



# Installation Guide: Nintex for SharePoint 2016

Last updated Tuesday, December 6, 2016

---

## Legal notices

For the latest information, please see <http://en-us.nintex.com/company/legal>.

# Contents

Introduction .....	1
Worksheets (optional) .....	1
Installation checklist .....	1
Installation worksheet .....	1
Nintex Workflow and Nintex Forms .....	2
Files, account, and server used for running installer .....	2
Web applications for Nintex Workflow .....	2
Databases .....	2
Global settings .....	2
Quick installation .....	1
Run the installer and import the license file .....	1
Deploy Nintex Workflow enterprise solution (optional) .....	1
Configure databases .....	1
Activate web applications .....	2
Configure Nintex Workflow email settings .....	2
Enable external features (optional) .....	2
Enable actions for Nintex Workflow .....	3
Activate features in SharePoint .....	3
Plan your test and production environments .....	3
System requirements .....	3
Review topology considerations and best practices .....	4
High availability .....	4
Capacity considerations .....	4
Storage space .....	4
Content databases and performance .....	4
Security .....	5
Backup and recovery .....	5
Database mapping .....	5
Simultaneous backups and restores .....	5
SharePoint and SQL Server .....	6
Set up topology for installation .....	6
Ensure services are running .....	6
Disable antivirus software .....	7
Set up server used for running installer .....	7
Install Nintex products to test environment and confirm .....	8

Install Nintex products to production environment .....	8
Obtain account with sufficient permissions .....	8
Typical account used for Nintex installation .....	8
Minimum Required Permissions .....	9
Obtain Nintex license file .....	9
Schedule deployment .....	10
Run the installer .....	10
Nintex installer .....	10
Import the license file .....	10
Steps for deploying solutions .....	11
Configure databases and other items .....	11
Nintex product configuration .....	12
Configure databases for Nintex Workflow and Forms .....	12
Activate web applications .....	13
Enable actions for Nintex Workflow .....	14
Configure SharePoint email prerequisites .....	14
Configure Nintex Workflow email settings .....	15
Set up LazyApproval .....	16
Connect to the Nintex external platform .....	17
Enable Nintex external platform features .....	18
Activate features in SharePoint .....	20
Confirm production installation .....	21
Test Nintex functionality .....	21
Confirm installer and configuration tasks (optional) .....	22
Nintex assemblies and features .....	22
Solution deployments .....	22
Licensing .....	22
Databases .....	23
Enabled actions (safe controls) .....	24
Reinstate original server settings .....	24
Addendum .....	24
Nintex Workflow Exchange Connector Service installation .....	24
Introduction .....	25
System requirements .....	25
Install Nintex Workflow Exchange Connector Service .....	25
Complete post-installation tasks .....	26
Connect to Exchange from Nintex workflows .....	28
Manually export and import Nintex products and solutions .....	28
Deploy the solutions .....	29

Solutions and required deployments .....	29
Uninstall Nintex products .....	30
If you plan to reinstall the Nintex platform .....	30
Perform a complete uninstall .....	30
Troubleshoot deployment .....	37
Identify the problem .....	37
Deploy test solution packages .....	37
Review SharePoint ULS log files .....	38
Issues .....	39
Installation error for "Admin SVC": Nintex Forms 2016 .....	39
Symptom .....	39
Cause .....	39
Resolution .....	39
Installation error for "RPC server": Nintex Workflow .....	39
Symptom .....	39
Cause .....	40
Resolution .....	40
LazyApproval issues occur .....	40
Nintex Connector Workflow Queue Service failed to start .....	40
Symptom .....	40
Cause .....	40
Resolution .....	40
Nintex connectors: Multiple connector actions run in parallel may take hours to complete .....	41
Symptom .....	41
Cause .....	41
Resolution .....	41
Registration error: Nintex Mobile .....	41
Symptom .....	41
Cause .....	41
Resolution .....	41
Service stuck on "starting": Nintex Connector Queue Service .....	43
Symptom .....	43
Cause .....	43
Resolution .....	43
Solution package is listed as error: Nintex Workflow .....	44
Symptom .....	44
Cause .....	44
Resolution .....	44
Solution package is stuck in deployment: Nintex Workflow .....	44

Symptom .....	44
Cause .....	44
Resolution .....	44

## Introduction

This document provides guidance for installing Nintex for SharePoint 2016.

This installation guide is structured so you can go to the section relevance to you.

1. Plan your test and production environment
2. Install Nintex products to test environment and confirm Nintex on a test environment
3. Install Nintex products to production environment
4. Uninstall Nintex Workflow and Nintex Forms

Following are the high-level links useful for installing Nintex products.

### Worksheets (optional)

Use the following optional worksheets to track your status in the installation and record the locations of important information.

### Installation checklist

Use the following checklist to track your status in the installation process.

#### 1. Plan

- Plan your test and production environments
- Obtain account with sufficient permissions
- Obtain Nintex license file
- Schedule deployment

#### 2. Test

- Import the license file
- Deploy the solutions
- Configure databases and other items
- Activate features in SharePoint
- Confirm installation

#### 3. Install

- Import the license file
- Deploy the solutions
- Configure databases and other items
- Activate features in SharePoint
- Confirm installation

### Installation worksheet

Use this worksheet to record locations of files and identifiers of servers used in installation.

Environment (Production / Test / Other): \_\_\_\_\_

## Nintex Workflow and Nintex Forms

### Files, account, and server used for running installer

Installer file location	
License file location	
User account for installation process	
Server for running the installer	

### Web applications for Nintex Workflow

List each web application in the SharePoint farm that is expected to use Nintex Workflow.

---

---

### Databases

Nintex configuration databases for Nintex Workflow and Nintex Forms:

Nintex configuration database name	Failover database name	Notes

Content databases for Nintex Workflow:

Nintex content database name	SharePoint content database name	Notes

### Global settings

Outbound SMTP Server	
From Address	
Reply to Address	



## Quick installation

This document provides guidance for installing Nintex for SharePoint 2016 using the default settings provided.

The instructions assume that the installation server meets system requirements and is already set up to run the installer.

For a full detailed guide on installing Nintex Workflow and Nintex Forms for SharePoint 2016, see <http://help.nintex.com/en-US/nintex2016/current/Default.htm#cshid=installguide>.

## Run the installer and import the license file

### To install Nintex products and import the license file

1. Double-click the installer file to display the installation dialog box.
2. Follow the default steps through the wizard and then close the installer dialog box.

**Note:** Note: nintexworkflow2016enterprisefeatures.wsp will not be deployed at this stage as it is license dependent.

3. On the Central Administration Home page, click **Nintex Administration** and then click **Licensing** under **Licensing and setup**.
4. Click **Import license file**.
5. Click **Browse** to locate your license file and then click **Upload license file**.
6. Click **Import**.

## Deploy Nintex Workflow enterprise solution (optional)

### To deploy a Nintex solution

1. On the Central Administration Home page, click **System Settings** and then click **Manage farm solutions** under Farm Management.
2. Click the Nintex Workflow enterprise feature to deploy and then click **Deploy Solution** and then click **OK**.

## Configure databases

### To set up configuration databases for Nintex Workflow and Forms

1. Configure Nintex Forms database
  - a. On the Central Administration Home page, click **Nintex Administration** and then click **Database management** under **Licensing and setup**.
  - b. Click **Nintex Forms database setup** and then click **OK** to create a default database.
2. Configure Nintex Workflow database
  - a. On the Central Administration Home page, click **Nintex Administration** and then click **Database management** under **Licensing and setup**.
  - b. Click **Add Nintex Content Database** and then click **Create** and then click **OK** to create a default database.

### To set up a content database for Nintex Workflow (Optional)

1. On the Central Administration Home page, click **Nintex Administration** and then click **Database management** under **Licensing and setup**.

2. Click **Add content database**, overwrite the content database name with your desired content database name, and then click **OK**.
3. Add additional content databases as required.

### Activate web applications

#### To activate Nintex Workflow the web applications

1. On the Central Administration Home page, click **Nintex Administration** and then click **Web Application activation** under **Licensing and setup**.
2. Click **Activate**.

#### To activate Nintex Forms on a web application

1. On the SharePoint Central Administration Home page, click **Application Management** and then click **Manage web applications** under Web Applications.
2. In the Name column, select the web application on which you want to activate Nintex Forms.
3. In the Web Applications ribbon, click **Manage Features**.
4. In the Nintex Forms section, click **Activate**.
5. Click **OK**.

### Configure Nintex Workflow email settings

This section provides instructions to configure email settings for Nintex Workflow.

#### To configure email settings for Nintex Workflow

1. Ensure that the SharePoint email prerequisites are met.
2. On the Central Administration Home page, click **Nintex Administration** and then click **Messaging and notifications** under **Licensing and setup**.
3. Under **Email settings**, enter the following details.
  - **Outbound SMTP Server**  
Enter the URL used for outgoing mail in your SharePoint farm.
  - **From Address**
  - **Reply To Address**
4. Edit other settings on the page as needed for your environment.
5. Click **OK**.

### Enable external features (optional)

Connect and enable external features of the Nintex external platform. For information on additional features to enable, see the full detail installation guide.

#### To enable connector actions (to use connector actions in the workflow)

1. Go to the External settings for Workflow page: On the Central Administration Home page, click **Nintex Administration** and then click **External settings for Workflow** under **Licensing and setup**.
2. Under Enable prerequisite service, click **Enable** and then click **OK**.
3. Click the link for the action settings page, select all desired connector actions, and then click **Enable**.

#### To enable Document Generation (to generate documents)

1. Go to the External settings for Workflow page: On the Central Administration Home page, click **Nintex Administration** and then click **External settings for Workflow** under **Licensing and setup**.

2. Under Enable prerequisite service, click **Enable**.
3. Under Document Generation, click **Activate** and then click **OK**.

**To enable External Start (to create endpoint URLs to initiate workflows)**

1. Go to the External settings for Workflow page: On the Central Administration Home page, click **Nintex Administration** and then click **External settings for Workflow** under **Licensing and setup**.
2. Under Enable prerequisite service, click **Enable**.
3. Under External Start, click **Activate** and then click **OK**.

**To enable external forms (to publish forms to the Nintex external platform)**

1. Go to the External forms settings page: On the Central Administration Home page, click **Nintex Administration** and then click **External forms settings** under **Forms environment**.
2. Under Enable external forms, click **Enable**.
3. To allow anonymous form submissions, select **Yes** under Allow anonymous form submissions.

## Enable actions for Nintex Workflow

**To enable Nintex Workflow actions**

1. On the Central Administration Home page, click **Nintex Administration** and then click **Action settings** under **Workflow environment**.
2. Click the check box in the heading rows of the Core and Connectors actions to enable all actions and then click **OK**.

## Activate features in SharePoint

**To activate features on each relevant site collection in your SharePoint environment**

1. From your top site level home page, access **Site Settings** and then click **Site collection features** under Site Collection Administration.
2. For each Nintex Workflow feature listed, click **Activate** to activate. Activate in the following order.

Activate in the following order

- a. Nintex Workflow 2016
  - b. Nintex Workflow 2016 InfoPath Forms
  - c. Nintex Workflow 2016 Reporting Web Parts
  - d. Nintex Workflow 2016 Web Parts
3. For each Nintex Forms feature listed, click **Activate** to activate.
    - a. Nintex Forms Prerequisites Feature
    - b. Nintex Forms for Nintex Workflow
    - c. Nintex Forms for SharePoint List Forms
    - d. Nintex Forms - External Forms.

