

Nuance Management Center

User Provisioning and Deprovisioning Configuration Guide

version 2021.1

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Nuance® Management Center

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About this guide

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Guide overview

This guide contains the following:

- System requirements for user provisioning and deprovisioning
- Installation instructions for installing the Nuance Command Center (NCC) AD Integration Service for user deprovisioning
- Installation instructions for installing the Nuance Command Center (NCC) User Sync Service for user deprovisioning (on-premise customers only)
- Configuration instructions for user provisioning and deprovisioning

Audience

This guide is intended for administrators whose responsibility is to perform the following:

- Ensure system requirements for your organization's user provisioning and deprovisioning environment are met
- Install and configure prerequisite software
- Enable and configure user provisioning and deprovisioning features

This guide assumes you have experience in hardware configuration, software installation, database management, and networking.

Chapter 1: Introduction

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About user provisioning

User provisioning allows you to establish new users in Nuance Management Center automatically when your organization is using LDAP or Trusted authentication (also known as Windows Single Sign-on) and the users belong to a specific group in your LDAP directory. During user provisioning, Nuance Management Center grants a product license to the users when they log in and assigns them to the Nuance Management Center group that you specify. With user provisioning enabled, you do not need to manually create users and grant licenses in Nuance Management Center and keep them synchronized with the users in your LDAP directory.

User provisioning also includes the ability to re-provision users who were disabled manually or through the user deprovisioning process. You might want to re-provision disabled employees who returned from a leave of absence. Employees are disabled through user deprovisioning when you have selected the **Enable user deprovisioning** setting and the **Disable users who cannot be found** setting on the Organization Details page and you remove them from the LDAP group you specified or when they are disabled in your LDAP directory. Nuance Management Center automatically re-provisions these employees when you add them back to the appropriate LDAP group or when you enable them in your LDAP directory.

User provisioning differs from auto-provisioning in that it uses LDAP authentication and only creates user accounts in Nuance Management Center when they exist in the LDAP group that you specify. Auto-provisioning uses token authentication and creates user accounts in Nuance Management Center when they do not already exist.

Users must log in to Dragon Medical One or Dragon Professional with their LDAP login. If no product licenses are available, Nuance Management Center still creates the user accounts, but a license error occurs when the user dictates. This error is resolved when you grant a license to the user. You must manually grant licenses after this error occurs.

You enable user provisioning in the NMC console on the **Organization Details>Auto-provisioning** tab. You must have the **Product Manage Dragon Medical Server** privilege or the Product Manage Dragon Professional privilege to view and edit this tab.

User provisioning is currently supported only for Dragon Medical One and Dragon Professional on-premise customers using LDAP or Trusted authentication.

Note: This documentation uses the product name Dragon Medical One to refer to the following products: Dragon Medical One, Dragon Medical Direct, Dragon Case and Care.

About user deprovisioning

User deprovisioning simplifies your user management process by providing automatic user synchronization between Nuance Management Center and your organization's LDAP user directory. With user deprovisioning enabled, you do not need to review the status of users in your user directory and manually make adjustments in Nuance Management Center to keep the users synchronized. User deprovisioning performs the following functions for you automatically:

- Queries your LDAP user directory nightly and disables or deletes users in Nuance Management Center based on their status in your active directory.

Nuance Management Center disables or deletes only users who do not have an **NMC Administrator** license.

- Provides the option for you to first review users to be deprovisioned before Nuance Management Center performs the action, allowing you to cancel the deprovisioning.
- Revokes the product licenses from disabled or deleted users, allowing them to be re-used.

You enable deprovisioning in the NMC console on the **Organization Details>Deprovisioning** tab. You must have the appropriate grants to view and access this tab.

About deprovisioning components and workflow

User deprovisioning consists of the following components:

- **Nuance NCC AD Integration Service**—Installed as a Windows service on or next to your LDAP server. It accesses your user directory nightly and runs a user comparison.
- **Nuance NCC User Sync Service**—The AD Integration service calls the User Sync service to find comparison requests sent from Nuance Management Center to process. When the integration service completes a comparison against your LDAP directory, it sends the results back to the User Sync service for the NMC console to retrieve and process. The user sync service acts as a communication hub between the NMC console and the AD Integration Service.
- **Nuance Management Center scheduled tasks**—Several scheduled tasks perform the following on a nightly basis:
 - Initiate deprovisioning by sending a request for a user comparison to the User Sync service to be picked up by the AD integration service.
 - Call to receive the result of the comparison performed by the AD integration service.
 - Mark users to be disabled or deleted based on the comparison results.

Note: Users are disabled and deleted when their appropriate scheduled tasks run. There are separate scheduled tasks for disabling and delete users; as a result, users marked for delete may be deleted at a later time than the users who are disabled.

- Disable or delete users in Nuance Management Center when the administrator has reviewed the list of marked users and provided confirmation (if **Require confirmation** option is enabled) and revoke the appropriate product licenses.

Note: When your administrator provides confirmation, users are disabled and deleted the next time the User Sync service runs.

About user deprovisioning logic

The following actions occur during the user deprovisioning process:

- When users exist in Nuance Management Center but do not exist in your user directory, the users are disabled or deleted in Nuance Management Center based on whether you selected the **Disable users who cannot be found** setting.

For more information on this setting, see [“User deprovisioning field descriptions” on page 40](#).

- When users exist in Nuance Management Center and also exist in your user directory, but do not belong to the group you selected in the **Group Distinguished Name** field, the users are disabled and their product licenses are revoked.

For more information on the **Group Distinguished Name** field, see [“User deprovisioning field descriptions” on page 40](#).

- When users exist in Nuance Management Center and exist in your user directory in the group you selected but are disabled, the users are disabled in Nuance Management Center and their product licenses are revoked.

Note: Nuance Management Center does not disable or delete users with the **NMC Administrator** license.

About audit events

Nuance Management Center creates audit events for deprovisioning actions that occur, such as when a user is deleted. Review the following in the Audit Events utility:

- **Events 88 through 93**—Deprovisioning events
- **Event 12**—Events for revoked licenses

About notifications

Nuance Management Center sends the following deprovisioning notifications to the user you specify:

- Success notification indicating the number of users flagged for deprovisioning.
- Error message with the request transaction ID for troubleshooting.

You specify this user’s email address on the **Organization Details page>Deprovisioning tab**. For more information, see [“User deprovisioning field descriptions” on page 40](#).

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System requirements—User provisioning

Ensure that your environment meets the following requirements before configuring user provisioning.

Component	Requirement
User Directory	<ul style="list-style-type: none"> Active Directory supporting LDAP protocol or Trusted authentication (also known as Windows Single Sign-on)
Nuance Management Center Privileges/Grants	<ul style="list-style-type: none"> An NMC administrator who has the Product Manage Dragon Medical Server privilege or Product Manage Dragon Professional privilege
User Directory User Configuration	<p>If you choose to enable user provisioning and deprovisioning, an email address is required for all users in your user directory.</p> <p>For more information, see “Preparing for user provisioning” on page 7.</p>

Preparing for user provisioning

The user provisioning process creates new users in Nuance Management Center and does the following:

- Imports users' email addresses as defined in your user directory.
- Imports users' First Name and Last Name as defined in your user directory.
- Sets each user's login in Nuance Management Center to the login defined in your user directory.
- Sets the NTLM credentials, which are required to log in to Dragon Medical One with active directory.

The user provisioning process populates the NTLM credentials using the Active Directory **UserDomain** and **UserName**. The UserDomain must match the Domain defined in Nuance Management Center on the **Organization Details>Domains** tab.

For more information, see the "Managing Active Directory domains" topic in the NMC Help.

To ensure your users are provisioned without issue, Nuance recommends you do the following before enabling user provisioning:

- Be consistent with your user logins and email addresses.

For example, if a user's login is "john.smith", make the user's email address "john.-smith@domain.com". Do the same with other credentials.

- Consider enabling the **Email address required for organization users** setting on the Organization Details page.

This ensures users' email addresses are not blank upon user creation in Nuance Management Center when no email address exists in your user directory.

Note: If you choose to implement both user provisioning and deprovisioning, a valid email address is required for all users in your user directory.

For additional recommendations for user deprovisioning, see [“Preparing user accounts for deprovisioning”](#) on page 14.

Enabling user provisioning

You enable user provisioning on the **Organization Details>Provisioning** tab. You must have the appropriate privileges to view, access, and change settings on this tab.

For more information, see [“System requirements—User provisioning” on page 6](#).

Note: User provisioning is currently supported only for Dragon Medical One and Dragon Professional on-premise customers.

To enable user provisioning:

1. View an organization.

The Manage Organization page appears.

2. View organization details.

The Organization Details page appears.

3. Click the Provisioning tab.

You must have the **Product Manage Dragon Medical Server** privilege or the **Product Manage Dragon Professional** privilege to view and access this tab.

4. Select the Dragon Medical Server tab or the Dragon Professional tab.

5. Select **Enable user provisioning for this product**.

For field information, see [“User provisioning field descriptions” on page 38](#).

6. Select a group from the **Add users to group** drop-down list.

Nuance Management Center creates the new users in this group.

Note: If you select **<Generated>**, user provisioning creates a new group called **Dragon Medical** and places all provisioned users in this group.


