

SCOPTEL WITH ACTIVE DIRECTORY USER DOCUMENTATION

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ScopTel with Active Directory

ScopServ International Inc is proud to release its ScopTel IP PBX with Active Directory integration. The following are the software features, compatibility list, and pre-requisites.

Software Features

- Telephone extensions management from Active Directory Users and Computer Snap-In
- Voicemail creation
- Automatic synchronization between ScopTel IP PBX and Active Directory
- Configuration options
 - Extension number
 - Full name
 - Extension password
 - Voice password
 - Web access password
 - Phone template
 - Class of service
- Extend Active Directory Schema to fully support ScopTel IP PBX

Software Compatibility

- Windows Server 2008, 2008 R2 – 32 bits / 64 bits
- Windows Server 2012 – x64 bits
- Windows 7 – 32 bits / 64 bits
- Windows 8, 8.1 – 64 bits

Requirements

- Schema Admin rights to extend Active Directory Schema
- Local Admin rights to install ScopTel with Active Directory MMC Snap-In Extension
- Most recent ScopTel Telephony Package
- ScopTel with Active Directory option licence

ScopTel Configuration

Prerequisites

Login to ScopTel



The image shows the login interface for the ScopServ Telephony Server. At the top, it says "ScopServ Telephony Server". Below this is the ScopTEL logo with "IP PBX" text. A message box states "You have been logged out." Below the message is a login form with fields for "Username" (containing "admin"), "Password" (masked with dots), and "Language" (set to "English"). A "Login" button is at the bottom of the form. The footer contains the copyright notice: "Copyright © 2005-2013 ScopServ International Inc."

Goto Configuration\Server\License and Click on Download License. Make sure under License Options ScopServ Active Directory (ScopAD) appears.



The image shows the ScopTEL Configuration window. The left sidebar shows a tree view with "Server" expanded, showing "General", "Configuration", "License", "MySQL Server", "SSH Server", "Date and Time", "LDAP Server", "SNMP Server", "Storage Manager", "Packages Manager", "Backup", "Monitoring", "High Availability", and "Certificate Manager". The main area displays "License Information:" with tabs for "General", "End-User Registration", and "End-User License Agreement". The "General" tab is active, showing the following details:

License Information:	
System Code:	00U-00L02W-02P-002D-00000A
Serial Number:	00GC10CF-0000-92870-3
Maintenance Expiration:	2038-01-01
Download Date:	2015-03-21

Below this is the "License Options" section:

License Options	
Options:	Network and Firewall ScopTel Professional ScopServ Active Directory (ScopAD)
Supported Version(s):	1.4 to 2.x
Maximum Users:	250
Maximum Tenants:	26

