CoSign Connector for SharePoint

Version 7.3

User Guide
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# Table of Contents

**Chapter 1: Overview** .............................................................................................................. 1  
Requirements for Data Authentication Systems........................................................................... 1  
Introduction to CoSign.................................................................................................................... 2  
   Environments Supported by CoSign......................................................................................... 2  
   Applications that Work with CoSign....................................................................................... 2  
CoSign Components ..................................................................................................................... 3  
CoSign Guides ............................................................................................................................... 4  
Intended Audience ....................................................................................................................... 4  
Organization of this Guide.......................................................................................................... 5  

**Chapter 2: Installing and Deploying the CoSign Connector for SharePoint** .............................. 7  
CoSign Connector for SharePoint Installation .............................................................................. 7  
   Installing and Configuring the CoSign Client........................................................................... 8  
   Installing the CoSign Connector for SharePoint Solution..................................................... 10  
Deploying the CoSign Connector for SharePoint Solution............................................................ 12  
   Deploying the CoSign Connector for SharePoint Solution via the GUI ................................ 12  
   Deploying the CoSign Connector for SharePoint Solution via the CLI.................................. 13  
   Verifying the Deployment..................................................................................................... 13  
Retracting the CoSign Connector for SharePoint Solution Deployment........................................ 14  
Uninstalling the CoSign Connector for SharePoint Solution....................................................... 15  

**Chapter 3: Configuring the CoSign Connector for SharePoint** .................................................. 16  
Configuring at the SharePoint Installation Level ......................................................................... 16  
   Configuring General Settings Parameters ............................................................................ 16  
   Configuring Document Library Default Settings ..................................................................... 18  
Activating the CoSign Connector for SharePoint at the Site Collection Level and Site Level .......... 19  
   Activating CoSign Connector for SharePoint at the Site Collection Level.................................. 19  
   Activating the CoSign Connector for SharePoint at the Site Level........................................ 20  
Defining CoSign Settings in Document Libraries and Form Libraries ......................................... 21  
   Defining the Content Type Settings...................................................................................... 23  
   Defining Signature Profile Settings ...................................................................................... 26  
   Updating Signature Profile Settings..................................................................................... 28  
   Deleting a Signature Profile .................................................................................................. 29  
   Creating a Signature Profile by Loading a Signature Field from a Document Template ............ 29  
   Configuring Column Availability in Document/Form Libraries and Lists............................... 30  
   Configuring Column Display for a Document/Form Library.................................................... 33  
Defining CoSign Settings in Lists ................................................................................................ 35  
   Configuring Column Display for a List................................................................................... 36  
Backing Up and Restoring CoSign Connector for SharePoint Configurations.............................. 38  
   Backing Up Configuration Parameters................................................................................. 38  
   Restoring Configuration Parameters.................................................................................. 39  

**Chapter 4: Using the CoSign Connector for SharePoint to Prepare Documents for Signing** ....... 41  
Preparing PDF Documents for Signing.......................................................................................... 41  
Preparing Word/Excel Documents for Signing............................................................................ 44  
Converting a document to PDF format........................................................................................... 44  

**Chapter 5: Using the CoSign Connector for SharePoint for Signing Documents, Forms and Items** . 46
Signing and Validating Documents in Document/Form Libraries ......................................................... 46
Signing PDF Documents .................................................................................................................. 48
Signing Microsoft Word/ Excel Documents ....................................................................................... 52
Signing Microsoft InfoPath Web Forms .......................................................................................... 54
Validating Document/Form Signatures ............................................................................................ 56
Reviewing Document/Form Signatures ............................................................................................. 56
Signing and Validating Items in Lists ............................................................................................... 57
Signing Items .................................................................................................................................. 58
Validating Item Signatures .............................................................................................................. 60
Reviewing Item Signatures ............................................................................................................... 60
Signing and Validating Entire Lists .................................................................................................. 61
Signing All List Items ....................................................................................................................... 61
Verifying All List Items .................................................................................................................... 62

Chapter 6: Using CoSign Connector with SharePoint Workflows ...................................................... 63
Activating CoSign Connector for Workflows as a Custom Task ..................................................... 63
Using CoSign Connector with SharePoint Designer Workflows .................................................... 64
    Configuring a Sign with CoSign Custom Task in SharePoint Designer ...................................... 65
    Configuring an AutoSign with CoSign Custom Action in SharePoint Designer ....................... 66
    Configuring a Verify with CoSign Custom Action in SharePoint Designer ................................ 67
Using CoSign Connector with Nintex Workflows ......................................................................... 68
    Adding CoSign Columns to the Workflow Task list ................................................................. 69
    Configuring a CoSign Signature Task in a Workflow in Nintex .............................................. 70
    Retrieving Signature Task Outcome and Signer Comments Values in Nintex ..................... 72
    Configuring an AutoSign with CoSign Custom Action in Nintex .......................................... 74
    Configuring a Verify with CoSign Custom Action in Nintex .................................................. 75
Starting a Workflow ......................................................................................................................... 76
Signing a Document as Part of a Workflow ..................................................................................... 78

Index .................................................................................................................................................. 83
Chapter 1: Overview

Over the last four decades, the biggest challenge of IT departments in many organizations was moving to a paperless work environment. Seemingly, there was tremendous success in this regard. Today, most transactions in the business world are performed electronically:

- Documents are written using word processing programs.
- Messages are sent via email.
- Inventories and purchases are tracked using Enterprise Resource Planning (ERP) systems.
- Medical information is stored in Electronic Medical Record (EMR) systems.

Although these transactions are performed in a paperless environment, organizations have still not managed to find an easy way to get rid of the paper used for data authentication (signing the authenticity of the data). Today, although organizations have invested large amounts of funds and other resources in creating paperless environments, their workers are still printing every transaction, signing it, and saving the printed copy. These organizations require a digital method for data authentication.

By moving to a viable electronic data authentication system, organizations can reduce their printing, archiving, shipping, and handling costs. In addition, better and more competitive customer service can often be provided.

Requirements for Data Authentication Systems

A viable data authentication system must meet the following specifications:

- **Security** – The system must ensure that no one other than the data creator can tamper with or change the data in any way.

- **Third-party validation** – The system must enable any third party to validate the authenticity of the data. If a dispute arises between the parties (the data creator and recipient), any third party must be able to validate the data authenticity in order to settle the dispute.

- **System independence** – Data authentication must be independent of the system that created the data. Users must be able to validate the authenticity of the data using a known standard that is independent of any specific system.

- **Validation over time** – Users must be able to validate data authenticity at any point in time. Authenticity cannot expire at any point.

Currently, the only data authentication method known to support all of these requirements is the Public Key Infrastructure (PKI) method of authenticating data, simply called “digital signatures”.

Introduction to CoSign

CoSign is a PKI-based, off-the-shelf digital-signature solution that can be integrated with a wide range of applications. In this way, CoSign enables organizations to embed digital signatures in various documents, forms, and transactions. CoSign is a turnkey, hardware-based solution that is easily and quickly deployed in the network and provides cost-effective digital-signature capabilities for the organization.

CoSign includes all the components needed for PKI-based digital-signature deployment. You do not need to install any other device or integrate any other component for the system to work.

Environments Supported by CoSign

CoSign integrates with leading user management systems, including Microsoft Active Directory and a variety of LDAP (Lightweight Directory Access Protocol) based directories, such as IBM Tivoli. This integration ensures no overhead in managing the digital-signature system and signature credentials (i.e., the private keys that are needed in a PKI environment), solving one of the main problems of legacy digital-signature systems. System managers, network managers, and end-users can continue to use the IT infrastructure in the same manner as before CoSign was installed.

CoSign stores the signature credentials in a secure server, ensuring that the signer has exclusive access to his or her signature credentials, while still maintaining a centrally managed solution. This is necessary in order to fulfill the security requirement of the data authentication system.

Another option is to use the CoSign Cloud service. An organization can register its users to the service and thus enable them to digitally sign content without having to deploy the CoSign appliance on the organizational premises.

Applications that Work with CoSign

An increasing number of applications can work with CoSign as their digital-signature layer without needing any further integration, including:

- Microsoft Office XP/2003 (Word, Excel, and PowerPoint)
- Microsoft InfoPath 2007/2010/2013
- Adobe Acrobat
- Microsoft SharePoint 2010/2013
- XML
- TIFF files
- Word Perfect
Microsoft Outlook and Outlook Express
Adobe Server forms (for signing web forms)
AutoCAD
Lotus Notes
Microsoft BizTalk
FileNet eForms
Verity Liquid Office
ERP systems (e.g., SAP)
OpenText
Oracle
Crystal Reports
Web applications
Any application that has a print option can use CoSign to generate a PDF file and sign it.

For information on using CoSign with other applications, contact ARX technical support.

**CoSign Components**

CoSign includes the following components:

- **CoSign appliance** – The CoSign appliance hardware and software, connected to the organization’s network.
- **Client** – The CoSign Client software, installed on the users’ computers.
- **Administrator** – The CoSign Administrative software that includes the CoSign Microsoft Management Console (MMC) snap-in, installed on the administrative computer.
- **CoSign Connector for SharePoint** – This connector enables adding digital signature functionality to documents managed by Microsoft SharePoint, or using digital signatures within any workflow procedure that is based on Microsoft SharePoint.
- **CoSign Web App** – This application is deployed in the Microsoft Web Server of the organization and enables users to sign documents without installing any client component. CoSign Web App can use either the local CoSign appliance or the CoSign Cloud environment for performing digital signature operations. Applications can interact with the CoSign Web App and add a digital signature to documents using a web based interface.
- **CoSign Mobile App** – This mobile application, which can be installed on Android-based devices or Apple iOS devices, enables users to sign documents using their mobile devices. The mobile devices interface directly with the CoSign appliance via a CoSign RESTful interface. The CoSign Mobile App can interface with either the CoSign Cloud, the organizational CoSign appliance, or CoSign’s Trial system.
CoSign Click – This application is deployed in the Microsoft Web Server of the organization and enables external users to sign documents without installing any client component. CoSign Click can use either the local CoSign appliance or the CoSign Cloud environment for performing digital signature operations. Applications can incorporate CoSign Click in simple workflows. For example, a workflow in which an external user is required to sign a document in the CoSign Click system.

