Nuance Management Center Server installation and configuration guide

For:

Nuance[®] Dragon[®] Professional Group

Nuance® **Dragon® Legal** Group

Nuance[®] Dragon[®] Law Enforcement



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We strongly urge current owners of Nuance products that include optional system password features to verify that these features are enabled! You can call our support line if you need assistance in setting up passwords correctly or in verifying your existing security settings.

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Guide overview

This guide contains installation and configuration instructions for on-premise NMC servers. It also contains instructions for configuring single-sign-on authentication, which you can implement regardless of whether you are hosting your own NMC server on-premise or using Nuance's cloud-hosted NMC server. Use the following table to determine the chapters that are applicable to you:

NMC server type	Applicable chapters	
On-premise	All, except chapter 7	
Nuance cloud-hosted	1, 6, 7 Also see "Opening required ports" on page 13 for information on opening port 443.	

Note: This guide describes only the NMC server installation and single sign-on configuration. When you have completed the NMC server installation, you must then install Dragon clients and configure them for Nuance Management Center. For Dragon client installation and configuration, see the *Dragon Client Installation Guide*.

Audience

This guide is intended for IT administrators, database administrators, and Dragon administrators whose responsibility is to perform the following:

- Install and configure an on-premise NMC server.
- Set up and manage single sign-on user authentication.
- Install and manage a SQL Server database.

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

Additional resources

The following resources are available in addition to this guide to help you manage your Dragon installation.

Documentation

Document	Description	Location
Dragon Group Citrix Administrator Guide	Hardware, software, and network requirements for deploying Dragon in a network of client computers that connect to a Citrix server to access published applications.	Dragon Support web site
Nuance Management Center Administrator Guide	Information on creating and maintaining objects and managing Dragon clients from the Nuance Management Center (NMC) console.	Dragon Support web site
Nuance Management Center Help	Instructions for configuring and managing the Nuance Management Center (NMC) consoleand Dragon clients.	When Nuance Management Center is open, click the NMC console Help button (()).
Dragon client Help	Commands and instructions for dictating, correcting, and more with the Dragon client.	When Dragon is open, click the Help icon (?) on the DragonBar, and then select Help Topics .
Dragon Release Notes	New features, system requirements, client upgrade instructions, and known issues.	Dragon Help. Do the following: 1. When Dragon is open, click the Help icon (?) on the DragonBar, and then select Help Topics. 2. Click Get started. 3. Click Dragon

Description	Location
	release notes.
	Description

Training

Nuance provides several Dragon training offerings, like webinars, demos, and Nuance University online training courses. For more information, see the Dragon Support web site.

Support

The Dragon Support web site provides many resources to assist you with your Dragon installation, like forums and a searchable knowledgebase. For more information on Support offerings, see the Dragon Support web site at:

https://www.nuance.com/dragon/support/dragon-naturallyspeaking.html

Chapter 1: Introduction

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About Nuance Management Center

Nuance Management Center allows Dragon administrators to manage all Dragon Group clients from a single central console. The console, called the Nuance Management Center (NMC) console, allows you to do the following:

- Configure options for clients at the site and group level
- Centrally manage your Dragon product licensing
- Share data, like words and auto-text commands, with Dragon clients and across other Nuance products
- Audit user session events
- Monitor client usage and trends through reporting

You can choose to install, configure, and maintain your own Nuance Management Center (NMC) server onpremise, or you can use the Nuance cloud-hosted NMC server.

Physical architecture

The physical configuration of Nuance Management Center includes:

- **Application server**—Consists of the NMC server, NMC console, and upon initial installation, the database instance. Your application server can be:
 - A single physical machine (smaller installations)
 - Multiple physical machines load-balanced by a network traffic switch (larger installations)
- Database server(optional)—Hosts the SQL database that stores your data, like sites, licenses, and words. Initially, the installation process installs the database and the other NMC components on the same physical machine. However, you can optionally move your database instance after the installation completes to a separate database server.
- **Dragon clients**—Client computers with Dragon installed. Users log in to Dragon on their client computers which connect to the NMC server to access shared words and commands.

Chapter 2: Installation checklist

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Checklist—Planning the server installation

If you are installing and managing your own Nuance Management Center (NMC) server and database server on-premise, use this checklist to help you prepare for the installation.

When you finish installing the server, see the *Nuance Management Center Administrator Guide* for the NMC console setup checklist. You must also install Dragon clients if you are a new Dragon customer.

Server	Task	Reference
NMC server and database server	Ensure all system requirements have been met.	"Software requirements—Server" on page 7
NMC server and database server	Ensure all prerequisites have been met.	"Server installation prerequisites" on page 10
NMC server	Obtain the required server software.	"Obtaining required server software" on page 12
NMC server and database server	Ensure required ports are open.	"Opening required ports" on page 13
Database server	Install the SSL certificate.	"Installing and binding the SSL certificate" on page 23
NMC server and database server	Install the required software.	"Installing SQL Server" on page 15
NMC server	Run the NMS_SuiteInstaller.exe file to install the NMC server, NMC console, and database instance.	"Installing Nuance Management Center" on page 16
NMC server	If you're using multiple NMC servers, configure your network traffic switch.	"Configuring your network switch" on page 29
NMC server	Verify that the NMS Platform service is running.	"Verifying the NMS Platform service is running" on page 28
NMC server	Log in to the NMC console. If you're using a network traffic switch, ensure you access the NMC console using the name or address of the switch in the URL.	"Logging in to the NMC console" on page 30
Database server	Determine your database backup method.	"Determining your database backup method" on page 31

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Software requirements—Server

If you're hosting your own Nuance Management Center (NMC) server and database server on-premise, you must first download the Nuance Management Center installation package. When you purchase Nuance Management Center, Nuance sends you an email with a link to download the package. You must then ensure that your servers meet the following software requirements.

Application server and database server

The following table provides software requirements for the following scenarios:

- Your application server and database server are separate physical machines.
- Your application server and database server are on the same physical machine.