7. Specify your LDAP server information.

For field information, see [“User provisioning field descriptions” on page 38](#).

8. Do one of the following:

- If you have an Enterprise license, click **Save**.
- If you have Account licenses and want to auto-assign available licenses upon login, do the following:

1. Select **Restrict automatic license assignment...**

2. Select the license type from the Automatic license assignment disabled list, click the Right arrow button (), and then click **Save**.

Chapter 3: Configuring user deprovisioning

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System requirements—User deprovisioning

Cloud-hosted

If you are a Nuance cloud-hosted customer, ensure that your environment meets the following requirements before configuring user deprovisioning.

Component	Requirement
Software	<p>You must install and configure the Nuance NCC AD Integration Service on or next to your LDAP server. This service requires access to your user directory.</p> <p>You obtain the installation file from your Nuance Field Services representative.</p>
LDAP server	<ul style="list-style-type: none"> • Processor: Dual-Core 2GHz CPU • Minimum RAM: 4 GB • Storage: 4 GB free space for rolling logs • Operating System: Windows Server 2012 and later 64-bit • LDAP directory
Auth0	<p>Your Nuance Field Services representative creates a machine-to-machine application (or client) for you on the Auth0 server. The application allows the Nuance NCC AD Integration Service to communicate with the User Sync microservice.</p>
Nuance Management Center Grants/Privileges	<p>The following grants are required for user deprovisioning:</p> <ul style="list-style-type: none"> • Manage User Deprovisioning—Required to view and access the Deprovisioning tab. • Modify Organization—Required to modify the settings on the Deprovisioning tab. • Delete Users in All Groups—Required to select and deselect users marked for disable and delete.
Email addresses	<p>To be evaluated for deprovisioning, your user accounts must have a valid email address in Nuance Management Center. The deprovisioning process uses email addresses to match user accounts in Nuance Management Center with the users in your LDAP directory.</p> <p>To ensure an email address is provided for all users, you can optionally enable the Email</p>

Component	Requirement
	<p>address required for organization users setting on the Organization Details page in the NMC console. For more information on this setting, see the Nuance Management Center Help.</p>

On-premise

If you are an on-premise customer, ensure that your environment meets the following requirements before configuring user deprovisioning.

Note: These requirements assume you have an existing Nuance Management Center environment and database installed, configured, and accessible.

Component	Requirement
<p>Software</p>	<p>You must install and configure the following:</p> <ul style="list-style-type: none"> • Nuance NCC AD Integration Service—You must install and configure this service on or next to your LDAP server. This service requires access to your user directory. You obtain the installation file from your Nuance Field Services representative. • Nuance NCC User Sync Service—You must install and configure this service on a server accessible by both Nuance NCC AD Integration Service and Nuance Management Center. This service requires access to the Nuance Management Center database. You obtain the installation file from your Nuance Field Services representative.
<p>LDAP server</p>	<ul style="list-style-type: none"> • Processor: Dual-Core 2GHz CPU • Minimum RAM: 4 GB • Storage: 4 GB free space for rolling logs • Operating System: Windows Server 2012 and later 64-bit • LDAP directory
<p>Security</p>	<ul style="list-style-type: none"> • SSL certificate Nuance recommends that you host the Nuance NCC User Sync Service APIs on SSL/HTTPS. To do so, you'll need an SSL certificate signed by a Certificate Authority (CA).

Component	Requirement
	<p>Nuance Management Center does not support self-signed certificates.</p>
<p>Nuance Management Center Grants/Privileges</p>	<p>The following grants are required for user deprovisioning:</p> <ul style="list-style-type: none"> • Manage User Deprovisioning—Required to view and access the Deprovisioning tab. • Modify Organization—Required to modify the settings on the Deprovisioning tab. • Delete Users in All Groups—Required to select and deselect users marked for disable and delete.
<p>Database and Database users</p>	<p>Database</p> <p>The installation creates tables and stored procedures. Nuance recommends that you install the User Sync database on the same server where you have your Nuance Management Center database installed.</p> <ul style="list-style-type: none"> • Supported version—SQL Server 2016 only • Initial size—16 MB • Disk space—Nuance recommends allocating 10 GB for the User Sync database. • Backups—Optionally enable backups for this database according to your organization's policies for data retention. <p>For additional requirements, see the SQL Server database requirements for Nuance Management Center in the <i>Nuance Management Center Installation and Configuration Guide</i>.</p> <p>Database users</p> <p>You must have available two database users:</p> <ul style="list-style-type: none"> • User who can create tables, indexes, procedures, and so on. The Nuance NCC User Sync Service installation runs under this user. • User who can execute procedures to which the user is granted. The Nuance NCC User Sync Service logs in to your database under this user and runs read and write procedures.

Component	Requirement
Email addresses	<p>To be evaluated for deprovisioning, your user accounts must have a valid email address in Nuance Management Center. The deprovisioning process uses email addresses to match user accounts in Nuance Management Center with the users in your LDAP directory.</p> <p>To ensure an email address is provided for all users, you can optionally enable the Email address required for organization users setting on the Organization Details page in the NMC console. For more information on this setting, see the Nuance Management Center Help.</p>

Preparing user accounts for deprovisioning

To implement user deprovisioning, a valid email address is required for all users in your user directory. If you have existing users in Nuance Management Center, you can update their email addresses if necessary using the Import Users feature to overwrite their existing email addresses.

For more information, see the "Importing new or modifying existing users" section of the "Working with user accounts" topic in the NMC Help.

For additional recommendations for user provisioning, see ["Preparing for user provisioning" on page 7](#).

Checklist—User deprovisioning setup

Cloud-hosted

<input type="checkbox"/> Task	Reference
<input type="checkbox"/> Locate your organization's Nuance Healthcare account GUID.	You can find this in the NMC console on the Organization Details page>Products tab>General tab .
<input type="checkbox"/> Ensure your environment meets all system requirements.	“System requirements—User deprovisioning” on page 10
<input type="checkbox"/> A Nuance Field Services representative creates a client for your organization in Auth0. The representative will also provide you with the Client ID and Client Secret that you'll need to install the integration service.	Contact your Nuance Field Services representative.
<input type="checkbox"/> Obtain the Nuance-NCC-AD-IntegrationService.exe file from Nuance Field Services.	Contact your Nuance Field Services representative.
<input type="checkbox"/> Install Nuance-NCC-AD-IntegrationService.exe.	“Installing the Nuance NCC AD Integration Service” on page 19
<input type="checkbox"/> Enable user deprovisioning in the NMC console.	“Enabling user deprovisioning” on page 34

On-premise

<input type="checkbox"/> Task	Reference
<input type="checkbox"/> Locate your organization's Nuance Healthcare account GUID.	You can find this in the NMC console on the Organization Details page>Products tab>General tab .
<input type="checkbox"/> Ensure your environment meets all system requirements.	“System requirements—User deprovisioning” on page 10
<input type="checkbox"/> Modify the Nuance.NMS.Server.exe.config file to enable user deprovisioning.	“Modifying the Nuance.NMS.Server.exe.config file” on page 17
<input type="checkbox"/> Enable JWT on your NMC server.	“Enabling JWT on your NMC server” on page 18.
<input type="checkbox"/> Obtain the Nuance-NCC-AD-IntegrationService.exe file from Nuance Field Services.	Contact your Nuance Field Services representative.
<input type="checkbox"/> Install Nuance-NCC-AD-IntegrationService.exe.	“Installing the Nuance NCC AD Integration Service” on page 19
<input type="checkbox"/> Obtain the Nuance-NCC-User-Sync-Service.exe file from Nuance.	Contact your Nuance Field Services representative.

<input type="checkbox"/>	Task	Reference
<input type="checkbox"/>	Install Nuance-NCC-User-Sync-Service.exe.	“Installing Nuance NCC User Sync Service” on page 26
<input type="checkbox"/>	Optionally install and bind an SSL certificate.	“Installing and binding an SSL certificate” on page 31
<input type="checkbox"/>	Start and test the User Sync service.	“Starting and testing the service” on page 31
<input type="checkbox"/>	Review optional advanced options.	“Advanced options” on page 32
<input type="checkbox"/>	Enable user deprovisioning in the NMC console.	“Enabling user deprovisioning” on page 34

Modifying the Nuance.NMS.Server.exe.config file

If you are an on-premise customer configuring user deprovisioning, you must edit the Nuance.NMS.Server.exe.config file to enable user deprovisioning.