## Plan your test and production environments

This section provides guidance if you are new to setting up SharePoint to run Nintex products or require a refresher of the prerequisites.

Planning test and production environments involves meeting system requirements, reviewing topology considerations and best practices, setting up the topology for installation, and setting up the server to be used for running installer.

## System requirements

Following are the system requirements for Nintex Workflow and Nintex Forms.

**Note:** In some instances, Microsoft has not published specific SharePoint 2016 documents. The SharePoint 2013 equivalent document is provided.

Type	Nintex Workflow 2016 and Forms 2016 Requirement
Operating system, software, and hardware	<p>See Microsoft SharePoint 2016 system requirements at <a href="#">System requirements for SharePoint Server 2016</a>. MinRole server farm deployments are not currently supported. For information on MinRole server farm deployments, see <a href="https://technet.microsoft.com/en-us/library/mt346114(v=office.16).aspx">https://technet.microsoft.com/en-us/library/mt346114(v=office.16).aspx</a>.</p> <p><b>Note:</b> Publishing forms to Nintex external platform may require special licensing for external or anonymous users. For more information, reference SharePoint Server 2016 for Internet Sites (SharePoint FIS) licensing details, such as the following TechNet article: <a href="http://blogs.technet.com/b/volume-licensing/archive/2013/08/08/licensing-how-to-sharepoint-server-2013-licensing-changes.aspx">http://blogs.technet.com/b/volume-licensing/archive/2013/08/08/licensing-how-to-sharepoint-server-2013-licensing-changes.aspx</a>. (2016 version not available at the time of writing.)</p>
Browser client	<p>To design and run Nintex workflows, use the following browsers.</p> <ul style="list-style-type: none"> <li>• Microsoft Internet Explorer 10</li> <li>• Google Chrome latest version</li> <li>• Safari for Mac latest version</li> <li>• Firefox latest version</li> <li>• Microsoft Edge latest version</li> </ul>
Hard disk space	<p>Database servers: Nintex Workflow requires the same minimum requirements that are required when installing SharePoint 2016. Hard disk space is dependent on the Nintex database growth rate. This rate is affected by the following:</p> <ul style="list-style-type: none"> <li>• The number of workflow instances that are executed</li> <li>• The number of actions in a workflow instance</li> <li>• The number of tasks assigned to users</li> </ul>

## Review topology considerations and best practices

This section provides guidance on preparing your environment for Nintex installation.

### High availability

This section describes topology considerations and best practices related to high availability of Nintex databases.

### Capacity considerations

Nintex Workflow follows the same scalability and limitations as SharePoint workflows; both Nintex and SharePoint use the workflow engine inside SharePoint.

### Storage space

Size your Nintex databases according to the anticipated use of Nintex workflows and the level of complexity in those workflows (numbers of actions and tasks).

### Content databases and performance

Nintex product installation involves creating Nintex Workflow content databases and mapping them to SharePoint content databases. Nintex content databases store workflow and task history.

For more information about database mapping for Nintex Workflow, see the following Nintex Connect article: [Database Design Guide: Nintex Workflow](#).

During the planning phase, determine the optimal number of Nintex content databases for your workflow traffic. Ensuring a sufficient number of content databases can improve performance of the workflow engine across all site collections in the farm as well as facilitating backup, restore, and migration.

For site collections that use workflows, scale each SharePoint content database to one of the following levels of granularity, depending on the degree of traffic in your environment:

- Multiple web applications per SharePoint content database
- A single web application per SharePoint content database
- Multiple site collections (in a single web application) per SharePoint content database
- A single site collection (in a single web application) per SharePoint content database

For environments with high workflow traffic, we recommend using the most granular level: a single site collection in a single web application per SharePoint content database.

Following these guidelines optimizes performance by automatically distributing workflows to corresponding content databases, thereby helping to avoid workflow time-out issues.

### Security

This section describes topology considerations and best practices related to security of Nintex databases.

Ensuring security for SQL Server and SharePoint addresses the security needs of Nintex.

For security guidance specific to SharePoint and SQL Server, refer to Microsoft resources at [msdn.microsoft.com](http://msdn.microsoft.com) and [technet.microsoft.com](http://technet.microsoft.com), such as the following articles:

- [Security Considerations for a SQL Server Installation](#)

### Backup and recovery

This section describes topology considerations and best practices related to backup and recovery of Nintex databases.

### Database mapping

Every SharePoint content database that contains site collections using Nintex Workflow should be mapped to a Nintex Workflow content database. The ideal number of SharePoint content databases per Nintex Workflow content database varies by environment. One-to-one mapping often serves smaller environments while others are better served by grouping SharePoint content databases by department or other function and mapping each set of SharePoint content databases to a single Nintex Workflow content database. For more information, see the following Nintex Connect article: [Database Design Guide: Nintex Workflow](#).

### Simultaneous backups and restores

To retain integrity of data, backup and restore the related databases at the same time.

For more information, see the following article: [Nintex Workflow Backup and Restore](#).

### SharePoint and SQL Server

For backup and recovery guidance specific to SharePoint and SQL Server, refer to Microsoft resources at [msdn.microsoft.com](http://msdn.microsoft.com) and [technet.microsoft.com](http://technet.microsoft.com), such as the following articles:

- [Back Up and Restore of SQL Server Databases](#)

### Set up topology for installation

This section provides guidance for preparing all servers in the SharePoint farm for the Nintex installation process. This task involves ensuring that the required services are running and disabling antivirus software—on all servers in the farm.

### Ensure services are running

This section provides instructions for ensuring that the required services are running on all servers in the SharePoint farm.

Nintex Workflow requires that the following Microsoft Windows and SharePoint services be running.

Microsoft Windows services required:

- SharePoint Administration
- SharePoint Timer Service

SharePoint services required:

- Microsoft SharePoint Foundation Web Application (for Web Front End (WFE) servers)
- Microsoft SharePoint Foundation Workflow Timer Service

**Note:** On application servers running Microsoft SharePoint Foundation Workflow Timer Service, the Microsoft SharePoint Foundation Web Application service can be turned off by following Microsoft's recommended practices. See [Microsoft article 2674684](#). The Windows PowerShell command listed in the "Resolution" section must be run on a Web Front End (WFE) server that has the Microsoft SharePoint Foundation Web Application service running. In addition, we recommend running the IISRESET command and restarting the SharePoint Timer Service after running the Windows PowerShell command.

Nintex Forms does not require any services to be running other than those required to run SharePoint.

### To ensure that required Microsoft Windows services are running on all servers in the farm

1. On each server, open the Services Microsoft Management Console (MMC) snap-in.

**Note:** For instructions on accessing the Services Microsoft Management Console (MMC) snap-in, see the Microsoft TechNet Library at <http://technet.microsoft.com/en-us/library/cc772408.aspx>.

2. For any required services that are not running, click **Start**.

### To ensure that required SharePoint services are running on all servers in the farm

1. On the Central Administration Home page, click **System Settings**.
2. Under Servers, click **Manage servers in this farm**.

Each server on the farm is listed, along with services running on that server.

3. If required services are not running on a server, go back to the Central Administration Home page, click **System Settings**, and then click **Manage services on this server** under Servers.
4. On the Services on Server page, select the server from the Server list to display its SharePoint services.
5. For any required services that are not running, click **Start**.

### Disable antivirus software

The installation process for Nintex Workflow and Nintex Forms requires antivirus software to be disabled.

#### To disable antivirus software on all servers in the farm

1. On each server, note original settings for antivirus software.  
You'll need the original settings to revert after installation.
2. On each server, disable all antivirus software.

### Set up server used for running installer

Setting up the server used for running the installer involves temporarily disabling User Account Control (UAC), ensuring that the application pools are started, and ensuring that Windows PowerShell scripts can be run by the installer.

#### To temporarily disable User Account Control (UAC)

1. On the server that you plan to use for running the installer, from Control Panel, select **Change User Account Control settings**.
2. Note the original settings for User Account Control (UAC).  
You'll need the original settings to revert after installation.
3. Disable User Account Control (UAC).

For instructions on disabling UAC, see the following

URL: <http://windows.microsoft.com/en-us/windows/turn-user-account-control-on-off#1TC=windows-7>

#### To ensure that the application pools are started

1. On a server that can access the application pools, open IIS Manager.  
For instructions, see [http://msdn.microsoft.com/en-us/library/vstudio/bb763170\(v=vs.100\).aspx](http://msdn.microsoft.com/en-us/library/vstudio/bb763170(v=vs.100).aspx).
2. Expand the server and then click **Application Pools**.  
Status is indicated for each application server, such as SharePoint - 80 and SharePoint Central Administration v4.

#### To ensure that Windows PowerShell scripts can be run by the installer

1. On the server that you plan to use for running the installer, determine if Windows PowerShell script execution is set by group policy:
  - a. Open the Local Group Policy Editor (gpedit.msc); for instructions, see <http://technet.microsoft.com/en-us/library/cc731745.aspx>.
  - b. Navigate to Local Computer Policy > Computer Configuration > Administrative Templates > Windows Components > Windows PowerShell.
  - c. Click Turn on Script Execution.
  - d. In the Turn on Script Execution dialog box, determine if the **Enabled** setting is grayed out (unavailable).  
Unavailability of this setting indicates that group policy is used.

- e. Navigate to Local Computer Policy > User Configuration > Administrative Templates > Windows Components > Windows PowerShell.
  - f. Click Turn on Script Execution.
  - g. In the Turn on Script Execution dialog box, determine if the **Enabled** setting is grayed out (unavailable).  
Unavailability of this setting indicates that group policy is used.
2. If group policy is used for script execution, ask your network administrator to do one of the following:
    - Allow script execution policy to be set individually (turn off group policy for that server).
    - Set the policy to **Unrestricted** for the user and server to be used for installation.

When the ability to execute Windows PowerShell scripts is available, you can continue on to the next step in setting up the topology for installation.

### Install Nintex products to test environment and confirm

Complete all installation steps on a test SharePoint environment and then confirm successful installation. See "[Install Nintex products to production environment](#)" below and "[Confirm production installation](#)" on page 21.

### Install Nintex products to production environment

This section provides guidance for installing Nintex Workflow and Nintex Forms to your production environment. Installation involves running the installer, deploying the provided Nintex solutions, importing the Nintex license file, configuring databases, connecting and enabling Nintex external platform, and activating Nintex features in SharePoint.

### Obtain account with sufficient permissions

To successfully install Nintex products, obtain a user account with sufficient permissions.

### Typical account used for Nintex installation

In most cases, the Farm Installation account (used to install SharePoint) satisfies the permission requirements for the full installation process.

### To identify the Farm Installation account

**Note:** By default, the SharePoint Central Administration v4 application pool is configured to run using the Farm Installation account.

1. Open IIS Manager.  
For instructions, see [http://msdn.microsoft.com/en-us/library/vstudio/bb763170\(v=vs.100\).aspx](http://msdn.microsoft.com/en-us/library/vstudio/bb763170(v=vs.100).aspx).
2. Under your server, click **Application Pools**.
3. Select **SharePoint Central Administration v4**.
4. Under Edit Application Pool, click **Advanced Settings**.  
The Farm Installation account is indicated in the Identity row under Process Model.



