https://cucm-pub.cll-collab.internal:8443>

User Name:

Password:

The dialog box has a title bar with a close button (X). The main area contains a message: 'A username and password are being requested by https://cucm-pub.cll-collab.internal:8443'. Below this are two labels: 'User Name:' followed by a text input field containing 'kkoeper', and 'Password:' followed by a password input field containing six dots. At the bottom are two buttons: 'Ok' and 'Cancel'. The 'Ok' button is highlighted with a red border.

RTMT System Summary



Viewing Audit Logs

Under the Tools menu select Audit Log Viewer

Real Time Monitoring Tool For Cisco Unified Communications Solutions

System

- System Summary
- Server
 - CPU and Memory
 - Process
 - Disk Usage
 - Critical Services
- Performance
 - Performance
 - Performance Log Viewer
- Tools**
 - Alert Central
 - Trace & Log Central
 - Job Status
 - SysLog Viewer
 - AuditLog Viewer**
- Voice/Video

AuditLog Viewer

Select a Node: **cucm-pub.cll-collab.internal**

Logs

- AuditApp Logs
- Archive
 - Audit00000006.log**
- Cisco Unified OS Logs

Date	UserID	ClientAddress	Severity	EventType
08/11/2022 12:21:21.969	Administrator	10.1.5.200	Info	UserLogging
08/11/2022 12:21:41.940	Administrator	10.1.5.200	Info	UserAccess
08/11/2022 12:22:08.703	Administrator	10.1.5.200	Info	GeneralConfigurationUpdate
08/11/2022 12:22:08.742	Administrator	10.1.5.200	Info	UserAccess
08/11/2022 12:23:32.215	Administrator	10.1.5.200	Notice	DeviceUpdate
08/11/2022 12:23:32.342	Administrator	10.1.5.200	Notice	GeneralConfigurationUpdate
08/11/2022 12:24:01.566	Administrator	10.1.5.200	Notice	DeviceUpdate
08/11/2022 12:24:01.606	Administrator	10.1.5.200	Notice	GeneralConfigurationUpdate
08/11/2022 12:25:19.313	Administrator	10.1.5.200	Notice	DeviceUpdate
08/11/2022 12:25:19.442	Administrator	10.1.5.200	Notice	GeneralConfigurationUpdate
08/11/2022 12:25:38.927	Administrator	10.1.5.200	Notice	DeviceUpdate
08/11/2022 12:25:38.967	Administrator	10.1.5.200	Notice	GeneralConfigurationUpdate

Older changes

Latest changes

Scroll right to see details

Viewing Audit Logs (Cont.)

