



Identity Director

## Upgrade Guide

Version 10.2.0.0

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## Chapter 1: Introduction

This document guides you through the upgrade of RES ONE Identity Director 10.x or RES ONE Service Store 2016 to Ivanti Identity Director 10.2.0.0.

- You can keep your Ivanti product up to date by installing Feature Releases and Revision Packs. This requires Solution Assurance, which entitles you to technical support, product upgrades and access to the Knowledge Base. For more information: <http://res.com/support>.
- Please contact Ivanti Support if you are running RES Service Orchestration.
- See the **RES ONE Service Store 2016 Upgrade Guide** if you are running RES ONE Service Store 2015.
- See the **RES ONE Service Store 2015 Upgrade Guide** if you are running RES IT Store 2014. You can download this document at the Success Center.
- As of RES ONE Identity Director 10.0.0.0, Single sign-on (SSO) can no longer be configured for the Web Portal, but is managed via the Ivanti Identity Broker. The Identity Broker is a web application that acts as a "broker" for authentication, between Ivanti portals and their configured Identity Provider: it can process authentication requests by means of external authentication endpoints. If you use this configuration in your current version, and want to continue to offer this functionality to your users, please install and configure Ivanti Identity Broker in your environment. See **Getting Started with Ivanti Identity Broker** for more information.

### More information

You can find these and more documents at the Success Center, at <http://success.res.com> > **Downloads:**

- **Release Notes:** this document provides information on new and changed functionality.
- **Help:** this document provides user assistance.
  - In the Management Portal, click the question mark in the menu bar.
  - In the Setup and Sync Tool, press F1.
- **Getting Started with Ivanti Identity Director:** this document describes how to install Ivanti Identity Director and configure a basic environment.
- **Ivanti Identity Director Administration Guide:** this document provides in-depth information about Ivanti Identity Director, and is available at <http://help.res.com/IdentityDirectorAdminGuide10>. You can download the PDF at the Success Center.

## Chapter 2: Licensing

### License requirements

- Ivanti Identity Director uses Named User licenses. These are based on the number of **active** people in your environment: each active person requires **one** license.
- People stated as inactive, marked for deletion or ready for deletion don't require a license. They don't qualify for any service and can't sign in to the Web Portal and the Clients.
- Ivanti Identity Director claims licenses from the Datastore to which an environment connects. This can also be an Ivanti Automation Datastore.

### Evaluation licenses

When you install Ivanti Identity Director, 25 evaluation licenses are available that are valid for 45 days. To use Ivanti Identity Director after the evaluation period, you need production licenses.

- You can buy production licenses at your reseller.
- If necessary, contact [backoffice@res.com](mailto:backoffice@res.com) to extend the evaluation period.
- Evaluation licenses offer the same functionality as enterprise licenses.

### Production licenses

There are three types of production licenses available for Ivanti Identity Director:

- **Enterprise licenses:** This license type offers full service delivery functionality. Enterprise licenses are packaged with an Ivanti Automation Desktop Automation license file.
- **Identity licenses:** This license type limits service delivery to automated service delivery scenarios only. It disables functionality related to self-service.
- **Access licenses:** This license type limits service delivery to self-service delivery scenarios only. It disables functionality related to automated provisioning.

### License distribution

Licensing is maintained by the Transaction Engine. When you add an active person to your environment, the Transaction Engine checks if a sufficient number of licenses is available in the Datastore:

- **Sufficient number of licenses:** The person claims one license.
- **Insufficient number of licenses:** The person gets the status **Unlicensed** and doesn't qualify for any service until a sufficient number of licenses is available. Unlicensed users can't sign in to the Web Portal and the Clients.

## Chapter 3: Software prerequisites

Before you upgrade to Ivanti Identity Director 10.2, please make sure to meet the following prerequisites:

### 3.1 Windows applications

For supported versions of Windows for the Setup and Sync Tool, Transaction Engine, Catalog Services and Windows Client, please see **Supported Microsoft Windows operating systems** (on page 11).

Additionally, the following software is required for these Identity Director components:

- Windows Installer 3.1
- .NET Framework 4.5.1 or higher
- Database client for the type of database used for the Datastore (Setup and Sync Tool, Transaction Engine, Catalog Services)

## 3.2 Web applications

For supported versions of Windows for the Management Portal, Web Portal and Mobile Gateway, please see **Supported Microsoft Windows operating systems** (on page 11).

