

Kofax OmniPage Server

Installation Guide

Version: 3.0.0

Date: 2020-12-03

The KOFAX logo is displayed in a bold, blue, sans-serif font. The letters are thick and closely spaced, with a consistent weight throughout the word.

© 2020 Kofax. All rights reserved.

Kofax is a trademark of Kofax, Inc., registered in the U.S. and/or other countries. All other trademarks are the property of their respective owners. No part of this publication may be reproduced, stored, or transmitted in any form without the prior written permission of Kofax.

Table of Contents

Preface.....	5
Product documentation.....	5
System requirements.....	5
License Requirement.....	5
Overview.....	6
OmniPage Server components.....	6
External components.....	6
Abbreviations.....	7
Chapter 1: Prepare for installation.....	8
About Installation topology.....	8
Simple installation.....	8
Advanced installation.....	8
About installation security.....	9
About choosing authentication.....	11
About choosing MS SQL server authentication.....	11
Chapter 2: Installation.....	12
General installation steps.....	12
Start the OPS - Installation Web Assistant.....	12
Check hardware and build prerequisites.....	13
Accept the license agreement.....	13
Enter customer information.....	13
Review detected installations.....	13
Select topology.....	14
Steps for Simple installation.....	14
Select applications.....	14
Steps for Advanced installation.....	15
Select applications.....	15
Configure the server.....	16
Configure the server environment.....	18
Configure the database type.....	19
Closing installation steps.....	20
Specify destination.....	20
Chapter 3: Verify installation.....	21
Verify Service API.....	21

Verify Swagger API.....	21
Verify the administration console.....	22
Chapter 4: Licensing.....	23
Migrate OPS 2 licenses.....	23
Chapter 5: MS SQL Server configuration.....	25
About installing MS SQL Server.....	25
Firewall settings.....	25
Configure SQL authentication.....	26
Configure remote connection to the MS SQL Server.....	26
Configure SQL login.....	27
Create a database instance.....	27
Chapter 6: Cloud environment.....	28
Configure SQL Azure.....	28
Chapter 7: High-availability installation and configuration.....	30
Important recommendations.....	30
About high availability in general.....	30
About high availability in OPS.....	31
OmniPage clustered services.....	31
Node diagnostic for OmniPage Server.....	31
Common configuration steps for HA deployments.....	32
Chapter 8: Troubleshooting.....	33
Services cannot start.....	33
Verify port.....	33
Verify user.....	33

Preface

This document describes the installation of OmniPage Server (OPS), a solution that supports document conversion services while optimizing scalability and reliability. OPS is an application service solution built using conventional enterprise architectural components and approaches, while still offering a high level of availability with scaling functionality.

Product documentation

The full documentation set for Kofax OmniPage Server is available online:

<https://docshield.kofax.com/Portal/Products/OmniPageServer/3.0.0-g6hc8b14r5/OmniPageServer.htm>

The Kofax OmniPage Server documentation set includes:

- *Kofax OmniPage Server Installation Guide*
- *Kofax OmniPage Server Administrator's Guide*
- *Kofax OmniPage Server API Reference Guide*
- *Kofax OmniPage Server API Sample Reference Guide*
- *Kofax OmniPage Server Folder Watcher Administrator's Guide*
- *Help for Kofax OmniPage Server Conversion Client*
- *Help for Kofax OmniPage Server Folder Watcher*
- *Kofax OmniPage Server Release Notes*
- *Kofax OmniPage Server Technical Specifications*

System requirements

The primary source of information about Kofax OmniPage Server system requirements and dependencies on other products is the *Technical Specifications* document, which is available on the Kofax OmniPage Server 3.0.0 [Product Documentation](#) page. The document is updated regularly, and we recommend that you review it carefully to ensure success with your Kofax OmniPage Server product.

The installation requires the authority and personal skills of an IT administrator, including basic knowledge of SQL Server products, and the Windows Domain Authentication.

License Requirement

OmniPage Server version 3.0.0 requires version 3.0 license. Version 1.0 licenses cannot be used. You can convert version 2.0 licenses to version 3.0 with the [Activation Server](#).

Overview

OmniPage Server is a client-server application involving a single or multiple server computers working in a networked environment.