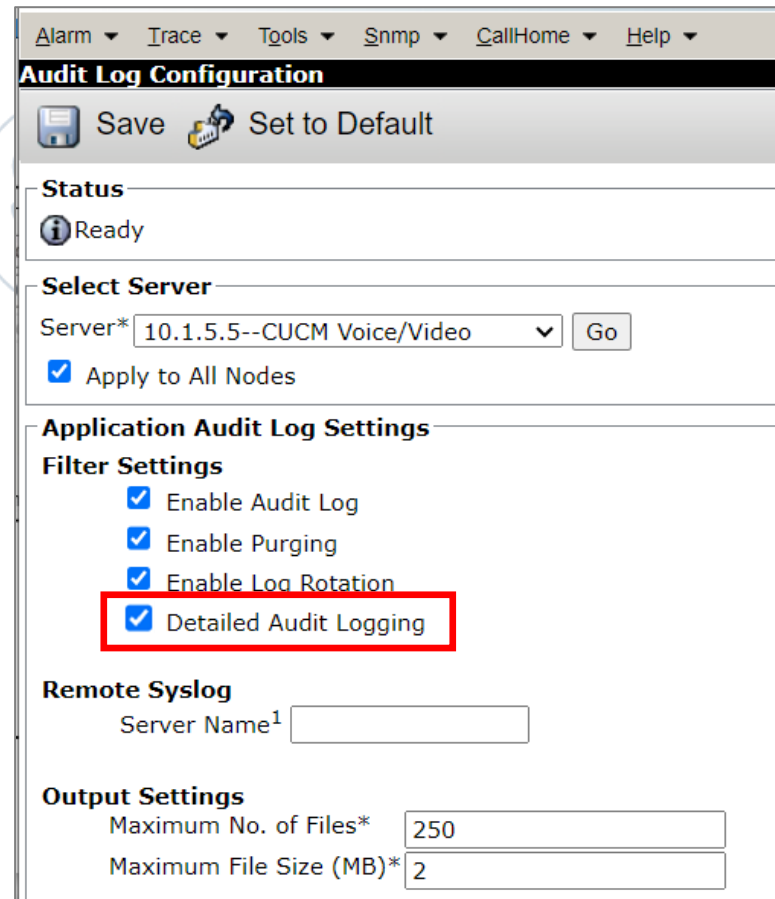
UserID	ClientAddress	Severity	AuditDetails
Administrator	10.1.5.200	Info	Attempt to access data was successful.User is authorized to access /tracecollection/MainServlet.
dbrown	10.10.18.10	Notice	CAL mode or CAL value of Phone with MAC address=6C710DD2BA83 has not been modified
dbrown	10.10.18.10	Notice	record in table device with key field name = SEP6C710DD2BA83 updated
dbrown	10.10.18.10	Notice	CAL mode or CAL value of Phone with MAC address=6C710DD2BA83 has not been modified
dbrown	10.10.18.10	Notice	record in table device with key field name = SEP6C710DD2BA83 updated
dbrown	10.10.18.10	Notice	New Directory/Line added with Number=3031 .
dbrown	10.10.18.10	Notice	record in table numplan with key field dnorpattern = 3031 added
dbrown	10.10.18.10	Notice	CAL mode or CAL value of Directory/Line with Number=3031 has not been modified
dbrown	10.10.18.10	Notice	record in table numplan with key field dnorpattern = 3031 updated
dbrown	10.10.18.10	Notice	CAL mode or CAL value of Trunk with Name=BR_PSTN_trk has not been modified
dbrown	10.10.18.10	Notice	record in table device with key field name = BR_PSTN_trk updated
dbrown	10.10.18.10	Info	Session Invalidated Successfully
dbrown	10.10.18.10	Info	Successfully Logged out Cisco Unified Administration Web Pages
jwhite	10.10.18.10	Info	Successfully Logged into Cisco Unified CM Admin Webpages
jwhite	10.10.18.10	Notice	CAL mode or CAL value of Phone with MAC address=6C410EDE225D has not been modified
jwhite	10.10.18.10	Notice	record in table device with key field name = SEP6C410EDE225D updated
jwhite	10.10.18.10	Notice	New Directory/Line added with Number=2032
jwhite	10.10.18.10	Notice	record in table numplan with key field dnorpattern = 2032 added
jwhite	10.10.18.10	Notice	CAL mode or CAL value of Directory/Line with Number=2032 has not been modified
jwhite	10.10.18.10	Notice	record in table numplan with key field dnorpattern = 2032 updated



Enabling Detailed Audit Logs

Enabling Detailed Audit Logs

Detailed audit logs include not just what items were changed, but also what the modified value is



The screenshot shows the 'Audit Log Configuration' web interface. At the top, there are menu items: Alarm, Trace, Tools, Snmp, CallHome, and Help. Below the title bar, there are 'Save' and 'Set to Default' buttons. The 'Status' section shows 'Ready'. The 'Select Server' section has a dropdown menu set to '10.1.5.5--CUCM Voice/Video' and a 'Go' button, with a checked 'Apply to All Nodes' checkbox. The 'Application Audit Log Settings' section includes 'Filter Settings' with four checked checkboxes: 'Enable Audit Log', 'Enable Purging', 'Enable Log Rotation', and 'Detailed Audit Logging' (which is highlighted with a red box). Below this is the 'Remote Syslog' section with a 'Server Name' input field. The 'Output Settings' section has two input fields: 'Maximum No. of Files*' set to '250' and 'Maximum File Size (MB)*' set to '2'.

