

Grandstream Networks, Inc.

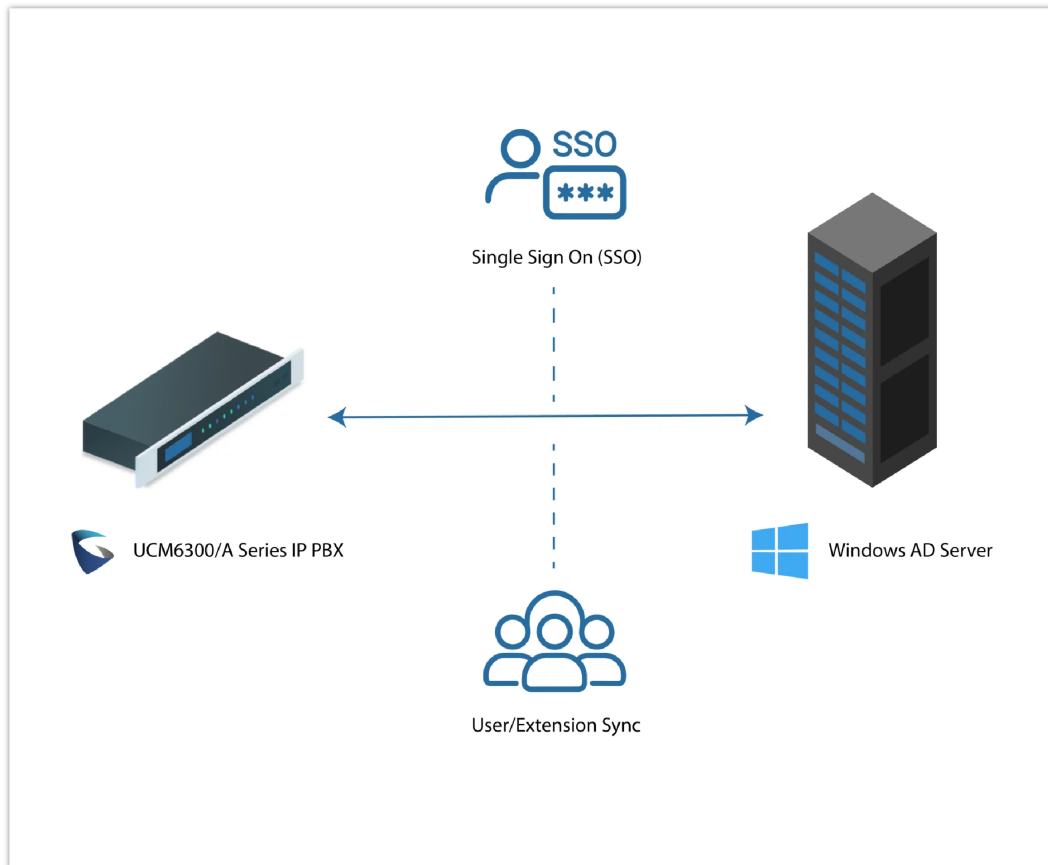
Windows AD Configuration Guide



This guide offers a comprehensive walk-through on integrating a Windows Active Directory (AD) server with a Grandstream IP PBX systems.

Integrating Windows AD allows the PBX to fetch and manage user data directly from the AD server, making it easier to maintain consistent user information across platforms. Contacts can be imported into the PBX's LDAP phonebook, and AD users can be linked to extensions or system accounts for unified user administration. The integration also supports automatic and scheduled synchronization, reducing manual workload and keeping user records up to date.

Additionally, enabling Single Sign-On (SSO) allows AD users to log in to the PBX web interface using their domain credentials, enhancing security and simplifying password management.



Overview of Windows Integration with UCM6300A

PREREQUISITES

Before starting the configuration process, ensure that both your Windows AD environment and PBX system meet the necessary requirements.

- **Supported Windows Server Versions**
 - Windows Server 2008 / 2008 R2
 - Windows Server 2012 / 2012 R2
 - Windows Server 2016
 - Windows Server 2019
- **Supported Grandstream PBX Firmware Versions**
 - Please refer to the [\[Supported Models\]](#) section for details.