Do the following:

1. Open the Nuance.NMS.Server.exe.config file.
2. Locate the following line:

```
<!--<section name="UserSyncMSConfig" type="NMS.Platform.Configuration.MSConfig,
NMS.Platform.Configuration" />-->
```

3. Uncomment the line by removing the beginning tag (<!--) and ending tag (-->).
4. Locate the following line:

```
<!--
<UserSyncMSConfig ServiceName="UserSync" IsEnabled="true" MicroserviceApiURL=
L="http://localhost:57504" KeyVaultQConfigSecretName="UserSyncSecrets" />
-->
```

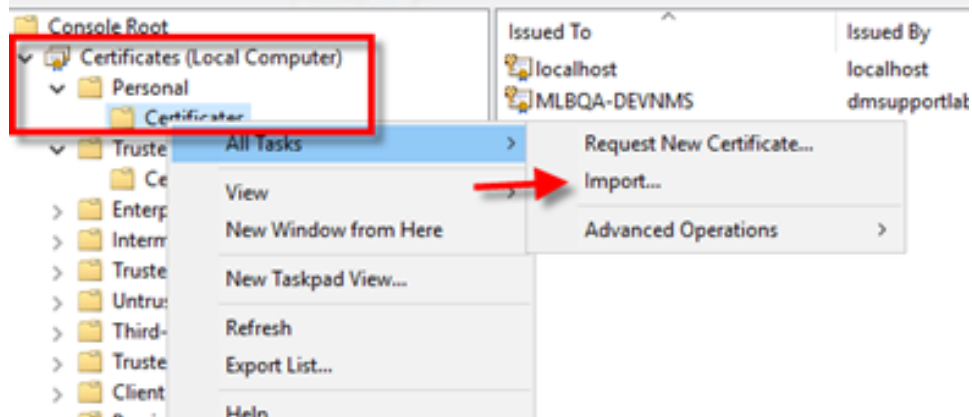
5. Uncomment the line by removing the beginning tag (<!--) and ending tag (-->).
6. Change the MicroserviceApiURL value to the URL of the machine where you are installing the **Nuance NCC User Sync Service**.

```
<UserSyncMSConfig ServiceName="UserSync" IsEnabled="true"
MicroserviceApiURL="http://localhost:57504"
KeyVaultQConfigSecretName="UserSyncSecrets" />
```

7. Save and close the file.
8. Restart the NMS Platform Service.

Enabling JWT on your NMC server

1. Obtain a certificate from a Certificate Authority.
2. Import the certificate into the Local Computer Personal folder using MMC.exe.



3. Obtain the certificate thumbprint.
 1. Open Windows PowerShell.
 2. Type `dir cert:\currentuser\my`.
 3. Highlight and copy the thumbprint for your certificate.
4. Open the `Nuance.NMS.Server.exe.config` file as Administrator in any text editor.
5. Locate the entry below and uncomment the line by removing the beginning tag (`<!--`) and ending tag (`-->`).

```

16 <add key="ApplicationServicesFolder" value="AppServices" />
17 <add key="ConnectorFolder" value="Connectors" />
18 <add key="AuthenticationProviderFolder" value="AuthenticationProviders" />
19 <add key="NMServerHostName" value="localhost" />
20 <add key="UseSSL" value="true" />
21 <add key="FileStorePath" value="" />
22 <add key="ForceNTLMDomain" value="" />
23 <!--<add key="JwtCertificateThumbprint" value="E1BAB8FAA75FA3DBFD5FDD471773F99854F516F5" />-->
24 <add key="OpenIdConnectMetadataUrl" value="https://nuancehdpdev.auth0.com/.well-known/openid-configuration" />
25 <add key="ClientSettingsProvider.ServiceUri" value="" />

```

6. In the same entry, replace the `JwtCertificateThumbprint` value with your certificate's thumbprint.
7. Save the file.
8. Restart the NMS Platform Service.
9. Log in to Nuance Management Center to verify that JWT is enabled.

Installing the Nuance NCC AD Integration Service

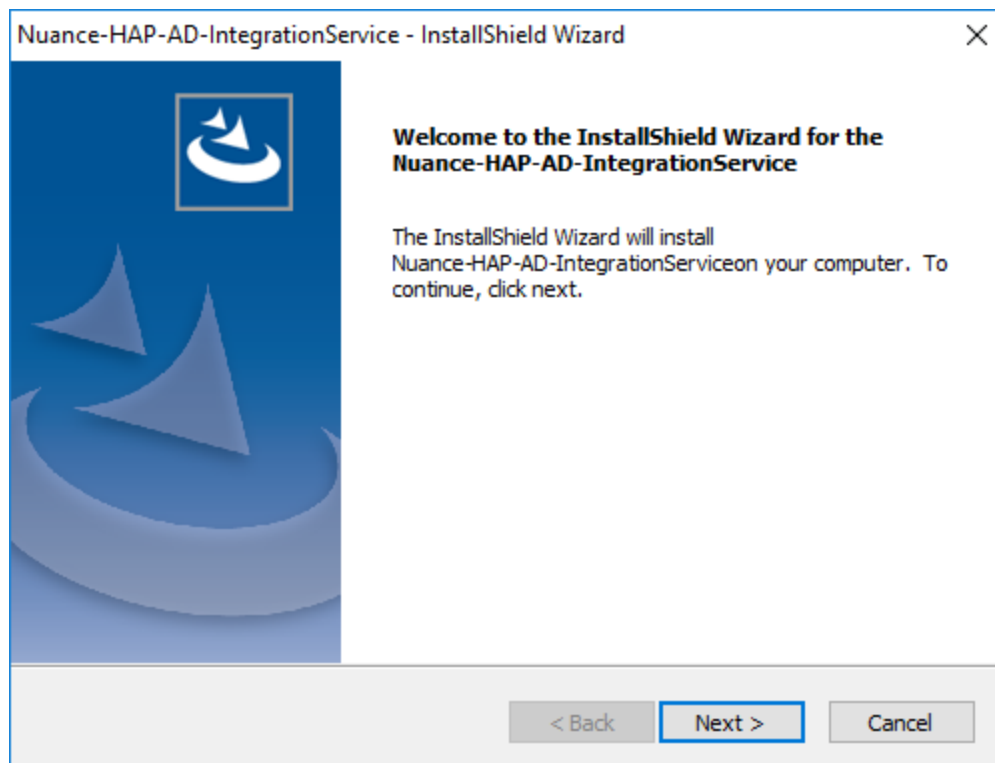
You must install the **Nuance NCC AD Integration Service** on or next to your LDAP server to allow it to access your user directory. Both cloud-hosted and on-premise customers must install this service.

- **Nuance-hosted cloud customers**—Your Field Services representative provides you with the following to perform the integration service installation:
 - Integration service installation file
 - Client ID
 - Client Secret
- **On-premise customers**—Nuance provides you with the installation file. You do not need to provide a Client ID or Client Secret during the installation.

Do the following to install the integration service:

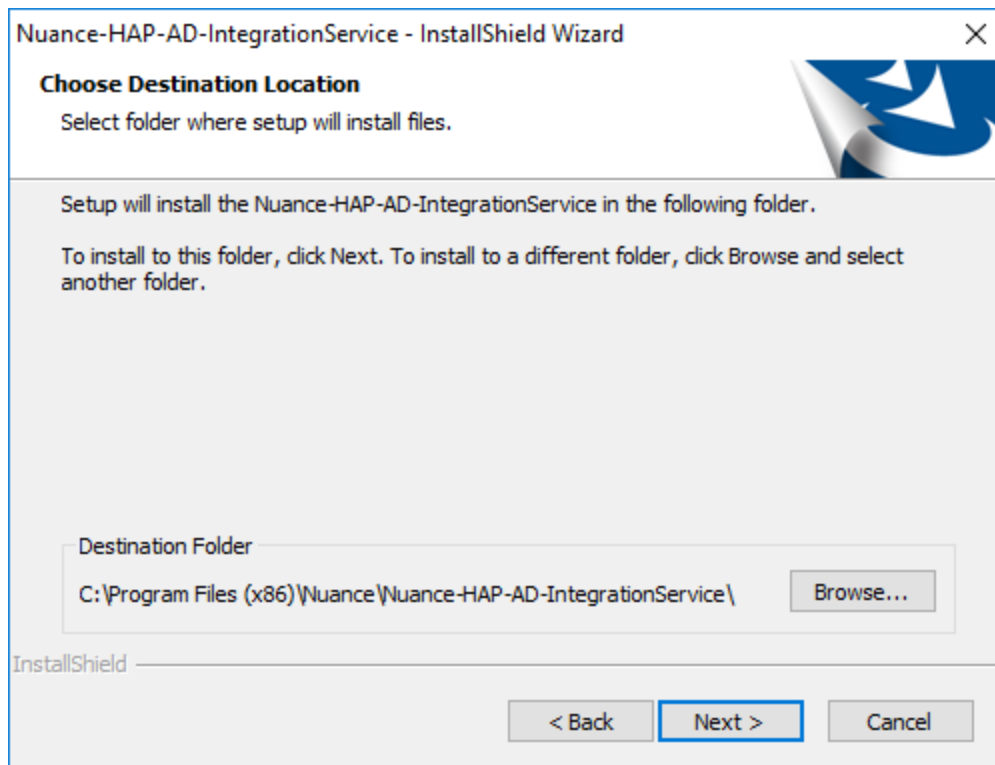
1. Double-click the `Nuance-NCC-AD-IntegrationService.exe` file to launch the installation.

The Welcome screen appears.