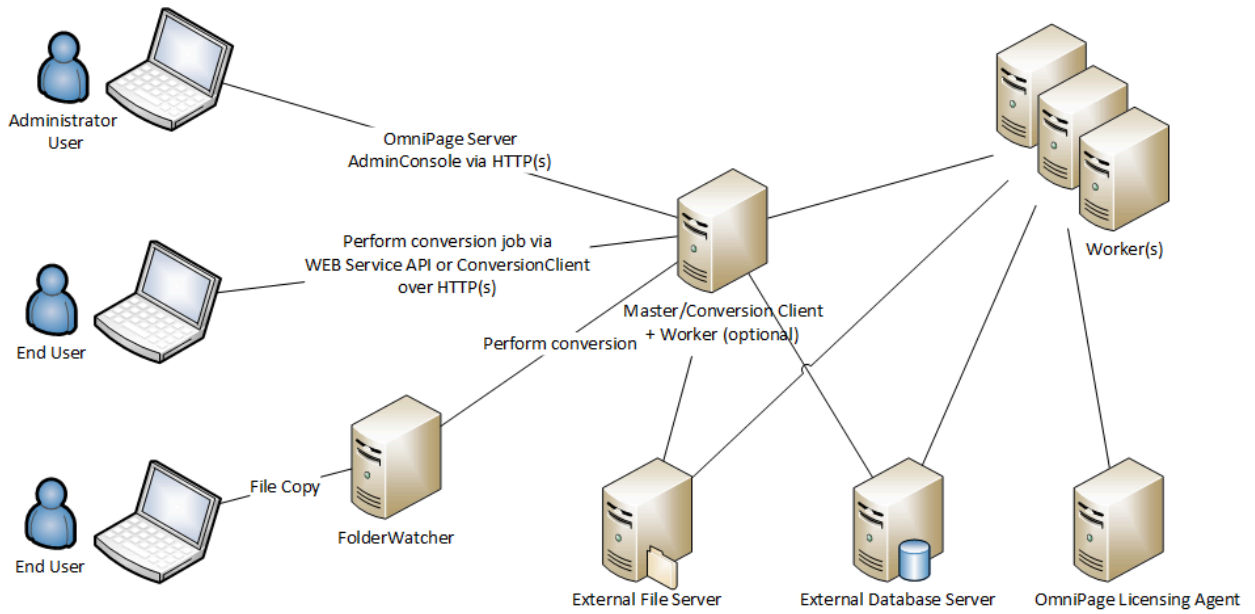
OmniPage Server components

The architecture of the OPS relies on the following components:

- Master: the main service component that manages the conversion jobs.
- Worker: the OCR conversion processing unit.
- Folder Watcher: monitors network folders for new input documents and gets conversion results into output sub-folders.
- Conversion Client: a web application that utilizes OPS to process documents for results right in the web browser.

External components

- Database server contains the operational database of OPS. The external database is optional; you can install it to the server where the Master is running or to another separate SQL server/cluster.
- File Server is the file storage responsible for the safe and systematic storage of conversion related documents. This component is optional; the file system of the Master can be used to store the documents.
- SMTP Mail Server is required to send notifications to the configured administrator user.



System architecture

Abbreviations

- AD: Active Directory
- OPS: OmniPage Server
- OPSHA: OmniPage Server High Availability
- HA: High Availability
- WG: Work Group
- OS: Operating System

Chapter 1

Prepare for installation

Before starting the installation of OmniPage Server, you need to [select the installation type and mode](#). Your current choice projects the capacity and flexibility of your installed system. You can also [prepare the installer for secure HTTPS communication](#).

About Installation topology

You may choose between [Simple](#) and [Advanced](#) topology during installation.

Simple installation

You can quickly install everything you need and set OmniPage Server up and running on a single computer. This topology suits low-volume applications that do not require load balancing or failover.

Important You cannot convert a Simple installation later to a multi-server environment.

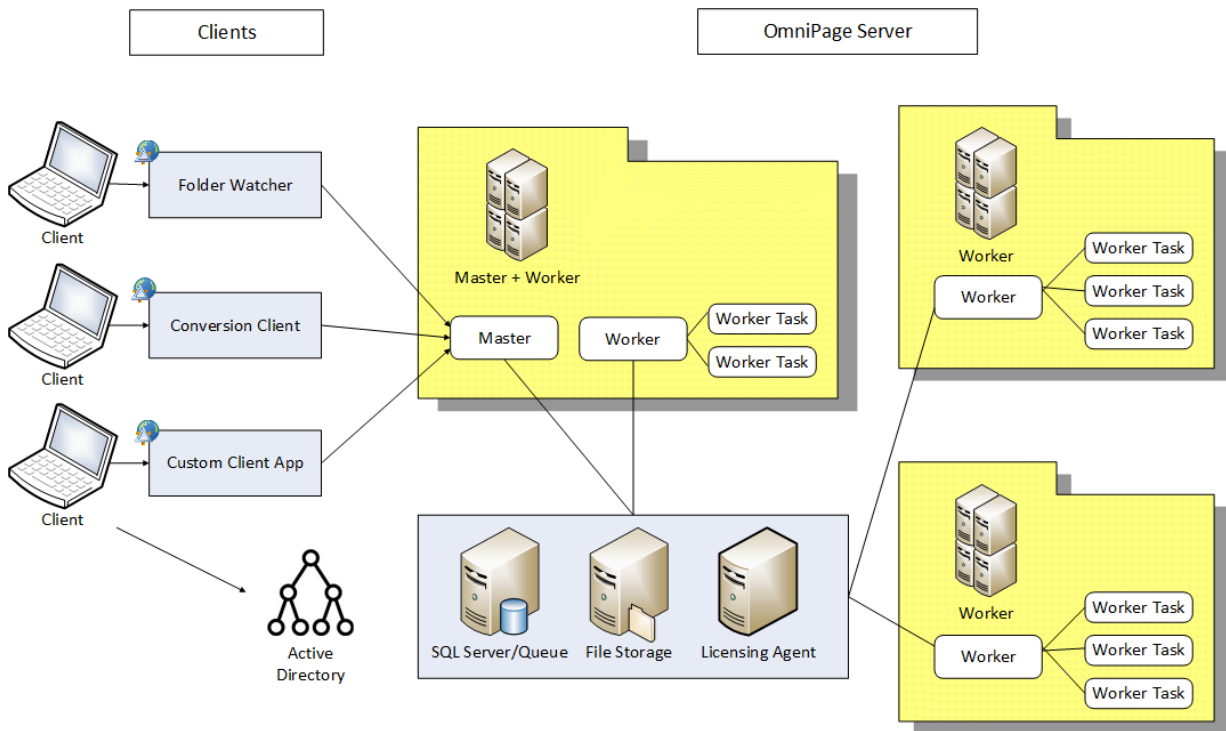
Advanced installation

Advanced topology offers a wider flexibility setting up the different components of OPS. You can customize the OPS installation to your exact needs even for high-volume, high-availability applications.

The [Database type](#) determines the database engine to use:

- Lite mode: recommended for small businesses.
 - No SQL server installation is required. The configuration, the operational and historical data are stored on the file system of the Master server.
 - This mode is recommended only if the deployment contains only one or two machines.
 - This mode cannot be used in high-availability cluster or failover cluster environments.

