



Zero Touch Auto-Provisioning

for Cisco Unified Communications

Overview

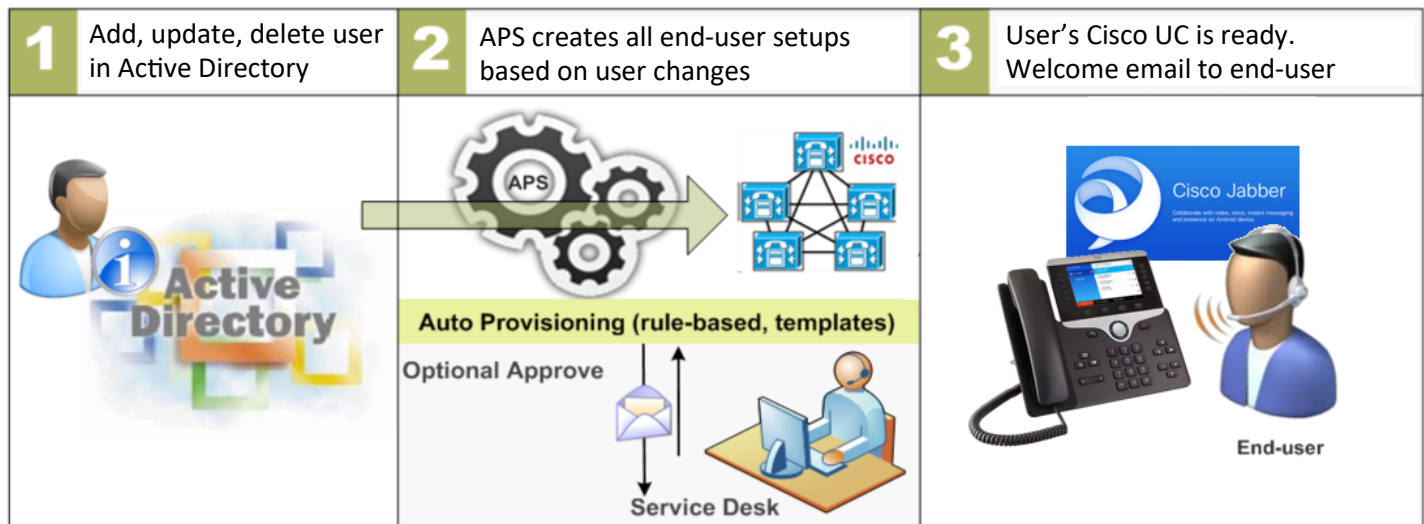
UPLINX Auto Provisioning System (APS) creates automatically all end-user setups for Cisco UC such as (multiple) phones with automated extension allocation, device profiles for Cisco Extension Mobility, Jabber, CSF, RDP and voicemail.

Dramatic simplification and cost savings.

Rule-based automated provisioning of all Cisco end-user configurations based on Active Directory.

Benefits

- ◆ Rapid automated service provisioning and fault free commissioning for every Cisco end-user.
- ◆ Administrative efforts and costs are minimized. Quality and speed of provisioning is increased.
- ◆ All user's information is setup at the very beginning in Active Directory, only requiring a single job to be raised to a service desk. Cisco UC provisioning jobs are then automatically detected and executed.



APS can automatically create any end-user setups required by Cisco Unified Communications based on Microsoft Active Directory's user settings such as:

- ◆ CUCM end-user with roles, presence settings and associated/controlled phones
- ◆ Any combination of phones and extensions
- ◆ Device Profiles and extensions
- ◆ Mobility (Remote Destination Profiles)
- ◆ Extension allocation automated out of site ranges, preferred and pre-set in AD, or ad-hoc by admin.
- ◆ Voicemail
- ◆ Presence with IMP
- ◆ Update of iPhone and office telephone, or any other user's Active Directory attribute. Expand to full in-dial (DID) or E.164 extension formats.

Optionally administrators can approve proposed jobs on a simple web based console removing any human error along the way to ensure MACDs work first time—every time!