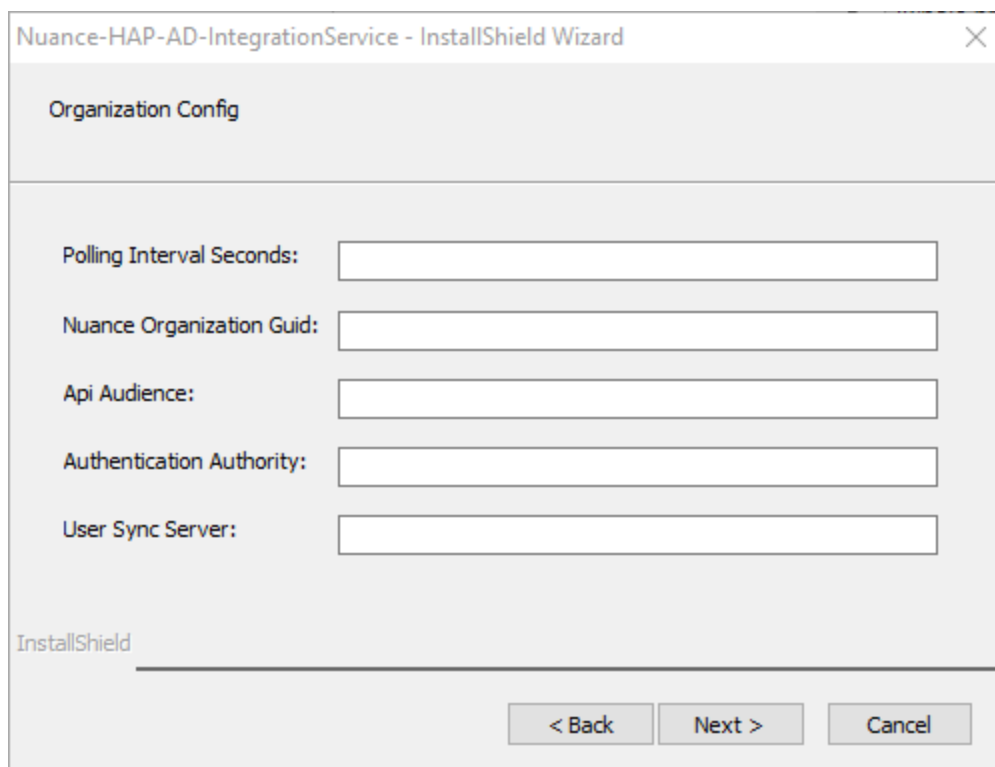
2. Click **Next**.

The Choose Destination screen appears.



3. Click **Next** to use the default folder.

The Organization Configuration screen appears.



Specify the following:

- **Polling Interval Seconds**—The period of time the Nuance NCC AD Integration Service will wait in between calls to the User Sync microservice for comparison requests to process. For example, if you specify 30, the integration service will process any available comparisons every 30 seconds. Specify a positive integer.

Nuance Management Center currently requests a comparison only once per day. The process does the following:

- **Event 80**—Runs at 01:00 UTC and issues the request for comparison.
 - **Event 81**—Runs at 03:00 UTC and populates the database with the comparison data.
 - **Event 82**—Finishes the process at 04:00 UTC executing any changes, assuming changes have been confirmed. If the polling interval is set to check once per day and the time frames above are missed, the request data is held until the next scheduled event.
- **Nuance Organization GUID**—The Nuance Healthcare Account GUID assigned to your organization when it was created. This is located in the NMC console in **Organization Details>Products>General**.

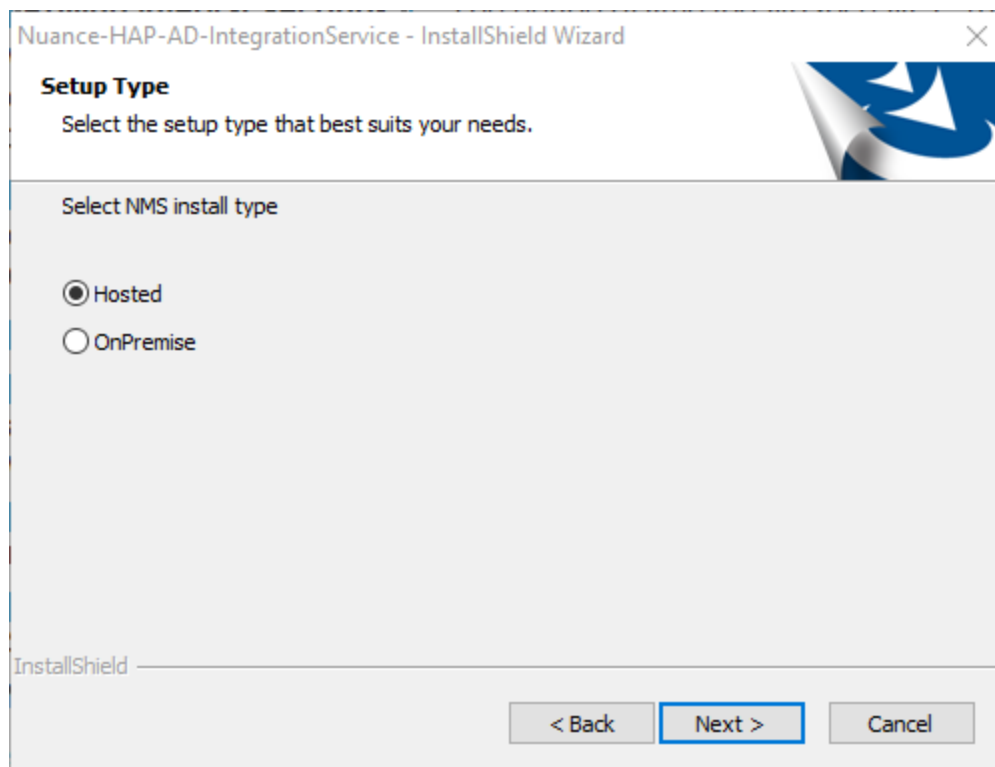
Example: 3d53b893-3b19-408d-b9aa-c13891ea693b

- **API Audience**—Name of the API for user synchronization. This value limits the scope of access to the user synchronization API.
 - **Nuance cloud-hosted customers**—Your Nuance Field Services representative provides you with this value.
 - **On-premise customers**—Specify <http://nms.nuance.com>, regardless of your NMC server name.

In on-premise deployments, Nuance Management Center is the authentication authority. **Nuance NCC AD Integration Service** gets a token from Nuance Management Center and presents that token to **Nuance NCC User Sync Service** when making calls. **Nuance NCC User Sync Service** verifies this token. The API audience (<http://nms.nuance.com>) is used in the token verification process.
- **Authentication Authority**—Name of the Auth0 server.
 - **Nuance cloud-hosted customers**—Your Nuance Field Services representative provides you with this value.
 - **On-premise customers**—Specify the URL for your NMC server. For example, <https://nms.localserver.com>.
- **User Sync Server**—Name of the server for user synchronization.
 - **Nuance cloud-hosted customers**—Your Nuance Field Services representative provides you with this value.
 - **On-premise customers**—Specify the URL for your User Sync server. For example, <https://usersync.localserver.com>.

4. Click **Next**.

The Setup Type screen appears.



Select one of the following:

- **Hosted**—You are a Nuance cloud-hosted customer.
- **OnPremise**—You are an on-premise customer.

5. Click **Next**.

The Secrets page appears.

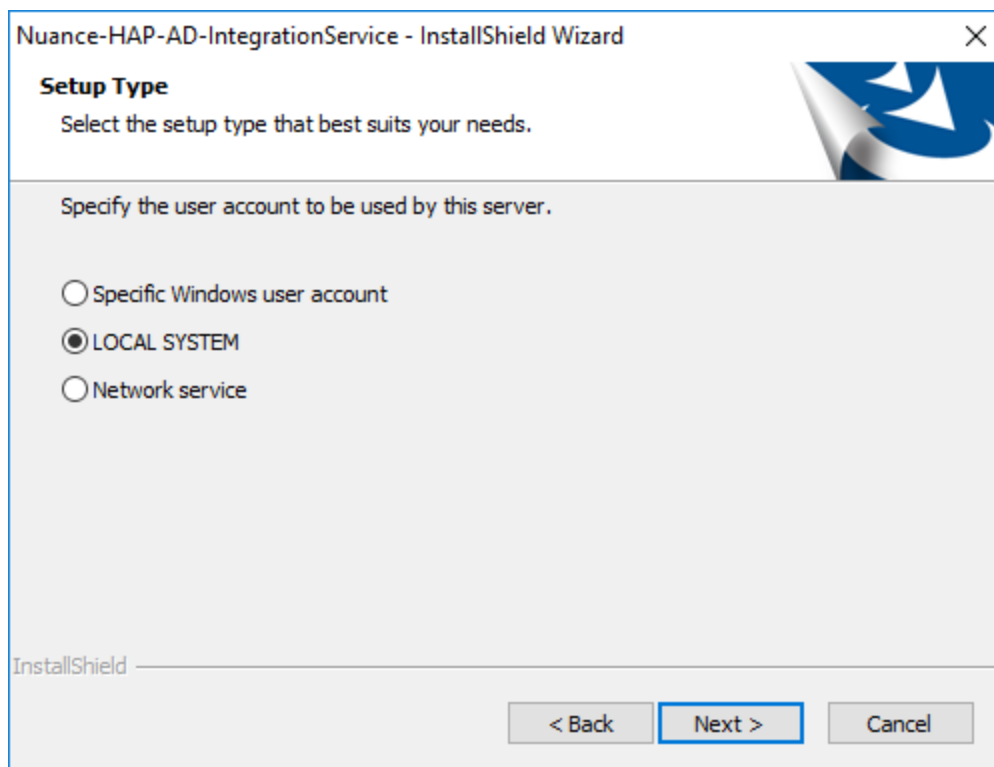
The screenshot shows a wizard window titled "Nuance-HAP-AD-IntegrationService - InstallShield Wizard" with a close button (X) in the top right corner. The main area is labeled "Secrets" and contains four input fields with labels to their left: "Client Id:", "Client Secret:", "Ldap Bind Dn:", and "Ldap Bind Password:". At the bottom of the window, there are three buttons: "< Back", "Next >" (which is highlighted with a blue border), and "Cancel". The "InstallShield" logo is visible in the bottom left corner of the window.