- Robust mode: recommended where higher loads expected, or failover clustering is a requirement.
 - Requires MS SQL Server or [SQL Azure](#). A central MS SQL database stores the configuration, the operational and historical data.
 - Recommended for multi-server environments.
 - We recommend you to prepare the [MS SQL Server and configure the firewall](#) before starting the OmniPage Server installer.



Robust architecture example

About installation security

OPS - Installation Web Assistant uses plain HTTP communication by default. If you want to secure the network communication for the whole installation process, you need to set up HTTPS before [starting InstallationWebAssistant.exe](#). This requires an SSL certificate installed on the computer.

- Create an empty plain text file and save it as `appsettings.json`, next to `InstallationWebAssistant.exe`.
- This `.json` file should contain HTTP security settings for the OPS installer. You can set up the file content starting with the sample below:

```
{
  "WebPort": 5020,
  //"SSLWebPort": 5021, // The port of the HTTPS communication (if set then only
  https protocol is enabled for installation)
  //"SSLCertHash": "2959b4bc5d7d3918fb3a0297da503afdf1b42323", // The thumbprint
  of your SSL certificate (important: 40 characters without spaces)
```

```
    // "SSLHttpProtocols": 1, // default: Http1 = 1, other possible values: None = 0,
    Http2 = 2, Http1AndHttp2 = 3
    // "SSLCertAllowInvalid": true // defaults to true to enable using self-signed
    certificates
}
```

- Edit the file to adjust the settings to your network and certificate.
- Delete the leading "// " characters in front of "SSLWebPort". Edit the port number as you prefer. The installer uses this port for HTTPS communication.

Note If "SSLWebPort" is specified, the installer disables plain HTTP communication.

- Delete the leading "// " characters in front of "SSLCertHash" and specify the thumbprint of your certificate, which should be a hexadecimal code, exactly 40 characters long. This setting is mandatory.

Tip You can use the certificate manager to [get the thumbprint for a certificate already installed on the computer](#).

- Delete the leading "// " characters in front of "SSLHttpProtocols" and specify the HTTP protocol version:
 - **0**: None
 - **1**: HTTP 1 (default)
 - **2**: HTTP 2
 - **3**: HTTP 1 and HTTP 2
- Delete the leading "// " characters in front of "SSLCertAllowInvalid" and set the value to "false" to disable the use of self-signed certificates. The default value for "SSLCertAllowInvalid" is "true", so self-signed certificates are enabled if you do not edit this line.
- Save the changes.

About choosing authentication

OmniPage Server components can be installed with either using Windows Domain Authentication based on Windows Active Directory or Windows Authentication without Active Directory.

- Windows Domain Authentication: OmniPage Server requires a domain account with the following conditions:
 - The password for the account should not expire.
 - The account should have the required rights.
- Windows Authentication (without Active Directory): In this case there is no central authentication; you need to create an account on all machines where OmniPage Server components (Master, Worker, Folder Watcher service) are installed. These accounts should meet the following conditions:
 - The accounts must have the same account name and password on all the machines.
 - The password for the account must not expire.
 - The account must have the required rights.

OmniPage Server components will run under this account. The installer requests to enter the password for this account.

Note OmniPage Server does not store the password in any form.

In the case of Windows Authentication, the OPS RESTFul API and the Conversion Client will be available without authentication.

About choosing MS SQL server authentication

In case you are installing OmniPage Server in Robust mode, you need to decide the authentication method of the SQL Server.

- Integrated Windows authentication
This way the user of the service needs to have the right to log on and authenticate to the MS SQL Server and the database of the OmniPage Server.
- SQL Server authentication
The SQL Server system administrator should create an SQL user that has the right to log on and authenticate to the MS SQL Server and the database of the OmniPage Server.

For further details, see [MS SQL Server configuration](#).

Chapter 2

Installation

OmniPage Server installation consists of the following parts:

- [General installation steps](#)
- [Steps for Simple installation](#)
- [Steps for Advanced installation](#)
- [Closing installation steps](#)

General installation steps

OmniPage Server installation process starts with the following steps, regardless of installation topology.

- [Start the OPS - Installation Web Assistant](#)
- [Check hardware and build prerequisites](#)
- [Accept the license agreement](#)
- [Enter customer information](#)
- [Review detected installations](#)
- [Select topology](#)

Start the OPS - Installation Web Assistant

Important Before starting the installer make sure that the default web browser is a supported version of either Chrome or Firefox. OPS - Installation Web Assistant does not support Internet Explorer.

1. Download your installation pack onto the computer on which you want to install OPS.
2. Browse to the installation pack and extract it into a new folder.
3. Open the folder and double-click the "InstallationWebAssistant" application to run it.
4. As User Access Control asks for a permission, click **Yes**.
5. If **Windows Defender Firewall** blocks "InstallationWebAssistant.exe", click **Grant access** to allow the installer to access the network.

The OPS - Installation Web Assistant opens in the default browser.

Check hardware and build prerequisites

As you start OPS - Installation Web Assistant, it opens in the web browser, the **Welcome** page appears, and you can start with the general steps of the installation.

1. Review the **Welcome** page that contains some important information.
 - a. On the left of the top bar, click **About** to open the **About** dialog box, where you can find the build number of the OmniPage Server application.
 - b. Review the name of the computer on which you are about to install OmniPage Server. This information prints on the top bar like this:
"Host: *computername*"

Note You can continue the installation in a web browser on another computer, so it is important to review the name of the computer carefully.

Example "Host: xy881.acme.com"

- c. Review the type of the installed OS, which can be either **Desktop** or **Server**.
Example "OS: Desktop"
2. Click **Next** in the lower left corner of the page to proceed to the next page.

Accept the license agreement

As you click Next on the **Welcome** page, the **License agreement** page appears.