- ◆ Automatic detection of added, changed or deleted end-users in Active Directory through the UPLINX Active Directory change tracker.
- ◆ Fully automated system based on rules and information in Microsoft Active Directory to provision all required telephony setups.
- ◆ User extension information in Active Directory is now always in sync to the Cisco phone extensions.
- ◆ Automated email to end user with detailed instructions on how to login and use the system.
- ◆ *Full reporting* on provisioning activities. Allows for *SLA tracking*.
- ◆ Ensures compliance on fully automated system based on defined rules
- ◆ Provides *workflow* for a help desk with:
 - ❖ Notification by email of detected changes in Active Directory
 - ❖ Approving Commissioning jobs on a simplified console



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Approver Console for Help Desk

The single and simple web based Approver Console (screenshot below) allows administrators to optionally approve any proposed changes by the system when fully automated commissioning is not desired.



Site admins are notified by email when user changes are detected in Active Directory and can then login into the Approver Console web page to approve, update or deny a proposed commissioning job.

The pre-allocated extension can be changed with the help of the extension picker on the Approver Console. Site, telephony class and email template for the user notification can also be updated to overwrite the system determined parameters.

The console helps also to classify special users, such as managers and assistant setups if there is no AD attribute present to automatically determine the telephony class by any defined rule.

Automatic Allocation of Extensions

Extensions can be predefined in the AD user, assigned by a telephony administrator or automatically allocated from the site extension range.



During commissioning the allocated extension will be updated in Active Directory to reflect the commissioned extension of the user. This means that extension information is always accurate across Cisco UC and Active Directory without manually managing free and used extension lists.

Extensions can be transformed to localized or internationalized (E164 format) and written to standard or custom Active Directory attributes so that Active Directory maintains the "source-of-truth" for user telephony information at any time.

Auto Provisioning Approver								Phone Control	
	ID	Action	Time	AD User	CUCM User	Site	Job Template	Extension 1	
<input checked="" type="checkbox"/>	83	Add	10:15:08 03 Apr, 2021	bstinson		HeadOffice (Sync)	[ADD] User w CUPS,UDP & VI	2005	...
<input checked="" type="checkbox"/>	84	Add	10:15:08 03 Apr, 2021	kbacon		HeadOffice (Sync)	Add User, Phone, UDP and VI	10004	...
<input checked="" type="checkbox"/>		Details...	10:08 03 Apr, 2021	tmosby		HeadOffice (Sync)	[ADD] User, UDP & VM	10000	...
<input type="checkbox"/>		Submit (2 jobs)	10:48 04 Apr, 2021	User_template	User_template	HeadOffice (Sync)	EM Auto: ADD User UDP VM	2001	...
<input type="checkbox"/>		Resubmit (1 job)	10:50 05 Apr, 2021	emtest3	emtest3	HeadOffice (Sync)	EM Auto: Update User UDP V		...
<input type="checkbox"/>		Reevaluate (3 jobs)	10:04 05 Apr, 2021	emtest001	emtest001	HeadOffice (Sync)	EM Auto: Update User UDP V		...
<input type="checkbox"/>		Delete (3 jobs)	10:20 05 Apr, 2021	emtest002	emtest002	HeadOffice (Sync)	EM Auto: Update User UDP V		...
<input type="checkbox"/>		Exclude AD user (3 jobs)	10:28 05 Apr, 2021	nstandage	nstandage	HeadOffice (Sync)	EM Auto: Update User UDP V		...
<input type="checkbox"/>			10:33 05 Apr, 2021	emtest003	emtest003	HeadOffice (Sync)	EM Auto: ADD User UDP VM	2000	...

The Approver Console Screen is the central workspace for all commissioning actions.

Ensure Compliance

APS is based on templates and rules per telephony site (which only need to be customized once) that use the Active Directory information of an end-user, making sure that the same format and data are used for each provisioning job eliminating any possible human mistakes.



Every action in the system is logged, and reports can be generated on performed actions.

Reporting SLAs

The Auto Provisioning System provides built-in reporting allowing to track details based on the number of MACDs received and the number processed.



Detailed job logs and an activity report per site with time period reporting are also available.

Automatically re-configure Auto Registered Phones

Simply connect a new phone on a desk.