CoSign Cloud – A CoSign cloud-based application that provides digital signature services to users who register for the services. The CoSign cloud supports single users as well as groups of users.

Software Development Kit - SAPI – This component enables developers to integrate digital signatures into their system. The developer can use SAPI (Signature API) to integrate with CoSign.

CoSign Guides

CoSign documentation includes the following guides:

- **CoSign Administrator Guide** – Provides all the information necessary for an administrator to install and manage the CoSign appliance in the various environments in which CoSign can operate.

- **CoSign User Guide** – Provides all the information necessary for an end user to use CoSign. Includes information about special add-ins for various applications such as Microsoft Office.

- **CoSign Connector for SharePoint User Guide** – Provides all the information necessary for implementing and using the CoSign Connector for SharePoint.

- **CoSign Web App User Guide** – Provides all the information necessary for deploying CoSign Web App in the organization’s environment.

- **CoSign Programmer Guide (SAPI)** – Provides all the information necessary for a developer to integrate their application with CoSign.

**Intended Audience**

This guide is intended for implementers wishing to implement the CoSign Connector for SharePoint, and for end-users using the CoSign Connector for SharePoint. It is assumed that readers have prior knowledge of CoSign and SharePoint.
Organization of this Guide

This guide is organized as follows:

♦ **Chapter 1: Overview** – Provides an overview and introduction to CoSign.

♦ **Chapter 2: Installing and Deploying the CoSign Connector for SharePoint** – Describes how to install and deploy the CoSign Connector for SharePoint.

♦ **Chapter 3: Configuring the CoSign Connector for SharePoint** – Describes the various options available for configuring the CoSign Connector for SharePoint to enable the production of digital signatures at the site level. The chapter also describes how to perform backup/restore to the CoSign Connector for SharePoint configuration.

♦ **Chapter 4: Using the CoSign Connector for SharePoint to Prepare Documents for Signing** – Describes how to use the CoSign Connector for SharePoint to prepare documents for signing.

♦ **Chapter 5: Using the CoSign Connector for SharePoint for Signing Documents, Forms and Items** – Describes how to use the CoSign Connector for SharePoint to produce a digital signature.

♦ **Chapter 6: Using CoSign Connector with SharePoint Workflows** – Describes how to use the CoSign Connector for SharePoint to produce a digital signature as part of a workflow procedure using the Microsoft SharePoint custom tasks.

♦ **Index** – Provides a comprehensive index of the topics discussed in this guide.
Chapter 2: Installing and Deploying the CoSign Connector for SharePoint

This chapter describes how to:

- Install the CoSign Connector for SharePoint.
- Deploy the CoSign Connector for SharePoint.

CoSign Connector for SharePoint Installation

The CoSign Connector for SharePoint enables organizations to extend their existing SharePoint installations by enabling the following operations:

- Sign and verify documents that are managed by the Microsoft SharePoint product.
- Sign and verify lists that are managed by the Microsoft SharePoint product.

CoSign Connector for SharePoint supports the following versions of Microsoft SharePoint, including all the editions of each version:

- Microsoft SharePoint 2010.
- Microsoft SharePoint 2013.

CoSign Connector for SharePoint is installed as a standard solution for SharePoint, and supports the following document types:

- PDF files with or without existing signature fields.
- *.doc files with existing signature fields using an entire file signature type.
- *.docx or *.xlsx files with existing signature fields.

Both administrative operations and user operations are based on Web-based applications, where the end user does not have to install any software on the end PC. However, a CoSign Client must be installed on the server that is installed with the SharePoint product. The recommended order of installation is:

1. Installing and Configuring the CoSign Client.
2. Installing the CoSign Connector for SharePoint Solution.
Installing and Configuring the CoSign Client

CoSign Connector for SharePoint accesses CoSign through the CoSign client installation. Therefore, before installing the CoSign Connector for SharePoint, you should:

1. Install a CoSign Client version 6.0 or above, on the server that is installed with the SharePoint product.

Configuring the CoSign Client for the CoSign Connector for SharePoint

To configure the CoSign Client to work with the CoSign Connector for SharePoint:

2. Select Client Configuration. The CoSign configuration utility’s main window appears.
3. Click ☐ to the left of the Client node.
4. Click the Appliances node.

![CoSign Configuration Utility – Client Configuration – Appliances Parameters](Figure 1 CoSign Configuration Utility – Client Configuration – Appliances Parameters)
5. In the Appliances screen, add the CoSign appliance IP or DNS name to the Appliance list.
6. Select File > Apply (save to registry) to apply the changes.
7. Click the Login dialog node.

![CoSign configuration utility - Local Computer Configuration](image)

**Figure 2** CoSign Configuration Utility – Client Configuration – Login Dialog Parameters

8. In the Login dialog screen:
   a. Uncheck the Permit known applications only checkbox.
   b. Select Disable login dialog.
9. Select File > Apply (save to registry) to apply the changes.
10. Click the Timeouts node.
11. In the **Timeouts** screen:

- Set the **Configuration reload interval** to 0.
- It is recommended to reduce the **Connect failure block time** to 30.

12. Select **File > Apply (save to registry)** to apply the changes.

13. Select **File > Exit** to exit the CoSign configuration utility.

**Installing the CoSign Connector for SharePoint Solution**

To install the CoSign Connector for SharePoint:

1. Open a command line prompt.

2. Change the current directory to the SharePoint utilities folder. By default, this should be:

   `<Program Files>\Common Files\Microsoft Shared\web server extensions\15\BIN>`
3. Run the following command to add the CoSign Connector for SharePoint solution to the SharePoint Solutions Store:

```bash
stsadm.exe -o addsolution -filename <Full Path>\cosign4sharepoint.wsp
```

The `cosign4sharepoint.wsp` file can be found on the CoSign Connector for SharePoint CDROM.

4. In case of a SharePoint 2013 installation that was upgraded using the “database attach” method, run the following command to add the CoSign Connector for SharePoint 2010 compatibility solution:

```bash
stsadm.exe -o addsolution -filename <Full Path>\CoSign4SharePoint_2010compatibility.wsp
```

The `CoSign4SharePoint_2010compatibility.wsp` file can be found on the CoSign Connector for SharePoint CDROM.

**Note:** It is also possible to manually install the CoSign Connector for SharePoint solution through the Manage Farm Solutions options in the SharePoint management screens, but in a case of repeated installations and uninstallations, this is not recommended.

5. Check the SharePoint server farm to confirm that the CoSign Connector for SharePoint solution was successfully installed:

a. In the SharePoint **Central Administration** menu, select **System Settings**. The **System Settings** screen appears.

b. Select **Manage Farm Solutions**. The **Solution Management** screen appears.

![Solution Management Screen](image.png)

*Figure 4 Solution Management Screen – CoSign Connector for SharePoint Installed*
c. Verify that the `cosign4sharepoint` entry is present, indicating that the CoSign Connector for SharePoint solution was successfully installed.

d. In case of a SharePoint 2013 upgraded farm, the following additional solution should appear in the Solution Management list: `CoSign4SharePoint_2010compatibility.wsp`

### Deploying the CoSign Connector for SharePoint Solution

An installed solution is not automatically deployed by default. You can either deploy the solution through the GUI or through the Command Line Interface (CLI).

#### Deploying the CoSign Connector for SharePoint Solution via the GUI

To deploy the CoSign Connector for SharePoint solution via the GUI:

1. In the SharePoint **Central Administration** menu, select **System Settings**. The **System Settings** screen appears.

2. Select **Manage Farm Solutions**. The **Solution Management** screen appears (*Figure 4*).

3. In case of a SharePoint 2013 upgraded farm, click the CoSign Connector for SharePoint 2010 compatibility solution entry. Otherwise, click the CoSign Connector for SharePoint solution entry.

   The **Solution Properties** screen appears.

4. Click **Deploy Solution**.

*Figure 5 Solution Properties Screen – Deploy Solution*
Deploying the CoSign Connector for SharePoint Solution via the CLI

To deploy the CoSign Connector for SharePoint solution via the CLI:

1. Open a command line prompt.
2. Enter the following command:
   
   ```
   stsdadm.exe -o deploysolution -name cosign4sharepoint.wsp -immediate -allowgacdeployment -force
   ```
3. In case of a SharePoint 2013 upgraded farm, enter the following command as well:
   
   ```
   stsdadm.exe -o deploysolution -name CoSign4SharePoint_2010compatability.wsp -immediate -allowgacdeployment -force
   ```
4. Update the SharePoint site map using the following command:
   
   ```
   stsdadm.exe -o copyappbincontent
   ```

Verifying the Deployment

To verify the deployment of the CoSign Connector for SharePoint solution:

1. In the SharePoint Central Administration menu, select System Settings. The System Settings screen appears.
2. Select Manage Farm Solutions. The Solution Management screen appears.
3. Verify that the cosign4sharepoint entry has the status Deployed.

The solution is now installed, and can provide the following features:

* CoSign Connector for SharePoint Document Libraries – Enables the user to sign documents and InfoPath forms.
CoSign Connector for SharePoint Lists – Enables the user to sign Data elements defined within a List as part of the site.

These features are disabled by default and must be enabled to provide the digital signature functionality. These features can be enabled for any relevant Site that is defined as part of the SharePoint installation. For more information, refer to Configuring the CoSign Connector for SharePoint.

Retracting the CoSign Connector for SharePoint Solution Deployment

To retract the CoSign Connector for SharePoint solution deployment:

1. In the SharePoint Central Administration menu, select System Settings. The System Settings screen appears.

2. Select Manage Farm Solutions. The Solution Management screen appears.

3. Click the cosign4sharepoint.wsp entry. The Solution Properties screen appears.

4. Click Retract Solution. The Solution Management screen appears, displaying that the CoSign Connector for SharePoint solution has the status Not Deployed (Figure 4).
Uninstalling the CoSign Connector for SharePoint Solution

Note: You must retract the deployment of the CoSign Connector for SharePoint solution before you can uninstall it. For more information, refer to Retracting the CoSign Connector for SharePoint Solution Deployment.