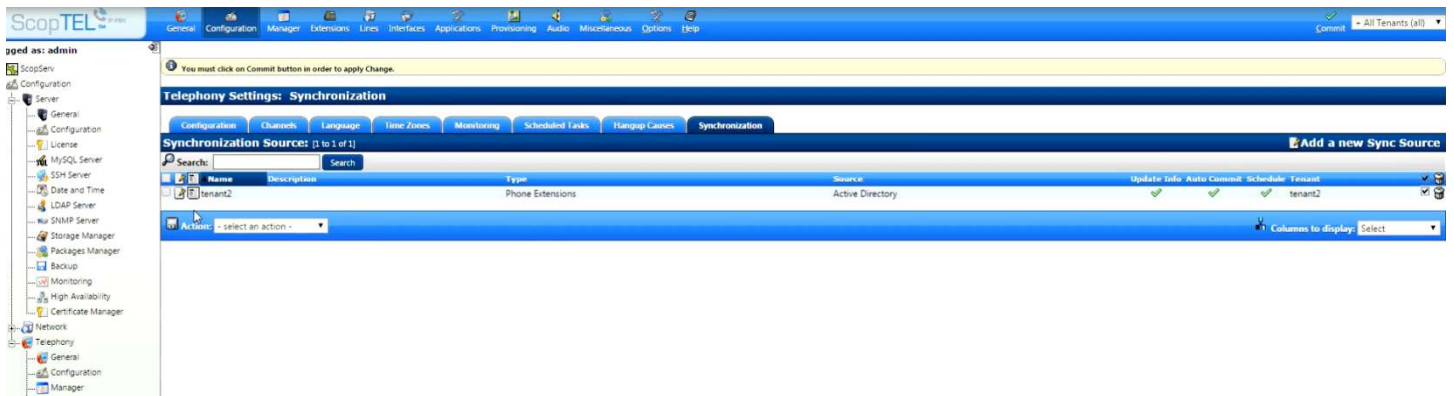
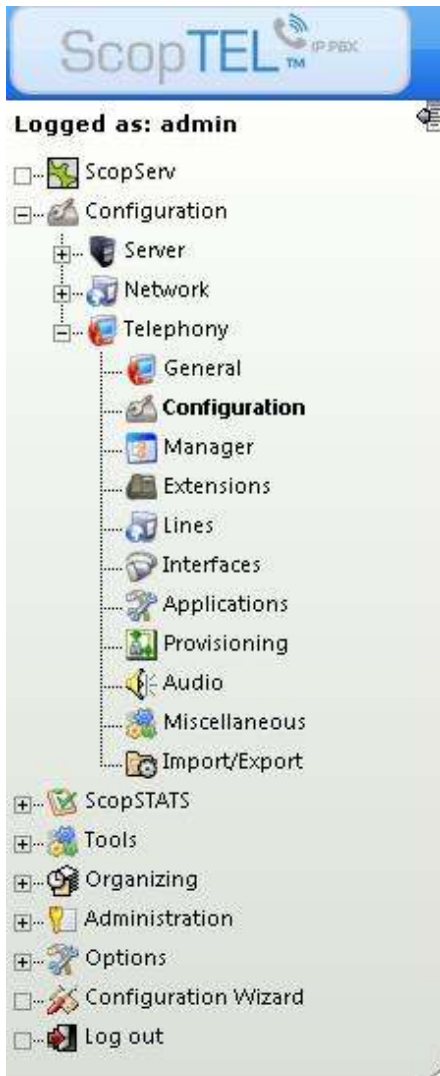
At the bottom of the license information section are two buttons: "Change" and "Download License".

Packages Update

Update telephony package

Active Directory Synchronization Configuration

Goto Configuration\Telephony\Configuration




Click on the Synchronization tab then click on Add New Sync Source and select Tenant.

Telephony Settings: Synchronization


Configuration Channels Language Time Zones Monitoring Scheduled Tasks Hangup Causes **Synchronization**

Synchronization

General

* Tenant : -- select --
-- select --
tenant1
tenant2

Add Cancel




Legend: * Required Field  Page Refresh on Change

Telephony Settings: Synchronization


Configuration Channels Language Time Zones Monitoring Scheduled Tasks Hangup Causes **Synchronization**

Synchronization

General Source Attributes Options

* Tenant : tenant1
* Source : Active Directory
* Type : Phone Extensions
* Name: Tenant1
Description:

Add Cancel

Legend: * Required Field  Page Refresh on Change

Source: Choose Active Directory

Type: Choose Phone Extensions

Name: Choose and insert a sync object name

Description: Choose a description

Click on Source tab

Telephony Settings: Synchronization

Configuration Channels Language Time Zones Monitoring Scheduled Tasks Hangup Causes **Synchronization**

Synchronization

General **Source** Attributes Options

LDAP Source : None (Custom) ▼

* Server Address: 192.168.120.92
This setting refers to the DNS name or IP address of the LDAP server.

* Port: 389
Default: 389

Enable TLS ? ☐

Protocol Version: Version 3 ▼
Default: Version 3

Authentication

* Login DN: CN=Administrator,CN=Users,DC=win2k12r2,DC=...
Password: Admin account password

Search Filter

* Base DN: OU=Tenant1,DC=win2k12r2,DC=COM
This setting specifies the LDAP search base (the distinguished name of the search)

* Filter Prefix: (objectClass=*)

Add Cancel

Legend: * Required Field Page Refresh on Change

Server Address: Your Active Directory Domain Controller IP Address

Port: LDAP default port is 389

Enable TLS: Check to activate TLS encryption

Login DN: The account DN for Active Directory authentication

Password: The account password

Base DN: Your domain Base DN for synchronization

Filter Prefix: You can add a filter to sync specific object or leave it as default to sync all users