After approval for security, the phone's location is



then used to reformat the phone's configuration to a logged out phone with the correct certificate and site settings, enabling the phone for extension mobility and

assigning a login service. For details, please see our [White Paper Extension Mobility Deployments](#).

Role Based Commissioning



Multiple administration and operational users can be configured to access the system via role based administration.

Access to the approver console can be defined per telephony site and each proposed job is only accessible to the specified site administrator.



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Workflow



The UPLINX Auto Provisioning System can operate in fully automated or approved mode for one or several assigned site administrators.

The UPLINX Change Tracker, which is part of the Auto Provisioning System, detects added, updated or deleted users and assigns a site and telephony class to generate an auto provisioning job. The system supports multiple CUCM clusters, each with multiple sites and telephony administrators.

In automated mode, the system provisions immediately all required telephony configurations and then emails login details and user guides as attachment to end users.

Designed for large Environments

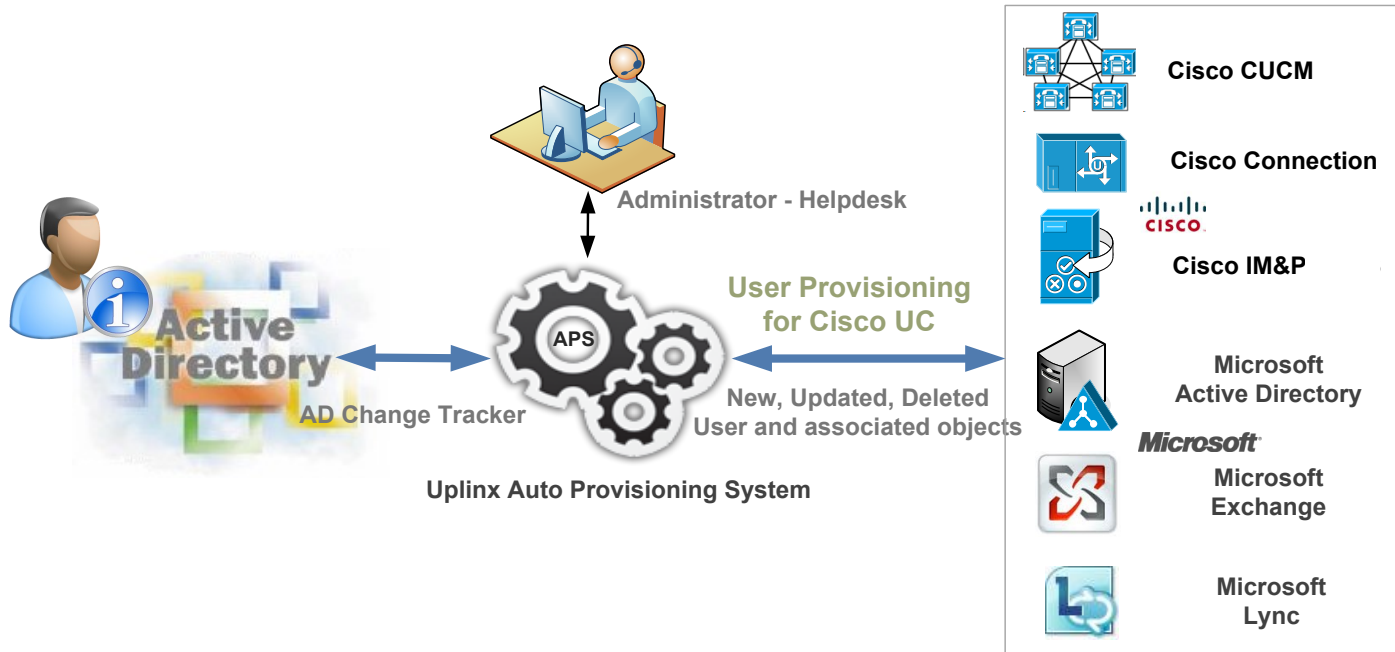


A Provisioning System server is capable of supporting numerous CUCM clusters and tens of thousands of end-users and devices; at the same time having a low server footprint due to optimized software.