CONFIGURING WINDOWS AD ON THE PBX

To integrate Windows AD with the PBX, please navigate to **Integrations→Windows AD→Basic Settings** and fill in the following information:

Windows AD

[Basic Settings](#)
[User Settings](#)
[Single Sign-on \(SSO\)](#)

Connected

Windows AD

* Server Address

IPv4 Address

* Domain

ucmtest.cn

* Port

389

Range 1 - 65535

* Username

Administrator

1 - 64 characters

* Password

At least 4 bits

* Filter

(objectClass=*)

* Base DN

dc=ucmtest,dc=cn

1 - 128 characters, supports numbers, letters, chinese characters, and special characters _

* Phone Book Name

* AD properties

☐ All

☒ telephoneNumber

☐ mail

☐ displayName

☐ givenName

☐ sn

☒ mobile

☐ homePhone

☐ facsimileTelephoneNumber

☒ userPrincipalName

☐ department

☐ title

Parameter	Description
Windows AD	The IPv4 address of the Windows AD server to which the PBX will connect. This must be reachable from the over the network.
Server Address	The IPv4 address of the Windows AD server to which the PBX will connect. This must be reachable from the over the network.
Domain	The domain name of the AD environment, such as “ <i>example.local</i> “. It identifies the AD domain for authentication and user retrieval.
Port	The TCP port used to connect to the AD server, typically 389 for standard LDAP. Valid range is between 1 and 65535.
Username	The AD domain administrator account, typically “administrator”, must be used to authenticate the PBX with the AD server. Supports 1 to 64 characters.
Password	The password for the specified administrator account. Required to authenticate the PBX during connection and synchronization operations.
Filter	An LDAP query string used to control which objects (e.g., users, contacts) are retrieved from AD. For example, (objectClass=*) retrieves all objects.
Base DN	The Distinguished Name (DN) of the AD node from which searches will begin, such as “dc=example,dc=local”. This defines the LDAP query root path. Supports 1 to 128 characters, including letters, numbers, Chinese characters, and special characters such as underscores () and hyphens (-).
Phone Book Name	The name under which AD contacts will appear in the PBX’s LDAP phonebook. This label helps distinguish AD-sourced entries in the contact list. Only letters, numbers and special characters _ allowed
AD Properties	Specifies which LDAP attributes to pull for each AD object, such as sn (surname), mail (email), or telephoneNumber. These map to fields on the PBX.

Synchronizing Windows AD Information

Once the Windows AD connection settings are properly configured, the next step is to synchronize user and contact data from the Windows Active Directory into the PBX system.

This section shows screenshots from the UCM6300/A Series Web UI. The same steps apply to all supported PBX models.

To customize how Windows AD users are retrieved, displayed, and associated within the PBX system, administrators can configure the following synchronization parameters under **Integrations→Windows AD→User Settings**.

Windows AD

Basic Settings

User Settings

Single Sign-on (SSO)

Windows AD User

Get Windows AD User

When enabled, Windows AD users can be associated one-to-one with system users/extensions in UCM.

Synchronize User to LDAP

Associated User Settings

Associated UCM

When enabled, the associated UCM user's information (first name, last name, email, phone, job title) will be overwritten by the Windows AD user's information.

Association Mode

Automatic Association

Manual Association

Associated User Range

All Users

Association Policy

Automatic Allocation

Starting Extension

1000

Cancel

Save

Parameter	Description
Get Windows AD User	When enabled, the PBX retrieves user accounts from the Windows AD based on the filter and base DN previously configured in the integration basic settings. These users become eligible for association with system users or extensions.
Synchronize User to LDAP	Enables automatic import of AD user data into the PBX's LDAP phonebook. IP phones or devices configured with the PBX LDAP server can then perform lookups to access up-to-date contact information.
Associated UCM* (*Field may vary by PBX model)	Enables/Disables binding of AD users to PBX extensions and system users.
Association Mode	Defines how Windows AD users are bound to PBX extensions/users. The options are: ● Manual Association: Users must bind users/extensions to Windows AD users by clicking Bind in the synchronized AD users list. ● Auto Association: The system binds users/extensions to Windows AD users automatically using defined rules.
Associated User Range	Specifies which categories of AD users can be linked to PBX users.