## Minimum Required Permissions

Installation and deployment of Nintex products requires an account with at least the following permissions.

- SharePoint permissions:
  - Ability to modify farm properties (required to import the license file).

Any user account in the Farm Administrators group has the ability to modify farm properties. To view members of this group, navigate to Central Administration > Security > Users > Manage the farm administrators group.
  - SharePoint\_Shell\_Access role membership for the SharePoint configuration database, Central Administration database, and all SharePoint content databases.

For instructions on provisioning this membership using Windows PowerShell, see [https://technet.microsoft.com/en-us/library/ff607596\(v=office.16\).aspx](https://technet.microsoft.com/en-us/library/ff607596(v=office.16).aspx).
- SQL Server permissions:
  - Ability to create databases as well as modify permissions on databases.
  - A Microsoft Windows-based login to SQL Server that is a member of the following roles:
    - securityadmin fixed server role
    - dbcreator fixed server role
    - db\_owner fixed database role for all databases in the server farm that will be used during installation
- Windows PowerShell permissions:
  - SharePoint\_Shell\_Access role membership (required to access parts of SharePoint via Windows PowerShell).
  - Ability to run Windows PowerShell scripts if script execution is set by group policy; needed for the server on which the installer is run only.

For more information, see "[Set up server used for running installer](#)" on page 7.
- Windows permissions:
  - Membership of the Administrators group for every server in the farm.

To determine if a user account has local administrator rights on the server, view the Administrators group: In the Services Microsoft Management Console (MMC) snap-in, expand Local Users and Groups, expand Groups, and double-click Administrators. If your account is not listed, note original status for reverting after installation is complete, then add the account to the group. For information about Local Users and Groups in the Services Microsoft Management Console (MMC) snap-in and instructions on adding accounts to the Administrators group, see [http://msdn.microsoft.com/en-us/library/ee250492\(v=bts.10\).aspx](http://msdn.microsoft.com/en-us/library/ee250492(v=bts.10).aspx).

## Obtain Nintex license file

Make sure your Nintex license file is up to date. Make sure each product license is explicitly activated for the functionality that you want, such as Enterprise Edition.

If you have questions about your license file, contact your Nintex partner or territory manager.

## Schedule deployment

To minimize interruption of services, determine the best time for deployment to production.

## Run the installer

Run the installer for both products being installed.

In the installer, you have the option to install both Nintex Workflow and Nintex Forms. You also have the option of installing just one product.

You can download the installer file from the product download page of the Nintex Connect site at <https://community.nintex.com>. For more information, contact your Nintex partner or territory manager.

## Nintex installer

### To install Nintex for SharePoint 2016

1. Set up a server for running the installers. See "[Set up server used for running installer](#)" on page 7.
2. Double-click the installer file to display the installation dialog box.  
Example installer file: NintexWorkflow2016Int.exe

**Note:** To run the installer with a user account other than the logged-in user account, press and hold SHIFT, right-click the installer file, select **Run as different user**, and then enter the credentials for the desired account.

3. On the Welcome to the Installation Wizard page, click **Next**.
4. On the License Agreement page, review the license, click **I Agree**, and then click **Next**.
5. Click **Next** to automatically adding the solutions to SharePoint.

**Note:** You can optionally select **Export** to download the Nintex Workflow solutions for manual deployment later. For instructions to manually export and import solutions for deployment, see [Manually export and import solutions](#).

Installation status is indicated by messages and a progress bar.

6. Choose the Nintex products to install and then click **Next**.
7. When installation is complete, click **Close** to close the installation dialog box.

The installer installs Nintex-named assemblies and SharePoint features locally. For more information, see "[Nintex assemblies and features](#)" on page 22.

After you import your license file in the next section, deploy NintexWorkflow2016EnterpriseFeatures.wsp to your SharePoint farm. For instructions on deploying solutions, see "[Steps for deploying solutions](#)" on the [next page](#).

## Import the license file

For full product functionality you must have a license issued by Nintex for each product. Each product license can be either a full production license or an evaluation license. The license file must be imported into SharePoint Central Administration.

Make sure your Nintex license file is up to date. Make sure each product license is explicitly activated for the functionality that you want, such as Enterprise Edition.

If you have questions about your license file, contact your Nintex partner or territory manager.

### To import the license file

1. On the Central Administration Home page, click **Nintex Administration**.
2. Under Licensing and setup, click **Licensing**.
3. Click **Import license file**.
4. Click **Browse** to locate your license file and then click **Upload license file**.  
The licensing information is displayed.
5. Select the product license you want to import.  
By default, product licenses for Workflow and Forms are selected.
6. Click **Import**.

### Steps for deploying solutions

Follow these instructions to deploy Nintex solutions to your SharePoint environment.

This topic assumes that the installer have already been run and the solutions have already been imported.

If you have an Enterprise license, you need to deploy the Nintex Workflow enterprise feature.

### To deploy a Nintex solution

1. On the Central Administration Home page, click **System Settings**.
2. In the Farm Management section, click **Manage farm solutions**.  
The Solution Management page appears. Solution deployment status is indicated in the Status column; the Web applications to which the solutions are deployed are indicated in the Deployed To column.  
If you manually exported the solutions, you must manually import them. For instructions, see [Manually export and import solutions](#).
3. To deploy a solution to all content Web applications, do the following:

**Note:** Make sure you deploy the solution to all content Web applications first (if required). Make sure you deploy Nintex Workflow solutions before Nintex Forms solutions.

- a. Display the Deploy Solution page: Click the solution that you want to deploy and then click **Deploy Solution**.
  - b. In the Deploy When? section, select **Now**.
  - c. In the Deploy To? section, select **All content Web applications**.
  - d. Click **OK**.
4. To deploy a solution to the Central Administration Web application, do the following:
    - a. Display the Deploy Solution page: Click the solution that you want to deploy and then click **Deploy Solution**.
    - b. In the Deploy When? section, select **Now**.
    - c. In the Deploy To? section, select the URL for the Central Administration Web application.
    - d. Click **OK**.

### Configure databases and other items

This section provides the following links.

## Nintex product configuration

This section provides guidance on configuration tasks for the Nintex products, including configuring databases, activating web applications, enabling workflow actions, configuring email settings, and setting up LazyApproval.

### Configure databases for Nintex Workflow and Forms

This section provides instructions for Nintex Workflow and Forms database configurations.

Nintex Workflow requires a configuration database. While the configuration database can technically serve as the sole content database for Nintex Workflow and Forms, we recommend multiple content databases to ensure high availability. For more information, see "[Content databases and performance](#)" on page 4.

#### To set up configuration and content databases

1. Create a Nintex Forms configuration database:
  - a. On the Central Administration Home page, click **Nintex Administration** and then click **Database management** under **Licensing and setup**.
  - b. Click **Add Nintex Forms configuration database**.  
When Nintex Forms is newly installed, the Nintex Forms database setup page displays default settings for the Nintex Forms database.
  - c. If needed, edit the database settings.
  - d. Click **OK** to create the database.
2. Create a Nintex Workflow configuration database:
  - a. On the Central Administration Home page, click **Nintex Administration** and then click **Database management** under **Licensing and setup**.
  - b. Click **Add Nintex Workflow configuration database**.  
When Nintex Workflow is newly installed, the Add configuration database page displays default settings for the Nintex Workflow configuration database.
  - c. If needed, edit the database settings.
  - d. Click **OK** to create the database.

**Note:** The default value for Database Server is the default SharePoint database server.

A database connection string appears in the Configuration Database section.

3. (Optional but recommended.) Add content databases as needed to store workflow and task history (optional; see "[Content databases and performance](#)" on page 4):
  - a. To redisplay the database management page, on the Central Administration Home page, click **Nintex Administration** and then click **Database management**.
  - b. For each content database to be added, do the following:
    - i. In the Content Databases section, click **Add content database**.
    - ii. In the Add content database page, enter the name of your database server and a database name; leave all other settings as default.
    - iii. Click **OK**.  
A database connection string appears in the Configuration Database section.
  - c. (Optional.) Update content database parameters using the NWAdmin operation UpdateContentDatabaseParameters.
4. (Optional but recommended.) Map Nintex content databases to SharePoint content databases:
  - a. On the Central Administration Home page, click **Nintex Administration** and then click **Database management** under **Licensing and setup**.
  - b. Click **Manage** under Content database/s.
  - c. For each SharePoint content database corresponding to a site collection that uses Nintex Workflow, select a Nintex Workflow content database under **Map to Workflow Content Database**.  
For more information about database mapping for Nintex Workflow, see the following Nintex Connect article: [Database Design Guide: Nintex Workflow](#).
  - d. Click **OK**.
5. Run the IISreset command to implement the changes:
  - a. Start a command prompt as an administrator.  
For instructions, see the following TechNet article: [http://technet.microsoft.com/en-us/library/cc947813\(v=WS.10\).aspx](http://technet.microsoft.com/en-us/library/cc947813(v=WS.10).aspx)
  - b. Enter the following command.  
IISreset

#### Activate web applications

Nintex Workflow and Forms require activation of web applications that will use the product.

#### To activate Nintex Workflow the web applications

1. On the Central Administration Home page, click **Nintex Administration** and then click **Web Application activation** under **Licensing and setup**.  
The default web application name is automatically selected.
2. To activate all web applications for Nintex Workflow, select the check box for **All content web applications** and then click **Activate**.
3. To activate a subset of web applications for Nintex Workflow, select each web application and then click **Activate**; repeat until all desired web applications have been activated.

#### To activate Nintex Forms on a web application

1. On the SharePoint Central Administration Home page, click **Application Management**.
2. In the Web Applications section, click **Manage web applications**.
3. In the Name column, select the web application on which you want to activate Nintex Forms.  
For example, select SharePoint -80.
4. In the Web Applications ribbon, click **Manage Features**.  
The Manage Web Application Features dialog box appears.
5. In the Nintex Forms section, click **Activate**.  
After a short delay, the dialog box refreshes and the status is "Active."
6. Click **OK**.

#### Enable actions for Nintex Workflow

This section provides instructions for enabling Nintex Workflow actions. Only the actions you enable are displayed in the Workflow designer.

#### To enable Nintex Workflow actions

1. On the Central Administration Home page, click **Nintex Administration**.
2. Under Workflow environment, click **Action settings**.  
By default, for new installations, no actions are selected.
3. Click the check box in the Core and Connectors heading rows to enable all actions.  
Alternatively, to enable a subset of the available actions, select the check box for each desired action.  
Enabled actions become available in the Workflow designer.
4. Click **OK**.  
The web.config file for each web application is updated to list enabled actions as safe controls.

#### Configure SharePoint email prerequisites

This section provides instructions for completing SharePoint email settings that are required for using LazyApproval and sending email from Nintex workflows. SharePoint email settings include configuring incoming email, confirming that required services are running, and ensuring that incoming emails are sent to the correct servers.

#### To configure incoming email for the farm

- See the following Microsoft article: [Configure incoming email for a SharePoint 2013 farm](#).  
SharePoint automatically populates the incoming email address for the farm using the fully qualified domain of the server. To view or edit this address, go to the Central Administration Home page, click System Settings, and then click Configure Incoming E-mail Settings.