Specify the following:

- **Client ID**
 - **Nuance cloud-hosted customers**—Your Nuance Field Services representative provides you with this value.
 - **On-premise customers**—Specify **on-prem**.
- **Client Secret**
 - **Nuance cloud-hosted customers**—Your Nuance Field Services representative provides you with this value.
 - **On-premise customers**—Specify **on-prem**.
- **LDAP Bind Dn**—LDAP account the Nuance NCC AD Integration Service will bind to the directory as. Be sure this account has read-only access to the directory. For example, "CN=Joe Smith,DC=hospital123,DC=com".
- **LDAP Bind Password**—Password for the LDAP Bind Dn account.

6. Click **Next**.

The Setup Type screen appears.



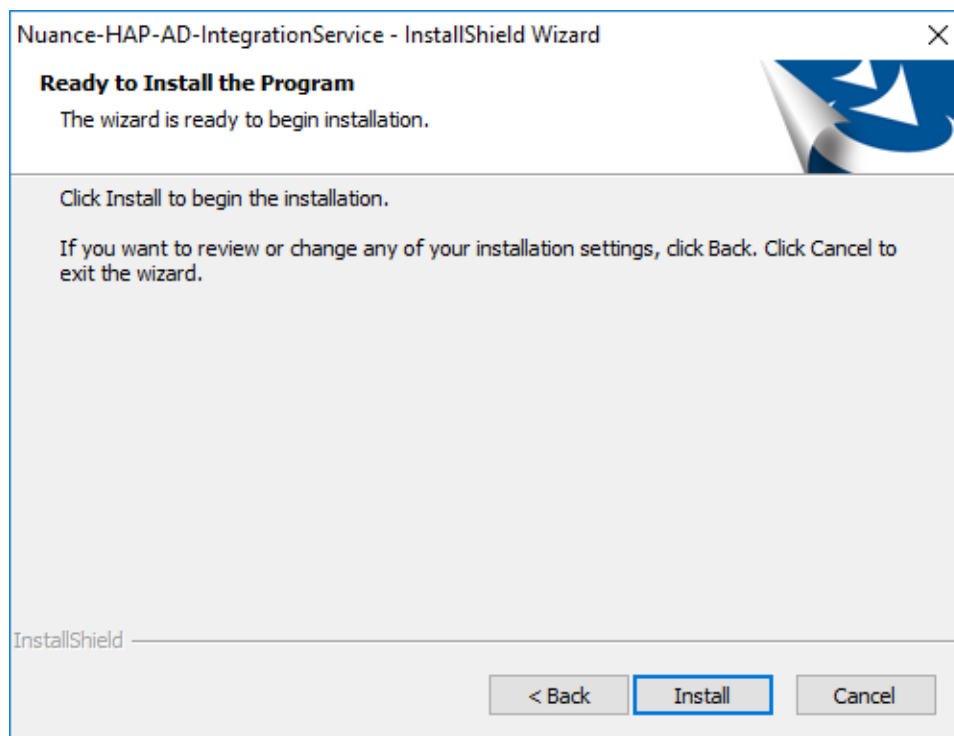
7. Select the user account the AD Integration service runs under. The default value is **LOCAL SYSTEM**.

Note: If you are an on-premise customer and you select **Specific Windows user account**, the user must meet the following requirements:

- Has a corresponding user created in your organization in Nuance Management Center.
- The Nuance Management Center login matches the domain login of this user's Windows account.

8. Click **Next**.

The Ready to Install screen appears.



9. Click **Install** to begin the installation.

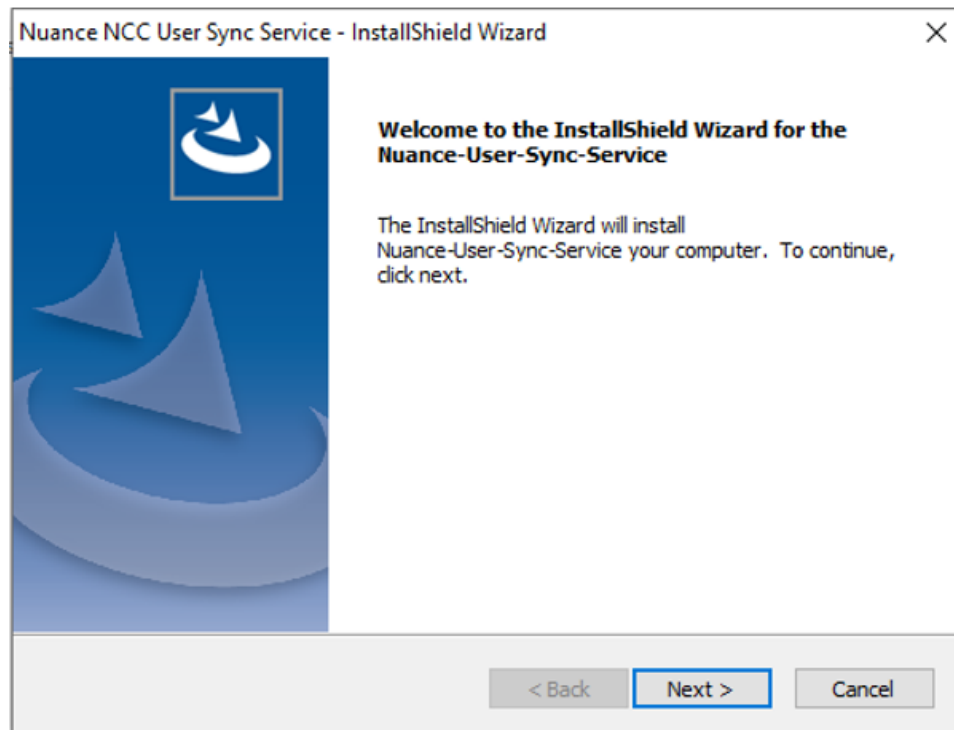
Installing Nuance NCC User Sync Service

If you are an on-premise customer, you also install the **Nuance NCC User Sync Service** to implement user deprovisioning in your environment. You install the **Nuance NCC User Sync Service** as a Windows service.

Installing the service

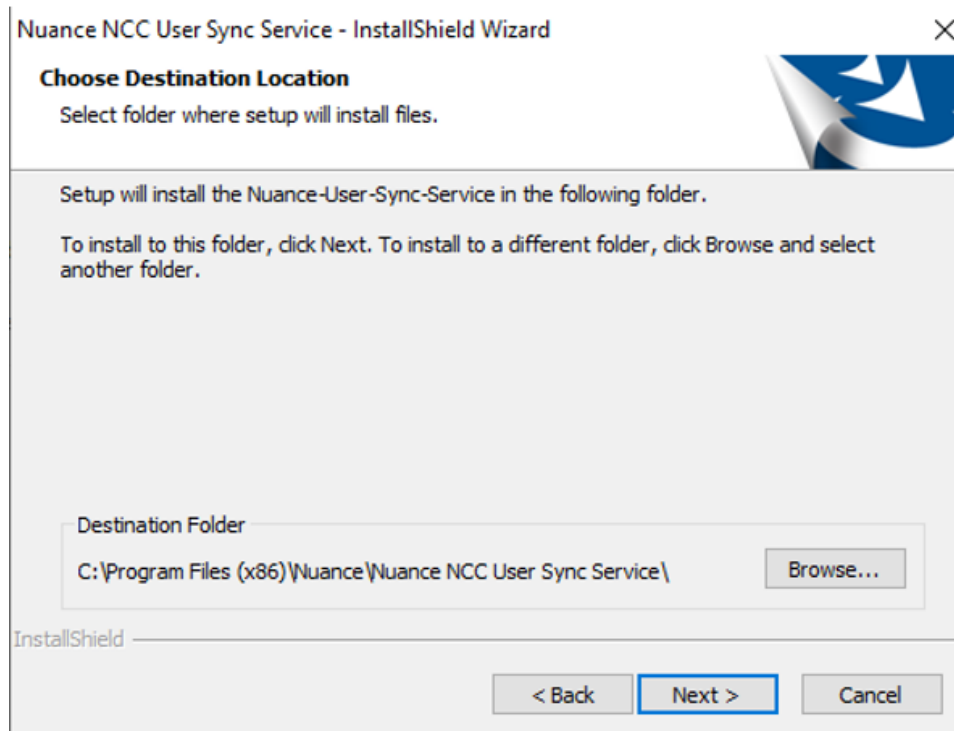
1. Double-click `Nuance-NCC-User-Sync_Service.exe`.