Association Policy	Defines how PBX assigns extensions to Windows AD users during automatic association: 1. Automatic Allocation: Assigns extensions sequentially, starting from a specified base extension number. 2. Read the Specified Property Value: Uses the <i>telephoneNumber</i> attribute by default to assign or match extensions, enabling binding based on existing directory data.
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Windows AD User List

Once the synchronization settings are correctly configured, the Windows AD user list (located under **Integrations→Windows AD→User Settings**) will be populated with user information retrieved from the Windows AD server. The attributes displayed in this list correspond to those selected during the initial integration setup.

Windows AD User

Sync Now

Sync Settings

Telephone ...	Mail	Display Name	Given Name	Surname	Mobile Num...	Home Num...	Facsimile Te...	User Princip...	Department	Job Title	Associate U...	
2002		Alice Dawson	Alice	Dawson	2002	2002		alicedawson@wl...			2002	
2003		Anderson Riley	Anderson	Riley	2003	2003		andersonriley@...			2003	
2001		Dana Lynch	Dana	Lynch	2001	2001		danalynch@win...			2001	
2000		John Doe	John	Doe	2000	2000		johndoe@winad...			2000	

Total: 4

1

10 / page

Goto

Below the user list, there are two buttons:

Parameter	Description
	Manually triggers synchronization to fetch current Windows AD user data and reapply any binding configuration.
	Opens configuration options for scheduling automatic synchronization intervals and displays the history or records of past sync operations.

Automatic Synchronization Configuration

This configuration defines how to schedule automated synchronization of Windows AD users, along with optional extension cleanup based on AD comparison results.

Users can access this feature by clicking the **Sync Settings button** located in the Windows AD user list under **Integrations → Windows AD → User Settings**.

Windows AD > Sync Settings

Extensions

Automatically Delete Extensions ☒ When the associated user is delete in Windows AD

Windows AD Data synchronization

ⓘ Data synchronization includes obtaining the latest Windows AD users and updating the association between Windows AD users and UCM extension/system users. The synchronization process may affect the efficiency of equipment usage. It is recommended to carry it out during non-office hours.

Timed automatic synchronization ☒

Sync Time Custom 2 day(s)

Cancel Save

Synchronous Record

Sync Time	Synchronization Mode	Results	Options
2025-05-29 14:43:30	Manual synchronization	Success	ⓘ
2025-05-29 13:56:27	Manual synchronization	Success	ⓘ
2025-05-29 13:56:00	Manual synchronization	Success	ⓘ
2025-05-29 13:54:37	Manual synchronization	Success	ⓘ
2025-05-29 13:35:59	Manual synchronization	Success	ⓘ
2025-05-29 13:00:00	Manual synchronization	Success	ⓘ

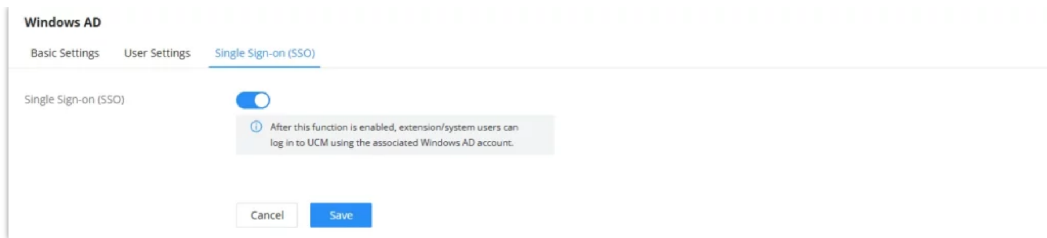
On this page, users can view and configure the following settings:

Parameter	Description
Automatically Delete Extensions	When enabled, this feature ensures that if a user is deleted or disabled in Windows AD, the PBX will automatically stop synchronizing that user's information and delete the associated extension. This helps maintain alignment between the AD and PBX systems.
Timed automatic synchronization	This option allows administrators to enable/disable scheduled synchronization with Windows AD.
Sync Time	Specifies when automatic synchronization occurs. Administrators can choose from the following scheduling options: ● By Day: Sync occurs once every day at a specified time. ● By Week: Sync occurs on a chosen day of the week at a specified time. ● By Month: Sync occurs on a specified day of the month at a specified time. ● Custom: Allows users to set the interval to any number between 1 and 30 days.
Synchronous Record	The Synchronous Record section provides a detailed log of past synchronization activities. The displayed fields are: ● Sync Time: The exact date and time when the synchronization occurred. ● Synchronization Mode: Indicates whether the sync was performed manually (via "Sync Now") or automatically (via scheduled sync). ● Results: Displays the outcome of the sync process (Success/Fail). ● Options: Includes a "Sync Details" button that opens a detailed report of the synchronization, including information such as the number of users successfully synchronized.

SSO (Single Sign-On)

This configuration page allows administrators to enable and configure Single Sign-On (SSO) for Windows AD integration. Once enabled, users can authenticate directly using their Windows AD credentials.

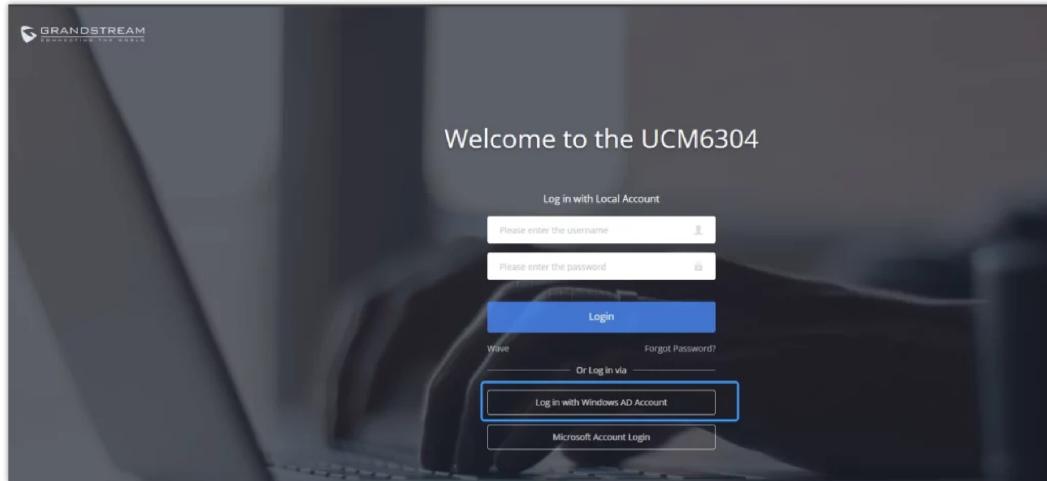
To access this page, navigate to **Integrations** → **Windows AD** → **SSO Settings**.



After enabling SSO, extension or system users linked to Windows AD accounts can log in to the PBX using their Windows credentials. This simplifies the login process and centralizes authentication.

Below are the steps to use SSO login:

1. Enable the SSO feature from the SSO Settings page (**Integrations** → **Windows AD** → **SSO Settings**).
2. After logging out of the PBX's web UI, the login page will display a "Log in with Windows AD Account" option.



3. Log in using the **User Principal Name (UPN)** (e.g., *john.doe@example.local*) and the corresponding **password** from the AD server.
4. Depending on the type of binding:
 - If the AD user is **linked to an extension**, the login redirects to the User Portal for that extension.
 - If the AD user is **bound to a system user account**, the login redirects to that user's PBX account interface.

SUPPORTED MODELS

The table below lists the Grandstream PBXs that support Windows AD integration, along with the minimum firmware version required for this feature.

Supported Devices	Firmware Version
UCM6300/A Series	1.0.29.6+
CloudUCM	1.0.29.7+
SoftwareUCM	1.0.33.7+