**To confirm that required services are running**

- On each server in your farm that is running the service Microsoft SharePoint Foundation Incoming E-Mail, do the following:

For this service...	Do this to confirm that the service is running:
Microsoft SharePoint Foundation Incoming E-Mail	On the Central Administration Home page, click <b>Manage servers on this farm</b> (under System Settings).
Microsoft SharePoint Foundation Web Application	On the Central Administration Home page, click <b>Manage servers on this farm</b> (under System Settings).
SMTP	Reference <a href="#">the "Install and configure the SMTP service" section</a> of the following Microsoft article: <a href="#">Configure incoming email for a SharePoint 2013 farm</a> .

**To ensure that incoming emails are sent to the correct servers (environments with multiple front-end servers)**

- Configure your load balancer to forward incoming emails to servers with the SMTP service enabled. Refer to your organization's SharePoint environment documentation.

**Configure Nintex Workflow email settings**

This section provides instructions to configure email settings for Nintex Workflow.

**To configure email settings for Nintex Workflow**

- Ensure that the SharePoint email prerequisites are met.  
For more information, see ["Configure SharePoint email prerequisites" on the previous page](#).
- On the Central Administration Home page, click **Nintex Administration** and then click **Messaging and notifications** under **Licensing and setup**.
- Under **Email settings**, enter the following details.
  - Outbound SMTP Server**  
Enter the URL used for outgoing mail in your SharePoint farm.  
Example: exchange.example.com
  - From Address**  
Example: admin@example.com
  - Reply To Address**  
Example: lazyapproval@seattle-server2.example.com

**Note:** When using LazyApproval, the Reply To Address must be identical to the alias specified on the LazyApproval settings page. If you would like the workflow-triggered emails to display an email address other than the configured LazyApproval account, then specify the different email address in From Address. Make sure that Reply To Address is the LazyApproval alias. This way the email sender can be identified as a portal email address, such as admin@example.com, while replies are sent to the LazyApproval alias, such as lazyapproval@example.com.

4. Edit other settings on the page as needed for your environment.
5. Click **OK**.

### Set up LazyApproval

LazyApproval allows users to respond to requests in real language, even when on the go and without access to the SharePoint portal.

Setting up LazyApproval involves enabling LazyApproval for the server farm, configuring the LazyApproval alias for email, and optionally editing phrases recognized and ignored by the LazyApproval process.

### To set up LazyApproval

1. Ensure that SharePoint email prerequisites and Nintex Workflow email settings are configured.  
For more information, see ["Configure SharePoint email prerequisites" on page 14](#) and ["Configure Nintex Workflow email settings" on the previous page](#).
2. Go to the LazyApproval Settings page:
  - a. On the Central Administration Home page, click **Nintex Administration** and then click **LazyApproval settings** under **Workflow environment**.
  - b. Click **Enable / Disable LazyApproval for the current server farm**.

**Note:** The page displays a message if either of the following requirements is missing: email configuration for Nintex Workflow and incoming email for the farm. For more information, see ["Configure SharePoint email prerequisites" on page 14](#) and ["Configure Nintex Workflow email settings" on the previous page](#).

3. Under Enable LazyApproval via email, select **Yes**.
4. In the **Email alias** text box, enter a unique account name.

The alias is the name that will be used as the email address that sends the notifications and accepts the LazyApproval replies. The domain is determined by the incoming email address for the farm. To view or edit this address, go to the Central Administration Home page, click System Settings, and then click Configure Incoming E-mail Settings.

Example: lazyapproval@seattle-server2.example.com

**Note:** Ensure that the email alias complies with standard SharePoint requirements for email-enabled document libraries and lists. For example, the email alias cannot have an inbox in Exchange as having one prevents transmission to SMTP.

**Note:** Contacts in Active Directory are not required. There is no need for Directory Management Service.



5. Click **OK** to save changes.

**Note:** If the Reply To Address setting under Nintex Workflow > Global settings differs from the Alias setting, then Nintex updates the Reply To Address setting to match the Alias setting. These email settings must be identical for LazyApproval to function.

The changes propagate to all servers within about 15 minutes.

A list of phrases recognized and ignored by the LazyApproval process appears.

6. Add, edit, or remove phrases at your discretion.
  - To add a recognized phrase, click **Create a new LazyApproval term for the current server farm** and enter the desired phrase and outcome.
  - To edit a recognized phrase, click the phrase, then change settings in the Edit LazyApproval Phrase page.
  - To remove a recognized phrase, click the phrase, then click **Delete** in the Edit LazyApproval Phrase page.
  - To add an ignored phrase, click **Create a term to ignore** and enter the desired phrase.
  - To remove an ignored phrase, click the **Delete** icon next to the phrase.

The changes propagate to all servers within about 15 minutes.

7. (Optional) To implement changes immediately, run the IISreset command.

### Connect to the Nintex external platform

This section describes how to connect the SharePoint server to the Nintex external platform. If you are not installing Nintex external platform features, then you can skip this section.

Connecting the server to the Nintex external platform involves making sure the server can access required certificates and URLs.

Optionally, you can install the Nintex external platform on servers that do not host SharePoint Central Administration. You can also change the managed user account that runs the service Nintex External Relay Service.

#### To install the Nintex external platform on a server that does not host SharePoint Central Administration (optional)

1. Log on to the server hosting SharePoint Central Administration.
2. Open a SharePoint PowerShell command prompt and run the following command:

```
Install-ExternalPlatform
```

#### To change the managed user account that runs the service Nintex External Relay Service (optional)

1. Obtain a managed user account with the following access and group memberships:
  - Appropriate access to the Nintex Forms and Nintex Workflow databases
  - Access to the SharePoint lists and web applications that may be used by the Nintex external platform
  - Membership in the Farm Administration group on the SharePoint farm
2. On the Central Administration Home page, click **Security**.

3. Change the user account for the service Nintex External Relay Service:
  - a. In the General Security section, click **Configure service accounts** to display the Service Accounts page.
  - b. In the first drop-down menu, select **Windows Service – Nintex External Relay Service**.
  - c. From the **Select an account for this component** drop-down menu, select the appropriate user account.
  - d. Click **OK**.

**To confirm server connection to the Nintex external platform**

- On the Central Administration Home page, click **Nintex Administration** and then click **Health checks** under **Support and troubleshooting**.

If the connection can be established, a "Success" message is displayed in the status column.

**Note:** If your network requires a proxy server to access the internet, specify the server details in the Proxy server section. These settings are specific to the Nintex external platform and will be the only application allowed access to the internet.

**To review availability of required certificates**

1. On the Central Administration Home page, select **Security**.
2. In the General Security section, click **Manage trust**.
3. Review availability of the following certificates; if any are unavailable, update to make them available.

Baltimore CyberTrust Root.crt

GTE CyberTrust Global Root.cer

Microsoft Internet Authority.cer

Microsoft Secure Server Authority.cer

Thawte Primary Root CA.cer

Thawte SSL CA.cer

**To confirm server access to required URLs**

- Navigate to each required URL.
  - <http://ntx.lv>
  - <https://cm.nintex.com> (to connect to Connection Manager)
  - <https://forms.nintex.com>
  - <https://live.nintex.com>
  - <https://liveservices.nintex.com>
  - <https://mobile.nintex.com>
  - <https://nintexlive.blob.core.windows.net/serviceicon>
  - <https://nintexrelay.servicebus.windows.net>
  - <https://prdswasbuwus01.servicebus.windows.net> (to connect to External Start)
  - <https://run.nintex.io> (to connect to the Start Workflow API for External Start)

### Enable Nintex external platform features

This section describes how to enable Nintex external platform features. If you are not installing features with this requirement, then you can skip this section.

Enabling Nintex external platform features involves configuration in SharePoint Central Administration.

The following features require the Nintex external platform.

- External workflow features
  - Connector actions
  - External Start
  - Document Generation
- External forms (including anonymous forms)
- Remote mobile access (Microsoft account sign-in for Nintex Mobile)

**To enable external workflow features**

1. Make sure the server can connect to the Nintex external platform.
2. On the Central Administration Home page, click **Nintex Administration** and then click **External settings for Workflow** under **Licensing and setup**.
3. Enable the prerequisite service and then enable each desired feature.

**To enable external forms (including anonymous forms)**

1. Make sure the server can connect to the Nintex external platform.
2. On the Central Administration Home page, click **Nintex Administration** and then click **External forms settings** under **Forms environment**.
3. Enable each desired feature.

**To set up remote mobile access**

1. Make sure the server can connect to the Nintex external platform.
2. If you have a firewall in place, make the following ports accessible using outbound rules (the ports will be used by the service Nintex External Relay Service).
  - 9351/HTTP
  - 80/HTTP
  - 443/HTTP
3. Make sure the service Nintex External Relay Service is running.
  - a. On the Central Administration Home page, click **Application Management**.
  - b. In the Service Applications section, click **Manage services on server**.
  - c. Click **Start** for Nintex External Relay Service.
4. Enable remote mobile access for the farm.
  - a. On the Central Administration Home page, click **Nintex Administration** and then click **Remote mobile access** under **Forms environment**.
  - b. Click **Enable**.

5. Confirm the ability to register SharePoint accounts with Nintex.

**Note:** The Nintex Forms feature must be activated on the SharePoint site for the registration option to appear.

- a. Follow the instructions from [Nintex registration in the Nintex Mobile help](#) to register a SharePoint account.
- b. (Optional.) Confirm that the registered user is listed on the server hosting SharePoint Central Administration: On the Central Administration Home page, click **Nintex Administration** and then click **Nintex Mobile users** under **Forms environment**.
- c. On a mobile device, sign in to the Nintex Mobile app using the Microsoft account selected for registration.

### Activate features in SharePoint

Nintex Workflow must be activated on both the site collection and relevant sites; Nintex Forms needs activation on the site collection only.

#### To activate features on each relevant site collection in your SharePoint environment

1. From your top site level home page, access **Site Settings**.
2. In the Site Collection Administration section, click **Site collection features**.
3. Nintex Workflow: For each feature listed, in the sequence listed, click **Activate** to activate.
  - a. Activate **Nintex Workflow 2016**.  
This feature allows SharePoint lists and libraries in this site collection to utilize Nintex Workflow features.  
After a short delay, the page refreshes and the feature status becomes "Active."
  - b. Activate each additional feature desired.

Feature (listed in alphabetical order)	Description
<b>Nintex Workflow 2016 InfoPath Forms</b>	Allows Nintex Workflow to use start forms and task forms designed with Microsoft InfoPath.
<b>Nintex Workflow 2016 Reporting Web Parts</b>	Allows the Nintex Workflow Enterprise reporting web parts to be added to sites in this site collection.
<p><b>Note:</b> This feature is only available for the Enterprise edition of Nintex Workflow.</p>	
<b>Nintex Workflow 2016 Web Parts</b>	Allows the Nintex Workflow web parts to be added to sites in this site collection.

4. Nintex Forms: For each feature listed, in the sequence listed, click **Activate** to activate.
  - a. Activate **Nintex Forms Prerequisites Feature**.  
 This feature allows SharePoint lists and libraries in this site collection to utilize Nintex Forms features.  
 After a short delay, the page refreshes and the feature status becomes "Active."
  - b. Activate each additional feature desired.

Feature (listed in alphabetical order)	Description
<b>Nintex Forms for Nintex Workflow</b>	Allows Nintex Workflow in this site collection to utilize Nintex Forms features.
<b>Nintex Forms for SharePoint List Forms</b>	Allows SharePoint lists and libraries in this site collection to utilize Nintex Forms features.
<b>Nintex Forms - External Forms</b>	Allows Nintex Forms designers to publish the form to the Nintex external platform.