To uninstall the CoSign Connector for SharePoint solution:

1. In the SharePoint Central Administration menu, select System Settings. The System Settings screen appears.

2. Select Manage Farm Solutions. The Solution Management screen appears.

3. Click the cosign4sharepoint.wsp entry. The Solution Properties screen appears.

4. Click Remove Solution.

Figure 8 Solution Properties Screen – Remove Solution
Chapter 3: Configuring the CoSign Connector for SharePoint

To enable using the CoSign Connector for SharePoint once it is deployed, the only action you must perform is to activate it at the site level (refer to Activating the CoSign Connector for SharePoint at the Site Collection Level and Site Level). You can also optionally configure the various settings of the CoSign Connector for SharePoint; if you do not, the default values will be used.

The CoSign Connector for SharePoint can be configured at several levels:

- **SharePoint Installation Level** – Parameters that are applicable to the overall SharePoint level. This is done through SharePoint Central Administration.
- **Site Collection Level** – Parameters that are applicable to a group of web sites.
- **Site Level** – Parameters that are applicable to a specific website.
  - **Document Library and Form Library Level** – Parameters that are applicable to all documents within the document library or forms within the form library. Custom document libraries are also supported.
  - **List Level** – Parameters that are applicable to all items within a list. Custom lists are also supported.

In addition, this chapter describes how to backup and restore CoSign Connector for SharePoint configurations.

Configuring at the SharePoint Installation Level

At the SharePoint installation level, configure the following:

- Parameters related to server authentication mode.
- The document library default settings (optional).

Configuring General Settings Parameters

To configure general settings parameters at the SharePoint Installation level:

1. In the SharePoint Central Administration menu, select General Settings.

![CoSign Connector for SharePoint Screen – General Settings Option](image)

Figure 9 CoSign Connector for SharePoint Screen – General Settings Option
2. Click **General Settings**. The *General Settings* screen appears:

![General Settings Screen](image)

**Figure 10 General Settings Screen**

3. In the **CoSign authentication mode** field, select one of the following options to specify how users should be authenticated to the CoSign appliance while signing using the CoSign Connector for SharePoint:

- **Standard** – Users need to enter a user ID and a password to be authenticated for every digital signature operation. This is the default setting.
- **Kerberos SSPI (Active Directory)** – Users can perform a digital signature operation which relies on the existing login to the Microsoft Domain. Users do not need to provide any additional credentials upon signing.
- **Claim Based** – Users can perform digital a signature operation which relies on the identity of the user in SharePoint.

**Note:** If you select Kerberos SSPI, you must perform additional configurations in Microsoft SharePoint to enable ticket based signatures. Refer to [Enabling Ticket-Based Signatures](#).

In addition, in Active Directory you must go to **User and Computers ➔ Computers**, select the SharePoint server machine, click **Properties**, and select **trust this computer for delegation to any service (Kerberos)**.

**Note:** If you select Claim Based authentication, additional configurations are required, as described in the CoSign Connector for SharePoint – Claim-Based Authentication Guide.
4. Optionally, select the **Require extended password** checkbox. An extended password should be used when CoSign is configured to use a RADIUS-based password for every signature operation (Extended Authentication Mode). Usually this mode will be used for providing an OTP (One Time Password) for every digital signature operation.

5. Optionally, select the **Force upper case user name** checkbox. If you select this option, the user name is converted to all upper case letters (e.g., JOHN SMITH) during the signing operation. This action is necessary if SharePoint is installed in an Active Directory environment (in which user names are case insensitive), but CoSign is installed in a directory independent environment (in which user names are case sensitive). In such a case, you must also make sure that the user names of all CoSign users are in upper case letters only.

6. Optionally, select the **Disregard task's assigned user** checkbox. If you select this option, the assigned user may enter a different signer name; in other words, a signer other than the assigned user can complete the signature task.

7. Optionally, select **Multiple Signatures Mode**. This mode enables signers to remain on the signed page after a signature was applied, instead of automatically being redirected back to the document library. This feature is very useful in cases where a user expects to review the applied signature or when a user may apply more than one signature to a selected document.

8. Click **Save** to save the configuration settings.

**Enabling Ticket-Based Signatures**

To enable ticket-based signatures for Kerberos authentication:
1. Go to the SharePoint **Central Administration** menu.
2. Select **Security > General Security > Specify Authentication Providers**.
3. Select the default zone.
4. Select the **IIS Auth Settings** section.
5. Select **Integrated Windows authentication**.
6. Select **Negotiate Kerberos**.
7. Click **OK**.

**Configuring Document Library Default Settings**

Modifying the Document Library default configuration eliminates the burden of manually changing configuration in individual Document Libraries because default settings are automatically inherited when a new Document Library is created in SharePoint.

To configure document library default settings at the SharePoint Installation level:
1. In the SharePoint **Central Administration** menu, select **CoSign Connector for SharePoint**.
Configuring the CoSign Connector for SharePoint

Figure 11 CoSign Connector for SharePoint Screen – Document Library default settings


3. The following default settings can be configured:
   - Enable CoSign Signatures
   - Logged-in User
   - Predefined Reasons for Signing
   - User-Generated Signature Fields
   - New Signature Fields
   - New Signature Field Settings

Activating the CoSign Connector for SharePoint at the Site Collection Level and Site Level

Each SharePoint website can be configured to support CoSign digital signatures for the documents and lists defined for the site.

Activating CoSign Connector for SharePoint at the Site Collection Level

In order to enable the CoSign Connector for SharePoint for a site collection, you must activate at least some ARX features for every site collection that requires the use of digital signatures.

To activate the CoSign Connector for SharePoint features for a site collection:

1. Go to the Site Settings screen for the site, and click Site collection features in the Site Collection Administration section.

2. Click Activate to activate each of the following CoSign Connector for SharePoint features:
CoSign Connector for SharePoint. This enables all sites that are part of this site collection to use CoSign Connector for SharePoint. If this feature is not enabled, you will not be able to use CoSign Connector for SharePoint for this site collection.

CoSign Connector for Workflows. This enables using CoSign Connector for SharePoint as a custom task. For more information, refer to Chapter 6: Using CoSign Connector with SharePoint Workflows.

Activating the CoSign Connector for SharePoint at the Site Level

In order to enable the CoSign Connector for SharePoint for a site, each of the features listed in Verifying the Deployment must be activated on every site that requires the use of digital signatures.

To activate the CoSign Connector for SharePoint features for a site:

1. Go to the Site Settings screen for the site, and click Manage site features in the Site Actions section.

2. Click Activate to activate each of the following CoSign Connector for SharePoint features:

   ♦ CoSign Connector for SharePoint Document Libraries. This also enables signing InfoPath forms in SharePoint Form libraries.

   ♦ CoSign Connector for SharePoint Lists.

   Most users must activate all of these features, but some users may not need to activate all of them.

   Optionally, click Deactivate to deactivate features for sites or site collections.

   You now need to define CoSign settings in the relevant document libraries, form libraries or lists. In order to sign and verify documents, forms or items, you must at least enable CoSign digital signatures in the document libraries, form libraries, or lists. For instructions, refer to:


   ♦ Defining CoSign Settings in Lists.
Defining CoSign Settings in Document Libraries and Form Libraries

You can define CoSign settings for every document library and form library of a SharePoint site. Custom document libraries are supported as well.

To define the CoSign settings for a document library or form library:

1. Go to the relevant document library or form library.
2. Select Library Settings.

5. Set the configuration settings as follows:

- **Enable CoSign Signatures** – Select Yes. Otherwise, you will not be able to use CoSign Connector for SharePoint for this document/form library.

- **Enable CoSign Automatic Verification** – Select Yes if you want to enable automatic signature verification upon checking in a document/form. This will also update all digital signature attributes for checked-in documents/forms.

Note: The parameter Require documents to be checked out before can be edited must be set to Yes in order to be able to activate the Enable CoSign Automatic Verification parameter. If it is not, go to the Document/Form Library Settings > Version Settings screen and select Yes for the Require documents to be checked out before can be edited parameter.

- **Logged-in User** – During the act of performing a digital signature, a window appears prompting the signer to provide credentials. Select Yes to define that logged-in users must reenter their usernames for every digital signature operation, or select No to define that the logged-in user’s name is automatically recognized and displayed in the username field.

It is recommended that you enable this feature when CoSign is installed in Active Directory environments.

- **Predefined Reasons for signing** – When a user signs, the user needs to enter the reason for having done so:
Configuring the CoSign Connector for SharePoint

- **Enforce Predefined Reasons** – Select Yes to specify that the user must select a reason from the predefined reasons list.

- **Predefined reasons list** – Specify a list of reasons. In the Enter new reason field, enter text for a reason and click Add to add it to the list. You can also delete an entry from the list by selecting it and clicking Delete.

  Note: You can also define reasons per content type. For more information, refer to Defining the Content Type Settings.

Defining the Content Type Settings

In SharePoint, documents or forms can be classified according to predefined content types. Every document or form that is managed in SharePoint has a content type, for which specific settings can be defined. In addition, for every content type, several signature profiles can be defined. Each signature profile is identified by a name, and can be used to define signature field characteristics.

Note: Before defining content type settings, make sure you set Enable CoSign Signatures to Yes in the CoSign Configuration Settings screen (Figure 15). Otherwise, you will not see any items in the list of content types (Figure 16).

To define the content type configuration settings:

1. Go to the relevant document library or form library.
2. Select Library Settings.
4. Select a content type.

![Figure 16 CoSign Digital Signature Settings Screen – Selecting a Content Type](image-url)
The Content Type Settings screen appears (Figure 17).

**Figure 17  Content Type Settings Screen**

5. Click **Configuration Settings**.

The Content Type Configuration Settings screen appears.

**Figure 18  Content Type Configuration Settings Screen**
6. Set the configurations as follows:

- **User-Generated Signature Fields** – Select **No** to define that a user will only be able to sign using the Signature Profiles you have defined for this Content Type. Select **Yes** to define that a user will also be able to sign any additional signature fields that were created in the document.

- **New Signature Fields** – Select **No** to forbid adding new visible signature profiles using the graphical PDF viewer mechanism. Select **Yes** to allow adding new signature profiles to a given PDF document. For more information, refer to *Creating a New Signature Field and Signing it*.

- **New Signature Field Settings** – If you specified **Yes** in **New Signature Fields**, you can set the following parameters:
  - **Enable users to change new signature field settings?** – Specify whether the user can set which elements will appear in a new signature field. If you check this box, the user can select or deselect any of the following elements:
    - Signed by
    - Reason
    - Logo
    - Date/Time
    - Graphical Signature
    - Initials
    - Title

  *Note: You cannot select both the Graphical Signature and the Initials options.*

  - **Date Format** – The format of the date field in the signature time.
  - **Time Format** – The format of the time field in the signature time.
  - **Display GMT Offset** – Whether to display the GMT offset in the signature time.