Feature	Application server	Database server	Combined application and database server
Operating system	 One of the following: Microsoft® Windows Server 2008 R2, Service Pack 1, Service Pack 2 Microsoft® Windows Server 2008 R2, 32-bit and 64-bit Microsoft® Windows Server 2008 R2 64 bit Service Pack 2 Microsoft® Windows Server 2012 Microsoft® Windows Server 2012 R2 (64 bit) Ensure you have all current service packs installed. 	One of the following: Microsoft® Windows Server 2008 R2, Service Pack 1, Service Pack 2 Microsoft® Windows Server 2008 R2, 32-bit and 64-bit Microsoft® Windows Server 2008 R2 64 bit Service Pack 2 Microsoft® Windows Server 2008 R2 64 bit Service Pack 2 Microsoft® Windows Server 2012 Microsoft® Windows Server 2012 Microsoft® Windows Server 2012 R2 (64 bit) 	 One of the following: Microsoft® Windows Server 2008 R2, Service Pack 1, Service Pack 2 Microsoft® Windows Server 2008 R2, 32-bit and 64-bit Microsoft® Windows Server 2008 R2 64 bit Service Pack 2 Microsoft® Windows Server 2012 Microsoft® Windows Server 2012 R2 (64 bit) Ensure you have all current service packs installed.
Windows components	Microsoft .NET Framework 3.5, including the ASP.NET component	None.	 Microsoft .NET Framework 3.5, including the ASP.NET component

Feature	Application server	Database server	Combined application and database server	
	 Microsoft .NET Framework 4.5.2, including the ASP .NET component Both version 3.5 and 4.5.2 are required to install Nuance Management Center successfully. Internet Information Services (IIS) 7, 7.5, or 8.0 		 Microsoft .NET Framework 4.5.2, including the ASP .NET component Both version 3.5 and 4.5.2 are required to install Nuance Management Center successfully. Internet Information Services (IIS) 7, 7.5, or 8.0 	
Database	None.	 SQL Server 2008, 2012, or 2014 	 SQL Server 2008, 2012, or 2014 	
Security	 SSL certificate, signed by a third party certificate authority Nuance Management Center does not support self-signed certificates. For more information on SSL certificates, see "Installing and binding the SSL certificate" on 	None.	 SSL certificate, signed by a third party certificate authority Nuance Management Center does not support self-signed certificates. For more information on SSL certificates, see "Installing and binding the SSL certificate" on 	
	binding the SSL certificate" on page 23.		binding the SSL certificate" on page 23.	

NMC console

- Microsoft Internet Explorer 10 or 11, or latest version of Chrome
- Microsoft .NET Framework 3.5
- Microsoft .NET Framework 4.5.2

Both version 3.5 and 4.5.2 are required to install Nuance Management Center successfully

Hardware requirements—Server

If you're hosting your own Nuance Management Center (NMC) server and database server on-premise, ensure the servers meet the following hardware requirements.

For every 1,000 users:

- One Quad-Core physical server to host the SQL database, NMC server, and NMC console
 - Processor: Quad-Core 2 GHz CPU
 - Minimum RAM: 8 GB
 - Core Application Disk Storage: 40 GB for the NMC server
- If using Roaming user profiles: A server, separate machine, or RAID array to host the Master user profiles directory
 - Processor: Intel® Pentium 4® or later, or AMD Athlon 64 or later
 - CPU: 1 GHz minimum (2.4 GHz recommended)
 - **RAM**: 8 GB
 - Cache: 512 KB minimum L2 Cache (1 MB recommended)
- One Database Server
 - Processor: Dual-Core 2GHz CPU
 - Minimum RAM: 8 GB

Server installation prerequisites

In addition to the system requirements, you'll also need the following.

Application server and database server

Prerequisite	Server	Additional Information	
Windows	Application	All services should run under this account.	
administrator account		This account must also meet the following requirements:	
		 Is an administrator account in the workgroup (single-tier) or in the domain (two-tier) 	
		Account and password never expire	
		Has rights to install software	
		Has rights to install, create, and start a Windows service	
		Has full read/write access to the database server, and to all servers in the network	
		You provide this account name and password during the server installation.	
		To allow this account to launch the services upon installation completion, you must set it up with Log on as Service rights.	
Computer name or IP address of your server	Application and database	Must be provided during the NMC server installation.	
Directory permissions	Application and database	Assign full read/write/modify permissions to the directories where the NMC server, NMC console, and database server are installed.	

NMC console

Prerequisite	Additional Information		
Full trust privileges	None.		

Other considerations

Consider the following while you prepare for your NMC server installation.

Network bandwidth recommendations

Nuance recommends the following network bandwidth speeds for Nuance Management Center.

Number of clients	Minimum network speed	
100	10 Mbps	
>100	100 Mbps	

Using a network traffic switch

If you have a large organization and you're implementing more than one NMC server, you can include a network traffic switch in your network to balance the load on the servers.

Component	Setting
Network Interface Card (NIC)—Gigabit cards	Automatic. Switches and gigabit cards must have the same setting.
Network Interface Card (NIC)— 10/100Mb cards	Network link speed and duplex must be set the same on all servers, workstations, and other network equipment, or performance and recognition degradation could occur.
Network speed—100 Mbps	Full Duplex

The following table describes the recommended settings for your device.

Obtaining required server software

The following server software is required. You can obtain all software from microsoft.com.

- Microsoft .NET Framework 3.5
- Microsoft .NET Framework 4.5.2

Both version 3.5 and 4.5.2 are required to install Nuance Management Center successfully.

- SQL Server 2008, 2012, or 2014
- One of the following:
 - Microsoft® Windows Server 2008, Service Pack 1, Service Pack 2
 - Microsoft® Windows Server 2008 R2, 32-bit and 64-bit
 - Microsoft® Windows Server 2008 R2 64 bit Service Pack 2
 - Microsoft® Windows Server 2012
 - Microsoft® Windows Server 2012 R2 (64 bit)

Opening required ports

Port	Location	Description
389 TCP	NMC server	Allows communication between the NMC server and your Active Directory, if you are using single sign-on authentication.
443	NMC server	Allows communication between Dragon clients and the NMC server. Also allows communication between NMC console workstations and the NMC server.
		You must open port 443 regardless of whether you are using the Nuance cloud-hosted NMC server or you're hosting your own NMC server on-premise.
1433 Custom	Database server	Allows communication between the NMC server and the database server if they are on separate physical machines.

You must open the following ports to allow communication between components.

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Installing SQL Server

Install SQL Server according to the product instructions. On the screens indicated below, specify the settings recommended for Nuance Management Center.