1. Review the license agreement.
2. At the bottom of the text, select **I accept the terms in the License agreement**.
3. Click **Next** in the lower left corner of the page to proceed to the next page.

Enter customer information

As you click Next on the **License agreement** page, the **Customer information** page appears.

1. Enter customer information.
 - a. Enter **User name**.
This field is mandatory.
 - b. Enter **Organization**.
2. Click **Next** in the lower left corner of the page to proceed to the next page.

Review detected installations

As you click Next on the **Customer information** page, the **Detected installations** page appears.

1. If there is no OmniPage Server already installed on the computer, the Nothing was detected message appears on the page. In this case, click **Next** to move to the next page.
 - a. Enter **User name**.
This field is mandatory.
 - b. Enter **Organization**.

- Otherwise, the list of installed OPS components appear on the page. Review the list.

Details display in the following order for each item:

Service indicator (▶ or ■)	The green play symbol (▶) indicates that the component runs as a service. The red stop symbol (■) indicates that the component is already installed, but the service is not running.
Link (↗)	The blue arrow symbol (↗) works as a link, and starts the pertaining component.
Component name	The name of the component, such as OmniPage Admin Console Portal.
Version number (i)	The info symbol (i) leads a version number, showing which version of OmniPage Server installed the pertaining component.
Installation path	The folder where the component is installed.

- Click **Next** in the lower left corner of the page to proceed to the next page.

Select topology

As you click Next on the **Detected installations** page, the **Topology** page appears.

- Select the topology that best suits your needs.
 - Click **Simple installation** to proceed with a streamlined installation process most suitable for lower-volume applications. See [Simple installation](#) for details.
 - Click **Advanced installation** to proceed with a detailed installation process for higher-volume, fail-safe applications. See [Advanced installation](#) for details.
- Click **Next** in the lower left corner of the page to proceed to the next page.

Steps for Simple installation

If you selected Simple installation on the **Topology** page, the installation process continues with the following step:









- [Select applications](#)

Select applications

As you click Next on the **Topology** page when you selected Simple installation, the **Select applications** page appears.

The installer lists all applications and their components, using the following indicators to describe the installation status of each component:

To be installed (↑)	The green arrow up sign (↑) indicates that the component will be installed.
---------------------	---

Missing and will not be installed ()	The gray X () indicates, that the component is not yet installed, and it is not selected for installation.
To be repaired ()	The green circular arrow () indicates an older version of the component, which upgrades to the current version.
To be actualized ()	The blue circular arrow () indicates an unidentified version of the component, which upgrades to the current version.
Already installed and will not be modified ()	The green no entry sign () indicates, that the component is installed, and the installer leaves it intact.

Tip OPS - Installation Web Assistant cannot uninstall any application: use the application management features of the operating system for that purpose.

In the Simple application process, the following applications are preselected for mandatory installation:

- OmniPage Server Master
 - OmniPage Server Worker
1. Select further applications to add to the installation according to your preference:
 - OmniPage Server Folder Watcher
 - OmniPage Server Conversion Client
 2. Click **Next** in the lower left corner of the page to proceed to the next page.

Steps for Advanced installation



If you selected **Advanced installation** on the **Topology** page, the installation process continues with the following steps:









- [Select applications](#)
- [Configure the server](#)
 - [Configure HTTPS](#)
- [Configure the server environment](#)
- [Configure the database type](#)
 - [Configure SQL settings](#)

Select applications

As you click Next on the **Topology** page during Advanced installation, the **Select applications** page appears.

The installer lists all applications and their components, using the following indicators to describe the installation status of each component:

To be installed ()	The green arrow up sign () indicates that the component will be installed.
---	---

Missing and will not be installed ()	The gray X () indicates, that the component is not yet installed, and it is not selected for installation.
To be repaired ()	The green circular arrow () indicates an older version of the component, which upgrades to the current version.
To be actualized ()	The blue circular arrow () indicates an unidentified version of the component, which upgrades to the current version.
Already installed and will not be modified ()	The green no entry sign () indicates, that the component is installed, and the installer leaves it intact.

Tip OPS - Installation Web Assistant cannot uninstall any application: use the application management features of the operating system for that purpose.

In the Advanced application process, the following applications are preselected for mandatory installation by default:

- OmniPage Server Master
- OmniPage Server Worker

Important In the Advanced installation topology, you can select OmniPage Server Master only for server operating systems. Use the [Simple installation topology](#) to install both Master and Worker servers onto a desktop operating system.

1. Select further applications to add to the installation according to your preference:
 - OmniPage Server Folder Watcher
 - OmniPage Server Conversion Client
2. Click **Next** in the lower left corner of the page to proceed to the next page.

Configure the server

As you click Next on the **Select applications** page during Advanced installation, the **Server configuration** page appears.

1. In the **Log file location** box, edit the default path for storing log files, or click **Browse** to specify another location.
2. If you did not select OmniPage Server Master for installation, then in the **Server URL** box, provide the URL of the server where the Master is running.
A green check mark indicates if the server path is valid. Otherwise, a red exclamation mark appears.

3. If you selected OmniPage Server Master for installation, then proceed with the following steps:
 - a. In the **Storage location** box, edit the default path for working files, or click **Browse** to specify another location.
The Master server uses this folder for input file uploads and work files.
 - b. To disable unencrypted HTTP communication, clear **Use plain HTTP protocol**. This feature is enabled by default.
 - c. To enable encrypted communication, select **Use secured HTTPS protocol**. This feature is disabled by default.
For HTTPS configuration steps, see [Configure HTTPS](#).
4. Under the HTTP version, a table of the affected applications and ports appears.
The default port values are the following:

Application	HTTP	HTTPS
Service API	5002	5003
Admin Console	5004	5005
Conversion Client	5010	5011
Folder Watcher's Folder Configuration Editor	5008	5009
Folder Watcher's System Configuration Editor	5006	5007
Socket for OPLA		18019
OPLA Web UI	5000	5001

Edit the default port values as you prefer.