- **Graphical Signature Location** – Defines the location of the graphical signature inside the signature block.
  - **Left** – The signature block will be split into two equal halves vertically. The graphical image will be positioned in the left half.
  - **Top** – The signature block will be split into two equal halves horizontally. The graphical image will be positioned in the top half.

- **Predefined Reasons for Signing** – When a user signs, the user needs to enter the reason for having done so:
  - **Enforce Predefined Reasons** – Select **Yes** to define that the reasons list is enforced, in which case the user must select a reason from the predefined reasons list.
Predefined reasons list – Specify a list of reasons. In the Enter new reason field, enter text for a reason and click Add to add it to the list. You can also delete an entry from the list by selecting it and clicking Delete.

Note: By default, the definition for this parameter at the Content Type Settings level overrides the definition set at the document/form library level. If, however, the list of reasons is left empty, then both the list of available reasons and the Enforce Predefined Reasons status is taken from the document/form library configuration.

Defining Signature Profile Settings

Several signature profiles can be defined for every content type. A signature profile defines the characteristics of a signature field. For PDF documents, these characteristics are used for generating a new signature field following a digital signature operation.

Note: Signature profiles are fully supported for PDF documents because signature fields can be created in a PDF document during the digital signature operation. In other document types (such as doc, docx, forms, etc.), the signature fields need to be created in advance.

To define the Signature Profile settings:

1. In the CoSign Digital Signature Settings screen (Figure 14), select a content type. The Content Type Settings screen appears (Figure 17).

2. Click Create new Signature Profile. The Signature Profile screen appears.
3. Configure the signature profile settings as follows:

- **Signature Profile Name** – Define the name and details of the signature profile:
  - **Name** – Enter the identity of the signature profile, which is the name of the signature field created in the documents. The name is case sensitive, and can be composed only of alphanumeric characters and the following symbols: -, =, _.
  - **Description** – Optionally, enter descriptive information about the signature field.

- **Default Signature Profile** – Define whether this profile is the default profile of the content type.

- **Allow Signature Reason** – Define whether a reason will be included in the signature. The reason can be visible or non-visible in the signature. This option is relevant to .pdf, .docx and .xlsx file types as well as InfoPath forms.

- **Signature Visibility** – Define whether the signature field is visible or not.

- **Signature Field Details** – Define the visible content of the signature field. You can select or deselect all required elements from the following list:
  - **Signed By**
  - **Reason**
  - **Logo**
Date/Time
Graphical Signature
Initials
Title

Note: You cannot select both the **Graphical Signature** and the **Initials** options.

- **Graphical Signature Location** – Defines the location of the graphical signature inside the signature block.
  - **Left** – The signature block will be split into two equal halves vertically. The graphical image will be positioned in the left half.
  - **Top** – The signature block will be split into two equal halves horizontally. The graphical image will be positioned in the top half.

- **Time/Date Appearance Format** – Define the date and time format for the signature profile:
  - **Date Format** – The format of the displayed signature date.
  - **Time Format** – The format of the displayed signature time.
  - **Display GMT Offset** – Defines whether the signature time includes a GMT offset.

- **Signature Size and Location** – Define the location of the signature on the page – its X,Y coordinates, its width and height. In addition, specify on which page the signature is located – either enter a page number, or specify that the page is the penultimate (next to last) or last page of the document.

4. Click **Save**.

### Updating Signature Profile Settings

You can update the settings of an existing signature profile.

**To update a Signature Profile’s settings:**

1. In the CoSign Digital Signature Settings screen (Figure 14), select a content type. The Content Type Settings screen appears (Figure 17).

2. Select a signature profile. The **Signature Profile** screen appears (Figure 19).

3. Update the Signature Profile’s settings. For an explanation of the various fields in the screen, see the explanations in *Defining Signature Profile Settings*.

4. Click **Save**.
Deleting a Signature Profile

You can delete an existing signature profile.

To delete a Signature Profile:
1. In the CoSign Digital Signature Settings screen (Figure 14), select a content type. The Content Type Settings screen appears (Figure 17).
2. Select a signature profile. The Signature Profile screen appears (Figure 19).
3. Click Delete. The signature profile is deleted.

Creating a Signature Profile by Loading a Signature Field from a Document Template

You can create signature profiles by loading signature fields from a document serving as a template for creating signature profiles.

Important: This operation deletes all existing signature profiles in the relevant content type, and creates new signature profiles according to the existing signature fields in the document serving as a template.

Note: You cannot generate signature profiles from an InfoPath template.

To generate signature profiles from signature fields inside a document template:
1. In the CoSign Digital Signature Settings screen (Figure 14), select a content type. The Content Type Settings screen appears (Figure 17).
2. Click Assign Signature Profiles from template. The Assign Signature Profiles screen appears.
3. To the right of the Template Locations field, click Browse to locate and select a document that already includes signature fields. This document will serve as the template.
4. Click OK.
All signature profiles previously defined for the content type are permanently deleted. New signature profiles are generated for every existing signature field in the document template.

Note: Both unsigned signature fields and signed signature fields are used for creating signature profiles.

Configuring Column Availability in Document/Form Libraries and Lists

You can configure which signature-related columns will be available for display, for every managed document or form in a SharePoint document library or form library and for every managed list.

Starting from CoSign Connector for SharePoint version 6.1, the columns that will be available for display can be selected in the standard SharePoint fashion.

To view the columns currently available for display:

1. Select Site Settings > Web Designer Galleries > Site Columns
2. View the available columns.

Figure 21 Site Columns Screen
To specify which columns will be available for display:

1. Open the appropriate **Settings** screen as follows:
   - For a document or form – Navigate to the relevant document library or form library, and select **Library Settings**.
   - For a list – Navigate to the relevant list, and select **List Settings**.

   ![Settings Screen](image)

   **Figure 22 Settings Screen**

2. To add a column from the list of columns, in the **Columns** section click **Add from existing site columns**.

   The **Add Columns from Site Columns** window appears.
3. Filter the site columns to view only the ARX CoSign signature columns. To do so, select ARX CoSign Signature Columns in the Select site columns from drop-down list.

4. Use the Add > button to specify which columns will be available for the document/form library or list. The columns include:

- **Last Signature Reason** – Reason for the most recent signature in the document.
- **Last Signature Status** – Verification status of the most recent signature in the document.
- **Last Signature Time** – Time of the most recent signature in the document.
- **Last Signer Name** – Signer name of the most recent signature in the document.
- **Last Verified On** – Date when the document was verified.
- **Signature Status** – The overall status of all signatures in the document. The possible statuses are:
  - **Not Signed** – The document does not contain digital signatures.
  - **Unknown** – The document’s signature status has not been verified yet.
  - **Valid Signatures** – The document contains at least one digital signature, and all signatures are valid.
  - **Invalid Signature** – The document contains at least one invalid digital signature.
- **Signature Count** – Number of signatures in the document.

5. Optionally, select Add to default view to specify that the added columns be part of the default view.
Configuring Column Display for a Document/Form Library

You can configure which columns of information will be displayed for every managed document or form in a SharePoint document library or form library.

To configure which columns to display for a SharePoint document/form library for a given view:

1. Navigate to the Edit View screen from the Library ribbon.

![Edit View Screen](image1.png)

Figure 24 Edit View Screen

2. Specify for which view you are defining the columns to display:
   - **Name** – Define the displayed name and web address for the document/form library:
   - **View Name** – Define the name which is displayed for the document/form library in SharePoint. Make sure to define a name which will be easily understood by users.
   - **Web address of this view** – Define the final portion of the web address at which the document/form library is to be stored.
3. Specify which columns to display, as follows:

- **Columns** – For each available column type, select or unselect the Display checkbox to define whether the column should be displayed or hidden, and in the Position from Left drop-down lists, define the order of the columns starting from the left side of the screen.
  Note that the available columns are the ones you previously defined as available in Configuring Column Availability in Document/Form Libraries and Lists.

**Note:** You can still use the old column selection mechanism because CoSign Connector for SharePoint is backward compatible (the columns appear in the CoSign Configuration Settings for the Document/Form Library or List). If you want to use the new column selection mechanism, deselect all previous column settings and save the configuration. From now on you can use the new mechanism.

The following figure demonstrates a document library view with signature related information:

![Figure 25 Documents with Additional Signature Information Displayed – Example](image-url)
Defining CoSign Settings in Lists

You can define CoSign settings for every list in a site. Custom lists are supported as well.

*Note:* It is recommended to backup all signature related information in a list before configuring CoSign settings in the list.

To define a list’s CoSign settings:

1. Navigate to the relevant list, and go to the **List Settings** option.
2. Click the **CoSign Digital Signature Settings** option. The **CoSign Configuration Settings** screen appears.

3. Set the configuration settings as follows:
   - **Enable CoSign Signatures** – Select Yes.
     *Note:* Setting **Enable CoSign Signatures** to No causes all existing signature information to be deleted from this list.
   - **Enable CoSign Automatic Verification** – Select Yes if you want to enable automatic signature verification when updating an item.
Welcome to the CoSign Connector for SharePoint User Guide. This guide will help you configure CoSign for optimal performance and security in your SharePoint environment.

Important Features:

- **Disable Multiple Signing**: Select Yes if you want to disable the option of signing multiple list items simultaneously.

- **Logged-in User**: During the act of performing a digital signature, a window appears prompting the signer to provide credentials. Select Yes to define that logged-in users must reenter their usernames for every digital signature operation, or select No to define that the logged-in user’s name is automatically recognized and displayed.

  It is recommended that you enable this feature when CoSign is installed in Active Directory environments.

- **Enable Delete CoSign Signatures**: When enabled, additional buttons are displayed on the List Item Signatures page, enabling users to delete previously created signatures. When disabled, existing signatures cannot be deleted.

- **Columns to Sign**: Define which columns in the list item are authorized when the user signs. To add a column, select the column in the Available list columns area and click Add. To remove a column, select the column in the Selected list columns area and click Remove.