Scalability and High Availability



Multiple Provisioning Systems can be distributed across different regions to support international CUCM clusters. Standard Windows



The Auto Provisioning workflow with Active Directory Change Tracker, email notification for approval to administrators.

Approved Commissioning



In semi automated mode, changes in Active Directory create proposed jobs in the Provisioning System and a notification email is sent to the site administrator.

Administrators can then approve, delete or modify the proposed jobs on the Approver Console (see previous page for details).

Once a commissioning job has been processed, an email containing login details and user guides are automatically sent to the end user.

Simplified Self-Service for End-Users



Self-service for end-users can now (optionally) integrate into your intranet by extending the provided self-service web page which uses Active Directory for authentication.

The presented web page can be fully customized by your web designer to present only relevant choices to your company's specific telephony setup. This enables the end-user to perform self-provisioning with minimal and straightforward input from an end user.



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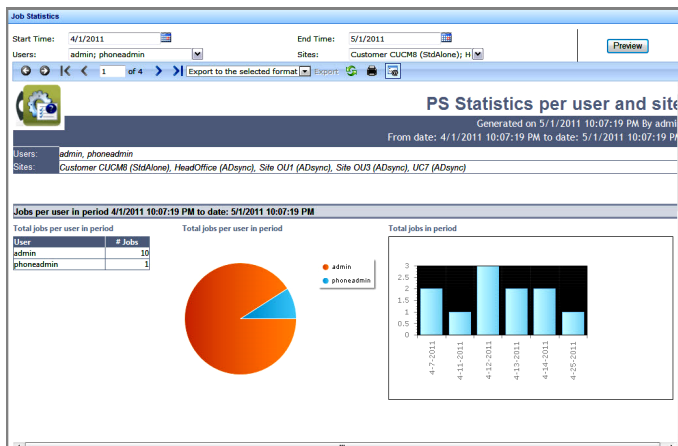
Benefits

For an **IT department**:

- ◆ Rule-based automated provisioning of all end-user configurations based on Active Directory.
- ◆ Dramatic reduction of administration efforts and costs.
- ◆ Consistent and high end-user service.
- ◆ Automated, zero-touch workflow which provide consistent and high quality provisioning for added, updated and deleted end-users.
- ◆ Approval (optional) per site with multi administrator support.
- ◆ Strong reporting for billing and auditing.
- ◆ Automated decommissioning when user is deleted in Active Directory.

For **end-users**:

- ◆ Quick service availability immediately after creating AD user with high and consistent quality.
- ◆ Email with instructions and details how to use the system immediately after telephony setup.



Inbuilt reporting for billing and auditing

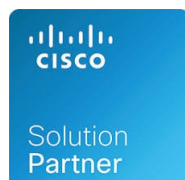


Using Extension Mobility? Please read our white paper "[Deployment of Cisco Extension Mobility](#)"

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Licensing

The UPLINX Provisioning System is licensed based on the number of end-users configured on CUCM and the number of CUCM clusters that need to be supported. Maintenance and support subscription ensures compatibility with new Cisco releases.

Supported Configurations

The Uplinx Provisioning System supports the following Cisco Unified Communications components for version 11.0 and later:

- ◆ Cisco Unified Communications Manager (CUCM)
- ◆ Instant Message & Presence (IMP)
- ◆ Cisco Unity Connection (CUC)

It supports the following Microsoft server products for any end-user setups:

- ◆ Active Directory 2016 and later
- ◆ Exchange 2013 and later (mailbox and unified messaging for voicemail)
- ◆ Lync / Skype for Business
- ◆ Any SQL server based products

with the following end user configurations:

- ◆ Cisco CUCM User
- ◆ Any combination of phones and extensions
- ◆ Device Profiles and extensions
- ◆ Voicemail
- ◆ Mobility (Remote Destination Profiles)
- ◆ Presence with IMP
- ◆ Read and write any Active Directory attribute
- ◆ Custom SQL databases

System Requirements

The Uplinx® Provisioning System will run on:

- ◆ Windows Server 2016 and later
- ◆ SQL Server (Express)
- ◆ Virtualised environments

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