Important Make sure you use ports that your system administrator enabled on the network. Enable the same ports in the firewall software installed on the host computer, if necessary.

Table headers for applications and ports

Applications	The name of the application. Only the applications affected by the installation appear in the table.
HTTP port	The port number for plain HTTP communication. This column appears only if plain HTTP protocol is enabled.
HTTPS port	The port number for secure HTTPS communication. This column appears only if plain HTTPS protocol is enabled.
Socket port	The socket port to use. This column appears for the OmniPage Licensing Agent application only.

5. Click **Next** in the lower left corner of the page to proceed to the next page.

Configure HTTPS

As you select Use secure HTTPS protocol on the **Server configuration** page during Advanced installation, you should configure HTTPS.

1. To disable self-signed certificates, clear **Allow invalid certificate (e.g. self-signed certificate)**. This feature is enabled by default.
2. In the **Certificate thumbprint** box, enter the hash of the SSL certificate, which should be a hexadecimal code, exactly 40 characters long. This field is mandatory. You can use the certificate manager to get the thumbprint for a certificate already installed on the computer.
 - a. In Windows **Control Panel**, either start **Manage user certificates** or **Manage computer certificates**. Click **Yes** if the **User Account Control** confirmation dialog box appears. The certification manager (**certmgr**) opens with the pertaining certifications.
 - b. Select your certification in the left list, then double-click to open the **Certificate** dialog box.
 - c. On the **Details** page, select the **Thumbprint** field in the list to show the certificate hash in the bottom box.
 - d. Select the hash in the box, copy it and paste into the **Certificate thumbprint** box. The installer automatically removes the unnecessary spaces from the hash as you paste it.

Configure the server environment

As you click Next on the **Server configuration** page during Advanced installation, the **Server environment** page appears.

1. Under **Network environment**, select the network authentication in use.
 - **Windows Domain with Active Directory**
 - **Windows workgroup**
2. Under **OmniPage Server Service Account**, specify the credentials for the service user account that will run the components. This user account should have administrator privileges. The database administrator should assign the same user as the OmniPage Server database owner.
 - a. In the **User name** box, specify the user account name to use to start component services. A green check mark indicates if the user name looks formally correct. Otherwise, a red exclamation mark appears.

Note The installer only accepts user names in the *domain\username* format.

- b. In the **Password** box, specify the password for the user account. A green check mark indicates if the box is not empty. Otherwise, a red exclamation mark appears.

Important When you click **Next**, the installer attempts to use the provided user name and password, so providing a wrong password multiple times may result in a user lock.

3. Under **Admin Console administrator account**, in the **User names (comma separated list)** box, enter the user names to grant Admin console administrator rights. Use colon as a separator. If you leave this field empty, then the Admin console asks for an admin user name at first run.

Note The installer only accepts user names in the *domain\username* format.

4. Under **Admin Console administrator group**, in the **User groups (comma separated list)** box, enter the user groups to grant Admin console administrator rights. Use a colon as a separator.

Note The installer only accepts user names in the *domain\username* format.

5. Click **Next** in the lower left corner of the page to proceed to the next page.

Configure the database type

As you click Next on the **Server environment** page during Advanced installation, the **Database type** page appears.

1. Select the databasetype.
 - **Lite mode:** Requires no MS SQL Server installation. Installs a lightweight local database solution that does not require further configuration. Typical for a topology based on a single Master server with an optional Worker server. This solution is appropriate when the deployment consists of a maximum of three machines.
 - **Robust mode:** Relies on MS SQL Server to maintain a high-availability installation with failover capabilities. Suits multi-server scenarios with high-volume use and load balancing.
2. Click **Next** in the lower left corner of the page to proceed to the next page.

Configure SQL settings

As you click Next on the **Database type** page during Advanced installation and you select Robust mode, the **SQL settings** page appears.

1. In the **Database server** box, enter the MS SQL server instance.

A green check mark indicates if the database server looks correct. Otherwise, a red exclamation mark appears.

Use the following scheme: *computername\instancename*.

Example For example:

```
winsqlserver\mssql01
```
2. In the **Database name** box, enter the name of the database created for OmniPage Server.

A green check mark indicates if the database name looks correct. Otherwise, a red exclamation mark appears.
3. Under **Use database server with**, select the authentication method in use for the database.
 - **Integrated Windows authentication:** The installer uses the user specified as the [Omnipage Server Service Account](#) to access the MS SQL database. This Windows user should be authenticated to use the database.
 - **SQL Server authentication using Logon ID and Password:** The installer uses the **Logon ID** and **Password** specified by the MS SQL Server administrator to access the MS SQL database. The specified SQL user is usually the database owner.

4. If you selected **SQL Server authentication using Logon ID and Password**, enter the MS SQL database credentials in the **Logon ID** and **Password** boxes.

A green check mark indicates if the credentials look correct. Otherwise, a red exclamation mark appears.

Important When you click **Next**, the installer attempts to use the provided user name and password, so providing a wrong password multiple times may result in a user lock.

Important For important details on SQL Azure Login ID configuration, see [Configure SQL Azure](#).

5. Click **Next** in the lower left corner of the page to proceed to the next page.

Closing installation steps

OmniPage Server installation process ends with the following step, regardless of installation topology.

- [Specify destination](#)

Specify destination

As you perform the steps of either a Single or Advanced installation, the **Destination** page appears.

1. In the **Destination** box, edit the default destination path or click **Browse** and choose a valid folder.
2. Click **Install** in the lower left corner of the page to start the installation.

OPS - Installation Web Assistant moves to the Installation progress page and copies all components to the host computer. When finished, the Installation finished page appears, offering links to all installed components. The installer adds a Desktop shortcuts for all the components.