Click on Synchronization tab

The screenshot shows the ScopTEL web interface. On the left is a navigation tree with categories like Configuration, Server, Network, and Telephony. The main area is titled 'Telephony Settings: Synchronization' and has tabs for Configuration, Channels, Language, Time Zones, Monitoring, Scheduled Tasks, Hangup Causes, and Synchronization. The Synchronization tab is active, showing sub-tabs for General, Source, Attributes, and Options. The Options sub-tab is selected, displaying several configuration options: 'Update existing Extensions ?' (checked), 'Delete non-existing Extensions ?' (checked), and 'Execute a Commit if we detect changes ?' (checked). Below these is the 'Synchronization' section with 'Enable Auto Synchronization ?' (checked), a 'Synchronization Interval' of 15 minutes, and time range settings. The 'ScopTEL Active Directory API (ScopAD)' section includes 'Enable Remote Access (API) ?' (checked), an 'API Key' field with the value 'secretkey', and a 'Generate API key' button. At the bottom, there are fields for 'Allowed IP Address' (with a 'Select' button) and 'Allowed Scope (Base DN)' (containing '*,DC=test,DC=com'). A note explains that if the scope is empty, requests from any IP addresses are accepted, and provides an example of a restricted scope.

Logged as: admin

ScopTEL

General Configuration Manager Extensions Lines Interfaces Applications Provisioning Audio Miscellaneous Options Help

Telephony Settings: Synchronization

Configuration Channels Language Time Zones Monitoring Scheduled Tasks Hangup Causes Synchronization

Synchronization

General Source Attributes Options

Update existing Extensions ? : ☒
If the Phone Extension already exist then it will update informations like Full Name, Username, Password, etc.

Delete non-existing Extensions ? : ☒
If the Phone Extension no more exist on the Active Directory/LDAP server, it will remove the informations from ScopTEL.

Execute a Commit if we detect changes ? : ☒

Synchronization

Enable Auto Synchronization ? : ☒
Synchronization Interval: 15 Minute(s)
From Hour: 00:00 Default: 00:00
To Hour: 23:59 Default: 23:59

ScopTEL Active Directory API (ScopAD)

Enable Remote Access (API) ? : ☒
* API Key: secretkey
Generate API key

Allowed IP Address: Select

Allowed Scope (Base DN): *,DC=test,DC=com

If empty, we will accept request from any IP Addresses

If you want to restrict query to one or more DN, specify here. You can also use a wildcard () to accept match child/subtree.
Example: *,ou=users,dc=scopserv,dc=corp,dc=com*

Add Cancel

Update Existing Extensions: Enable to update extensions

Delete Non Existing Extensions: Enable to clean up non existing extensions

Execute a Commit if we detect changes: Enable for automatic extension update

Enable Auto Synchronization: Enable to sync automatically

Enable Remote Access (API): Enable to activate ScopTel ADUC MMC Snap-In

APIKey: Choose a secret key to configure within ScopTel ADUC MMC Snap-In

Allowed IP Address: Add an IP address if you want to restrict access

Allowed Scope (Base DN): Add a scope if you want to restrict ScopTel ADUC MMC Snap-In to certain OU. If left empty, ScopTel ADUC MMC Snap-In can be used within all Active Directory OU.

Click on Save

Click on Commit

General Configuration Manager Extensions Lines Interfaces Applications Provisioning Audio Miscellaneous Options Help

Commit All Tenants (all)

Item saved.

You must click on Commit button in order to apply Change.

Telephony Settings: Synchronization

Configuration Channels Language Time Zones Monitoring Scheduled Tasks Hangup Causes Synchronization

Synchronization Source: 1 to 2 of 2

Search: Search

Name	Description	Type	Source	Update Info	Auto Commit	Schedule	Tenant
Tenant1		Phone Extensions	Active Directory	✓	✓	✓	tenant1
Tenant2		Phone Extensions	Active Directory	✓	✓	✓	tenant2

Actions: - select an action -

Columns to display: Select

Extensions Manager: Phones

Add Multiple Extensions Mass Operations

Phones Extension Groups Pickup Groups Speed Dial Directory Security (ACL) Hints (Subscribe)

Templates: 1 to 2 of 2 (License Maximum: 5 of 250)

Add a new Phone

Search: Search

Name	Type	Description	Tenant
Template1	SIP (UDP)		tenant1
Template2	SIP (UDP)		tenant1

Actions: - select an action -

Columns to display: Select

Phones: 1 to 5 of 5 (License Maximum: 5 of 250)

Search: Search

Extension	Name	Description	Template	Type	Class of Service	Language	VoiceMail	RAI	Sync	Tenant
102	test2			SIP (UDP)	default	English (Default)	✓	✓	✓	tenant1
105	test5			SIP (UDP)	default	English (Default)	✓	✓	✓	tenant1

Telephony :: Commit Changes :: SSI Internal DEV ScopAD - Google Chrome

192.168.120.57:5555/telephony/services/commit.php?show=sync

Telephony: Commit Changes

Please wait while we apply all changes ...