The Welcome screen appears.



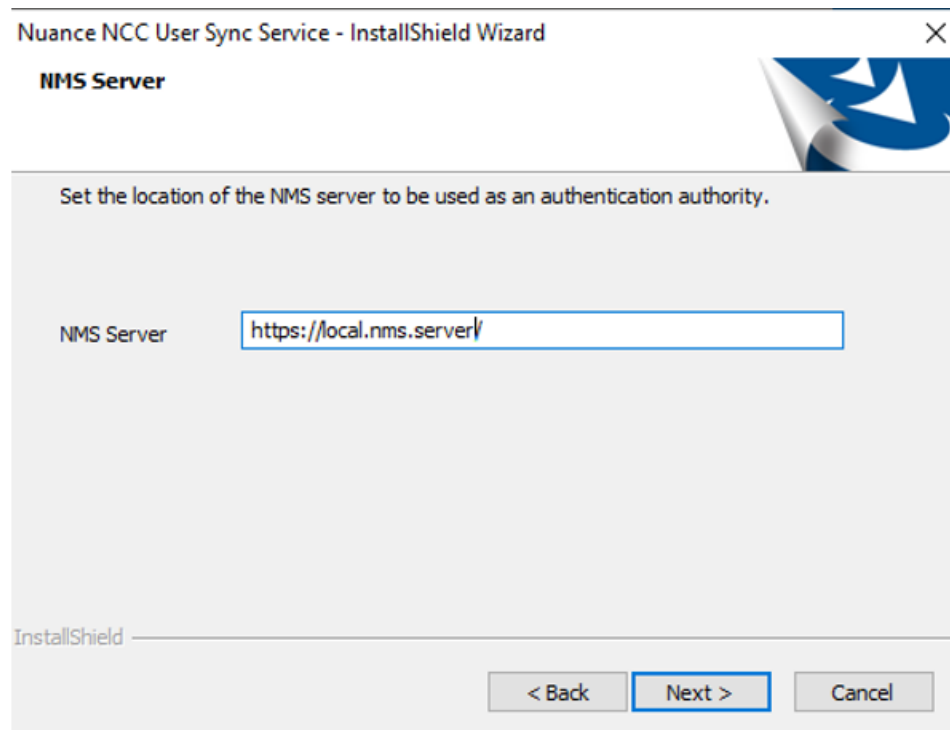
2. Click **Next**.

The Choose Destination Location screen appears.

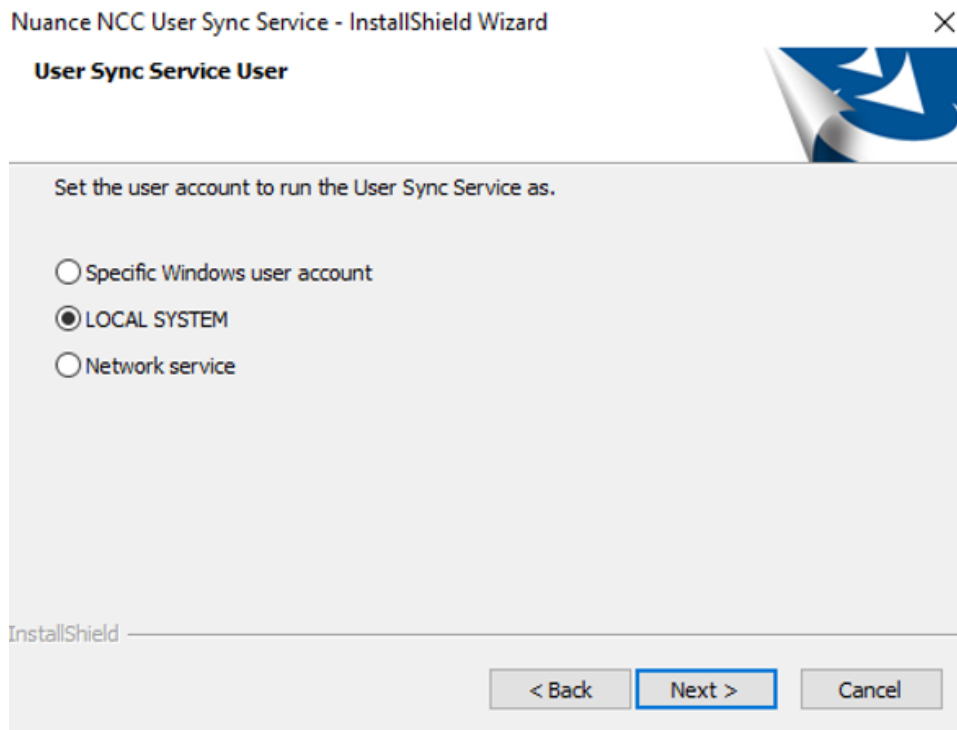


3. Click **Browse** to specify a custom installation location, or click **Next** to accept the default location.

The NMS Server screen appears.



4. Specify the URL of your NMC server.
 5. Click **Next**.
- The User Sync Service User screen appears.



6. Select the user account to access the server. The default value is **LOCAL SYSTEM**.

Note: If you are an on-premise customer, the user account must meet the following requirements:

- Has a corresponding user created in your organization in Nuance Management Center.
- The Nuance Management Center login matches the domain login of the user account chosen.

7. Click **Next**.

The Database Setup screen appears.

Nuance NCC User Sync Service - InstallShield Wizard

Database Setup

Set an admin level db user account with permission to create a database and setup tables and procedures etc.

Database server that you are installing to:

(local)

Connect using:

SQL Server authentication using the Login ID and password below

Login ID:

Password:

Name of database catalog:

Nuance.NCC.UserSyncC

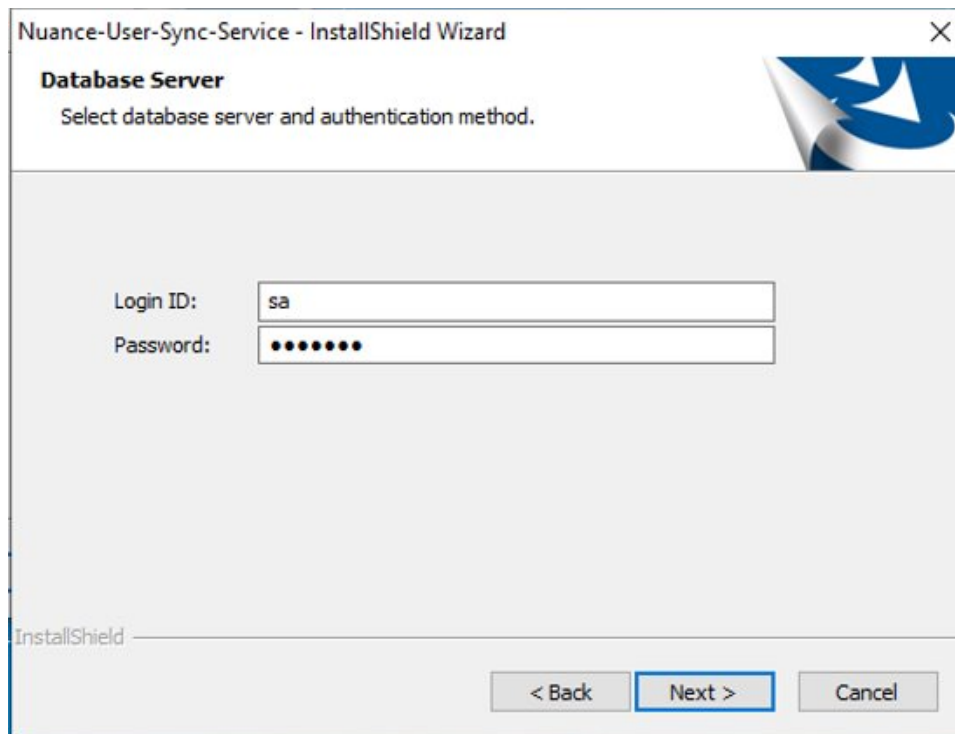
InstallShield

8. Specify the following:

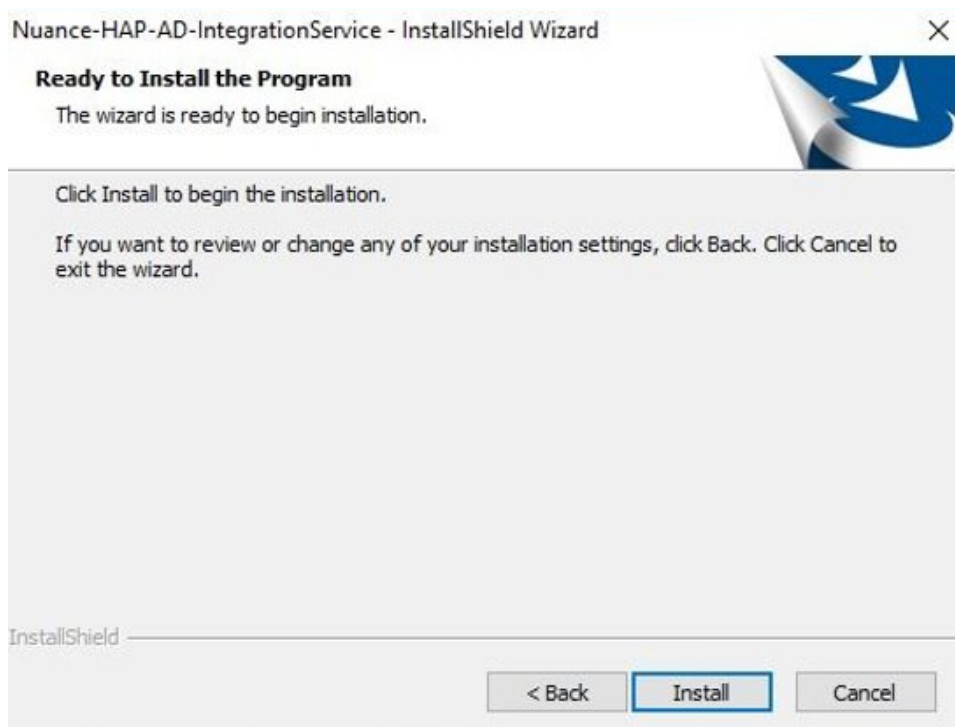
- **Database server**—Database server where you are installing the **Nuance NCC User Sync Service**.
- **Login ID and Password**—SQL Server credentials for the server where you are installing the **Nuance NCC User Sync Service**. These credentials should have permission to create a database and add tables and procedures to it.
- **Name of database catalog**—Default value is **Nuance NCC UserSync**.

9. Click **Next**.

The Database User screen appears.



10. Specify the login ID and password of the appropriate database user.
The **Nuance NCC User Sync Service** logs in to your database under this user.
11. Click **Next**.
The Ready to Install the Program screen appears.



12. Click **Install**.

The installation begins.

13. When the installation completes, click **Finish**.

Adding a non-administrator user to a group

During installation, if a non-administrator/low-privileged user is assigned for the **Nuance NCC User Sync Service** to run as, you must add that user to a group that has access to the user sync API endpoints.

For example:

1. Create a local Windows group or a domain group (for example, **UserSyncApiGroup**).
2. Grant access to the user sync API endpoints and add the user to the group:

```
c:\> netsh http add urlacl url=http://*:80/ user=UserSyncApiGroup
```

```
c:\> netsh http add urlacl url=https://*:443/ user=UserSyncApiGroup
```

Or, contact your internal IT group and request that the user has access to http and https endpoints.

Starting and testing the service

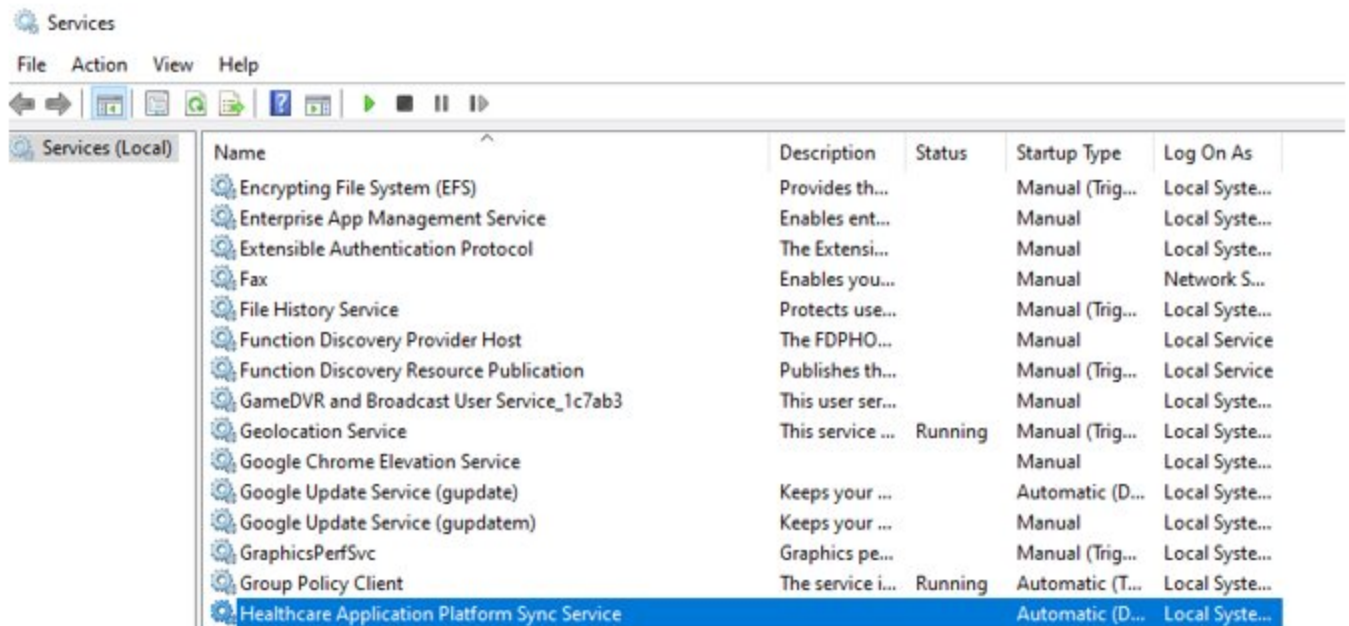
1. Start the **Nuance NCC User Sync Service**.

The installation may have already started the service. You can view the status in the Windows Service Control Manager panel.

2. Specify the following to test the service:

```
https://<ipaddress:port>/api/isalive
```

The following example shows the service when it has registered:



Installing and binding an SSL certificate

You can optionally host the Nuance NCC User Sync Service APIs on SSL/HTTPS. To do so, you'll need an SSL certificate signed by a Certificate Authority (CA). You can then install and bind the certificate using the netsh.exe Windows tool.

1. Install a signed SSL certificate in the default store for the user account under which the **Nuance NCC User Sync Service** will run.
2. Locate the certificate thumbprint.
For example **3178772c096f0a4662cas2bda5f6417b029ece1d**.
3. Use the thumbprint to bind the certificate to the port that the Nuance NCC User Sync Service will listen on, such as port 443.

For example:

```
netsh http add sslcert ipport=0.0.0.0:443 certhash=<Cert Thumbprint> appid={2534b6a5-bbd8-4a20-8bbb-50a866c977f1}
```

Advanced options

You can override some of the default values set by the installation in the `appsettings.json` file. To specify your own values, locate the appropriate section of the file described below and edit the values in **blue**.

Action	File Section
<p>Change the path to the log file</p> <p>Note: Be sure to escape the backslash.</p>	<pre>"Name": "EventLog", "Args": { "path": "C:\\Nuance\\Logs\\UserSyncMicroLog.OnPrem.json", "formatter": "Serilog.Formatting.Compact.RenderedCompactJsonFormatter, Serilog.Formatting.Compact", "rollingInterval": "Day", "rollOnFileSizeLimit": true, "fileSizeLimitBytes": 1048576, "flushToDiskInterval": "00:00:01" }</pre>
<p>Set the verbosity in the log</p> <p>Log levels are:</p> <ul style="list-style-type: none"> • Information • Warning • Debug • Error 	<pre>"MinimumLevel": { "Default": "Information", "Override": { "Microsoft": "Information", "System": "Information" } }</pre>
<p>Define a connection string the application can read and write to/from</p> <p>Note: Region is not required. You can specify any text for this value.</p>	<pre>"connectString": "Server=(localdb)\\MSSQLLOCALDB;Initial Catalog=NCC.UserSync;Persist Security Info=False;Integrated Security=true;MultipleActiveResultSets=False;Encrypt=False;TrustServerCertificate=False;Connection Timeout=30;", "Region": "USCentral", "IsPrimary": true, "IsReporting": false</pre>

Action	File Section
<p>(Optional) Define a secondary database (read-only replica of the primary database that the service reads)</p> <p>Note: Region is not required. You can specify any text for this value.</p>	<pre>"connectString": "Server=(localdb)\\MSSQLLOCALDB;Initial Catalog=HAP.UserSyncRead;Persist Security Info=False;Integrated Security=true;MultipleActiveResultSets=False;Encrypt=False;TrustServerCertificate=False;Connection Timeout=30; ", "Region": "USEase", "IsPrimary": false, "IsReporting": true</pre>
Set amount of time to wait before declaring pending user sync messages as expired	<pre>"UserSync": { "OnPremise": true, "TimeoutPollingIntervalMinutes": 60, "RequestTimeoutAfterXHours": 24, "OpenIdSettings": [</pre>
Specify alternative ports for the Nuance NCC User Sync Service to run on	<pre>"AllowedHosts": "*", "urls": "http://localhost:8118"</pre>

Additional notes

The following section provides additional information for organizations who want to secure their on-premise user deprovisioning installation with SSL.

- The authentication authority is the on-premise Nuance Management Center server.
- The on-premise **Nuance NCC User Sync Service** uses `http.sys` as the HTTP server.
- Use a `net .sh` command to set the SSL certificate for HTTPS.
For more information, see [“Installing and binding an SSL certificate” on page 1](#).
- Default startup ports are **80** and **443**.
- For on-premise customers, the on-premise flag must be set to true (`"OnPremise": true,`).
- Do not modify the keystore container GUID (`"KeystoreContainer": [value],`).
- If you use a custom, plain-text connection string in the `appsettings.json` file, be sure to comment out the `KeystoreContainer.json` element.
- If it becomes necessary to change your User Sync database password, you must re-run the **Nuance NCC User Sync Service** installation.