- 1. On the Feature Selection screen, select the following features:
 - Database Engine Services
 - Management Tools Basic
 - Management Tools Complete
- 2. On the Instance Configuration screen, ensure the Default instance option is selected.
- 3. On the Server Configuration screen, select Use the same account for all SQL Server Services.
 - 1. Enter the username and password of the Windows user account under which the SQL Server services should run. Use the same account under which NMS services run.

If your application server and database server are on the same physical machine, Nuance recommends using an account in a workgroup.

- 2. Enter the password that other servers and clients on the Dragon network use to access the database.
- 4. On the Database Engine Configuration screen:
 - Add at least three user accounts to administer the SQL database, including the account you created to run all NMS services.
- 5. On the **Reporting Services Configuration** screen, select **Install the native mode default configuration**.
- 6. If the **Complete with failures** screen appears, save the log to a location where you can retrieve it.

Nuance Technical Support can use this log file if any network issues arise.

Installing Nuance Management Center

You install all Nuance Management Center components on the same machine using a single installation wizard. When the installation is complete, you can optionally move the database instance to a different server if your database server is a separate physical machine.

1. On the NMC server (for single-node installations) or each node (for multiple-node installations), run NMS_SuiteInstaller.exe.

The installation wizard opens, and the Choose Setup Language screen appears.

- 2. Select a language from the drop-down list, and then click Next.
- 3. Accept the license agreement, and then click Install.

The wizard installs several components, and then the Customer Information screen appears.

NMS Platform - InstallShield Wizard	×
Customer Information Please enter your information.	Z
Please enter your name and the name of the company for which you work.	
User Name:	
Some User	
Company Name:	
Some Company	
w is light of f	
InstallShield	Cancel

4. Enter a user name and company name, and then click Next.

The Choose Destination Location screen appears.

NMS Platform - InstallShield Wizard	×
Choose Destination Location Select folder where setup will install files.	
Setup will install the Nuance Management Server Platform in the following folder.	
To install to this folder, click Next. To install to a different folder, click Browse and select another folder.	
Destination Folder	
C:\Program Files (x86)\Nuance\NMS Platform\	
InstallShield	
< <u>B</u> ack Cancel	

5. Choose where to install the NMS platform (default recommended), and then click Next.

The Setup Type screen appears.

NMS Platform - InstallShield Wizard	×
Select the setup type that best suits your needs.	No.
Select the Deployment option	
On a server with an SSL certificate installed directly on that server	
\bigcirc Behind a networking device with an SSL certificate installed	
InstallShield	Cancel

- 6. Choose a setup configuration:
 - On a server with an SSL certificate installed directly on that server—Select if you are performing a single-node installation.
 - Behind a networking device with an SSL certificate installed—Select if you are performing a multi-node installation.

Click Next. The Database Server screen appears.

NMS Platform - InstallShield Wizard	×
Database Server Select database server and authentication method.	
Database server that you are installing to: (local) Connect using: © Windows authentication	▼ Browse
© SQL Server authentication using the Login ID	and password below
Login ID: sa	
Password:	
InstallShield	
	< <u>Back N</u> ext > Cancel

- 7. Enter the required database information:
 - 1. Enter the machine name or IP address of the physical server where you have installed the SQL database server software.

The wizard creates the database and its backup directory in default locations on that server automatically.

- 2. Select a method of validating connections to the server:
 - Windows authentication—Use a Windows login and password to authorize access.
 - SQL Server authentication—Use a SQL Server login and password.

Choose the same type of authentication for access to the database that you chose when you installed SQL Server.

- If you selected SQL server authentication, enter the database administrator login name and password.
- 4. Click Next.

NMS Platform	InstallShield Wizard			×
Organizatior	n ld:			Z
Please ente	r your Organization Identifier.			
ld:				
InstallShield ——		< <u>B</u> ack	<u>N</u> ext >	Cancel

The Organization ID screen appears.

8. Enter the unique ID that Nuance assigned to your organization, and then click Next.

You should have received this ID with your Dragon welcome information.

Later, you can access your organization ID in the NMC console.

The Enter new password for NMC screen appears.

NMS Platform - InstallS	hield Wizard	×
Enter new password	for NMC	
Please enter the passv	vord to be used for the 'administrator' login to NMC for the system	
Password		
Confirm Password		
InstallShield	< <u>B</u> ack <u>N</u> ext > Ca	incel

9. Enter a password for the NMC administrator account, and then click Next.

You use the administrator login (**admin** by default) and this password when you log into the NMC console.

The Setup Type screen appears.

IMS Platform - InstallShield Wizard X Setup Type Select the setup type that best suits your needs.
Specify the user account to be used by this server.
Specific Windows user account
C LOCAL SYSTEM
nstallShieldCancel

10. Select the account type under which theNMS service will run, and then click **Next**.

The Service logon screen appears.

NMS Platform - Inst	allShield Wizard
Service logon	
Please enter the user account under which the NMS process will validate the account entered. This proceuser name:	
Password:	Browse
Select the button below to specify information abo created during the installation. New User Information	out a new user that will be
InstallShield	< Back Next > Cancel

11. Enter the user name and password of the Windows user account under which NMS will run, then click **Next**.

The Choose Destination Location screen appears.

NMC - InstallShield Wizard	×
Choose Destination Location Select folder where setup will install files.	
Setup will install NMC in the following folder.	
To install to this folder, click Next. To install to another folder.	a different folder, dick Browse and select
Destination Folder C:\inetpub\wwwroot\NMCHTML\ InstallShield	Browse < Back Next > Cancel

12. Choose where you want the install wizard to install the NMC console (default recommended), and then click **Next**.

The wizard installs the NMC console.

- 13. When the installation is complete, click **Finish**.
- 14. If the Windows Server 2008, 2012, or 2012 R2 firewall was turned on during the installation, you must now open port 443 to allow the NMC console to communicate with the NMS platform.

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Installing and binding the SSL certificate

About certificates

Using SSL requires that you obtain a signed SSL certificate. Nuance Management Center does not support self-signed certificates. You can obtain signed certificates from certificate authorities, such as GoDaddy or Verisign. The certificate authority must be a trusted authority known to both the client computer and the server via a root certificate. To obtain a signed certificate, you'll need to provide information to the certificate authority about your organization and the server on which you are installing the certificate in the Certificate Signing Request (CSR). Each certificate authority may require different information. Typically, the information can include the following:

- Organization name
- Organization location information, such as town and state
- · Computer name for the server on which you are installing the certificate
- Extended Key Usage value, such as 2.5.29.37. Extended key usage further refines key usage extensions, which define the purpose of the public key contained in the certificate.
- Key Size, such as 2048 bits or 4096 bits. Determines the length of the public key in the certificate. A longer key provides stronger security. You determine the level of security that is appropriate for your environment.