Nintex Forms features are now ready to use on all sites in the site collection; Nintex Workflow features require activation in each relevant site in the site collection.

**To activate features on each relevant site in your SharePoint environment (Nintex Workflow only)**

This section applies to Nintex Workflow.

1. From your top site level home page, access **Site Settings**.
2. In the Site Actions section, click **Manage site features**.
3. On the Site Features page, for each desired feature, click **Activate**.

Feature (listed in alphabetical order)	Functionality
<b>Nintex Workflow 2016</b>	Nintex Workflow
<b>Nintex Workflow 2016 Enterprise Reporting</b>	Nintex Workflow Enterprise reporting

**Note:** This feature is only available for the Enterprise edition of Nintex Workflow.

After a short delay for each feature activation, the page refreshes and the feature status becomes "Active."

Nintex Workflow features are now ready to use on the site.

**Confirm production installation**

This section provides guidance on confirming successful installation of Nintex products. This confirmation involves testing Nintex functionality, confirming the installer and configuration tasks were completed, and reinstating original server settings.

**Test Nintex functionality**

Make sure you test functionality for Nintex on each SharePoint list and library expected to use Nintex Workflow or Nintex Forms.

#### To test functionality for Nintex Workflow (SharePoint document library)

- Select the Library tab from the ribbon, click **Workflow Settings**, and then select **Nintex Workflow** to display the Nintex Workflow designer; add workflow actions and publish.

#### To test functionality for Nintex Workflow (SharePoint list)

- Select the List tab from the List Tools ribbon, click **Workflow Settings**, and then select **Nintex Workflow** to display the Nintex Workflow designer; add workflow actions and publish.

#### To test functionality for Nintex Forms (SharePoint list only)

- Select the List tab from the List Tools ribbon and then click **Nintex Forms** to display configuration options for the default Nintex form.

#### Confirm installer and configuration tasks (optional)

As part of confirming successful installation, you can confirm that expected installer and configuration tasks were completed. Following is a summary of these tasks.

- Nintex assemblies and features
- Solution deployments
- Licensing
- Databases
- Enabled actions (safe controls)

#### Nintex assemblies and features

As part of confirming installation, you can check for Nintex-named assemblies and SharePoint features. The Nintex installer installs assemblies and SharePoint features locally.

Assemblies are installed into the Global Assembly Cache (GAC). Both .NET Framework 3.5 and .NET Framework 4.0 assemblies are installed.

SharePoint features are installed into the SharePoint 2016 hive.

#### Solution deployments

During installation, the Nintex solutions need to be deployed to all required Web applications. For more information, see ["Steps for deploying solutions" on page 11](#).

#### To view deployment status for solutions in the farm

1. On the Central Administration Home page, click **System Settings**.
2. In the Farm Management section, click **Manage farm solutions**.

The Solution Management page appears. Solution deployment status is indicated in the Status column; the Web applications to which the solutions are deployed are indicated in the Deployed To column.

#### Licensing

During installation, the license file for installed products needs to be imported into SharePoint Central Administration as indicated in ["Import the license file" on page 10](#).

#### To view imported license files

- On the Central Administration Home page, click **Nintex Administration** and then click **Licensing** under **Licensing and setup**.
- On the Central Administration Home page, click **Nintex Administration** and then click **Health checks** under **Support and troubleshooting**.

## Databases

Successful installation of Nintex Workflow requires that a configuration database exist as well as any additional Nintex content databases needed for your environment; all Nintex content databases must be mapped to the corresponding SharePoint content databases. For more information, see ["Content databases and performance" on page 4](#).

For Nintex Forms, confirm that the automatically created database exists. See ["Configure databases for Nintex Workflow and Forms" on page 12](#).

In addition to ensuring that all required databases are set up, confirm that the web application user accounts are members of the custom database role WSS\_Content\_Application\_Pools for all Nintex databases. This membership configuration is completed by the Nintex installer; the WSS\_Content\_Application\_Pools database role has all required SELECT and EXECUTE rights to the database required for Nintex functionality.

### To confirm database role memberships for web application user accounts

1. Identify the names of all web applications used by Nintex.
  - a. On the Central Administration Home page, click **Application Management**.
  - b. In the Web Applications section, click **Manage web applications**.  
Example name of web application: SharePoint - 80
2. Identify the user account for each web application.
  - a. On the Central Administration Home page, click **Security**.
  - b. In the General Security section, click **Configure service accounts**.
  - c. In the Service Accounts page, select the web application name identified in the previous step.

**Note:** The web application name is prefixed by the phrase "Web Application Pool."  
Example: Web Application Pool - SharePoint - 80

The user account for the web application is identified under Select an account for this component.

Example user account: NINTEXT/PM13-SPWebApp01

3. View the database role membership for each user account on all Nintex databases.
  - a. View the login user accounts for the database server containing the Nintex databases: In Microsoft SQL Server Management Studio, expand the database server folder, expand the Security folder, and then expand the Logins folder.
  - b. Double-click the user account identified in the previous step to display the properties dialog box.
  - c. Click the **User Mapping** page to view the databases mapped to the login user account.
  - d. For each Nintex database:
    - i. Confirm that the check box for the database is selected.
    - ii. Select the database to display the database role memberships, and then confirm that the check box for **WSS\_Content\_Application\_Pools** is selected.

If the check box for the database is not selected, or if the check box for **WSS\_Content\_Application\_Pools** is not selected, go ahead and select it and then click **OK**.

#### Enabled actions (safe controls)

When workflow actions are enabled in SharePoint, the web.config files for the web applications are updated with "safe controls."

#### To confirm that web.config files were updated with Nintex "safe controls"

- From IIS Manager, right-click the web application, select **Explore** to view its files in Windows Explorer, and then open the web.config file in a text editor.

Example excerpt from web.config file indicating enabled actions:

```
<SafeControl Assembly="Nintex.Workflow.ServerControls, Version=1.0.0.0, Culture=neutral,
PublicKeyToken=913f6bae0ca5ae12" Namespace="Nintex.Workflow.ServerControls"
TypeName="*" Safe="True" />
```

#### Reinstate original server settings

When installation is complete, reinstate original server settings across the farm.

On the server used for running the installer, reinstate the following server settings (see ["Set up server used for running installer" on page 7](#)):

- User Account Control: reinstate at the original level
- User account rights: If you added the Farm Installation account (or other user account used for installation) to the Administrators group for the server on which you installed Nintex, remove the account from the group. Leaving the account in the Administrators group results in report warnings from the SharePoint Health Analyzer.
- Group policy for script execution: reinstate if needed

On all servers in the farm, reinstate the following server settings (see ["Disable antivirus software" on page 7](#)):

- Antivirus software: re-enable original programs

#### Addendum

This section contains the following links related to installation of Nintex products.

#### Nintex Workflow Exchange Connector Service installation

This guide contains the following topics helpful for installing Nintex Workflow Exchange Connector Service.



## Introduction

Nintex Workflow Exchange Connector Service is a web service that communicates with Microsoft Exchange.

## System requirements

Nintex Workflow Exchange Connector Service has the following system requirements.

Operating System: Microsoft Windows Server 2008 R2 or Microsoft Windows Server 2012

Software: Install and correctly configure the following.

- Microsoft Exchange Server 2013, 2010, or 2007
- Internet Information Services (IIS) 7.5, 7.0, or 6.0

## Install Nintex Workflow Exchange Connector Service

This topic describes how to install Nintex Workflow Exchange Connector Service.

If your Microsoft Exchange environment is implemented across multiple machines, install Nintex Workflow Exchange Connector Service on the machine running the Exchange Mailbox role.

### To install Nintex Workflow Exchange Connector Service

1. Define the following user accounts.
  - IIS application pool account: Used as the identity under which the web service IIS application pool runs.  
Type: Domain user  
Member of: Exchange Organization, Administrators, Local Administrators, Local IIS\_WPG
  - Web service account: Used as a service user account to authenticate calls from Nintex Workflow and restrict access to the web service.  
Type: Local User  
Member of: Local Users
2. Set up an application pool for Nintex Workflow Exchange Connector Service (new application pool recommended) and configure it to use the IIS application pool account defined in the previous step.

**Note:** For Exchange 2013, configure the application pool to use .NET framework version v4 (under Basic Settings or Advanced Settings, depending on IIS version).
3. Note the following for use in the installer.
  - Site (for example, Default Web Site selection)
  - Virtual directory (for example, Nintex.Workflow.ECS)
  - Application pool (for example, DefaultAppPool selection)
4. Log in to the server using an administrator account with sufficient privileges to execute Microsoft Installers (.msi files).

5. Execute the installer file ExchangeConnectorService.msi by either double-clicking it or running it from the command prompt (run as administrator).

**Note:** The installer file ExchangeConnectorService.msi is located in the "Supporting" folder created when you choose to export the solution in the Nintex Workflow installer.

The Nintex Workflow Exchange Connector Service installer wizard appears.

6. On the Exchange Connector Service installation wizard page, click **Next**.
7. On the License agreement page, confirm acceptance of the end-user license agreement and then click **Next**.
8. On the Select site and virtual directory page, edit the following fields as needed and then click **Next**.
  - Site (for example, Default Web Site selection)
  - Virtual directory (for example, Nintex.Workflow.ECS)
  - Application pool (for example, DefaultAppPool selection)
9. On the Confirm installation page, click **Next**.

After a short while, the Installation complete page appears.
10. On the Installation complete page, click **Close** to exit the installer.

### Complete post-installation tasks

This topic describes how to complete post-installation tasks.

Post-installation tasks include authorizing the web service user, configuring the application pool identity, and setting the authentication method for the virtual directory.

#### To authorize the web service user

1. Locate the web.config file for the virtual directory specified during installation.

The location of the virtual directory folder depends on the site specified during installation. For example, if you selected default web site and specified Nintex.Workflow.ECS for the virtual directory, then the path to the web.config file is as follows.

C:\Inetpub\wwwroot\Nintex.Workflow.ECS\web.config

2. Right-click the web.config file and select **Edit**.
3. Within the <authorization> section of the web.config file, replace [local windows account] with the web service account created during installation.

Original <authorization> section:

```
<authorization>
<allow users="[local windows account]"/>
<deny users="*/"/>
</authorization>
```

Example of revised <authorization> section:

```
<authorization>
<allow users="SystemName\WebServiceUser"/>
<deny users="*/"/>
</authorization>
```

4. Save the web.config file, ensuring that no other changes are made.

You are now ready to configure the application pool identity.

#### To configure the application pool identity

Follow the instructions for your version of IIS (Internet Information Services).

---

#### **IIS 7 or 7.5 instructions for configuring the application pool identity**

1. Open IIS Manager. For instructions, see the Microsoft article "[How to: Open IIS Manager.](#)"
2. Edit properties for ECSAppPool: In the IIS Manager window, select the **Application Pools** folder to list its contents, right-click **ECSAppPool**, and then select **Advanced Settings** to display the Advanced Settings dialog box.
3. Edit the Identity property: Expand the Process Model section, click the ellipsis (...) for Identity, and complete the following configuration.
  - Choose to use a custom account.
  - Enter the credentials of the application pool account created during installation.
  - For Exchange 2013, configure the application pool to use .NET framework version v4 (right-click and select **Basic Settings**).
4. Save changes and close the Advanced Settings dialog box.