Chapter 3

Verify installation

After OmniPage Server the installation finished, you can verify whether the core elements are installed and working.

- [Verify Service API](#)
- [Verify Swagger API](#)
- [Verify the administration console](#)

Verify Service API

To check if the Service API component is installed properly, do the following:

1. Start your Internet browser.
2. Type the URL of the Service API into the address bar, and press Enter.

Note Ask your system administrator for the actual URL, which follows the schema below:

```
http://{hostname}:{port}
```

Example

```
https://ops-server:5002
```

The `https://{hostname}:5002/v3/status` calls of the Web API to [get status information](#) about the service. It also tests the access of the storage and the connection to the repository.

Verify Swagger API

To check if the Swagger API component is installed properly, do the following:

1. Start your Internet browser.
2. Type the URL of the Swagger API into the address bar, and press Enter.

Note Ask your system administrator for the actual URL, which follows the schema below:

```
http://{hostname}:{port}
```

Example

```
https://ops-server:5002/swagger
```

3. Discover the API functions and test them in your browser without any implementation.
Any simple conversion job can be performed from this API documentation page, except uploading the input files, which is not a part of the REST API, but this can be accomplished using another tool.

Verify the administration console

To check if the administration console component is installed properly, do the following:

1. Start your Internet browser.
2. Type the URL for the Admin Console into the address bar, and press Enter.

Note Ask your system administrator for the actual URL, which follows the schema below:

```
http://{hostname}:{port}
```

Example

```
http://ops-server:5004
```

3. Log in. If there were no admin user provided during installation, Admin Console asks you to register an admin user before login.

Chapter 4

Licensing

You can manage OmniPage Server licenses with OmniPage Licensing Agent (OPLA). To open the OPLA web application in a new browser page, start Admin Console and log in, click Licensing, then click the link of the agent.

You can perform the following tasks with this application:

- Activate a license
 - [Activate license in OPLA, using the web interface, online mode](#)
 - [Activate license in OPLA, using the web interface, offline mode](#)
 - [Activate license in OPLA, using the command line interface, online mode](#)
 - [Activate license in OPLA, using the command line interface, offline mode](#)
- Move a license
 - [Move license in OPLA, using the web interface, online mode](#)
 - [Move license in OPLA, using the web interface, offline mode](#)
 - [Move license in OPLA, using the command line interface, online mode](#)
 - [Move license in OPLA, using the command line interface, offline mode](#)

Refer to the [Licensing overview](#) in the CSDK Help for details on license management.

Important OPS supports PagePack licenses only.

Migrate OPS 2 licenses

Do the following to migrate your existing OPS 2.x licenses.

1. Export your old OPS 2 license from the Nuance Central Licensing Service (NCLS) into a moving package file with a `.lcxp` file name extension.
2. Enter the address of the Kofax Activation Server into your browser. (<https://licenses.kofax.com/omnipagelicensing/home/migrate>).
The **Migrate license package** page shows up.
3. Click **Choose file** and browse to the previously created `.lcxp` package file.
4. [Open OPLA](#) on the OPS 3.0 server and find **Hardware fingerprint** at the top-right of the page and copy the code to the clipboard.
5. Return to the **Migrate license package** web page of Kofax Activation Server, and paste the code from the clipboard into the **Hardware Fingerprint** field.
6. Select **I understand that this is an irreversible process**.

7. Click **Migrate License Package**.

Important If you click this button, you migrate the license package definitively and finally, so you cannot use your license any more with OPS 2, and you cannot migrate it back.

8. Download the migrated license file and bring it to the target computer where OPLA is hosted.
9. Log in to OPLA, then select **Load** on the top menu.
The **Load license package** page appears.
10. Click **Choose file** and browse to the migrated package file downloaded in step 8, and click **Upload**.

You can use your OmniPage Server 3.0 installation as soon as the license is activated.

Chapter 5

MS SQL Server configuration

Note If you plan to use a cloud database, see [Cloud environment](#).

To use OmniPage Server in Robust deployment mode requires an MS SQL Server installation properly configured. Verify the following criteria before starting the installation of OmniPage Server in a Robust deployment:

- [Microsoft SQL Server is installed.](#)
- [The firewall is configured.](#)
- [SQL authentication is configured.](#)
- [Remote connection to the MS SQL Server is allowed.](#)
- [An SQL Login is configured.](#)
- [There is a database set up for OPS.](#)

About installing MS SQL Server

If you have an installed Microsoft SQL Server/SQL Express instance to use with OPS, you can skip this section.

If you install the OPS environment in a Robust deployment mode, then an MS SQL Server or SQL Express is a required component.

We recommend that you install the SQL Server with SQL Server Management Studio. The SQL Server Management Studio is the official client user interface which can be used to manage the SQL Server instance.

If you install Microsoft SQL Express, verify that the installation package includes the SQL Management Studio.

Firewall settings

If you have a firewall between the OPS machines and your database server, check if the ports are opened. By default, the following port numbers are in use:

- 1433 for the default SQL Server instance
- 1434 for the SQL Server Browser

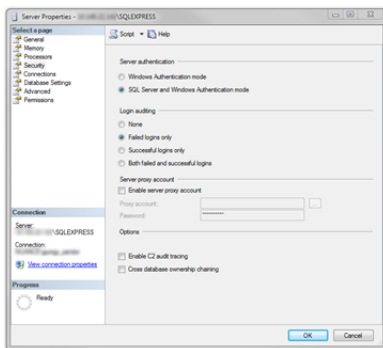
Configure SQL authentication

OPS can access the SQL Server with two authentication models.

- Windows Authentication means that the user identity is managed as part of the Windows handshake, so the user name and password are not handled by the client applications.
- SQL Authentication means that you must store a user name and a password in the client applications. In this case no Active Directory service is necessary.