You obtain this information from your IT department, or from the person who installed and configured your server.

All SSL Certificates require a private key to work. The private key is a separate file that's used in the encryption and decryption of data sent between your server and the connecting clients. A private key is created by you—the certificate owner—when you request your certificate with a Certificate Signing Request (CSR). The Certificate Authority providing your certificate (such as DigiCert) does not create or have your private key.

For more detailed information on installing SSL certificates, see:

http://msdn.microsoft.com/en-us/library/ms733791.aspx

Install the SSL certificate—Installing on the server

Clients contact the Local Authenticator on the standard HTTP ports 80 and 443.

1. Install an SSL certificate in the Personal Store under the Local Computer section for the "logon as" user account under which the NMS service is running.

To add the Certificates Snap-in and view the certificates installed on the local computer, see https://technet.microsoft.com/en-us/library/cc754431(v=ws.11).aspx.

Console1 - [Console Root\Certificates - Current Use	er\Personal]	-	- 0 ×				
🚟 File Action View Favorites Window Help							
Console Root	Object Type	Actions					
Certificates - Current User	Certificates	Personal					
 Personal Trusted Root Certification Authorities Enterprise Trust Intermediate Certification Authorities Active Directory User Object Trusted Publishers Untrusted Certificates Third-Party Root Certification Authorities Trusted People Other People Certificate Enrollment Requests Smart Card Trusted Roots 		More Actions	•				
	<						
Personal store contains 2 certificates.							

2. Note the subject of the certificate.

This should match the computer name that the certificate is deployed on, or be a wild card. This must match exactly the host used in the endpoints. For information on viewing the subject, see https://technet.microsoft.com/en-us/library/cc754686(v=ws.10).

ertificate	?				
General Details Certification Path	1				
Show: <all></all>	V				
Field	Value 🔺				
Version	V3				
Serial number	05 e2 f4				
E Signature algorithm	sha 1RSA				
EIssuer	Equifax Secure Certificate Aut				
Valid from	Monday, June 26, 2006 10:23				
🖃 Valid to	Monday, August 25, 2008 10:				
🚍 Subject	www.mysite.com				
Public key	RSA (1024 Bits) 👻				
CN = www.mysite.com OU = Internet Sales					
O = Gotham Book Company LLC legal name L = Atlanta S = Georgia					
	it Properties,				
	ОК				

3. Copy the thumbprint of the certificate. You use the thumbprint to bind the certificate to the port used by the primary NMS services in the next step.

For information on retrieving the thumbprint, see https://msdn.microsoft.com/en-us/lib-rary/ms734695.aspx.

Certificate								×		
General	Details	Certifi	cation Path	ı						
Show:	<all></all>				*					
Pu Su Ke	bject blic key bject Ke y Usage sic Cons		er	Value GlobalS RSA (2 60 7b 6 Certific Subject	048 Bit 56 1a 4 ate Sig	ts) 15 Od gning,	97 ca , Off-	a 89 50 -line CF) 2	^
Th Th Fri	Basic Constraints Subject Type=CA, Path Lengt Thumbprint algorithm sha1 Thumbprint b1 bc 96 8b d4 f4 9d 62 2a a8 Friendly name GlobalSign					~				
	⊯c 96 4 1d		f4 9d	62 2a	. a.8	9a	81	f2 1	.5 (1
			E	dit Prope	rties		Cop	py to F	ile	
									OK	:

- 4. Verify that the UseSSL setting is set to true (this should have been done by the installer):
 - a. In Nuance.NMS.Server.exe.config, located in the NMS Platform installation folder, find the line near the top that contains the key="UseSSL" tag.
 - b. Change the value to true:

<add key="UseSSL" value="true"/>

- 5. Bind the SSL certificate under IIS to port 443.
 - a. In the IIS Manager, from the left panel, click Default Web Site.
 - b. From the right panel, click **Bindings...**.

The Site Bindings dialog box opens.

c. Click Add.

The Add Site Binding dialog box opens.

- d. From the Type drop-down list, select https.
- e. From the SSL certificate drop-down list, select the certificate that you installed.

f. Click OK.

The Site Bindings dialog box appears. Ensure that the binding is displayed correctly.

6. Restart the NMS Platform server to allow any configuration changes to take effect.

Install the SSL certificate—Installing on a load balancing switch

Nuance uses this mode when the NMC server is behind a load balancing switch that also decrypts SSL. In this scenario, the load balancing switch would strip the SSL encryption and forward the messages on to the appropriate NMC server. Inside the firewall, these messages would be unencrypted, and the NMC server would receive them as HTTP with no SSL encryption.

This should only be configured by experienced networking personnel. It requires in-depth knowledge about load-balancing switches, which is outside the scope of this guide.

- 1. Verify that UseSSL is set to false (this should have been done by the installer):
 - a. In Nuance.NMS.Server.exe.config, located in the NMC Platform installation folder, find the line near the top that contains the key="UseSSL" tag.
 - b. Change the value to false:

<add key="UseSSL" value="false"/>

2. Restart the NMC server to allow the configuration changes to take effect.

Testing and troubleshooting your SSL configuration

Run these tests on a different computer. Do not run them on the NMC server.

Use the browser

- 1. Can you access and log into the NMC console?
 - a. Connect to https://<*SERVER_NAME*>/NMCHTML/.

If you see the Nuance Management Center login page, port 443 is working, and the NMC console is being deployed properly.

- b. Log in to the NMC console. If successful, the console is able to communicate with the server.
- 2. Can you access the NMC console status interface?
 - Connect to https://<SERVER_NAME>/NMS/Platform/ConfigurationSvc/v1/Status. An XML response should appear in the browser.
- 3. Can you make RESTful web service calls?

Attempt to create an NMS session using the browser.

a. Connect to https://<SERVER_NAME>/NMS/Platform/AuthenticationSvc/ v1/ValidateCredentials?location=Test&productGuid=9D62C366-6F85-4C4C-9333-6FE21798D7F4

A prompt for a login and password appears.