- **Reasons for Signing**:
  - **Require signers to add signature reason**: Select Yes to define that signers must enter a reason every time they sign an item from this list.
  - **Enforce Predefined Reasons**: Select Yes to define that the reasons list is enforced, in which case the user must select a reason from the predefined reasons list.
  - **Predefined reasons list**: Specify a list of reasons. In the Enter new reason field, enter text for a reason and click Add to add it to the list. You can also delete an entry from the list by selecting it and clicking Delete.

**Configuring Column Display for a List**

Starting from CoSign Connector for SharePoint version 6.1, the columns available for display can be selected in the standard SharePoint fashion. For instructions on how to specify which columns are available for display in a list, refer to Configuring Column Availability in Document/Form Libraries and Lists.

After specifying which columns are available for display, you can specify for a given view which columns to actually display.

**To configure which columns to display for a list for a given view:**

1. Navigate to the Edit View screen.
2. Specify for which view you are defining the columns to display:

- **Name** – Define the displayed name and web address for the list:
  
  - **View Name** – Define the name which is displayed for the list in SharePoint. Make sure to define a name which will be easily understood by users.
  
  - **Web address of this view** – Define the final portion of the web address at which the list is to be stored.

3. Specify which columns to display, as follows:

- **Columns** – For each available column type, select or unselect the **Display** checkbox to define whether the column should be displayed or hidden, and in the **Position from Left** drop-down lists, define the order of the columns starting from the left side of the screen.

  Note that the available columns are the ones you previously defined as available in **Configuring Column Availability in Document/Form Libraries and Lists**.

  **Note:** You can still use the old column selection mechanism because the CoSign Connector for SharePoint is backward compatible (the columns appear in the CoSign Configuration Settings for the Document/Form Library or List).

  If you want to use the new column selection mechanism, deselect all previous column settings and save the configuration. From now on you can use the new mechanism.
The following figure demonstrates a list view with signature related information:

![List view with signature related information](image)

**Figure 28** List items with Additional Signature Information Displayed – Example

### Backing Up and Restoring CoSign Connector for SharePoint Configurations

It is recommended to make a backup whenever changes are made to the configuration of the CoSign Connector for SharePoint.

#### Backing Up Configuration Parameters

- **Note:** Backup files do not include security-related configuration parameters.
- **Note:** The backup operation requires “Site Collection Administrator” privileges.

To back up the CoSign Connector for SharePoint configuration to a file:

1. Go to the SharePoint Central Administration menu.
2. Click **CoSign Connector for SharePoint**. The CoSign Connector for SharePoint screen appears.
   ![CoSign Connector for SharePoint screen](image)

   **Figure 29** Central Administration – CoSign Connector for SharePoint Screen

3. Click **Backup CoSign Connector configuration**. The Backup CoSign Connector Configuration screen appears.
Configuring the CoSign Connector for SharePoint

Backup CoSign Connector Configuration

This page allows users to perform backup of CoSign Connector for SharePoint configuration settings to a file located on a local network. CoSign Connector for SharePoint configuration backup includes digital signature settings and definitions for all SharePoint lists and document libraries. The generated backup file is secured and can be read only by the CoSign Connector for SharePoint application, and may be used to restore the CoSign Connector for SharePoint environment if necessary.

After generating the backup file, you can save it to disk or CD in case of data loss.

Please click here to download the backup file.

Figure 30 Backup CoSign Connector Configuration Screen

4. Click the here link. A standard file save window appears. Specify the path of the backup file and press Enter. The backup file is saved.

Restoring Configuration Parameters

To restore a CoSign Connector for SharePoint configuration from a file:

1. Go to the SharePoint Central Administration menu.


Figure 31 CoSign Connector for SharePoint Screen – Restore CoSign Connector configuration Option

Restore CoSign Connector Configuration

This page allows users to restore the CoSign Connector for SharePoint configuration data from a previously generated backup file. You may wish to do this if there has been data loss or corruption or if you want to set up a new CoSign Connector for SharePoint environment with the data from a previously installed environment. The Restore operation overwrites current CoSign Connector for SharePoint configuration including digital signature settings and definitions for all SharePoint Lists and Document Libraries.

**Backup File Location**
Click Browse to select the CoSign Connector for SharePoint configuration backup file that you wish to upload. Then click Restore.

**Backup Location:**

![Browse button]

**Figure 32 Restore CoSign Connector Configuration Screen**

4. To the right of the **Backup Location** field, click **Browse** and locate the configuration backup file.

5. Click **Restore** to restore the configuration.

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**Note:** Restored information does not affect new entities (such as document libraries) that were created after the backup was performed.
Chapter 4: Using the CoSign Connector for SharePoint to Prepare Documents for Signing

Using the CoSign Connector for SharePoint, users can not only sign documents but also prepare them for signing. Preparing a document for signing means creating empty signature fields (placeholders for signatures) and specifying various parameters of these fields. Later on, when signers sign these signature fields, signatures are created according to the specified parameters. This feature is especially useful combined with signature workflows when signatures are applied by different entities to the same document. Preparing a document with signature fields enables to explicitly define which signatures will be applied by different participants in a workflow. The following section describes how to prepare documents for signing by applying new signature fields.

Preparing PDF Documents for Signing

1. In a *document library*, select a PDF document.

2. Select **Prepare with CoSign** either from the *CoSign* ribbon or from the item menu.

   You are redirected to the *Prepare with CoSign* page (Figure 33).
The *Prepare with CoSign* page features the following elements:

- **Document Preview** – A preview of a page in the selected document.
- **Navigation** – If the document has more than one page, the navigation element enables browsing through the different pages.
- **New Signature Field** – A placeholder that can be resized and moved across the page. This placeholder represents the desired location of the new signature field.
- **Add Field button** – Displays a window for setting signature field parameters.
- **Save button** – Saves the document with its newly created signature fields in the document library.
- **Cancel button** – Cancels the operation. Any signature fields that were added are not saved in the document.
Creating a New Signature Field

To create a new signature field:

1. In the Prepare with CoSign page (Figure 33), place the New Signature Field placeholder in the desired location. Resize if desired.

2. Click Add Field. The Add Signature Field window is displayed:

![Add Signature Field Window](image)

**Figure 34 Prepare with CoSign Page – Add Signature Field Window**

The Add Signature Field window enables setting the appearance settings for the signature as well as a name for the signature field.

>Note: If Signature Field Name is left blank, a unique name is assigned automatically.

3. Click Add. This creates a new signature field in the specified location:
4. Optionally create additional signature fields by placing the New Signature Field placeholder in a different location and then clicking Add Field.

5. After adding all desired new signature fields, click Save to save them to the current document.

Note: If a PDF document already has a signature, an error is displayed when selecting Prepare with CoSign. This is to prevent invalidation of existing signatures caused by any change to the document (the addition of empty signature fields is considered a change).

Preparing Word/Excel Documents for Signing

To add signature fields to MS Word or Excel documents, they must first be converted to PDF format.

Converting a document to PDF format

To convert an MS Word or Excel Document to PDF:
1. Select a Word or Excel document within a document library.
2. Select Prepare with CoSign either from the CoSign ribbon or from the item menu.
   
   You are redirected to the Convert to PDF page (Figure 36).
3. Specify a **Name** for the new PDF document that will be created.

   **Note:** If the **Overwrite existing file** option is not selected, and a file with the same name already exists in the document library, an error will be displayed.

4. Select the desired **Content Type** for the new PDF file from the available content types in the document library.

5. Click **Convert** to convert the document to a PDF file and store the file in the document library.

After the document is converted to a PDF format, you are redirected to the **Prepare with CoSign** page (Figure 33). Refer to the instructions in **Preparing PDF Documents for Signing**.
Chapter 5: Using the CoSign Connector for SharePoint for Signing Documents, Forms and Items

Using the CoSign Connector for SharePoint, users can digitally sign and validate documents, forms, and items when accessing a site in a Microsoft SharePoint installation. The following sections describe how to sign and validate documents, forms, and items.

Note: It is also possible to incorporate the CoSign Connector for SharePoint as part of a Workflow procedure. For more information, refer to Chapter 6: Using CoSign Connector with SharePoint Workflows.

Note: It is very important that access to the SharePoint server be based on the https protocol and not on http, since credential information such as the User ID and password are passed from the user’s PC to the SharePoint server.

Note: An InfoPath form is based on a form template that is defined in the form library. Digital signature fields are defined in the form template. Therefore, it is forbidden to relocate forms between different form libraries and thus break the link between the signed form and its original form template.

Signing and Validating Documents in Document/Form Libraries

Access a document or a form library in SharePoint. The Document Library or Form Library screen appears:

![Document Library Screen](image)

Figure 37 Document Library Screen
For each document in the list, you can open the document options menu that enables you to perform several operations, or use the CoSign ribbon to perform those operations. The CoSign Connector for SharePoint enables you to perform the following operations:

- **Sign with CoSign** – Enables you to sign the document/form. Refer to [Signing PDF Documents, Signing Microsoft Word/Excel Documents](#), and [Signing Microsoft InfoPath Web Forms](#).
- **Verify Signatures** – Enables you to validate all signatures in the document or a form. Refer to [Validating Document/Form Signatures](#).
- **Review Signatures** – Enables you to view all signatures content inside the document/form. Refer to [Reviewing Document/Form Signatures](#).
- **Prepare with CoSign** – Enables you to add signature fields to PDF documents. Refer to [Chapter 4: Using the CoSign Connector for SharePoint to Prepare Documents for Signing](#).

![Figure 38 Document Library Screen – CoSign Connector for SharePoint Options](image)

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For each document in the list, you can open the document options menu that enables you to perform several operations, or use the CoSign ribbon to perform those operations. The CoSign Connector for SharePoint enables you to perform the following operations:

- **Sign with CoSign** – Enables you to sign the document/form. Refer to [Signing PDF Documents, Signing Microsoft Word/Excel Documents](#), and [Signing Microsoft InfoPath Web Forms](#).
- **Verify Signatures** – Enables you to validate all signatures in the document or a form. Refer to [Validating Document/Form Signatures](#).
- **Review Signatures** – Enables you to view all signatures content inside the document/form. Refer to [Reviewing Document/Form Signatures](#).
- **Prepare with CoSign** – Enables you to add signature fields to PDF documents. Refer to [Chapter 4: Using the CoSign Connector for SharePoint to Prepare Documents for Signing](#).
Signing PDF Documents

To sign PDF documents:

1. In a document library, choose a PDF document.

2. Select **Sign with CoSign** either from the CoSign ribbon or from the item menu.

You are redirected to a Sign with CoSign page (Figure 39).