Enabling user deprovisioning

You enable user deprovisioning in the NMC console. You must have the appropriate grants to view, access, and change settings on this tab.

For more information, see [“System requirements—User deprovisioning”](#) on page 10.

To enable deprovisioning:

1. View an organization.
The Manage Organization page appears.
2. View organization details.
The Organization Details page appears.
3. Click the De-provisioning tab.

You must have the **Manage User Deprovisioning** grant to view and access this tab.

Organization Details - Warner_QA | HIM Systems | Organization Details - Nuance | Organizations | Home

Organization Details

General | Address | Products | **Deprovisioning** | Data Retention | Auto-provisioning | Organization Tokens | Central Authentication

Enable user deprovisioning

Notification Email Address

Require confirmation

LDAP Configuration

Server Name

Port Number

SSL Enabled Yes

Base DN

Group Distinguished Name

The following number of users have been identified for deprovisioning: 7 . To confirm or cancel, click: [here](#).

Disable users who cannot be found; otherwise these users are deleted

4. Select the **Enable user deprovisioning** option.
5. Provide the email address of the user to receive user deprovisioning notifications in the **Notification Email Address** field.
6. Optionally select the **Require confirmation** option.

Caution: Nuance recommends that you select this option when you initially enable deprovisioning to ensure that it has been configured correctly. Without requiring confirmation, user service may be impacted by incorrectly deleted or disabled user accounts due to misconfiguration.

For information on this setting, see [“User deprovisioning field descriptions”](#) on page 40.

7. Configure the LDAP settings for your server in the LDAP Configuration section.
For field information, see [“User deprovisioning field descriptions”](#) on page 40.

8. Optionally select the **Disable users who cannot be found** setting.

For more information on this setting, see [“User deprovisioning field descriptions”](#) on page 40.

9. Click **Save**.

Confirming users marked for deprovisioning

If the integration service finds users to deprovision and you selected the **Require confirmation** option, the following message appears below the LDAP Configuration section:

"System has identified [x] users for de-provisioning. To confirm or cancel the user deletion, click here."

Do the following to confirm the deprovisioning:

1. View an organization.
The Manage Organization page appears.
2. View organization details.
The Organization Details page appears.
3. Click the Deprovisioning tab.
4. Click the link below the LDAP Configuration section to open the Deprovisioned users dialog box.
5. Review the users and the proposed action, and then do one of the following:
 - Select specific users to deprovision.
Or
 - Click **Select All** to select all users.
6. Then, do one of the following:
 - Click **Confirm Deprovisioning** to deprovision selected users and revoke their product licenses.
Or
 - Click **Cancel Deprovisioning** to cancel the deprovisioning for selected users.

Appendix A: Field descriptions

User provisioning field descriptions	38
User deprovisioning field descriptions	40

User provisioning field descriptions

The following table describes the fields on the **Organization Details>Provisioning>Dragon Medical Server** tab and the **Organization Details>Provisioning>Dragon Professional** tab in the NMC console.

Field	Description
<p>None</p> <p>Enable auto-provisioning for this product</p> <p>Enable user provisioning for this product</p>	<p>Applies to: Dragon Medical Server only</p> <p>Select one of the following:</p> <ul style="list-style-type: none"> • None—Nuance Management Center does not provision users automatically. You must create them manually or import them on the User Accounts ribbon. • Enable auto-provisioning for this product—If selected, when token authentication is in use and users log in to a client product, Nuance Management Center creates users automatically when they do not already exist and assigns them a product license if one is available. If no licenses are available, Nuance Management Center still creates the user account. • Enable user provisioning for this product—If selected, when LDAP authentication is in use and users in a specific LDAP group log in to Dragon Medical One on-premise, Nuance Management Center creates users automatically when they do not already exist, grants them a product license, and assigns them to the Nuance Management Center group that you specify. If no licenses are available, Nuance Management Center still creates the user accounts.
<p>Enable user provisioning for this product</p>	<p>Applies to: Dragon Professional only</p> <ul style="list-style-type: none"> • Enable user provisioning for this product—If selected, when LDAP authentication is in use and users in a specific LDAP group log in to Dragon Professional on-premise, Nuance Management Center creates users automatically when they do not already exist, grants them a product license, and assigns them to the Nuance Management Center group that you specify. If no licenses are available, Nuance Management Center still creates the user accounts. <p>For information on enabling and configuring user provisioning, see the <i>User Provisioning and Deprovisioning Configuration Guide</i>.</p>

Field	Description
Add users to group	<p>Group to which Nuance Management Center assigns provisioned users.</p> <p>You must have selected the Enable user provisioning for this product option above.</p>
<p>LDAP Configuration</p> <p>The following fields appear only when the Enable user provisioning for this product option above is selected.</p>	
Server Name	Your Active Directory server address.
Port Number	LDAP server port number to which the user provisioning service can connect.
SSL Enabled	<p>If Yes, SSL is enabled.</p> <p>If No, SSL is not enabled.</p>
Base DN	<p>Root for searches in your LDAP tree, or point from which to start searching for users. Typically, this matches the root of your domain.</p> <p>Example: DC=acme,DC=com</p>
Bind User Name	User account that authenticates to your LDAP server.
Bind Password	Password for the Bind User Name.
Group Distinguished Name	<p>The distinguished name of the LDAP group the user provisioning service would look in to find users to provision.</p> <p>Example: CN=R-RadiologyGroup,CN=Users,DC=acmeco,DC=com</p>

User deprovisioning field descriptions

The following table describes the fields on the **Organization Details>Deprovisioning** tab in the NMC console.

Field	Description
Enable user deprovisioning	If selected, enables deprovisioning. If deselected, disables deprovisioning.
Notification Email Address	Email address of the user to receive deprovisioning notifications. The user receives the notifications when the following occur: <ul style="list-style-type: none"> • Success notification indicating the number of users flagged for deprovisioning. • Error message with the request transaction ID for troubleshooting.
Require confirmation	If selected, Nuance Management Center provides a list of users marked for Delete and Disable when the user comparison occurs, allowing you to first review and confirm, change, or cancel the action before users are deprovisioned. If deselected, Nuance Management Center deprovisions users automatically without requiring you to review and confirm the action. <div style="border: 1px solid #ccc; padding: 5px; background-color: #f9f9f9;"> <p>Caution: Nuance recommends that you select this option when you initially enable deprovisioning to ensure that it has been configured correctly. Without requiring confirmation, user service may be impacted by incorrectly deleted or disabled user accounts due to misconfiguration.</p> </div>
LDAP Configuration	
Server Name	Your Active Directory server address.
Port Number	LDAP server port number to which the user comparison app can connect.
SSL Enabled	If Yes, indicates the connection to your LDAP server is secured by SSL. If No, indicates the connection to your LDAP server is not secured by SSL.
Base DN	Root for searches in your LDAP tree, or point from which to start searching for users. Typically, this matches the root of your domain. Example: DC=acme,DC=com
Group Distinguished Name	The distinguished name of the LDAP group the integration service would look in to find users for the comparison process. Example: CN=RadiologyGroup,CN=Users,DC=acmecom,DC=com
Disable users who cannot be found	If selected, users are disabled when the users exist in Nuance Management Center but do not exist in your user directory. If deselected, users are deleted when the users exist in Nuance Management Center but do not exist in your user directory.

Field	Description
	<p data-bbox="544 222 1429 289">Nuance Management Center revokes the product licenses from both disabled and deleted users.</p> <p data-bbox="544 310 852 338">Default value: Deselected</p>

Appendix B: Troubleshooting

Troubleshooting your on-premise deployment	43
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Troubleshooting your on-premise deployment

Error	Solution
<p>The prefix 'http://*:80/' is already registered.</p> <p>Or</p> <p>The prefix 'https://*:443/' is already registered.</p>	<p>When you install Nuance-NCC-User-Sync-Service.exe on a machine that is also running IIS, you may see these errors when the Nuance NCC User Sync Service starts. To resolve these errors, configure the Nuance NCC User Sync Service to use different ports.</p> <p>Edit the appsettings.json file and add the following line:</p> <pre>"urls" : "https://localhost: 9999;http://localhost:8888"</pre> <p>Change the values in blue to the appropriate ports for HTTP and HTTPS.</p> <p>For more information on the appsettings.json file, see “Advanced options” on page 32.</p> <div style="background-color: #f0f0f0; padding: 5px; border: 1px solid #ccc;"> <p>Note: This is a top-level element.</p> </div>
<p>Error: The target principal name is incorrect.</p>	<p>You might see this error when the Nuance NCC AD Integration Service starts and is unable to negotiate credentials with the NMC server for the user it is running under. You specified this user in step 7 of the Nuance-NCC-AD-IntegrationService.exe installation.</p> <p>To resolve this error, you must assign a Service Principal Name (SPN) to the user. An SPN is required for Kerberos authentication.</p> <p>For example:</p> <pre>setspn -s HTTP/nmsserver.domain.local domain\serviceuser</pre>