- b. Use any valid NMC console login and password.
- c. If some XML is returned, the NMC console is configured properly and working with SSL.

- 4. Can you access the NMS API Help pages?
 - 1. Connect to https://<SERVER-NAME>/NMS/Platform/UserManagementSvc/v1/help
 - 2. Enter any credentials if prompted.
 - 3. An HTML page with help for one of the NMS API sets should appear. If you see this help, the NMC server is configured and working properly.

Check the Bindings

If the NMC console is not working, ensure that the ports are properly bound to the SSL certificate. To do this, specify the following from the command prompt:

netsh http show sslcert

Verify that port 443 is bound to the certificate.

Verifying the NMS Platform service is running

When the installation completes, the NMS Platform service starts automatically if the Windows administrator account under which it is running has the correct privileges. Post-installation, you should verify that the service is running.

To verify, do the following:

- 1. Open the Services dialog box.
 - a. Click the Windows Start menu.
 - b. In the Search field, enter services.msc, and then press Enter.
 - c. Specify your administrator username and password when prompted.
- 2. Locate the NMS Platform service.

If the service is not running, you must start it manually.

Starting the NMS Platform service manually

Before starting the service manually, verify that the Windows administrator account has the correct privileges. For more information, see "Server installation prerequisites" on page 10.

If the account has the correct privileges, do the following to start the service manually:

- 1. Open the Windows Control Panel.
- 2. Click Administrative Tools.
- 3. Double-click Services.

The Services window opens.

4. Locate the NMS Platform service, and then right-click the service and select Properties.

The NMS Platform Properties dialog box opens.

- 5. From the Startup type drop-down list, select Automatic.
- 6. Click the Start button to start the service.
- 7. Click OK.

The dialog box closes.

Configuring your network switch

If you have multiple NMC servers in your environment, you can use a network traffic switch to balance the incoming client activity among your servers. You can configure the switch to make an API call periodically to your servers to ensure they are operational.

Configure the switch to make the following API call:

```
https://<NMS-Server-Name>:443/Nuance.NMS.Services/
NMSServiceStatus/Rest/Status
```

If operational, the NMC servers return the following XML response:

```
<ServiceStatusResponse xmlns=

"http://schemas.datacontract.org/2004/07/Nuance.NAS.Connector.

DictationTranscription" xmlns:i="http://www.w3.org/2001/

XMLSchema-instance">

        <Status>Running</Status>

        <ServerDateTimeUTC>2010-12-13T20:50:13.0969590Z

        </ServerDateTimeUTC>

        <InterfaceType>basicHttpTransport</InterfaceType>

</ServiceStatusResponse>
```

If the servers are down, the switch receives an error. If the switch receives anything other than the expected response, the switch can tag a specific server as down and reroute network traffic.

Logging in to the NMC console

Ensure you can log in to the NMC console using the administrator login and password.

If you have multiple NMC servers in your environment and you are using a network traffic switch to balance the load, ensure you substitute the name or IP address of the switch for the NMC server name in the URL when you access the NMC console.

- 1. Open a browser.
- 2. Enter the NMC console URL in the address bar.

You should have received this address in your welcome email from Nuance. The URL is in the format: https://<servername>/nmchtml

3. Enter the following information:

User Name: admin

Password: The password you specified for the administrator account during the installation.

4. Click Login.

The NMC console opens.

Determining your database backup method

The NMC server schedules database backups automatically. However, you can choose to manage database backups yourself and disable the automatic backups. You should determine your database backup method before users begin regular Nuance Management Center use.

For more information on Nuance Management Center database backups, see "About database backups" on page 57.

Configuring the Dragon client for use with Nuance Management Center

When you have finished the NMC server installation and configuration, you must install Dragon clients if you have not already done so, and then configure the Dragon clients for use with Nuance Management Center.

For more information on configuring Dragon clients for use with Nuance Management Center, see the "Configuring the Dragon client for Nuance Management Center" chapter in the *Dragon Client Installation Guide*.

Chapter 6: Preparing for your Active Directory single sign-on configuration

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Other requirements	
Checklist—Planning the single sign-on setup	35
Creating an NMC console Administrator user for Active Directory	
Setting the Active Directory connection string	
Creating and configuring user accounts for single sign-on	
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Single sign-on overview

You can optionally implement Active Directory single sign-on authentication rather than using the native Nuance Management Center authentication. With single sign-on, users can simply use their Windows login and password to access the Dragon client and other applications.

Ideally, you should decide to use single sign-on before you install Dragon clients, as you can configure some of the required settings during a batch or push install. However, it is possible to enable single sign-on after client installation.

Both on-premise customers and customers using the Nuance cloud-hosted NMC server can implement single sign-on.

Before you begin

Review the following before beginning your single sign-on configuration.

Software requirements

Cloud NMC server

Local Authenticator service

You download the Local Authenticator installation file from your NMC console. For more information, see "About the Local Authenticator" on page 43.

- Server on which to install the Local Authenticator with the following:
 - Latest version of the Microsoft .NET Framework installed
 - One of the following operating systems:
 - Microsoft® Windows Server 2008 R2, Service Pack 1, Service Pack 2
 - Microsoft® Windows Server 2008 R2, 32-bit and 64-bit
 - Microsoft® Windows Server 2008 R2 64 bit Service Pack 2
 - Microsoft® Windows Server 2012
 - Microsoft® Windows Server 2012 R2 (64 bit)
- SSL certificate, signed by a third party certificate authority

Nuance Management Center does not support self-signed certificates.

On-premise NMC server

None. On-premise installations do not require the Local Authenticator for single sign-on.

Other requirements

• When you create user accounts in the NMC console, each user's login must match that user's Windows Domain login exactly.

For more information on creating user accounts, see the *Nuance Management Center Administrator Guide*.

Checklist—Planning the single sign-on setup

If you're using single sign-on authentication, use these checklists to help you prepare for the configuration.

Cloud NMC server

If you're using the Nuance cloud-hosted NMC server, use this checklist to help you prepare for the configuration.