![Sign with CoSign page](image)

**Figure 39 Sign with CoSign Page – Page Components**

The Sign with CoSign page features the following elements:

- **Document Preview** – A preview of a page in the selected document. After a signature is applied, the document preview is refreshed and the new signature is displayed.

- **Navigation** – If the document has more than one page, the navigation element enables browsing through the different pages.
Using the CoSign Connector for SharePoint for Signing Documents, Forms and Items

- Select field to sign – A dropdown list that enables selecting existing signature fields to sign or adding a new field to sign.

  Note: The Add new field to sign option is available from the Select field to sign dropdown list only if the NewSignatureFields option is enabled.

- Sign button:
  - If no additional inputs are required, clicking this button performs the actual signing operation on the selected signature field.
  - If additional inputs are required, clicking this button displays a window requesting the required inputs

- Done button – Redirects the user back to the document library.

Creating a New Signature Field and Signing it

To create a new signature field and sign it:

1. In the Sign with CoSign page (Figure 39), select the New Signature Location option in the Select field to sign dropdown list.

   A new signature field appears on the document page (Figure 40).
2. Select the desired page using the navigation button, and place the new signature field in the desired location. You can resize the signature field from its bottom right corner.

3. Click **Sign** to sign the PDF document in the selected location.

   If additional inputs are required, a **Sign Ceremony** popup screen appears (Figure 41).
Using the CoSign Connector for SharePoint for Signing Documents, Forms and Items

The Sign Ceremony window includes the following main sections:

- **Signature appearance section** – Each option represents an element that may appear on the signature or a position of an element.

- **Additional details:**
  - **Title (Position)** – The title of the person signing the document (for example – VP Sales). If left blank, it will not be shown on the signature.
  - **Signing Reason** – The intent of the signer when signing this document. A reason can be selected from the predefined list. If you select **Other reason (enter below)**, you can enter your own custom reason.
  - **Authentication** – The contents of this section may vary, depending on the authentication setup of the CoSign appliance. For more information, refer to Configuring Server Authentication Mode Parameters.

**Note:** Title field can be filled automatically by SharePoint. In order to enable this feature, additional configuration is required. For more details, see the CoSign Connector for SharePoint – Automatic Title-Field Guide.
4. Fill in the necessary details in the Sign Ceremony window.

   Note: If Date/Time is selected, the format can be controlled from Content Type Configuration Settings.

5. Click Sign. This finalizes the signing process and creates a new signature.

**Signing an Existing Signature Field**

Empty signature fields can be created in a PDF document using CoSign Connector for SharePoint, as described in Chapter 4: Using the CoSign Connector for SharePoint to Prepare Documents for Signing.

To sign an existing signature field:

1. In the Sign with CoSign page (Figure 39), select the name of the desired field from the Select field to sign dropdown list.

2. Click Sign to sign the selected signature field.

**Signing Microsoft Word/ Excel Documents**

   Note: In order to sign Microsoft Word/Excel documents, such documents should be enabled with signatures by adding Microsoft Signature Lines. Note that a Suggested Signer must be specified for each Signature Line. For more information, see the CoSign User Guide.

To sign an MS Word or Excel document:

1. In a document library, choose a Microsoft office document (of type Word or Excel).

2. Select Sign with CoSign either from the CoSign ribbon or from the item menu.

   You are redirected to a Sign with CoSign page (Figure 43).
Using the CoSign Connector for SharePoint for Signing Documents, Forms and Items

Documents › PO.docx › Sign with CoSign

Figure 43  Sign with CoSign Page for a Word or Excel Document

3. Select a desired field (signature line) from the Select field to sign dropdown list.

4. Click Sign to sign the document.

Note: When selecting a signature field in a Word or Excel document, the page display does not change.
Signing Microsoft InfoPath Web Forms

The InfoPath 2007/2010/2013 digital signature mechanism supports multiple and sectional digital signatures. The solution is based on placing digital signature fields inside an InfoPath form template. This task is usually performed by the designer.

The template files are uploaded to SharePoint and then used for creating actual forms, which can be signed by users. Multiple users can sign the same signature field. It is highly recommended to read the chapter on signing InfoPath forms in the CoSign User Guide to learn how to design an InfoPath form with an empty signature field and how InfoPath is used to generate digital signatures.

By using the CoSign Connector for SharePoint module, these forms can be signed without having to install Microsoft InfoPath in the signer's PC.

Publishing InfoPath Forms to SharePoint

To publish InfoPath forms to SharePoint:

1. Using InfoPath designer, open an InfoPath template that is enabled with digital signature fields.

2. From the ribbon, choose File → Publish → SharePoint Server.

3. Provide a valid SharePoint site URL and click Next.
4. Make sure to choose **Enable this form to be filled out by using a browser**. Choose **Form Library** so that the form will be published as a template for a new or existing form library.

5. Finish the process by choosing to create a new library or by choosing to update an existing library.

### Signing an InfoPath Web Form from a Form Library

**To sign an InfoPath form from a form library:**

1. In a **form library**, choose an InfoPath form.
2. Select **Sign with CoSign** either from the **CoSign** ribbon or from the item menu.

   You are redirected to a **Sign with CoSign** page (Figure 45).

   ![Sign with CoSign Page – sign on InfoPath form](image)

   **Figure 45** Sign with CoSign Page – sign on InfoPath form

3. Select a desired field (signature line) from the **Select field to sign** dropdown list.

4. Click **Sign** to sign the document.

   **Note:** For InfoPath forms, a preview is not available.
Validating Document/Form Signatures

To validate document/form signatures:

1. In the Document Library or Form Library screen, click the arrow to the right of the document/form name to display the list of options (Figure 38).

2. Select **Verify Signatures** from the list of options (Figure 38).

**OR**

1. In the Document Library or Form Library screen, select document(s) by selecting the corresponding checkbox(es).

2. In the CoSign ribbon, click **Verify Signatures** (Figure 38).

**Note:** Using the **Verify Signatures** option in the list of options, you can validate a single document/form. Using the **Verify Signatures** option in the CoSign ribbon, you can validate a single document/form or multiple documents/forms.

All signatures of the selected document(s) or form(s) are validated, and the current view of the document(s) or form(s) is updated.

Reviewing Document/Form Signatures

To review document/form signatures:

1. In the Document Library or Form Library screen, click the arrow to the right of the document/form name to display the list of options (Figure 38).

2. Select **Review Signatures**. The Document/Form Signatures screen appears.

**OR**

1. In the Document Library or Form Library screen, select a document by selecting the corresponding checkbox.

2. In the CoSign ribbon, click **Review Signatures** (Figure 38).

The Document Signatures screen appears (Figure 46).
Figure 46 Document Signatures Screen

The screen includes document identification and additional signature related information such as the signature status, signatures summary, and validation statuses of all the signatures of the selected item.

3. To view the signer’s certificate, click the linked name in the Signed By field.

Signing and Validating Items in Lists

Access a list in a SharePoint site. The All Items screen appears.

Figure 47 All Items Screen
For each item in the list, you can open the item option menu that enables you to perform several operations, or use the CoSign ribbon to perform those operations. The CoSign Connector for SharePoint enables you to perform the following operations:

- **Sign with CoSign** – Enables you to sign the item. Refer to [Signing Items](#).
- **Verify Signatures** – Enables you to validate all signatures in the item. Refer to [Validating Item Signatures](#).
- **Review Signatures** – Enables you to view all signatures content inside the item. Refer to [Reviewing Item Signatures](#).

![Figure 48 All Items Screen – CoSign Connector for SharePoint Options](image)

### Signing Items

**To sign items:**

1. In the *All Items* screen, click the arrow to the right of the item name to display the list of item options (Figure 48).
2. Select **Sign With CoSign**.

OR

1. In the *All Items* screen, select list item(s) by selecting the corresponding checkbox(es).
2. In the CoSign ribbon, click **Sign with CoSign** (Figure 48).
Using the CoSign Connector for SharePoint for Signing Documents, Forms and Items

Note: Using the **Sign With CoSign** option in the list of item options, you can sign a single item. Using the **Sign With CoSign** option in the CoSign ribbon, you can sign a single item or multiple items.

The Sign with CoSign screen appears (Figure 49).

Note: If the signing user does not need to provide any input for the digital signature operation, the Sign with CoSign screen (Figure 49) does not appear, and a digital signature operation is immediately performed on the item(s).

![Figure 49 Sign with CoSign Screen for an Item](image)

The screen’s content is displayed according to the defined configurations.

3. Optionally, review details of the item(s) before signing.
   - If you are signing a single item (Figure 49), click the **Item name** link. The standard Microsoft SharePoint **Item Details** page appears.
   - If you are signing multiple items (Figure 52), select an item in the **Items to sign** drop-down list and click **View Details**. The standard Microsoft SharePoint **Item Details** page appears.

4. Select the desired settings. The following fields may appear:
   - **Reason for Signing** – Depending on the settings defined in the list settings, a list of available reasons is displayed from which the user can select the appropriate reason for signing. Furthermore, depending on these settings, a field enabling users to manually enter a reason for signing may also be displayed.
   - **User Name and Password** – Depending on the settings defined and the type of environment (Active Directory, etc.) the user may be required to enter a user name and password, and possibly the extended password (the signature password). For more information, refer to the explanations following Figure 10.

5. Click **Sign**.
After Signing an Item

If the digital signature is successful, you are directed to the list Default View, and the digital signature attributes are displayed.

Note: The signing user must have only one certificate in the user’s account in the CoSign appliance. If the user has more than one certificate, an error appears when the user attempts to sign.

Validating Item Signatures

To validate item signatures:

1. In the All Items screen, click the arrow to the right of the item name to display the list of item options (Figure 48).
2. Select Verify Signatures.

OR

1. In the All Items screen, select list item(s) by selecting the corresponding checkbox(es).
2. In the CoSign ribbon, click Verify Signatures (Figure 48).

Note: Using the Verify Signatures option in the list of item options, you can validate a single item. Using the Verify Signatures option in the CoSign ribbon, you can validate a single item or multiple items.