Viewing Detailed Audit Logs

Attempt to access data was successful. User is authorized to access directoryNumberEdit

Attempt to access data was successful. User is authorized to access directoryNumberSave

New Directory/Line added with Number=2042 , CAL mode=< None > and CAL value=< None >

Record details Fkpickupgroup = | Fkdevice = 43c3c8ef-328c-4518-af78-55880683f52c | Callername = true | Fkvoicemessagingprofile = | Fkcallingsearchspace_sharedlineappear
| Fkcallingsearchspace_cfurint = | Cfurdestination = | Cfurvoicemailenabled = true | Fkcallingsearchspace_cfur = | Devicefailedn = | Cfdvoicemailenabled = false | Fkcallingsea
umber = | Tkpresentationbit = 0 | IsAnonymous = false | ExternalPresentationName = | Tkringsetting = 4 | Tkringsetting_consecutive = 0 | PropagateMWLPolicy = false | PropagateF
AdvertizeGlobally = false | E164NumberLocalPartition = null | E164NumberIsUrgent = false | DeleteE164Number = false | AssociatedDevices = [] | NumPlanEndUserUriMatrixSize =
ovelist = null | Fkappserver = | UnityIntegrated = false | Newdn = 2042 | AddNewDN = false | Linetemplatename = 2042 | Tkstatus_audiblemwi = 2 | PropagateAudibleMWIPolicy = fa
record in table numplan with key field dnorpattern = 2042 added

Attempt to access data was successful. User is authorized to access directoryNumberEdit

Attempt to access data was successful. User is authorized to access executeSQLQuery

Attempt to access data was successful. User is authorized to access executeSQLQuery

Attempt to access data was successful. User is authorized to access directoryNumberSave

CAL mode or CAL value of Directory/Line with Number=2042 has not been modified

Record details Fkpickupgroup = | Fkdevice = 43c3c8ef-328c-4518-af78-55880683f52c | Callername = true | Fkvoicemessagingprofile = | Fkcallingsearchspace_sharedlineappear
| Fkcallingsearchspace_cfurint = | Cfurdestination = | Cfurvoicemailenabled = true | Fkcallingsearchspace_cfur = | Devicefailedn = | Cfdvoicemailenabled = false | Fkcallingsear
umber = | Tkpresentationbit = 0 | IsAnonymous = false | ExternalPresentationName = | Tkringsetting = 4 | Tkringsetting_consecutive = 0 | PropagateMWLPolicy = false | PropagateF
| EnterpriseNumberRouteLocally = false | EnterpriseNumberAdvertizeGlobally = false | EnterpriseNumberLocalPartition = null | EnterpriseNumberIsUrgent = false | DeleteEnterpris
e | PropagateE164mask = false | PropagateLabel = false | PropagateLabelASCII = false | Shared = false | PropagateButton = null | Useprovisionedvals = false | IsBulkLineTemplate
record in table numplan with key field dnorpattern = 2042 updated

Attempt to access data was successful. User is authorized to access directoryNumberEdit



Downloading Audit Logs

Downloading Audit Logs

AuditLog Viewer

Select a Node: **cucm-pub.cll-collab.internal** Auto Refresh

Logs

- AuditApp Logs
 - Archive
 - Audit00000003.log**

Date	UserID	ClientAddress	Severity	EventType
09/11/2022 11:44:29.984	Administrator	10.10.18.11	Info	UserLogging
09/11/2022 11:45:54.576	Administrator	10.10.18.11	Info	UserLogging
09/11/2022 11:45:54.615	Administrator	10.10.18.11	Info	UserLogging
09/12/2022 05:34:00.082	Administrator	10.10.18.11	Info	UserLogging
09/12/2022 06:18:48.905	Administrator	10.10.18.11	Info	UserLogging
09/12/2022 06:18:48.951	Administrator	10.10.18.11	Info	UserLogging
09/12/2022 06:18:49.028	Administrator	10.10.18.11	Info	UserLogging
09/12/2022 06:54:01.577	Administrator	10.10.18.11	Info	UserLogging
09/12/2022 06:56:05.543	Administrator	10.10.18.11	Info	UserAccess
09/12/2022 07:01:00.355	Administrator	10.10.18.11	Info	GeneralConfigurationUpdate
09/12/2022 07:01:00.356	Administrator	10.10.18.11	Info	GeneralConfigurationUpdate