If you want to access the SQL Server with SQL user authentication (not with Windows Authentication), then you should enable the SQL Server and Windows Authentication mode. It is asked at installation time, but you can set it later from the Microsoft SQL Server Management Studio by doing the following:

1. Select your SQL instance in the Object Explorer of the **Microsoft SQL Server Management Studio**.
2. Right-click the instance and select **Properties** in the context menu.
The **Server properties** dialog box appears.
3. On the **Security** page, under **Server authentication**, select **SQL Server and Windows Authentication mode**.



4. Click **OK** to save changes and close the dialog box.

Configure remote connection to the MS SQL Server

If you want to access the MS SQL Server remotely, for example, in case of an OPS multi-server installation, you should enable the TCP/IP communication to the SQL Server and start the SQL Server Browser service which is a part of your SQL Server installation.

1. Enable the TCP/IP protocol by proceeding with the following steps:
 - a. Start the **SQL Server Configuration Manager**.
 - b. Select your SQL instance in **SQL Server Network Configurations**.
 - c. Set the **TCP/IP** protocol to **Enabled**.
 - d. Restart the SQL Server instance.

2. Start **SQL Server Browser** by proceeding with the following steps:
 - a. Start the **SQL Server Configuration Manager**.
 - b. On the left, select **SQL Server Services**.
The list of available services appears on the right.
 - c. Right-click **SQL Server Browser** and select **Properties** in the context menu.
 - d. in the **SQL Server Browser Properties** dialog box, select the **Service** page.
 - e. Set **Start Mode** to **Automatic**, then click **OK** to close the dialog box.
 - f. Right-click **SQL Server Browser** and select **Start** from the context menu.

Configure SQL login

To connect to the SQL database, you should either create an SQL Login and User or use an existing one.

A Login provides entry into the SQL Server, while a User grants access to an SQL Database.

To create a Login, do the following:

1. Start the **Microsoft SQL Server Management Studio**.
2. In the **Object Explorer**, under **Security**, right-click **Login**, then select **New login** in the context menu.
The **Login - New** dialog box appears.
3. Enter the new **Login name**.
4. Select the preferred authentication method.
5. In case of **SQL Server authentication**, enter the password and clear the **Enforce password expiration** check box.
6. Click **OK** to save changes and close the dialog box.

Create a database instance

You should create a database for OmniPage Server.

1. Start the **Microsoft SQL Server Management Studio**.
2. In the **Object Explorer**, right-click **Databases**, then select **New Database** in the context menu.
The **New Database** dialog box appears.
3. Enter the new **Database name**, for example: `OmniPageServer`.
4. In the **Owner** box, select the [Login created earlier](#), so you can give access to the database for that SQL Login.
5. Click **OK** to save changes and close the dialog box.

Chapter 6

Cloud environment

OmniPage Server can run in cloud environments such as Azure and Amazon Cloud. It is possible to use Master, Worker, Conversion Client and Folder Watcher. You can also set up a scale set for Worker servers based on the load of the environment. You can install the server in Lite or Robust mode. If you select a Robust mode, you can use an SQL Azure database.

Configure SQL Azure

If you want to use an SQL Azure database in your OmniPage Server deployment, you should create a database user for the OPS service. The following steps give you an example how to create and configure your database user for OPS.

1. Connect to the SQL Azure server. For example, with **SQL Management Studio** with the server administrator user.
2. Switch to the master database and open a **New Query**.

Note In SQL Azure queries, the USE statement does not support switching between databases, so you should open a Query Window right on the relevant database. If you connect to the database with **Microsoft SQL Server Management Studio**, click the **New Query** button from the pertaining database. To verify the name of the database, check the caption of the query window or use the `select db_name()` command.

3. In the master database, create a Login and then add a user for that login to the master database. You can use the following script with changing the `opslogin` Login identifier and `opsuser` user names as you prefer:

```
CREATE LOGIN opslogin
  WITH PASSWORD = 'YOUR_OPS_LOGIN_PASSWORD'
GO
CREATE USER opsuser
  FOR LOGIN opslogin
```

4. Open a new query window on your OmniPage Server database. Connect to your database service with the user and create a user for this database with the following script:

```
CREATE USER opsuser
  FOR LOGIN opslogin
  WITH DEFAULT_SCHEMA = dbo
GO
EXEC sp_addrolemember N'db_owner', 'opsuser'
```

GO

Note When you install OmniPage Server, on the **Database type** page of the installer, use the SQL user Login in the following format:

`opslogin@servername`

Here `servername` is the first part of the azure database name.

SQL settings

Please select the database server and authentication method.

Database server



Database name



Use database server with:

Integrated Windows authentication

The connection to the SQL server is created using Windows authentication. The Service user must have access to the given SQL server and Database.

SQL Server authentication using Logon ID and Password

Connection to the SQL server is created using SQL authentication. The given user must have access to the SQL server and the Database.

Logon ID



Password



5. Click **OK** to save changes and close the dialog box.

Chapter 7

High-availability installation and configuration

OmniPage Server can be deployed with High Availability (HA) services. The following sections detail HA-related features and guidelines.

- [Important recommendations](#)
- [About high availability in general](#)
- [About high availability in OPS](#)
- [OmniPage clustered services](#)
- [Node diagnostic for OmniPage Server](#)
- [Common configuration steps for HA deployments](#)

Important recommendations

Although this documentation provides general guidance, the steps for creating your failover environment may vary significantly. Please use this document only as a general reference to set up highly available environments.

- We recommend that you consult an experienced HA expert and IT professional to ensure success in creating a high availability environment.
- To deploy high availability features for use with OPS, you must use SQL Server in Clustered mode. Also, be sure to cluster the Common File Storage for OPS. If these services are not configured for high availability, OPS cannot operate properly.
- OPS HA installation clusters only OPS Master server and its web services. It does not cluster workers, folder watchers or anything else.