You are now ready to set the virtual directory authentication method.

---

#### **IIS 6 instructions for configuring the application pool identity**

1. Open IIS Manager. For instructions, see the Microsoft article "[How to: Open IIS Manager.](#)"
2. Edit properties for ECSAppPool: In the IIS Manager window, expand the **Application Pools** folder, right-click **ECSAppPool**, and then select **Properties** to display the Properties dialog box.
3. Select the **Identity** tab and complete the following configuration.
  - Change the identity to Configurable.
  - Enter the credentials of the application pool account created during installation.
  - For Exchange 2013, configure the application pool to use .NET framework version v4 (right-click and select **Basic Settings**).
4. Click OK twice to close the Properties dialog box.
5. Ensure that ECSAppPool is started: Right-click ECSAppPool. If not yet started, click **Start**.

You are now ready to set the virtual directory authentication method.

---

#### **To set the virtual directory authentication method**

Follow the instructions for your version of IIS (Internet Information Services).

---

#### **IIS 7 or 7.5 instructions for configuring the virtual directory authentication method**

1. Open IIS Manager. For instructions, see the Microsoft article "[How to: Open IIS Manager.](#)"
  2. Edit properties for the virtual directory specified during installation: Expand the Web Sites folder, expand the site folder, and select the virtual directory folder to display available selections in the pane on the right.
-

3. In the pane on the right, within the IIS section, double-click **Authentication** and then complete the following configuration.
  - Ensure that "Anonymous Authentication" is set to Disabled (right-click to set).
  - Ensure that "Basic Authentication" and "Windows Authentication" are set to Enabled (right-click to set).

You have now completed all post-installation tasks and you can now connect to Exchange from Nintex workflows. For more information, see ["Connect to Exchange from Nintex workflows" below](#).

---

#### **IIS 6 instructions for configuring the virtual directory authentication method**

1. Open IIS Manager. For instructions, see the Microsoft article ["How to: Open IIS Manager."](#)
2. Edit properties for the virtual directory specified during installation: Expand the Web Sites folder, expand the site folder, right-click the virtual directory folder, and select **Properties**.
3. In the Properties dialog box, select the Directory Security tab, click **Edit...** in the Authentication and access control section, and then complete the following configuration.
  - Ensure that Enable anonymous access is unchecked.
  - Select the check box for either Integrated Windows authentication or Basic authentication.
4. Click OK twice to close the Properties dialog box.

You have now completed all post-installation tasks and you can now connect to Exchange from Nintex workflows. For more information, see ["Connect to Exchange from Nintex workflows" below](#).

---

### **Connect to Exchange from Nintex workflows**

This topic describes how to define the web service URL and account credentials for the action Provision User In Exchange.

The action Provision User In Exchange connects to Microsoft Exchange to provision a mailbox for the specified user.

When configuring this action, specify the web service URL as the path to Nintex Workflow Exchange Connector Service (EmailProvisioning.asmx) and specify the credentials for an authorized web service account. You can confirm authorized web service accounts by reviewing the web.config file for the virtual directory.

In the following example web service URL, the mycompany.com website contains the virtual directory "siteECS" that itself contains the web service "EmailProvisioning.asmx"—both created by the Nintex Workflow Exchange Connector Service installer.

Example: <http://www.mycompany.com/siteECS/EmailProvisioning.asmx>

### **Manually export and import Nintex products and solutions**

The following steps detail how to manually export and import Nintex products and solutions.

Prerequisites: Windows PowerShell and SharePoint 2016 Management Shell must be run as administrator to import the solutions.

#### **To manually export Nintex products and solutions**

1. Run the installation wizard and navigate to:  
**Installation options**
2. Choose **Export** and then click **Export**.

3. Select the destination folder.

Default value: Desktop.

4. Click **OK**.

Now you can manually install or import the products and solutions using Windows PowerShell or SharePoint Management Shell.

#### To manually install Nintex products using Windows PowerShell

1. Browse to the folder where you exported the Nintex solutions.
2. Add Nintex Workflow, Nintex Forms, and external connection by running the following command.

```
.\install.ps1
```

3. Add only the desired Nintex products by running the following command.

```
.\install.ps1 -isInstallWorkflow $boolean -isInstallForms $boolean -isInstallExternalConnection $boolean
```

Where \$boolean is a true or false flag. If you set \$boolean to true, the product will install. If you set \$boolean to false, the product will not install.

**Note:** If you do not pass the value for \$boolean parameter, it will install all three products.

#### To manually import a Nintex solution using Windows PowerShell

1. Add the Windows PowerShell snap-in to the current session by running the following command.

```
Add-PSnapin Microsoft.SharePoint.PowerShell
```

2. Add the solution to the farm by running the following command.

```
Add-SPSolution drive:\path\NameofSolution.wsp
```

where drive is the drive letter, path is the folder path, and NameofSolution.wsp is the name of the solution.

Now you can import the license file. See ["Import the license file" on page 10](#).

#### To manually import a Nintex solution using SharePoint Management Shell

- Add the solution to the farm by running the following command.

```
Add-SPSolution drive:\path\NameofSolution.wsp
```

where drive is the drive letter, path is the folder path, and NameofSolution.wsp is the name of the solution.

Now you can import the license file. See ["Import the license file" on page 10](#).

### Deploy the solutions

This section provides information about the solutions (.wsp files) included with the installer.

#### Solutions and required deployments

This section describes the solutions (.wsp files) included with the installer and indicates required Web application deployments. For instructions on deploying solutions, see ["Steps for deploying solutions" on page 11](#).

Solution name (ordered alphabetically)	Required deployments	
	All	CA
NintexCommon.wsp Sets up Nintex Administration page.	Auto	Auto

Solution name (ordered alphabetically)	Required deployments	
	All	CA
NintexForms2016.wsp Nintex Forms 2016 web application-specific functionality	Auto	Auto
NintexForms2016Core.wsp Nintex Forms 2016farm-wide functionality	Auto	Auto
NintexExternalConnection.wsp Nintex external connection	Auto	Auto
NintexWorkflow2016.wsp Nintex Workflow 2016 web application- specific functionality	Yes	Yes
NintexWorkflow2016Core.wsp Nintex Workflow 2016 farm-wide functionality for servers with the role "Application"	Auto	Auto
NintexWorkflow2016EnterpriseFeatures.wsp Nintex Workflow 2016 - Enterprise Edition(for Enterprise reporting)	Yes	Yes

Legend:

All: All content Web applications

CA: Central Administration Web application

Auto: Globally deployed automatically via installer

### Uninstall Nintex products

This topic describes how to uninstall Nintex Workflow and Nintex Forms completely. Follow these instructions for servers on which you do not intend to reinstall Nintex products.

#### If you plan to reinstall the Nintex platform

To facilitate an easy reinstall of Nintex products, perform the following tasks prior to uninstalling the Nintex platform.

- Run the IISreset command on all servers in the farm to ensure that Nintex assemblies are not write-locked. Make sure you run this command after a failed installation of the installer package.
- Retract and remove Nintex solutions from the farm, first for content web applications, and then for Central Administration. For retraction and removal instructions, refer to the following MSDN article: [http://msdn.microsoft.com/en-us/library/office/aa543958\(v=office.14\).aspx](http://msdn.microsoft.com/en-us/library/office/aa543958(v=office.14).aspx).

#### Perform a complete uninstall

Completely uninstalling Nintex Workflow and Nintex forms involves removing Nintex solutions, databases, web.config entries, and external platform components, as well as SharePoint libraries and lists used to interact with Nintex products.

**Note:** Retracting Nintex solutions from SharePoint will not remove Nintex External Relay Service. If Nintex External Relay Service is not stopped before retracting related solutions, then the retraction may fail due to locking issues. See instructions below to remove Nintex External Relay Service.

#### To uninstall Nintex features and solutions

1. Disable Nintex features on all relevant sites and site collections in SharePoint.

- a. Nintex Workflow: Disable Nintex features on all sites using Nintex Workflow.
  - b. Disable Nintex features on all site collections using Nintex products.  
Nintex features for site collections include external forms as well as Nintex Workflow.
2. Nintex Forms - External forms: Disable external forms options and services.
- On the Central Administration Home page, click **Nintex Administration**, click **External forms settings**, and then click **Disable** for Enable external forms.
  - On the Central Administration Home page, click **Nintex Administration**, click **Remote mobile access**, and then click **Disabled** for Enable External Mobile Access.
3. Deactivate Nintex features for all relevant web applications.
- Nintex Workflow: On the Central Administration Home page, click **Nintex Administration**, click **Web Application activation** under Licensing and setup, select the check box for **All content web applications**, and then click **Deactivate**.
  - Nintex Forms: On the Central Administration Home page, click **Application Management**, click **Manage web applications** under Web applications, and then for each web application on which you want to deactivate the product, select the web application, click **Managed Features**, and then click **Deactivate** for **Nintex Forms**.

**Note:** When Nintex Forms is deactivated, the web.config file for the web application is updated to remove Nintex.Forms references.

4. Stop all Nintex services by disabling related features as follows.
- Disable external settings for workflow:
    - a. On the Central Administration Home page, click **Nintex Administration** and then click **External settings for Workflow** under **Licensing and setup**.
    - b. Click **Disable** for the following options:
      - Enable External Connector for Nintex Workflow**
      - Enable External Start**
  - Disable external forms:
    - a. On the Central Administration Home page, click **Nintex Administration** and then click **External forms settings** under **Forms environment**.
    - b. Click **Disable** for **Enable external forms**.

5. Retract and remove Nintex solutions in the following sequence.

nintexworkflow2016enterprisefeatures.wsp

nintexworkflow2016.wsp

nintexworkflow2016core.wsp

nintexforms2016core.wsp

nintexforms2016.wsp

nintexternalconnection.wsp

nintexcommon.wsp

Steps to retract and remove a solution:

- a. On the Central Administration Home page, click **System Settings** and then click **Manage farm solutions**.
  - b. On the Solution Management page, click the name of the solution.
  - c. On the Solution Properties page, click **Retract Solution**. The Solution Management page is redisplayed.
  - d. Click the name of the solution again.
  - e. On the Solution Properties page, click **Remove Solution**. The Solution Management page is redisplayed.
6. Nintex Forms: Delete the following content types and related tasks from all SharePoint lists and sites.
    - Nintex Workflow Multi Outcome Task (use Nintex Forms)
    - Nintex Workflow Task (use Nintex Forms)

#### To remove Nintex databases

- Open Microsoft SQL Server Management Studio and delete databases associated with Nintex Workflow and Nintex Forms.
- Nintex Forms: Remove the settings object from the SharePoint database: In SharePoint 2016 Management Shell, at the command prompt, type the following.