Buttons: Refresh, Clear, Filter, Clear Filter, Find, **Save**

Save

Save In: **Local Disk (C:)**

- AnyConnect-4.8.02042
- XlsDataFiles
- PerfLogs
- Program Files
- Program Files (x86)
- Temp
- Users
- Windows

File Name: **CUCM Log 1**

Files of Type: **Auditlog Files (*.auditlog)**

Buttons: **Save**, Cancel

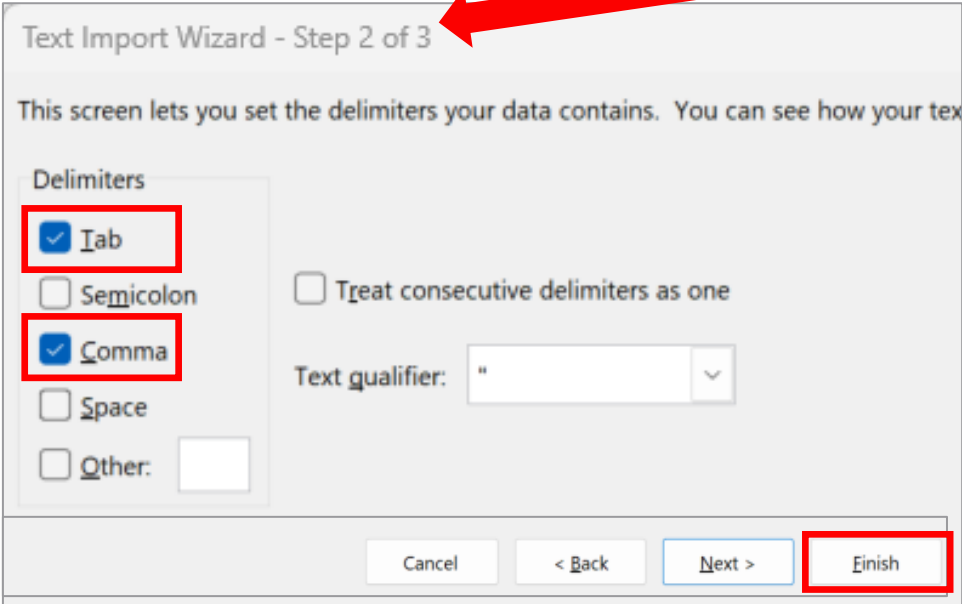
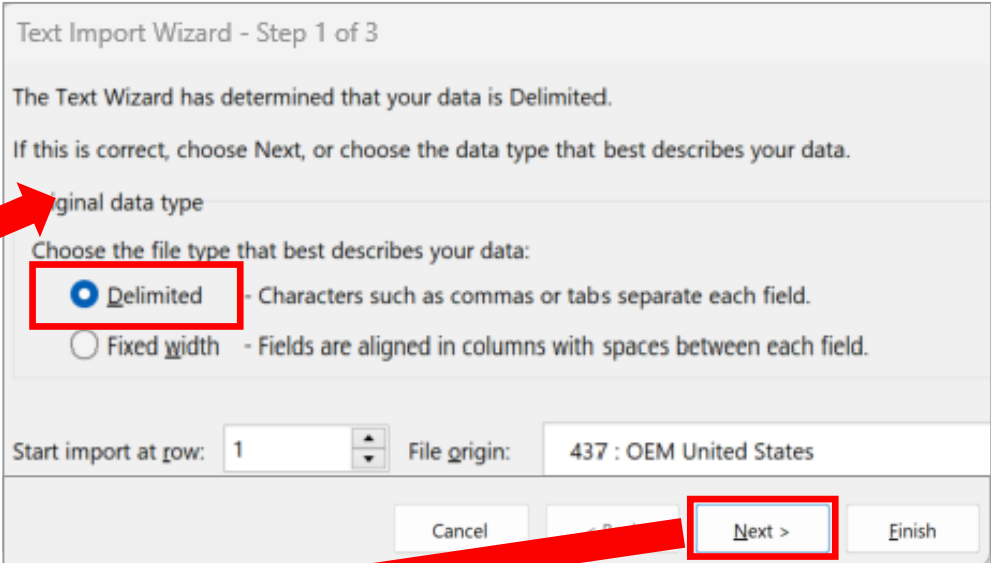
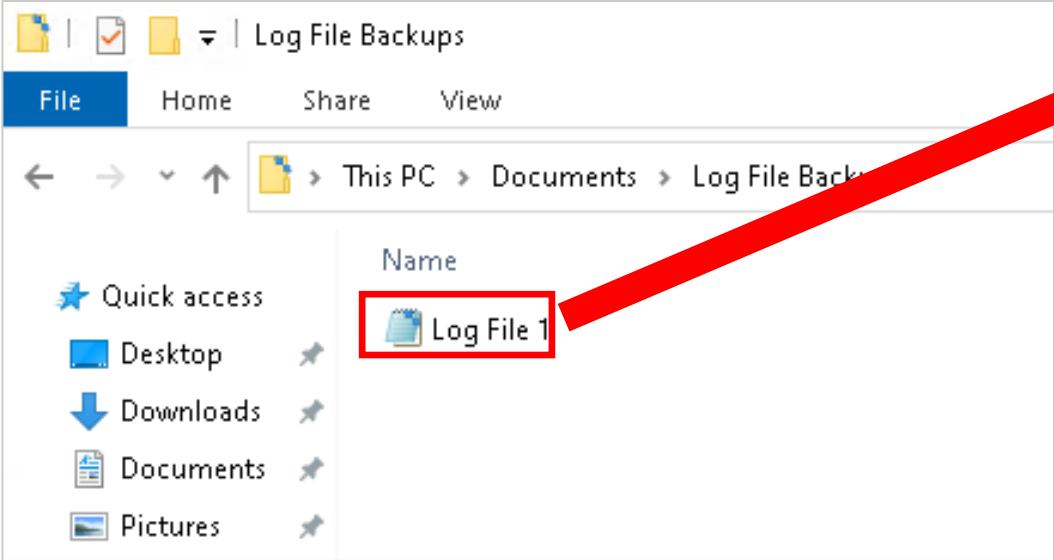
Opening Audit Logs