Task	Reference
Review software requirements	"Software requirements" on page 35
Ensure port 389 TCP is open.	"Opening required ports" on page 13

Task	Reference
Create an NMC console administrator account for Active Directory	"Creating an NMC console Administrator user for Active Directory" on page 38
Set the Active Directory connection string	"Setting the Active Directory connection string" on page 39
Create and configure user accounts in the NMC console	"Creating and configuring user accounts for single sign-on" on page 40
Run the SetSPN.exe Windows utility	"Running the SetSPN.exe Windows utility" on page 41
Download the Local Authenticator	"Downloading the Local Authenticator" on page 44
Create an organization token	"Creating organization tokens" on page 45
Install and bind the SSL certificate on the Local Authenticator server	"Installing and binding the SSL certificate" on page 46
Install the Local Authenticator	"Installing the Local Authenticator" on page 50
Edit the Local Authenticator configuration file	"Editing the configuration file" on page 54
Start the Local Authenticator service	"Starting the Local Authenticator service" on page 55
Associate Dragon clients with the Local Authenticator	See the "Configuring the Dragon Client for Nuance Management Center" chapter in the <i>Dragon Client Installation</i> <i>Guide</i> .
	This step assumes you have already installed Dragon clients.

On-premise NMC server

If you're hosting your own NMC server on-premise, use this checklist to help you prepare for the configuration.

Task	Reference
Ensure port 389 TCP is open.	"Opening required ports" on page 13
Create an NMC console administrator account for Active Directory	"Creating an NMC console Administrator user for Active Directory" on page 38
Set the Active Directory connection string	"Setting the Active Directory connection string" on page 39
Create and configure user accounts in the NMC console	"Creating and configuring user accounts for single sign-on" on page 40
Run the SetSPN.exe Windows utility	"Running the SetSPN.exe Windows utility" on page 41

	Task	Reference
٦	Associate Dragon clients with the NMC server	See the "Configuring the Dragon Client for Nuance Management Center" chapter in the <i>Dragon Client Installation</i> <i>Guide</i> .
		This step assumes you have already installed Dragon clients.

Creating an NMC console Administrator user for Active Directory

To configure Active Directory single sign-on and manage settings, you must create an administrator user in the NMC console. You cannot use the initial NMC console login that Nuance provides (Nuance cloud-hosted NMC server) or the login that you create (on-premise NMC server). The administrator user must match a user that exists in Active Directory.

- 1. Log in to the NMC console.
- 2. From the Menu bar, select **User Accounts**.
- 3. In the User Accounts ribbon, click the Add icon.

The User Account Details window opens.

- 4. Configure the following minimum settings:
 - Details tab—First Name, Last Name, and Login.
 - Group Memberships tab—Add the administrator to a group.
 - **Messaging tab**—Configure email settings to allow the administrator to receive messages from the NMC console.
- 5. Click Save.

Setting the Active Directory connection string

1. In the NMC console menu bar, click **Sites**, then click the **Organization Overview** icon. Click your organization, and then click the **Details** icon in the **Organizations** area.

The Organization Details screen appears.

- 2. Click the **Domains** tab.
- 3. Click Add.

The **Domain** dialog box appears.

4. Enter the following:

Name—Your domain name. For example, ABCCompany.

Active Directory connection strings—The Active Directory connection string. For example, LDAP://nuance.com.

Ask your Active Directory domain administrator for the correct connection string. When Active Directory is enabled, Nuance Management Center sends all authentication requests to this server.

- 5. Click Save.
- 6. Repeat steps 3-5 as needed for each domain.

Creating and configuring user accounts for single sign-on

Creating user accounts

If you have not already created user accounts in the NMC console, you must create them before enabling single sign-on. When you create user accounts, each user's login must match that user's Windows domain login exactly.

On the User Account Details screen (click **User Accounts** in the menu bar, then click the **Add** icon), enter the user's Windows domain login name in the **Login** field:

For example, enter "John_Doe" in the **Login** field if the user's Windows domain login name is one of the following:

- "Domain\John_Doe"
- "John_Doe@domain.example.com"

Configuring user accounts

When you have created user accounts, do the following to add the users to your domain:

- 1. From the menu bar, click **User Accounts**.
- 2. Click Search to search for a user.
- Specify search criteria, and then click Search. Search results appear.
- 4. Right-click a user, and then select User Account Details.
- 5. Click the Credentials tab.
- 6. Click the NTLM tab.
- 7. Click Add.

The New NTLM Credential dialog box appears.

- 8. Select your domain from the **Domain** drop-down list.
- 9. Enter the user's Windows domain login in the Login field.
- 10. Click Save.

Running the SetSPN.exe Windows utility

About SetSPN.exe

SetSPN.exe is a Windows utility that registers the Nuance Management Center Service Principal Name (SPN) with the Windows domain. You run this utility to indicate to the Windows domain that the Nuance Management Center service is valid and trusted on the domain.

To authenticate using single sign-on, Dragon clients securely pass users' Windows credentials to the Nuance Management Center service. The credentials are then validated on the NMC server. Dragon clients cannot connect to Nuance Management Center until you register the SPN for the Nuance Management Center service.

You must run the utility for single sign-on authentication regardless of whether you're using the Nuance cloudhosted NMC server or your own on-premise NMC server.

Downloading SetSPN.exe

SetSPN.exe is included with Microsoft's Windows Support Tools. If this package is not already installed on a computer in your domain, you can download it from Microsoft's web site:

https://social.technet.microsoft.com/wiki/contents/articles/2170.windows-server-2008-and-windows-server-2008-r2-support-tools-dsforum2wiki.aspx

Executing SetSPN.exe

You run the utility on any computer that is a member of the Windows domain you're using for your single signon users. You do not need to run the utility on the NMC server. You must be logged in to the computer as an administrator.

You run the SetSPN.exe utility only once.

To run the utility, specify the following from the command line:

SETSPN -A http/nms_spn <computer name>

where <computer name> is the name of your NMC server.

Chapter 7: Installing the Local Authenticator

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About the Local Authenticator

The Local Authenticator is a service that provides Dragon clients with Active Directory single sign-on authentication. The Local Authenticator validates Dragon client credentials when the clients attempt to connect to the Nuance cloud-hosted NMC server, and then passes the validate credential call to the cloud NMC server to create a session.

You must install the Local Authenticator to use single sign-on with the Nuance cloud-hosted NMC server. You do not need the Local Authenticator if you're hosting your own NMC server on-premise.

Install the Local Authenticator on a local server that is accessible to both the NMC server and your Dragon clients. You must have Administrator privileges on the server where you are installing the Local Authenticator.

For software system requirements for the Local Authenticator, see "Software requirements" on page 35.