About high availability in general

High availability (HA) means that one or more services can operate even if one or more computer becomes unavailable in the cluster for any reason. In brief, a cluster is a group of computers that have the same service installed and configured to collaborate to present services together for the end-user. A computer in a cluster is called a node. If at least one node can serve queries then the whole service appears to be available for the end-user. The cluster offers services on a dedicated virtual address called cluster IP, and only this endpoint is visible for end-users.

About high availability in OPS

OPS can run in high availability environments to ensure the best availability at any time. This means that the front-end applications like Conversion Client can be clustered. Because of the general architecture of the software, the only services that need to be clustered are located on the OPS Master server. The workers and folder watchers can run in parallel without any clustering. Therefore, the only required component for clustering is the OPS Master server. In practice this means two or more separate installations of the OPS Master server which will be clustered later. Workers and folder watchers run on different machines.

OmniPage clustered services

All the clustered services are located on each node in each OPS Master installation. These are the following, the ports were specified during installation:

- Main OPS API as web service. For example:

```
https://ops-server:5002
```

- OPS Administration Console as web application. For example:

```
https://ops-server:5004
```

- OPS UI for converting documents as web application. For example:

```
https://ops-server:5010
```

Workers manage load balancing by design, so no further optimization is required.

Node diagnostic for OmniPage Server

The status service retrieves information about the current status of the Master services and its backends.

Note Before diagnosing nodes, make sure that in the Clustering Server Name box on the Configuration page of the Admin Console, you set the name or IP of the clustering server.

Enter or copy the following URL into your browser address bar, then press Enter to obtain the status information in JSON format. Replace {OPS_SERVER_NAME} with the name of the server to diagnose.

```
https://{OPS_SERVER_NAME}:5002/v3/status
```

The result looks like:

```
{
  "serviceStatus": "OK",
  "version": "3.0.20568.300",
  "hasDatabaseAccess": true,
  "hasStorageAccess": true,
  "queueLength": 12,
  "averageWaitingTimeInQueue": 4.18,
  "averageProcessingTime": 7.28,
  "hosts": [
    {
```

```
"id": "ops-server",
"type": "mixed",
"workerTaskCount": 4,
"managerServiceStatus": null,
"workerServiceStatus": "running",
"masterServiceStatus": "running"
}
],
"errors": [],
"warnings": []
}
```

You can analyse the status information and find and resolve the problem. A couple of examples:

- If `hasDatabaseAccess` is false, check the connection to the database.
- If `workerServiceStatus` is not running, restart the related Worker service.
- If the Status Service does not respond, then restart the Master.
- If `hasStorageAccess` is false, make sure the folder exists and the service user has full access to this folder.

Note For detailed description of the returned JSON object please refer to the [API Reference Guide](#).

Common configuration steps for HA deployments

The following sections describe general steps of configuration in a HA OPS deployment.

1. Make sure you have the following:
 - An accessible Domain Controller and at least 2 machines dedicated to OPS as a member of the domain.
 - Access to the MS SQL Database server.
 - A dedicated user for OPS, who is part of the domain and has administrative rights on the dedicated OPS Servers.
2. Create the OPS Database in SQL and grant access to it for the user created above. It is recommended to allow DBO privileges only on the OPS database.
3. Grant the “Logon as a service” right for the dedicated OPS user under **Local Security Policy > User rights assignment**.
4. Install OPS Server as a single seat deployment. Use the dedicated OPS user. Use the SQL Database created above for all OPS Server installation. Optionally install Conversion Client and Folder Watcher if you need it.
5. Create a network file share which is accessible for all OPS nodes.
6. Open OPS Admin Console and update the Storage path in the configuration.
7. Apply OPS licenses.
8. Restart Windows on all OPS nodes.

Chapter 8

Troubleshooting

This section provides the information needed to troubleshoot OPS.

Services cannot start

The following sections may help you to recognize what blocks services and provide a solution.

Verify port

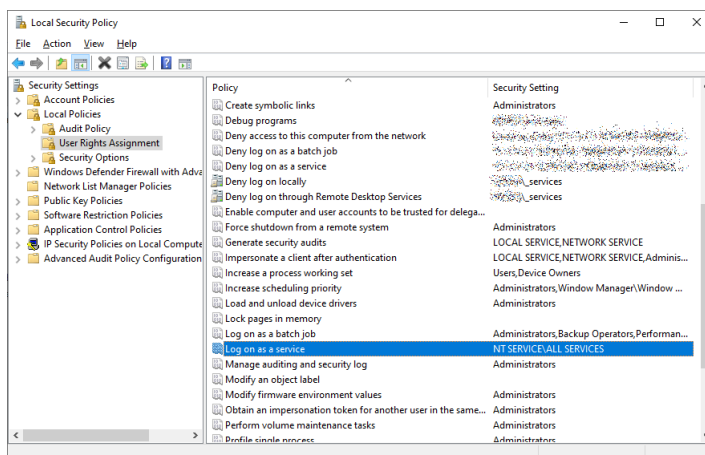
Make sure that the ports that the service wants to use are not reserved by another program. If the port is busy, there will be a related entry in the Windows Event Log.

You can check this in the Event Viewer, after selecting Windows Logs/Application in the list on the left.

Verify user

The service user, which was specified at installation time under OmniPage Server Service Account, should be able to register processes as a service. You can check if your service user account has rights to run windows services.

- Start Local Security Policy from Administrative Tools.
- Select Local Policies, then click User Rights Assignment.
- In the list on the right, look for the Log on as a service policy. Verify if your service user or group is listed.



If the service user is not in the Log on as a service policy, then add it.