Sanity check ...

- Check DAHDI (UDEV) permissions ✓
- Check Default UDEV permissions ✓
- Check Asterisk permissions ✓
- Verify Free disk space for Snapshot (Minimum: 500 MB) ✓
- Sound Manager ✓
- Checking Database columns and indexes ... ✓
- Fixing indexes on MySQL CDR table... Please wait, this can take few minutes ...
- Checking Deleted items ... ✓
- Cleanup completed! ✓

Configuration Snapshot

- Take a Snapshot of configuration ... ✓
- Snapshot of Asterisk/DAHDI configurations files

Generating configuration for ...

- Multi-Tenants ✓
- Activating Class of Services for tenant 'tenant1'
- Generate Parking Lot 701 to 799.

Windows Installation

Step 1: Install Prerequisites

The image displays four sequential screenshots of the Microsoft Visual C++ 2010 x64 Redistributable Setup process:

- ScopTel with Active Directory 64 bits Setup - Prerequisites Download:** This window shows the progress of downloading prerequisites. A table lists the URL, size, and status of the download. The progress bar indicates 0% completion (0.00 KB of 9.79 MB). The download is saving to C:\Users\Administrator\AppData\Roaming\ScopServ Internati... \vc_redist_x64.exe. A checkbox for "Automatically install the prerequisites after finishing the downloads." is checked. Buttons for Back, Next, Finish, and Cancel are visible.
- Microsoft Visual C++ 2010 x64 Redistributable Setup - Welcome to Microsoft Visual C++ 2010 x64 Redistributable Setup:** This window displays the Microsoft Software License Terms for the Microsoft Visual C++ 2010 Runtime Libraries with Service Pack 1. The user has accepted the terms, and the "Install" button is highlighted.
- Microsoft Visual C++ 2010 x64 Redistributable Setup - Installation Progress:** This window shows the progress of the installation. It includes a "File security verification" section with a green bar indicating success, and an "Installation progress" section with a green bar showing the progress of installing the Microsoft Visual C++ 2010 Redistributable. A "Cancel" button is visible.
- Microsoft Visual C++ 2010 x64 Redistributable Setup - Installation Is Complete:** This window confirms that the Microsoft Visual C++ 2010 x64 Redistributable has been installed successfully. It includes the Visual Studio logo and a link to check for more recent versions on the Microsoft Visual Studio website. A "Finish" button is visible.

Step 2: Install ScopTel with Active Directory

The left screenshot shows the 'ScopTEL with Active Directory' window, Version 1.0.0.0. It displays the license terms and conditions, with a checkbox for 'I agree to the License terms and conditions.' and an 'INSTALL' button.

The right screenshot shows the 'ScopTEL with Active Directory' window, Version 1.0.0.0. It prompts the user to enter customer information, including 'User Name', 'Organization', and 'Serial'. It also has 'Back' and 'Next' buttons.

- Agree to the terms and conditions
- Fill out company information and serial number

The left screenshot shows the 'ScopTEL with Active Directory' window, Version 1.0.0.0. It displays the 'Features' tab, where the user can select the features to be installed. The features listed are 'ScopTel Active Directory', 'AD Schema Extension', and 'MMC ADUC Snap-in Extension'. There is a 'Back' button and an 'Install' button.

The right screenshot shows the 'ScopTEL with Active Directory' window, Version 1.0.0.0. It displays a progress bar and a message: 'Please wait while the Setup Wizard installs ScopTel with Active Directory 64 bits. This may take several minutes.'

- Select which components to install
- Software is installing

Congratulation, you have successfully installed ScopTel with Active Directory on your system!

Once the installation is complete, go to next section for configuration.



Windows Configuration

ScopTel with Active Directory needs to be configured for proper communication between systems.



The image shows a Windows configuration window titled "ScopTel with Active Directory Configuration". The window has a blue title bar with standard minimize, maximize, and close buttons. The main content area features the "ScopTEL with Active Directory IP PBX™" logo. Below the logo, there are four input fields: "ScopTel Hostname / IP:" (a text box), "Port:" (a text box), "Key:" (a text box), and "Protocol:" (a dropdown menu currently showing "http"). At the bottom of the window, there are two buttons: "Save" and "Exit".