Local Authenticator logs

The Local Authenticator uses the same service trace logs as Nuance Management Center. These logs can be found in:

C:\ProgramData\NMS\Logs

Downloading the Local Authenticator

You download the LocalAuthenticator.exe file from your NMC console. You then install the Local Authenticator on a local server that is accessible to both NMC server and your Dragon clients.

To download the Local Authenticator:

- 1. Log in to your NMC console as an administrator.
- 2. In the Utilities ribbon, click **Tools**.

The Tools page appears.

3. Click Install local authenticator.

A message appears, prompting you to save or run the Local Authenticator executable.

4. Click Save.

The LocalAuthenticator.exe file is saved to your local Downloads folder.

5. Copy the LocalAuthenticator.exe file to the local server on which you are installing it.

Creating organization tokens

The Local Authenticator installation requires an organization token. You create a token in the NMC console.

To create an organization token:

- 1. From the menu bar, select **Sites > Organization Overview**.
- 2. Right-click your organization, and then select Details.

The Organization Details page appears.

- 3. Click the Organization Token tab.
- 4. Click Add to generate a new organization token.

The Organization Token Info dialog box appears. The **Organization Token** field is pre-populated with a system-generated token.

- 5. Optionally, enter a value in the **Comment** field.
- 6. Write down the token number.

You must enter this number during the Local Authenticator installation.

7. Click Save.

The new token appears in the **Organization Token** table.

Installing and binding the SSL certificate

About signed certificates

Using SSL requires that you obtain a signed SSL certificate. Nuance Management Center does not support self-signed certificates. You can obtain signed certificates from certificate authorities, such as GoDaddy or Verisign. The certificate authority must be a trusted authority known to both the client computer and the server via a root certificate. To obtain a signed certificate, you'll need to provide information to the certificate authority about your organization and the server on which you are installing the certificate in the Certificate Signing Request (CSR). Each certificate authority may require different information. Typically, the information can include the following:

- Organization name
- Organization location information, such as town and state
- · Computer name for the server on which you are installing the certificate
- Extended Key Usage value, such as 2.5.29.37. Extended key usage further refines key usage extensions, which define the purpose of the public key contained in the certificate.
- Key Size, such as 2048 bits or 4096 bits. Determines the length of the public key in the certificate. A longer key provides stronger security. You determine the level of security that is appropriate for your environment.

You obtain this information from your IT department, or from the person who installed and configured your server.

All SSL Certificates require a private key to work. The private key is a separate file that's used in the encryption and decryption of data sent between your server and the connecting clients. A private key is created by you—the certificate owner—when you request your certificate with a Certificate Signing Request (CSR). The Certificate Authority providing your certificate (such as DigiCert) does not create or have your private key.

For more detailed information on installing SSL certificates, see:

http://msdn.microsoft.com/en-us/library/ms733791.aspx

Install the SSL certificate

Clients contact the Local Authenticator on the standard HTTP ports 80 and 443.

1. Install an SSL certificate in the Personal Store under the Local Computer section for the "logon as" user account under which the NMS service is running.

To add the Certificates Snap-in and view the certificates installed on the local computer, see https://-technet.microsoft.com/en-us/library/cc754431(v=ws.11).aspx.

🚡 Console1 - [Console Root\Certificates - Current User\Personal]				
File Action View Favorites Window Help				
Console Root	Object Type	Actions		
Certificates - Current User Personal	Certificates	Personal	^	
Trusted Root Certification Authorities		More Actions	•	
▷ Contract State Sta				
^[1] Intermediate Certification Authorities ^[2] Active Directory User Object				
Trusted Publishers				
 Intrusted Certificates Intrusted Certification Authorities 				
Trusted People				
Other People Gatificate Encellment Results				
 Certificate Enrollment Requests Smart Card Trusted Roots 				
Personal store contains 2 certificates.				

2. Note the subject of the certificate.

This should match the computer name that the certificate is deployed on, or be a wild card. This must match exactly the host used in the endpoints. For information on viewing the subject, see https://technet.microsoft.com/en-us/library/cc754686(v=ws.10).

Certificate	<u>? ×</u>
General Details Certification Path	1
Show: <all></all>	_
Field	Value 🔺
Version	V3
E Serial number	05 e2 f4
E Signature algorithm	sha 1RSA
E Issuer	Equifax Secure Certificate Aut
Valid from	Monday, June 26, 2006 10:23
🖃 Valid to	Monday, August 25, 2008 10:
Subject	www.mysite.com
Public key	RSA (1024 Bits)
CN = www.mysite.com	
OU = Internet Sales O = Gotham Book Company LLC	Your company's
L = Atlanta	legal hame
S = Georgia	company's
	ocation
1	
Ec	lit Properties Copy to File
	ОК

3. Copy the thumbprint of the certificate. You use the thumbprint to bind the certificate to the port used by the primary NMS services in the next step.

For information on retrieving the thumbprint, see https://msdn.microsoft.com/en-us/lib-rary/ms734695.aspx.

	Certificate	×
General Details	Certification Path	
Show: <all></all>	¥	
Field Subject Public key Subject Key	Value GlobalSign Root CA, Root CA, RSA (2048 Bits) Identifier 60 7b 66 1a 45 0d 97 ca 89 50	^
Key Usage		
Thumbprint a	b1 bc 96 8b d4 f4 9d 62 2a a8	~
b1 bc 96 8 52 a4 1d 8	95 d4 f4 9d 62 2a a8 9a 81 f2 15 (2 9c)1
	Edit Properties Copy to File	
	OK	(

- 4. Verify that the UseSSL setting is set to true. This should have been set during the installation.
 - a. In Nuance.NMS.Server.exe.config, located in the NMS Platform installation folder, find the line near the top that contains the key="UseSSL" tag.
 - b. Change the value to true:

<add key="UseSSL" value="true"/>

- 5. Bind the SSL certificate under IIS to port 443.
 - a. In the IIS Manager, from the left panel, click Default Web Site.
 - b. From the right panel, click Bindings...

The Site Bindings dialog box opens.

c. Click Add.

The Add Site Binding dialog box opens.

- d. From the Type drop-down list, select https.
- e. From the SSL certificate drop-down list, select the certificate that you installed.

f. Click OK.

The Site Bindings dialog box appears. Ensure that the binding is displayed correctly.