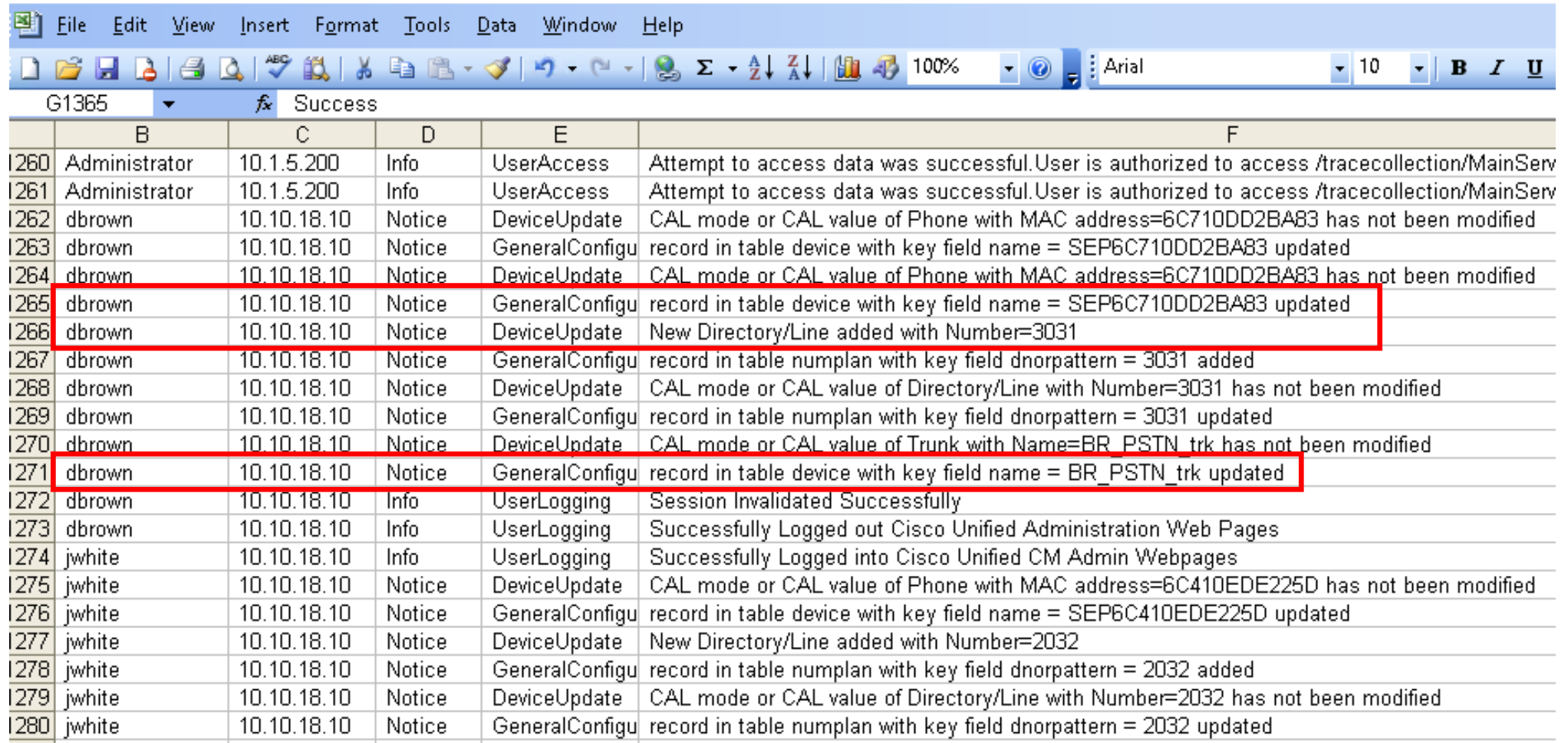
```
Log File 1 - Notepad
File Edit Format View Help
09/22/2023 11:37:47.743, Administrator, 10.1.5.7, Info, UserAccess, Cisco AXL, Success, No, AdministrativeEvent, Cisco CCM Appl
09/22/2023 11:37:47.890, Administrator, 10.1.5.7, Info, UserAccess, Cisco AXL, Success, No, AdministrativeEvent, Cisco CCM Appl
09/22/2023 11:37:58.038, jwhite, 10.10.18.10, Info, UserAccess, CUCMAdmin, Success, No, AdministrativeEvent, Cisco CUCM Admin
09/22/2023 11:37:58.300, jwhite, 10.10.18.10, Notice, DeviceUpdate, CUCMAdmin, Success, No, AdministrativeEvent, Cisco CUCM Adm
09/22/2023 11:37:58.304, jwhite, 10.10.18.10, Notice, GeneralConfigurationUpdate, CUCMAdmin, Success, No, AdministrativeEvent,
ration = 7 | Pffintdestination = | Pffintvoicemailenabled = false | Fkcallingsearchspace_pffint = | Pffdestination = | Pffvoic
09/22/2023 11:37:58.305, jwhite, 10.10.18.10, Notice, GeneralConfigurationUpdate, CUCMAdmin, Success, No, AdministrativeEvent,
Parkmonreversiontimer = 60 | Cfaptdestination = | Fkcallingsearchspace_cfapt = | Cfaptduration = null | Nfkccaprofile_id = null
09/22/2023 11:37:58.305, jwhite, 10.10.18.10, Notice, GeneralConfigurationUpdate, CUCMAdmin, Success, No, AdministrativeEvent,
n.forms.DirectoryNumberURIForm@a7aae2af, com.cisco.ccm.admin.forms.DirectoryNumberURIForm@a7aae2af] | Primarynumplanurinow = 0 |
09/22/2023 11:37:58.305, jwhite, 10.10.18.10, Notice, GeneralConfigurationUpdate, CUCMAdmin, Success, No, AdministrativeEvent,
ay = | E164mask = 201201XXXX | Tkmlpolicy = 0 | Callernumber = false | Dialednumber = true | Redirectnumber = false | RoutePart
09/22/2023 11:37:58.305, jwhite, 10.10.18.10, Notice, GeneralConfigurationUpdate, CUCMAdmin, Success, No, AdministrativeEvent,
e = true | SelectedDeviceAssociation = null | SelectedLGAssociation = null |, Cisco Tomcat, , cucm-pub.cll-collab.internal, 1364
09/22/2023 11:37:58.305, jwhite, 10.10.18.10, Notice, GeneralConfigurationUpdate, CUCMAdmin, Success, No, AdministrativeEvent,