Parameters

- **Server Hostname/IP:** ScopTel IP PBX server hostname or IP address.
- **Port:** This is the port used to communicate with ScopTEL PBX system. The default value is 5555.
- **Key:** Configured key within ScopTel IP PBX for authentication.
- **Protocol:** Protocol used to communicate between both systems.

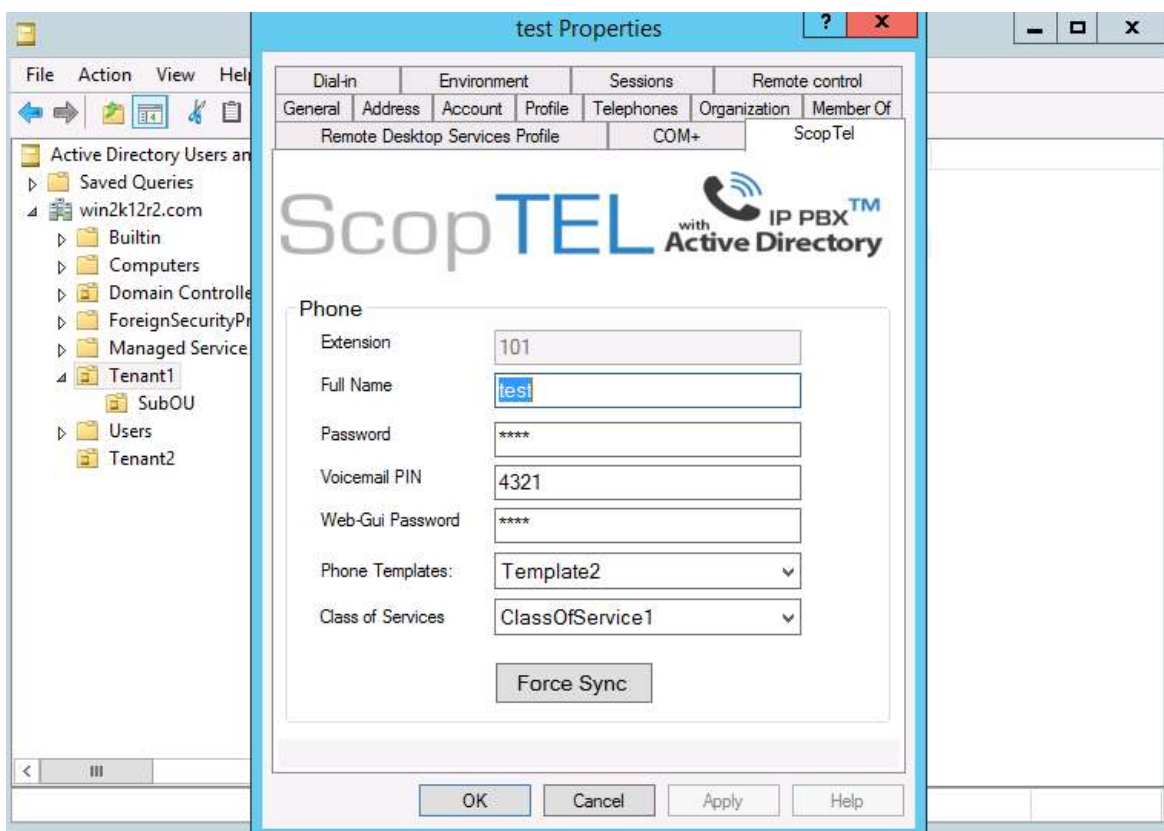
How to Use

Creating or changing an extension

1. Open the Active Directory Users and Computers Snap-In.
2. Open User properties.
3. Go to ScopTel tab.

Note:

Once an extension has been created within a user, the extension number can not be changed!



Troubleshooting

Manual Sync

Log into ScopTel server using SSH and run the following command to diagnose synchronization problems:

- `php -q /var/www/scopserv/telephony/scripts/crond.php sync SYNC_SOURCE_NAME`

Replace SYNC_SOURCE_NAME with the name of your synchronization source in question.

Misconfigured Scope

When the scope is misconfigured, the following error message appears. Refer to the ScopTel Configuration section to ensure the scope is configured properly.