All signatures of the selected item(s) are validated, and the current view of the item(s) is updated.

Reviewing Item Signatures

To review item signatures:

1. In the All Items screen, click the arrow to the right of the item name to display the list of item options (Figure 48).
2. Select Review Signatures.

OR

1. In the All Items screen, select a list item by selecting the corresponding checkbox.
2. In the CoSign ribbon, click Review Signatures (Figure 48).

The List Item Signatures screen appears.
Using the CoSign Connector for SharePoint for Signing Documents, Forms and Items

Figure 50 List Item Signatures Screen

The screen includes item identification and additional signature related information such as the signature status, signatures summary, and validation statuses of all the signatures of the selected item.

3. To view the signer’s certificate, click the linked name in the Signed By field.

Signing and Validating Entire Lists

You can perform the following operations on an entire list:

- Sign all items in a list – Refer to Signing All List Items.
- Verify all items in a list – Refer to Verifying All List Items.

Signing All List Items

To sign all items in a list:

1. In the List toolbar, open the CoSign ribbon (Figure 51) and click Sign all List Items.

Figure 51 Sign All List Items and Verify All List Items
A *Sign with CoSign* screen appears (see Figure 52).

![Sign with CoSign](image)

**Figure 52 Sign with CoSign – for All List Items**

2. Optionally, review an item’s details by selecting it in the **Items to sign** drop-down box and clicking **View Details**.

3. Specify the signature settings. For explanations of the fields appearing in the screen, refer to the explanations in *Signing Items*.

4. Click **Sign**

   All items in the list are signed.

**Verifying All List Items**

To verify all items in a list:

- In the List toolbar, open the **CoSign** ribbon (Figure 51) and click **Verify all List Items**.

  All signatures of all items in the list are validated, and the signature attributes of items in the list are refreshed.
Chapter 6: Using CoSign Connector with SharePoint Workflows

CoSign Connector for SharePoint provides several ways of enabling SharePoint workflows with digital signatures. When building a SharePoint workflow either with Microsoft Visual Studio, Microsoft SharePoint Designer or Nintex Workflows Designer, the workflow can be enabled with digital signatures using the following actions:

♦ **Sign with CoSign** – A workflow task that prompts a user to sign a document/form/list item. In order to complete this task, a user will either have to sign a document or reject signing.

♦ **AutoSign with CoSign** – A workflow action that signs on a document/form/list item without user interaction.

♦ **Verify with CoSign** – A workflow action that will verify a document/form/list item and retrieve relevant information regarding digital signatures.

This chapter describes, for both SharePoint Designer and Nintex, how an administrator can:

♦ Activate CoSign Connector for workflows as a custom task.

♦ Configure signature/verification actions in a workflow.

The chapter also describes how an end user can:

♦ Start a workflow.

♦ Sign a document as part of a workflow.

**Note:** Before you can use CoSign Connector for SharePoint workflow actions, you must first install, deploy and configure the Cosign Connector for SharePoint solution, as described in Chapters 2 and 3.

**Activating CoSign Connector for Workflows as a Custom Task**

To enable CoSign Connector to work with either SharePoint Designer or Nintex, you must first activate the CoSign Connector for workflows as a custom task.

**To configure CoSign Connector for workflows as a custom task:**

1. In the Site Settings screen for the Home site (root site), go to the Site Collection Administration column and click Site Collection Features. The Features screen appears.
2. Verify that the CoSign Connector for Workflows feature is activated.

Using CoSign Connector with SharePoint Designer Workflows

Microsoft Office SharePoint Designer is a specialized HTML editor and web design freeware for creating or modifying Microsoft SharePoint sites, workflows and web pages. In order to leverage CoSign Connector in SharePoint Designer workflows, CoSign Connector provides three custom actions, available from the Action menu:

![CoSign Custom Actions](image)
Configuring a *Sign with CoSign* Custom Task in SharePoint Designer

A *Sign with CoSign* action creates a “signature task” that prompts a user or a group of users for a signature on a document/form/list item. Because this is a “user interaction” action, the workflow waits until this task is completed. The configuration parameters are illustrated by Figure 55.

![Figure 55 SharePoint Designer –Sign with CoSign custom task](image)

The *Sign with CoSign* task includes the following configuration parameters:

- **Task name** (optional) – Specifies the name of the task that will be created. This name will appear as the task “title”, as illustrated in Figure 56.
- **User/group** (mandatory) – Specifies the user or a group of users that will receive this “signature task”. If a group was specified, the first person in the group to complete the task (by either signing or rejecting) causes the workflow to advance to the next step of the process.
- **Signature outcome** (mandatory) – An output parameter with two possible values:
  - Signed – A user signed a document
  - Rejected – A user rejected the signing operation
- **Signer comments** (mandatory) – Output parameter that specifies the reason for signing or rejecting to sign.

![Figure 56 Workflow Task - Sign with CoSign](image)
Configuring an AutoSign with CoSign Custom Action in SharePoint Designer

The AutoSign with CoSign action provides digital signature functionality without user interaction. It executes silently and signs the desired item using the specified parameters (see Figure 57).

The AutoSign with CoSign action includes the following configuration parameters:

- **Signature Profile** (mandatory) – In case of a document/form, specifies the name of the existing field/signature profile to be signed. For more information about signature profiles, refer to Defining Signature Profile Settings.

- Signing Reason (optional) – Specifies a reason for signing that will be embedded into the signature. If a signature field/profile/list item is configured to require a reason for signing, leaving this field empty will result in an error.

- Title (Position) (optional) - Specifies the title (position) of a person in the organization. The specified value will appear on the signature. If a signature field/profile/list item is configured to require a title, leaving this field empty will result in an error.

- Item ID (mandatory) – Specifies the Item ID of the document/form/list item to be signed. If the desired item to be signed is the “current item”, this field should be set to 0.

- Username (mandatory) – Specifies the CoSign username that will be used for signing.

- Password (mandatory) – Specifies a password of the user who will be used for signing.

- SignatureOutcome (mandatory) – An output parameter that indicates the outcome of a signing operation. In case of successful signing, the parameter is set to “Signed”. In any other case, the parameter receives the error message that prevented signing.
Configuring a *Verify with CoSign* Custom Action in SharePoint Designer

The *Verify with CoSign* action retrieves digital signatures related information for an item and stores it in workflow variables (see Figure 58)

![Verify with CoSign custom task](image_url)

*Figure 58 SharePoint Designer – Verify with CoSign custom task*

The *Verify with CoSign* action includes the following configuration parameters:

- **Item ID** (mandatory) – Specifies the Item ID of the document/form/list item to be signed. If the desired item to be signed is the “current item”, this field should be set to 0.
- **Document Status** (mandatory) – An output parameter that specifies whether the document is valid (all signature are valid) or invalid (one or more signatures are invalid)
- **Numbers of valid** (mandatory) – Specifies the number of valid signatures in the document/form/list item.
- **Number of unsigned** (mandatory) – Specifies the number of empty signature fields / lines in the document / form.
- **Last signer name** (mandatory) – Specifies the full name of the last person who signed this document/form/list item.
Using CoSign Connector with Nintex Workflows

Nintex Workflow is a third party drag-and-drop workflow designer that adds connectivity and advanced workflow features to the Microsoft SharePoint platform. CoSign connector can be used within a Nintex designer as a custom action, or as a “custom task” in a Nintex “to-do” task. Within Nintex workflows:

- **AutoSign with CoSign** and **Verify with CoSign** are custom actions (see Figure 59).
- Signing with CoSign is a custom task that can be used within a native Nintex To-Do task (see Figure 60).

![Figure 59 Nintex Designer –CoSign Custom Actions](image)
Adding CoSign Columns to the Workflow Task list

The workflow’s Task List is used by Nintex to manage user interaction actions. The Task List is specified for each Nintex Workflow in the **Workflow options** section of the **Workflow Settings** window, as shown in the following figure.
CoSign connector stores data from signing actions in specific task list columns that need to be specified. To specify the CoSign columns:

1. Open the Workflow’s Task List.
2. Choose List Settings from the List ribbon.
3. In the Columns section select Add from existing site columns.
4. In Select site columns from field, select ARX CoSign Signature Task Columns, and add the desired columns to the task list.

Figure 61  Nintex Designer – Workflow Settings

Figure 62  Nintex Designer – Selecting Site Columns

Configuring a CoSign Signature Task in a Workflow in Nintex

This section describes how to create a CoSign signature task in a Nintex workflow.

To create a Nintex workflow:

1. Click the Workflow menu in the document library options toolbar.
2. Select **Create a Workflow in Nintex Workflow**.

![Figure 63 Workflow – Create a Workflow using Nintex Designer](image)

3. Start performing the steps required for creating the workflow. At some point in the workflow definition, you will need to define a CoSign Signature task. This enables you to create a signature task that will require a user to either sign a document, reject the signing task, or delegate it.

Add an **Assign to-do** task to the workflow.

![Figure 64 Assign To-do Task Configuration Screen](image)
4. In the **Assignees** field specify either a single user or a single group of users. If you specify a group, the first person to sign or reject the task will complete the task and advance the workflow to the next step.

5. Select the **Allow Delegation** checkbox if you wish to enable users to delegate the assigned task to other users.

6. In the **Content Type** field:
   a. Select **Use existing**.
   b. Select **CoSign Workflow Signature Task**.

7. In the **Signature Profile Name** field, optionally specify which signature profile to use for this task. For example, if the task is that the head of the department must sign the document, but the document contains many signature fields, you can direct the head of the department to the specific signature field by selecting the signature profile of the relevant field.

   To specify a signature profile, enter it in the field to the right of the **Value** drop-down list.