09/22/2023 11:37:58.389, jwhite, 10.10.18.10, Info, UserAccess, CUCMAdmin, Success, No, AdministrativeEvent, Cisco CUCM Admin
09/22/2023 11:38:11.231, jwhite, 10.10.18.10, Info, UserAccess, CUCMAdmin, Success, No, AdministrativeEvent, Cisco CUCM Admin
09/22/2023 11:38:11.474, jwhite, 10.10.18.10, Notice, DeviceUpdate, CUCMAdmin, Success, No, AdministrativeEvent, Cisco CUCM Adm
09/22/2023 11:38:11.478, jwhite, 10.10.18.10, Notice, GeneralConfigurationUpdate, CUCMAdmin, Success, No, AdministrativeEvent,
kcallingsearchspace_cfna = | Cfnaduration = 7 | Pffintdestination = | Pffintvoicemailenabled = false | Fkcallingsearchspace_pff
09/22/2023 11:38:11.478, jwhite, 10.10.18.10, Notice, GeneralConfigurationUpdate, CUCMAdmin, Success, No, AdministrativeEvent,
llingsearchspace_pkmonfwdnoret = | Parkmonreversiontimer = 60 | Cfaptdestination = | Fkcallingsearchspace_cfapt = | Cfaptdurat
09/22/2023 11:38:11.478, jwhite, 10.10.18.10, Notice, GeneralConfigurationUpdate, CUCMAdmin, Success, No, AdministrativeEvent,
URIForm@a7aae2af, com.cisco.ccm.admin.forms.DirectoryNumberURIForm@a7aae2af, com.cisco.ccm.admin.forms.DirectoryNumberURIForm@a7a
09/22/2023 11:38:11.478, jwhite, 10.10.18.10, Notice, GeneralConfigurationUpdate, CUCMAdmin, Success, No, AdministrativeEvent,
| Callinfodisplaymask = null | Display = | E164mask = 201201XXXX | Tkmlpolicy = 0 | Callernumber = false | Dialednumber = true
09/22/2023 11:38:11.479, jwhite, 10.10.18.10, Notice, GeneralConfigurationUpdate, CUCMAdmin, Success, No, AdministrativeEvent,
ssociatedLineGroups = [] | IsCallable = true | SelectedDeviceAssociation = null | SelectedLGAssociation = null |, Cisco Tomcat, ,
09/22/2023 11:38:11.479, jwhite, 10.10.18.10, Notice, GeneralConfigurationUpdate, CUCMAdmin, Success, No, AdministrativeEvent,
09/22/2023 11:38:11.566, jwhite, 10.10.18.10, Info, UserAccess, CUCMAdmin, Success, No, AdministrativeEvent, Cisco CUCM Admin
```