**Caution:** This procedure removes the Nintex Forms database, license, and other items from the SharePoint farm. If you plan to reinstall Nintex Forms in the future, we recommend skipping this procedure as removal of these items may cause issues in the installer. The remedy for this installation issue is to run the Install-NFservice PowerShell script using SharePoint 2016 Management Shell.

```
$farm = Get-spfarm
```

```
$farm.RemoveObsoleteClass("4DB6F71E-05FF-4383-B16E-ABC5A57057C5")
```

#### To remove Nintex web.config entries

1. On the server's file system, navigate to the folder hosting the web application.  
Default path: C:\inetpub\wwwroot\wss\virtualdirectories\80
2. Open web.config with a text editor.
3. Find and delete any of the following references.  
Nintex.Workflow



4. In SharePoint 2016 Management Shell, use the following commands to remove the farm properties added by Nintex Workflow.

```
$farm = get-spfarm
```

```
$farm.properties.remove("NintexWorkflowServer2016License")
```

```
$farm.properties.remove("NW2007ConfigurationDatabase")
```

```
$farm.update()
```

**Note:** The "NW2007ConfigurationDatabase" reference is correct.

**To remove Nintex External Relay Service**

1. Obtain a login account that meets the following requirements.
  - Permissions to SharePoint and Windows
  - Access to a server that can access all other servers within the SharePoint farm
2. Access SharePoint 2016 Management Shell.

**Note:** Alternatively, you may also run this script in Windows PowerShell. If you do, you need to add the following line to the script: `Add-PSSnapin 'Microsoft.SharePoint.PowerShell'`

### 3. Enter the following script on each server that is hosting Nintex External Relay Service.

```
function Test-ServiceResult(
    [string]$operation = $(throw "operation is required"),
    [object]$result = $(throw "result is required"),
    [switch]$continueOnError = $false)
{
    $retVal = -1
    if ($result.GetType().Name -eq "UInt32")
    {
        $retVal = $result
    }
    else
    {
        $retVal = $result.ReturnValue
    }
    if ($retVal -eq 0)
    {
        return
    }
    $errorcode = 'Success,Not Supported,Access Denied,Dependent Services
Running,Invalid Service Control'
    $errorcode += ',Service Cannot Accept Control, Service Not Active,
Service Request Timeout'
    $errorcode += ',Unknown Failure, Path Not Found, Service Already Running,
Service Database Locked'
    $errorcode += ',Service Dependency Deleted, Service Dependency Failure,
Service Disabled'
    $errorcode += ',Service Logon Failure, Service Marked for Deletion,
Service No Thread'
    $errorcode += ',Status Circular Dependency, Status Duplicate Name, Status
Invalid Name'
    $errorcode += ',Status Invalid Parameter, Status Invalid Service Account,
Status Service Exists'
    $errorcode += ',Service Already Paused'
    $desc = $errorcode.Split(',')[$retVal]
    $msg = ("{0} failed with code {1}:{2}" -f $operation, $retVal, $desc)
    if (!$continueOnError)
    {
        Write-Error $msg
    }
    else
    {
        Write-Warning $msg
    }
}
```

```
}  
function Uninstall-Service(  
[string]$serviceName = $(throw "serviceName is required"),  
[string]$targetServer = $(throw "targetServer is required"))  
{  
$service = Get-WmiObject -Namespace "root\cimv2" -Class "Win32_Service" -  
ComputerName $targetServer -Filter "Name='$serviceName'" -Impersonation 3  
if (!$service)  
{  
Write-Warning "Failed to find Windows Service $serviceName on  
$targetServer. Nothing to uninstall."  
return  
}  
"Found windows service $serviceName on $targetServer; checking status"  
if ($service.Started)  
{  
"Stopping windows service $serviceName on $targetServer"  
$result = $service.StopService()  
Test-ServiceResult "Stop Service" $result  
}  
"Attempting to uninstall windows service $serviceName on $targetServer"  
$result = $service.Delete()  
Test-ServiceResult "Delete Service" $result  
"Uninstall Windows Service $serviceName on $targetServer Complete"  
}  
function Uninstall-SharePointServiceInstance(  
[string]$serviceName = $(throw "serviceName is required"),  
[string]$targetServer = $(throw "targetServer is required"))  
{  
$instance = Get-SPServiceInstance -Server $targetServer | where { $_.name  
-eq $serviceName }  
if ($instance -ne $null)  
{  
"Found SharePoint Service Instance $serviceName on $targetServer"  
$instance.Delete()  
"Uninstall SharePoint Service Instance $serviceName on $targetServer  
Complete"  
}  
else  
{  
Write-Warning "Failed to find SharePoint Service Instance $serviceName on  
$targetServer. Nothing to uninstall."  
}  
}
```

```
function Uninstall-SharePointService(  
[string]$serviceName = $(throw "serviceName is required"))  
{  
$farm = Get-SPFarm  
$service = $farm.Services | where { $_.name -eq $serviceName }  
if($service -ne $null)  
{  
"Found SharePoint Service $serviceName"  
$service.Delete()  
"Uninstall SharePoint Service $serviceName Complete"  
}  
else  
{  
Write-Warning "Failed to find SharePoint Service $serviceName. Nothing to  
uninstall."  
}  
}  
Add-PSSnapin 'Microsoft.SharePoint.PowerShell'  
$farm = Get-SPFarm  
$servers = $farm.Servers  
  
foreach ($server in $servers)  
{  
if ($server.Role -ne "Invalid")  
{  
UnInstall-Service -ServiceName "Nintex External Relay Service" -  
TargetServer $server.Address  
UnInstall-SharePointServiceInstance -ServiceName  
"NintexLiveRelayServiceInstance " -TargetServer $server.Address  
}  
}  
UnInstall-SharePointService -ServiceName "Nintex External Relay Service"
```

**Note:** This script attempts to stop and uninstall all instances of Nintex External Relay Service and remove Windows and SharePoint services related to Nintex External Relay Service. However, related files remain on the server, typically at the following path. C:\Program Files\Common Files\microsoft shared\Web Server Extensions\16\BIN\ExternalPlatform\

4. Access the SharePoint 2016 Management Shell; at the SharePoint PowerShell command prompt, type the following, where `http://mysharepoint:12345` is your Central Administration web application URL.

```
Disable-SPFeature -Identity NintexLiveAdminLinks -url  
http://mysharepoint:12345  
  
Uninstall-ExternalPlatform  
  
Uninstall-SPSolution -Identity NintexExternalConnection.wsp  
  
Remove-SPSolution -Identity NintexExternalConnection.wsp
```

**Note:** Select "Y" for all confirmation prompts.

#### To remove SharePoint libraries, lists, and content types

1. Nintex Workflow: Delete the following libraries, lists, and (optionally) content types.

Libraries and lists:

- /NintexWorkflows
- /Lists/NintexWorkflowHistory
- /Workflows/NintexWorkflow

Content types:

- Nintex Biztalk Task
  - Nintex Workflow Multi Outcome Task
  - Nintex Workflow Multi Outcome Task using InfoPath
  - Nintex Workflow Task
  - Nintex Workflow Task using InfoPath
  - Workflow
  - Workflow Snippet
  - Workflow Template
2. Nintex Forms: Delete the following content types and related tasks from all SharePoint lists and sites.
    - Nintex Workflow Multi Outcome Task (use Nintex Forms)
    - Nintex Workflow Task (use Nintex Forms)

## Troubleshoot deployment

This section describes ways to narrow down deployment problems as well as resolutions for deployment issues that may come up.

### Identify the problem

This section describes methods for narrowing down problems with solution deployment.

### Deploy test solution packages

Deployment issues with the Nintex Workflow solution package (`nintexworkflow2016.wsp`) may indicate an issue with the SharePoint environment. If you suspect issues with the SharePoint environment, you can deploy test solution packages to determine if the deployment issues persist.

The following test solution packages are available from Nintex:

- [TestingSolutionGlobal.zip](#): This solution deploys globally; no URL needs to be specified. The solution creates the following file:

C:\Program Files\Common Files\Microsoft Shared\Web Server Extensions\16\TEMPLATE\TestingSolutionGlobal.txt

**Note:** If you don't see the file in the above location, check the path for the SharePoint 2010 hive: C:\Program Files\Common Files\Microsoft Shared\Web Server Extensions\14\TEMPLATE\TestingSolutionGlobal.txt

If Solution 1 does deploy correctly, then please try Solution 2 as well, which is slightly more advanced.

- [TestingSolutionForWebApps.zip](#): This solution requires selection of a web application. The solution creates the following file:

C:\Program Files\Common Files\Microsoft Shared\Web Server Extensions\16\TEMPLATE\TestingSolutionForWebApps.txt

**Note:** If you don't see the file in the above location, check the path for the SharePoint 2010 hive: C:\Program Files\Common Files\Microsoft Shared\Web Server Extensions\14\TEMPLATE\TestingSolutionForWebApps.txt

The solution also deploys a file called SimpleSolution.dll to the GAC and adds an entry to the web.config file for the web application as follows:

```
<SafeControl Assembly="SimpleSolution, Version=1.0.0.0, Culture=neutral,
PublicKeyToken=a10b52b9b77b11de" Namespace="SimpleSolution" TypeName=""
Safe="True" />
```

**Note:** The SimpleSolution.dll contains no code that executes.

#### To deploy test solution packages

1. Download the test solution packages from the following URLs:  
<http://download.nintex.com/sl/supportfiles/TestingSolutionGlobal.zip>  
<http://download.nintex.com/sl/supportfiles/TestingSolutionForWebApps.zip>
2. Run the following Windows PowerShell command to add the solutions to the solution store:

```
Add-SPSolution drive:\path\NameofSolution.wsp
```

where drive is the drive letter, path is the folder path, and NameofSolution.wsp is the name of the solution.

3. Deploy the test solution packages from Central Administration. For instructions, see ["Steps for deploying solutions" on page 11](#).

If deployment does not successfully complete with one or more of the test solution packages, the SharePoint environment may have an issue. We suggest contacting Microsoft for additional support with your SharePoint environment.

If deployment successfully completes with both test solution packages, contact Nintex Support.

#### Review SharePoint ULS log files

The SharePoint Unified Logging Service (ULS) log files may contain helpful information for troubleshooting issues with deployment of solution packages.

For example, the following error suggests a critical timer job error related to internal SharePoint problems persisting objects to the database. These errors also mention an "update conflict" as experienced when attempting solution deployment. This underlying issue may be preventing solution deployment and should thus be resolved. Contact Microsoft for additional support if presented with this error.

"The Execute method of job definition Microsoft.Office.Server.Search.Administration.IndexingScheduleJobDefinition (ID xxxxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxxxx) threw an exception. More information is included below. An update conflict has occurred, and you must re-try this action. The object IndexingScheduleJobDefinition Name=Indexing Schedule Manager on servername Parent=SearchService Name=OSearch is being updated by DOMAIN\username, in the OWSTIMER process, on machine SERVERNAME. View the tracing log for more information about the conflict."

By default, ULS logs are located in the SharePoint hive. For example, the default location for SharePoint 2016 ULS logs is %ProgramFiles%\Common Files\Microsoft Shared\Web Server Extensions\16\Logs.

**Note:** For more information about ULS logging, see the following MSDN article. [http://msdn.microsoft.com/en-us/library/office/ff595318\(v=office.14\).aspx](http://msdn.microsoft.com/en-us/library/office/ff595318(v=office.14).aspx).

In your review of the log files, search for logged information during the time range in which the solution was scheduled to be deployed.

**To aggregate all log files from SharePoint servers**

- Use the [Merge-SPLogFile cmdlet](#) in a SharePoint Management Shell window.

## Issues

This section provides guidance for resolving common issues related to deployment.

### Installation error for "Admin SVC": Nintex Forms 2016

#### Symptom

The installer displays the following error message:

"Admin SVC must be running in order to create deployment timer job."

#### Cause

The Microsoft Windows service SharePoint Administration is not running.