   ![Signature Profile Name](image)

### Retrieving Signature Task Outcome and Signer Comments Values in Nintex

A Signature task may have different outcomes after execution. A user might sign the document, or reject signing the document. In both cases, the task will be executed in the same manner. In cases where workflow logic is dependent on the results (outcome) of a signature task, the **Signature Task Outcome** and **Signer Comments** values need to be retrieved:

1. Create the following workflow variables:
   - TaskIDsCollection of type **Collection**
   - taskId of type **Single line of text**
   - signResult of type **Single line of text**
   - signerComments of type **Single line of text**

2. In the **Assign to-do task** configuration, set the **Store task IDs in** option to **TaskIDsCollection**.

   ![Store task IDs in](image)

3. Add a **For each** loop from the **logic and flow** actions and open the configuration screen.
   - Set the **Target** collection parameter to **TaskIDsCollection**.
   - Set the **Store result in** field to the **taskId** variable.
4. Add a **Set variable** action from the **Operations** actions and open the configuration screen.
   - Set the **Set** field to `signResult`, and the **Equals** field to **List lookup**.
   - In the **Lookup details** section (Figure 65), set the following parameters:
     - **Source** = **Workflow Tasks**
     - **Field** = **Signature Task Outcome**
     - **When** = **ID**
     - **Equals**: **Workflow Data → taskID**

![Figure 65 Nintex Set Variable Task Configuration – Lookup Details Section](image)

The `signResult` variable will be set with the task outcome.

5. Create a second **Set variable** action to store the signer’s comment. The comment will be either the signing reason or the rejection reason, depending on the outcome of the signature task.

   Note that this action is the same as the previous action, except that the **Set** field is set to `signerComments`. 

Configuring an AutoSign with CoSign Custom Action in Nintex

An AutoSign with CoSign action provides digital signature functionality without user interaction. It executes silently and signs a desired item using the specified parameters (see Figure 66).

![Configure Action - AutoSign with CoSign](image)

**Figure 66  Nintex – AutoSign with CoSign custom action**

The AutoSign with CoSign action includes the following configuration parameters:

- **Signature Profile** (mandatory) – In case of a document/form, specifies the name of the existing field/signature profile to be signed. For more information about signature profiles, refer to Defining Signature Profile Settings.

- Signing Reason (optional) – Specifies a reason for signing that will be embedded into the signature. If a signature field/profile/list item is configured to require a reason for signing, leaving this field empty will result in an error.

- Title (Position) (optional) – Specifies the title (position) of a person in the organization. The specified value will appear on the signature. If a signature field/profile/list item is configured to require a title, leaving this field empty will result in an error.

- SignatureOutcome (mandatory) – An output parameter that indicates the outcome of a signing operation. In case of successful signing, the parameter is set to “Signed”. In any other case, the parameter receives the error message that prevented signing.

- Item ID (mandatory) – Specifies the Item ID of the document/form/list item to be signed. If the desired item to be signed is the “current item”, this field should be set to 0.

- Username (mandatory) – Specifies the CoSign username that will be used for signing.

- Password (mandatory) – Specifies a password of the user who will be used for signing.
Configuring a *Verify with CoSign* Custom Action in Nintex

The *Verify with CoSign* action retrieves digital signatures related information for an item and stores it in workflow variables (see Figure 67)

![Figure 67 Nintex - Verify with CoSign custom action](image)

The *Verify with CoSign* action includes the following configuration parameters:

- **Item ID** (optional) – Specifies the Item ID of the document/form/list item to be signed. If the desired item to be signed is the “current item”, this field should be left blank.
- **Document Status** (optional) – An output parameter that specifies whether the document is valid (all signatures are valid) or invalid (one or more signatures are invalid).
- **Numbers of valid** (optional) – Specifies the number of valid signatures in the document/form/list item.
- **Number of unsigned** (optional) – Specifies the number of empty signature fields / lines in the document / form.
- **Last signer name** (optional) – Specifies the full name of the last person who signed this document/form/list item.
Starting a Workflow

A workflow for a document/form/list item can be started in several ways, both automatically and manually. One of these mechanisms is described in this section.

To start a workflow:

1. In the document library environment, open the document options menu and select Workflows.

The Workflows screen appears (Figure 69).
2. In the Workflows screen, click ![Sign] to select a workflow.

Workflow controls screen appears (Figure 70), enabling you to start the workflow.

3. Click **Start** to start the workflow.
Signing a Document as Part of a Workflow

Whenever a user is requested to sign a document as part of a workflow, the system creates a task for this particular user.

You can view all current tasks by selecting **Workflow Tasks** in the document library’s left panel. The **Workflow Tasks** screen appears (Figure 71), displaying all tasks and their status.

![Figure 71 Workflow Tasks Screen](image)

To sign a document as part of a workflow:

1. Click the signing task in the **All Tasks** screen (Figure 71)

   The Sign with CoSign screen appears (Figure 72). The screen is very similar to the one that appears when signing a document (Figure 39).
2. If in the task definition (Figure 64) a specific profile was defined, that profile name is displayed in the **Signature Profile Name** dropdown, and you cannot change it. Usually, the signature profile directs the signer to the intended signature field in the document.

If a signature profile was not defined, a **Signature Profiles** drop-down list is enabled, similar to the one that appears when signing a regular document (refer to **New Signature Fields**). Select a signature profile from the list. In this case, an **Approve** button will be displayed as well:
In this scenario, signing a document will not resume a workflow. This is to allow a user to apply multiple signatures to a document before completing his signature task. In order to complete a signature task, click on the approve button.

3. You can optionally reject a signature operation. If you decide to reject, it is recommended to enter the reason for the rejection. Clicking **Reject** will display a **Reject Signing** screen (Figure 74).

4. If the designer of the workflow enabled delegation, the **Delegate** button will be available in the **Signing Ceremony** screen. It allows a user to delegate the signature operation to a different user or a single group of users. Clicking **Delegate** will display the **Delegate Signing** screen (Figure 75).
A user can delegate the task either to a different person or to a group of people. Delegation comments are optional and can be provided so that the user who will receive the task will have more information.

5. If you do not reject or delegate the signature operation, click **Sign**.

**Note:** If you click the link for a signing task, but the task was already completed, a signature review screen is displayed, similar to the screen displayed in Figure 46.
Applications that work with CoSign, 2
Authenticating
data, requirements, 1
Authentication mode, specifying, 17
Backing up CoSign configuration, 38
Configuring CoSign Connector for SharePoint, 16
activating at site collection level, 19
activating at site level, 20
at the SharePoint installation level
document library default settings, 18
General Settings parameters, 16
backing up the configuration, 38
configuring content type settings, 23
configuring document libraries, 21
configuring lists, 35
enabling ticket-based signatures, 18
restoring the configuration, 39
Content type
defining a signature profile, 26
defining CoSign settings, 23
inheriting signature profiles from a document template, 29
Converting documents to PDF format, 44
CoSign applications that work with CoSign, 2
components, 3
documentation, 4
environments supported by CoSign, 2
CoSign client
optimizing for CoSign Connector for SharePoint, 8
version supporting CoSign Connector for SharePoint, 8
CoSign Connector for SharePoint
backing up, 38
configuring, 16
deploying, 12
installing, 10
restoring, 39
retracting deployment, 14
uninstalling, 15
CoSign Connector for SharePoint as a custom task
activating, 63
CoSign signature task
activating the feature, 63
adding in a workflow, 71
viewing task outcome, 78
Data authentication systems, 1
Deploying CoSign Connector for SharePoint
using CLI, 13
using GUI, 12
verifying deployment, 13
Document
creating an empty signature field, 43
creating and signing a new signature field, 49
reviewing signatures, 56
signing, 48
signing a Word document, 52
signing an existing signature field, 52
signing an Excel document, 52
signing, as part of a workflow, 78
validating signatures, 56
viewing signer’s certificate, 57
Document library
configuring which information columns are available, 30
configuring which information to display, 33
CoSign options, 47
CoSign ribbon, 47
defining content type settings, 23
defining CoSign settings, 21
reviewing document signatures, 56
signing a document, 48
validating document signatures, 56
Environments supported by CoSign, 2
Extended password configuration, 18
Form
publishing to SharePoint, 54
reviewing signatures, 56
signing, 55
validating signatures, 56
viewing signer’s certificate, 57
Form library
configuring which information columns are available, 30
configuring which information to display, 33
CoSign options, 47
CoSign ribbon, 47
reviewing document signatures, 56
validating document signatures, 56

---

Installing CoSign Connector for SharePoint, 10
Intended audience, 4
Introduction
to CoSign, 2
to digital signatures, 1
Introduction to
CoSign Connector for SharePoint, 7
Item
  post-signing behavior, 60
  reviewing signatures, 60
  signing, 58
  validating signatures, 60
  viewing signer’s certificate, 61

---

Kerberos authentication, enabling, 18

---

List
  configuring which information columns are available, 30
  configuring which information to display, 36
  CoSign options, 61
  defining CoSign settings, 35
  signing all items, 61
  verifying all items, 62
List Item
  CoSign options, 58
  CoSign ribbon, 58
  reviewing item signatures, 60
  reviewing signer’s certificate, 61
  signing, 58
  validating item signatures, 60

---

Multiple signatures mode, specifying, 18

---

Nintex Workflow
  configuring a CoSign signature task, 70
  configuring a Verify with CoSign custom action, 75
  configuring an AutoSign with CoSign custom action, 74
  retrieving signature task outcome, 72
  retrieving signer comments, 72
  using with CoSign Connector, 68

---

Overview of CoSign, 1

---

Preparing documents for signing, 41
  Excel documents, 44
  PDF documents, 41
  Word documents, 44
Prior knowledge, 4

---

Restoring CoSign configuration, 39
Retracting CoSign Connector for SharePoint deployment, 14

---

SharePoint Designer
  configuring a Sign with CoSign custom task, 65
  configuring a Verify with CoSign custom action, 67
  configuring an AutoSign with CoSign custom action, 66
  using with CoSign Connector, 64
SharePoint server, accessing using https, 46
Signature field
  creating and signing, 49
  creating empty signature field, 43
  signing an existing field, 52
Signature profile
  deleting, 29
  updating, 28
Signature profile creation
  creating new, 26
  loading existing profiles from a document template, 29
Signing
  documents, 48
  Excel document, 52
  form, 55
  Word document, 52
Signing digitally in SharePoint, 46
Site settings
  activating CoSign at the site collection level, 19
  activating CoSign at the site level, 20

---

Ticket-based signatures, enabling, 18

---

Uninstalling CoSign Connector for SharePoint, 15
Validating
- document signatures, 56
- form signatures, 56
- item signatures, 60
- signatures of all items in a list, 62

Verifying deployment, 13

Workflow
- adding a CoSign signature task, 71
- signing a document as part of a workflow, 78
- starting, 76

Workflow task
- activating the CoSign signature task, 63
- creating, 71
- signing a document, 78
- viewing task outcome, 78