Opening Audit Logs (Cont.)

Open downloaded file in Excel



Opening Audit Logs (Cont.)



	B	C	D	E	F
1260	Administrator	10.1.5.200	Info	UserAccess	Attempt to access data was successful.User is authorized to access /tracecollection/MainServ
1261	Administrator	10.1.5.200	Info	UserAccess	Attempt to access data was successful.User is authorized to access /tracecollection/MainServ
1262	dbrown	10.10.18.10	Notice	DeviceUpdate	CAL mode or CAL value of Phone with MAC address=6C710DD2BA83 has not been modified
1263	dbrown	10.10.18.10	Notice	GeneralConfigu	record in table device with key field name = SEP6C710DD2BA83 updated
1264	dbrown	10.10.18.10	Notice	DeviceUpdate	CAL mode or CAL value of Phone with MAC address=6C710DD2BA83 has not been modified
1265	dbrown	10.10.18.10	Notice	GeneralConfigu	record in table device with key field name = SEP6C710DD2BA83 updated
1266	dbrown	10.10.18.10	Notice	DeviceUpdate	New Directory/Line added with Number=3031
1267	dbrown	10.10.18.10	Notice	GeneralConfigu	record in table numplan with key field dnorpattern = 3031 added
1268	dbrown	10.10.18.10	Notice	DeviceUpdate	CAL mode or CAL value of Directory/Line with Number=3031 has not been modified
1269	dbrown	10.10.18.10	Notice	GeneralConfigu	record in table numplan with key field dnorpattern = 3031 updated
1270	dbrown	10.10.18.10	Notice	DeviceUpdate	CAL mode or CAL value of Trunk with Name=BR_PSTN_trk has not been modified
1271	dbrown	10.10.18.10	Notice	GeneralConfigu	record in table device with key field name = BR_PSTN_trk updated
1272	dbrown	10.10.18.10	Info	UserLogging	Session Invalidated Successfully
1273	dbrown	10.10.18.10	Info	UserLogging	Successfully Logged out Cisco Unified Administration Web Pages
1274	jwhite	10.10.18.10	Info	UserLogging	Successfully Logged into Cisco Unified CM Admin Webpages
1275	jwhite	10.10.18.10	Notice	DeviceUpdate	CAL mode or CAL value of Phone with MAC address=6C410EDE225D has not been modified
1276	jwhite	10.10.18.10	Notice	GeneralConfigu	record in table device with key field name = SEP6C410EDE225D updated
1277	jwhite	10.10.18.10	Notice	DeviceUpdate	New Directory/Line added with Number=2032
1278	jwhite	10.10.18.10	Notice	GeneralConfigu	record in table numplan with key field dnorpattern = 2032 added
1279	jwhite	10.10.18.10	Notice	DeviceUpdate	CAL mode or CAL value of Directory/Line with Number=2032 has not been modified
1280	jwhite	10.10.18.10	Notice	GeneralConfigu	record in table numplan with key field dnorpattern = 2032 updated





Sending Logs to a Remote Server


Sending Logs to a Remote Server

Alarm ▾ Trace ▾ Tools ▾ Snmp ▾ CallHome ▾ Help ▾

Audit Log Configuration

 Save  Set to Default

Status

 Ready

Select Server

Server*

Apply to All Nodes

Application Audit Log Settings

Filter Settings

- Enable Audit Log
- Enable Purging
- Enable Log Rotation
- Detailed Audit Logging

Remote Syslog

Server Name¹

Output Settings

Maximum No. of Files*

Maximum File Size (MB)*

Summary

- ✓ Overview of Audit logs
- ✓ Enabling Collection of Audit Logs
- ✓ Viewing the Audit Logs
- ✓ Enabling Detailed Audit Logs
- ✓ Downloading Audit Logs
- ✓ Sending Logs to a Remote Server



Questions



Thank you for attending.

If you have any additional questions, or would like to learn more about our Athena program, please email...

pka@skyline-ats.com





www.skyline-ats.com