#### Resolution

Make sure that the service is running. For instructions, see ["Ensure services are running" on page 6](#).

### Installation error for "RPC server": Nintex Workflow

#### Symptom

During installation of Nintex External Connection Components and Nintex Workflow on a multi-server farm the following error message appears:

"The RPC server is unavailable"

This message may indicate upgrade or installation issues on one or more servers in the farm for one or more of the following services:

#### **Nintex Connector Workflow Queue Service**

#### **Nintex Workflow Start Service**

### Cause

Possible causes for this error include firewall and security restrictions for affected servers.

### Resolution

Manually install or upgrade the Nintex connector Workflow Queue Service and Nintex Workflow Start Service on each server in the farm using the following procedure.

1. In SharePoint Management Shell, run the following script for the Nintex connector Workflow Queue Service:  

```
$path =  
[Microsoft.SharePoint.Utilities.SPUtility]::GetVersionedGenericSetupPath  
("bin\NintexWorkflow\Nintex.Workflow.Connector.QueueService.exe", 15)  
$serviceName = "Nintex Connector Workflow Queue Service"  
New-Service -Name $serviceName -DisplayName $serviceName -BinaryPathName $path
```
2. In SharePoint Management Shell, run the following script for the Nintex Workflow Start Service:  

```
$path =  
[Microsoft.SharePoint.Utilities.SPUtility]::GetVersionedGenericSetupPath  
("bin\NintexWorkflowStart\Nintex.Workflow.Start.Service.exe", 15)  
$serviceName = "Nintex Workflow Start Service"  
New-Service -Name $serviceName -DisplayName $serviceName -BinaryPathName $path
```
3. Run the IISReset command and restart the SharePoint Timer Service.
4. To start the service on the current server, do the following:
  - a. On the Central Administration Home page, click **Application Management**.
  - b. In the Service Applications section, click **Manage services on server**.
  - c. On the Services on Server page, select the desired server.
  - d. Click **Start** for **Nintex Connector Workflow Queue Service**.
  - e. Click **Start** for **Nintex Workflow Start Service**.

### LazyApproval issues occur

For help troubleshooting LazyApproval issues, see the following Nintex Connect article: [LazyApproval Guide](#).

### Nintex Connector Workflow Queue Service failed to start

#### Symptom

The Nintex Connector Workflow Queue Service failed to start and the following error message appears:

"No connection could be made because the target machine actively refused it"

#### Cause

This message indicates a firewall issue.

#### Resolution

Confirm accessibility of all required ports and Nintex Connector URLs using the following procedure.

1. If you have a firewall in place, make the following ports accessible (the ports will be used by Nintex Connector Workflow Queue Service).



- 5671/TCP
- 5672/TCP
- 443/HTTP

**Note:** Note: Nintex uses Advanced Message Queuing Protocol (AMQP) over TCP traffic for Service Bus brokered messaging, which requires ports 5671 and 5672 to both be open for AMQP communication. By default, port 5671 is used by Secure AMQP.

2. Confirm that the server can access the Nintex connector URLs: From the server running the Nintex Connector Workflow Queue Service, navigate to each of the following URLs.
  - <https://live.nintex.com>
  - <https://liveservices.nintex.com>
  - <https://nintexlive.blob.core.windows.net/serviceicon>
  - <https://nintexrelay.servicebus.windows.net/>
3. To start the service on the current server, do the following:
  - a. On the Central Administration Home page, click **Application Management**.
  - b. In the Service Applications section, click **Manage services on server**.
  - c. Click **Start** for Nintex Connector Workflow Queue Service.

### Nintex connectors: Multiple connector actions run in parallel may take hours to complete

#### Symptom

Processing takes hours to complete when multiple Workflow actions are run in parallel on different servers in a SharePoint farm topology.

#### Cause

The Nintex Connector Workflow Queue Service has been enabled on two or more servers. As a result, the queue service generates a connector event that slows down processing times.

#### Resolution

Do not enable the Nintex Connector Workflow Queue Service on more than one server in a farm topology.

### Registration error: Nintex Mobile

#### Symptom

The following message appears when a user attempts to register with Nintex Mobile by clicking the SharePoint user name, selecting **Nintex Mobile Apps**, and then selecting **Register with Nintex mobile**.

"An error occurred during the registration process."

#### Cause

This error may be caused by an inability to connect to Nintex mobile.

#### Resolution

Make sure that the SharePoint site can connect to the Nintex external platform.

- Confirm that the Nintex external platform is fully connected and enabled. For instructions, see "[Connect to the Nintex external platform](#)" on page 17.
- Confirm connectivity to the Nintex External Replay Service bus at <http://nintexrelay.servicebus.windows.net>.

Follow Microsoft best practices for troubleshooting service bus connectivity. For more information, see the Microsoft article at <http://social.technet.microsoft.com/wiki/contents/articles/2055.troubleshooting-connectivity-issues-in-the-azure-appfabric-service-bus.aspx>.

- As part of troubleshooting:
  - Review verbose log files for the Nintex External Relay Service.  
For instructions on enabling verbose logging and reviewing the log files, see the related procedure below.  
If you find any proxy errors in the log, contact your network infrastructure team.
  - Restart the Nintex External Relay Service using the procedure below.
  - Check for blocked IP addresses using the procedure below.
  - Check for any proxy or firewall rules that isolate specific IP addresses.  
If you find any such rules, contact your network infrastructure team.
  - Retry Nintex registration: Click the SharePoint user name to display the context menu, select **Nintex Mobile Apps**, and then select **Register with Nintex mobile**.

#### To check for blocked IP addresses

1. With the help of the network administrator, trace the connections by opening the proxy and firewall servers.
2. Compare the traced connections to the known reserved addresses.  
See <http://blogs.msdn.com/b/narahari/archive/2011/08/01/ip-range-for-windows-azure-platform-identifying-connectivity-issues.aspx>; refer to Microsoft sites for the latest information on identifying connectivity issues with Windows Azure.
3. If any IP addresses used by the service bus are blocked, then contact your network infrastructure team to resolve the situation.

#### To enable verbose logging for the Nintex External Relay Service and review log files

1. In a text editor, open the relay service configuration file.  
By default, the file is located in the SharePoint hive, under /BIN/ExternalPlatform. For example, the default location is %ProgramFiles%\Common Files\Microsoft Shared\Web Server Extensions\16\BIN\ExternalPlatform\Nintex.External.RelayService.exe.config.

2. Edit the file to include the following lines, indicated by bold type.

```
<?xml version="1.0" encoding="utf-8"?>
<configuration>
<appSettings>
<add key="MaximumRetryInterval" value="60" />
<add key="RetryIntervalCoefficient" value="2.5" />
<add key="KeepLogsForMonths" value="2" />
<add key="VerboseFileLogging" value="true" />
</appSettings>
<startup>
<supportedRuntime version="v4.0" sku=".NETFramework,Version=v4.0" />
</startup>
<system.net>
<defaultProxy useDefaultCredentials="true">
<proxy bypassonlocal="True" usesystemdefault="True"/>
</defaultProxy>
</system.net>
</configuration>
```

3. Save your changes and close the file.
4. To start verbose logging, restart the Nintex External Relay Service.  
For instructions, see the related procedure below.
5. Retry Nintex mobile registration: Click the SharePoint user name to display the context menu, select **Nintex Mobile Apps**, and then select **Register with Nintex Mobile**.
6. To review the log files, open the folder /BIN/ExternalPlatform/LOGS in the SharePoint hive.

The default location for the Nintex External Relay Service log files is as follows.

```
%ProgramFiles%\Common Files\Microsoft Shared\Web Server
Extensions\16\BIN\ExternalPlatform\Logs
```

#### To restart the Nintex External Relay Service

1. On the Central Administration Home page, click **System Settings** and then click **Manage services on this server** under Servers.
2. Click **Start** for Nintex External Relay Service.

### Service stuck on "starting": Nintex Connector Queue Service

#### Symptom

The Nintex Connector Workflow Queue Service is in a "starting" status (with no start/stop link) for a prolonged period.

#### Cause

Nintex assemblies have not been refreshed by existing processes.

#### Resolution

Manually refresh Nintex assemblies using the following procedure.

1. Delete the provisioning job as follows:
  - a. On the Central Administration Home page, click **Monitoring**.
  - b. Click **Review job definitions**.
  - c. Click the job "Provisioning Nintex Connector Workflow Queue Service on [SERVERNAME]" and then delete the job.
2. Restart the **SharePoint Administration Service**.
3. Restart the **SharePoint Timer Service**.

4. Run the IISRESET command.
5. To start the service on the current server, do the following:
  - a. On the Central Administration Home page, click **Application Management**.
  - b. In the Service Applications section, click **Manage services on server**.
  - c. Click **Start** for **Nintex Connector Workflow Queue Service**.

### Solution package is listed as error: Nintex Workflow

#### Symptom

The Nintex Workflow solution package (nintexworkflow2013.wsp) is listed as error.

#### Cause

The solution may not have been deployed correctly.

#### Resolution

1. Confirm that the SharePoint Administration service is running. See ["Ensure services are running" on page 6](#).
2. Run the following stsadm command:

```
stsadm.exe -o execadmsvcjobs
```

For a mapping of Stsadm operations and their equivalent Windows PowerShell cmdlets, see the following Microsoft TechNet article: <http://technet.microsoft.com/en-us/library/ff621081.aspx>

3. Redeploy the solution by doing one of the following:
  - Click Deploy Solution button in the toolbar. For complete instructions, see ["Steps for deploying solutions" on page 11](#).
  - Run the following Windows PowerShell command:

```
Add-SPSolution drive:\path\NameofSolution.wsp
```

where drive is the drive letter, path is the folder path, and NameofSolution.wsp is the name of the solution.

If the solution package is still in error, check the solution information page for potential information about error causes. To view the solution information page, go to the Central Administration Home page, select System Settings, click Manage farm solutions, and click the link for the solution of interest.

You can also analyze the SharePoint ULS log files to determine what is causing the failure. For more information, see ["Review SharePoint ULS log files" on page 38](#).

### Solution package is stuck in deployment: Nintex Workflow

#### Symptom

The Nintex Workflow solution package (nintexworkflow2016.wsp) is stuck in deployment.

#### Cause

The solution may not have been deployed correctly.

#### Resolution

Cancel and restart the deployment.

1. Run the following stsadm command to list the job identifiers for all deployments in progress.

```
stsadm -o enumdeployments
```

For a mapping of Stsadm operations and their equivalent Windows PowerShell cmdlets, see the following Microsoft TechNet article: <http://technet.microsoft.com/en-us/library/ff621081.aspx>

2. Note the job identifier for the stuck Nintex Workflow deployment job.
3. Cancel the deployment, using the following stsadm command:

```
stsadm -o canceldeployment -id "your job id string here"
```

The solution management page in Central Administration updates the status of the solution to "not deployed." You can now deploy the solution again.

4. Redeploy the solution by doing one of the following:
  - Click the Deploy Solution button in the toolbar. For complete instructions, see ["Steps for deploying solutions" on page 11](#).
  - Run the following stsadm command:

```
stsadm.exe -o deploysolution -n nintexworkflow2013.wsp -allcontenturls -immediate -allowgacdeployment
```

If the deployment is stuck again, analyze the SharePoint ULS log files to determine what is causing the failure. For more information, see ["Review SharePoint ULS log files" on page 38](#).