6. Restart the Local Authenticator server to allow any configuration changes to take effect.

Testing and troubleshooting your SSL configuration

Run these tests on a different computer. Do not run them on the NMC server server.

Use the browser

- 1. Can you access and log into the NMC console?
 - a. Connect to https://<SERVER_NAME>/NMCHTML/.

If you see the Nuance Management Center login page, port 443 is working, and the NMC console is being deployed properly.

- b. Log in to the NMC console. If successful, the console is able to communicate with the server.
- 2. Can you access the NMC console status interface?
 - a. Connect to https://<*SERVER_NAME*>/NMS/Platform/ConfigurationSvc/v1/Status.

An XML response should appear in the browser.

3. Can you make RESTful web service calls?

Attempt to create an NMS session using the browser.

a. Connect to https://<SERVER_NAME>/NMS/Platform/AuthenticationSvc/ v1/ValidateCredentials?location=Test&productGuid=9D62C366-6F85-4C4C-9333-6FE21798D7F4

A prompt for a login and password appears.

- b. Use any valid NMC console login and password.
- c. If some XML is returned, the NMC console is configured properly and working with SSL.
- 4. Can you access the NMS API Help pages?
 - a. Connect to https://<SERVER-NAME>/NMS/Platform/UserManagementSvc/v1/help
 - b. Enter any credentials if prompted.
 - c. An HTML page with help for one of the NMS API sets should appear. If you see this help, the NMS is configured and working properly.

Check the Bindings

If the NMC console is not working, ensure that the ports are properly bound to the SSL certificate. To do this, specify the following from the command prompt:

netsh http show sslcert

Verify that port 443 is bound to the certificate.

Installing the Local Authenticator

On the server where you are installing the Local Authenticator:

1. Run the LocalAuthenticator.exe file.

A dialog box appears, prompting you to select a language for the installation.

2. Select your language from the drop-down list, and then click OK.

L	ocal Authenticator - InstallShield Wizard	×
ڪ 56	elect the language for the installation from the choices below.	
E	inglish (United States)	~
	OK Cancel	

The InstallShield Wizard opens.

3. Click Next.

Local Auth	enticator - InstallShield Wizard	×	
	Welcome to the InstallShield Wizard for the Local Authenticator The InstallShield Wizard will install Local Authenticator on your computer. To continue, click next.		
< Back Next > Cancel			

4. Leave the default value in the **User Name** field, and enter your company name in the **Company** field. Then, click **Next**.

	Local Authenticator - Instal	IShield Wizard	×
Customer Inform Please enter you			Z
Please enter you User Name:	r name and the name of the company	for which you work.	
Olivia Company Name:			
Nuance			
InstallShield	< Ba	ack Next >	Cancel

5. Set the location in which to install the Local Authenticator, and then click Next.

Local Authenticator - InstallShield Wizard	×
Choose Destination Location Select folder where setup will install files.	
Setup will install the Local Authenticator in the following folder.	
To install to this folder, click Next. To install to a different folder, click Browse and select another folder.	
Destination Folder C:\Program Files (x86)\Nuance\Local Authenticator\ Browse	
InstallShield <back next=""> Canc</back>	el

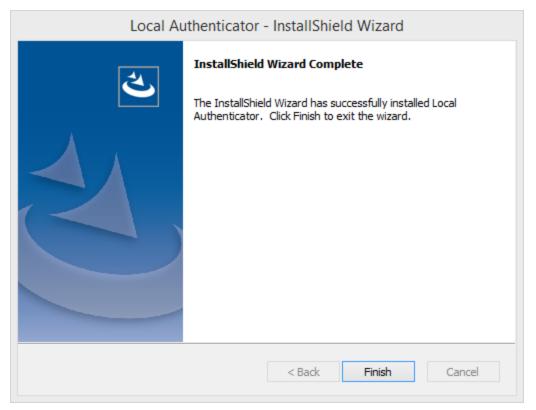
6. In the **Token** field, enter the organization token that you generated in the NMC console, and then click **Next**.

	Local Authenticator	- InstallShield Wizard	×
Organizatio	on Token:		Z
Please ent	er your Organization Token.		
Token:			
InstallShield —		< Back Next >	Cancel

7. Click Install.

Local Authenticator - InstallShield Wizard	×
Ready to Install the Program The wizard is ready to begin installation.	>
Click Install to begin the installation.	
If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.	
InstallShield	_
< Back Install Cancel	

8. When the installation is complete, the InstallShield Wizard Complete dialog appears. Click **Finish** to exit the installer.



Editing the configuration file

You edit the Local Authenticator configuration file to change the NMC server address to the Nuance cloudhosted NMC server URL. You should have received this address in your welcome information from Nuance.

1. Open the folder where the Local Authenticator is installed. By default, the Local Authenticator is installed in:

C:\Program Files\Nuance\Local Authenticator

- 2. In any text editor, open NMS.LocalAuthenticator.Service.exe.config.
- 3. Locate the following line and verify that the value is set to the token that you entered during Local Authenticator installation:

<add key="CustomerToken" value="{Organization token ID added in NMC}" />

4. Locate the following line and change the value to the address of the Nuance cloud-hosted NMC server:

"<add key="NMSServerAddress" value="nms server address" />

5. Save your changes.

Starting the Local Authenticator service

- 1. Open the Server Manager to view your Windows services.
- 2. Locate the NMS Local Authenticator Service.
- 3. Right-click the service, and then select Start.

Appendix A: Database backups

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About database backups

If you are hosting your own NMC server on-premise, database backups occur on a regular basis at scheduled intervals automatically. The backup process places backup files in the C:\NMSDBBACKUP folder on the database server by default, unless you specified a different drive and directory during installation. The backup includes database objects, like sites and groups, and includes the Windows communication foundation service logs generated for each user account. Backups occur on the following schedule:

- Transaction log backup—Hourly
- Differential database backup—Daily at 2AM
- Full database backups—Weekly at 2AM

The database server retains one month of backups on disk. To retain more data, you must copy the files to another location before the end of the month. The backup process purges files older than one month.

Disabling automatic database backups

Optionally, you can choose to disable the automatic backups and manage database backups yourself outside Nuance Management Center. To disable automatic backups:

1. From the NMC menu button (E), select **System Settings**.

The System Settings dialog box opens.

- 2. In the General section, select the Disable scheduled NMS database backups check box.
- 3. Click Save.