Additionally, the following software is required for these Identity Director components:

- Microsoft .NET Framework 3.5
- Microsoft .NET Framework 4.5.1 or higher
- IIS 7.0 or higher
- PowerShell 4.0 or higher
- Administrator permissions

Web Portal only:

- Microsoft Visual C++ 2015 Redistributables. These packages are available as x64 and x86 version. The Web Portal requires the installation of both. You can download them at
  - x86: [http://download.microsoft.com/download/9/3/F/93FCF1E7-E6A4-478B-96E7-D4B285925B00/vc\\_redist.x86.exe](http://download.microsoft.com/download/9/3/F/93FCF1E7-E6A4-478B-96E7-D4B285925B00/vc_redist.x86.exe)
  - x64: [http://download.microsoft.com/download/9/3/F/93FCF1E7-E6A4-478B-96E7-D4B285925B00/vc\\_redist.x64.exe](http://download.microsoft.com/download/9/3/F/93FCF1E7-E6A4-478B-96E7-D4B285925B00/vc_redist.x64.exe)

If you do not install these packages prior to the installation of the Web Portal, the installer downloads and installs them during installation. This means that if you perform an offline installation of the Web Portal, their installation fails. Among other things, this impacts the branding preview of the Web Portal in the Management Portal.

### IIS requirements

For IIS, install at least the following Windows features:

- Web Server
  - Common HTTP Features
    - Default Document
    - HTTP Errors
    - Static Content
    - HTTP Redirection
  - Health and Diagnostics
    - HTTP Logging
    - Request Monitor
  - Security
    - Request Filtering
    - Basic Authentication
    - Client Certificate Mapping Authentication
    - IIS Client Certificate Mapping Authentication
    - Windows Authentication
  - Application Development
    - .NET Extensibility 4.5
    - ASP.NET 4.5
    - ISAPI Extensions
    - ISAPI Filters
- Management Tools
  - IIS Management Console

### Browser requirements (client side)

For supported browsers, please see **Supported browsers** (on page 14)  
The browser must have JavaScript enabled.

Ivanti Identity Director is built on ASP.NET MVC 4.



## Chapter 4: RES ONE Service Store 2016

If you are upgrading from a version of RES ONE Service Store 2016, keep the following in mind:

### IIS

When you install an Ivanti Identity Director web component, the web site **RES** is now created in IIS. Each web component is available as a web application of this web site. If you install the Management Portals of the Ivanti Workspace Control and Ivanti Automation, they are deployed in IIS as a web application of the same web site. The web site **IT Store** has become obsolete.

- When you upgrade the Management Portal, it is deployed in IIS as the web application **RES > IdentityDirector**.
- When you upgrade the Web Portal, it is deployed in IIS as the web application **RES**.
- When you install the Mobile Gateway, it is deployed in IIS as the web application **RES > Mobile**.

### Web Portal and Mobile Gateway

The Mobile Gateway is no longer installed as part of the Web Portal installation: it is now a separate component. During the upgrade, the Web Portal and Mobile Gateway are uninstalled, after which the new version of the Web Portal is installed. If you want to support the Mobile Client after the upgrade, you need to install the Mobile Gateway separately.

Although the Web Portal and Mobile Gateway are uninstalled during the upgrade, the `web.config` file of the Web Portal is not deleted. This file contains settings related to IIS authentication, ADFS authentication, default language, etc. During the upgrade, these settings are merged into a new `web.config` file. In addition, a backup file of the original `web.config` file is created before the upgrade process starts, `web.config.<no>.back`. You can use this backup file to modify the new `web.config` file if necessary.

## Chapter 5: Upgrade procedure

To upgrade, run the Ivanti Identity Director Installer on the target device and select the component that you want to upgrade. The installation wizard of the component guides you through the upgrade process. You don't need to uninstall previous installations first.

The upgrade procedure consists of the following steps:

1. Stop all Transaction Engines and Catalog Services
2. Upgrade all Setup and Sync Tools
3. Upgrade all other components:
  - Transaction Engine
  - Catalog Services;
  - Web Portal
  - Management Portal
  - Windows Client (optional)
4. Install the Mobile Gateway (optional)
5. Install the Mobile Client (optional). See the **Ivanti Identity Director Administration Guide** for a user manual of the Mobile Client.

### Unattended upgrades

You can also upgrade the components of Ivanti Identity Director unattended, for example in a command line or as part of an Ivanti Automation Task **Perform Unattended Installation**. Please note that the unattended upgrade takes the existing database connection settings into account. If you specify different database connection settings in the command line, these will be ignored. If you want to specify different database settings, you must do this manually after you finished upgrading all components, by navigating to the appropriate UI of each component.

See the **Ivanti Identity Director Administration Guide** for an overview of all parameters.

### 5.1 Stop all Transaction Engines and Catalog Services

Stop all Transaction Engines and Catalog Services in your environment. This ensures that no processes that may affect your environment are running during the upgrade.

## 5.2 Upgrade all Setup and Sync Tools

1. Log on to the target device with a user account that has the role **DBO** on the database server.
2. Run the Ivanti Identity Director Installer.
3. When prompted, choose **Select and install components** and click **Next**.
4. In the **Features** section, select **Setup and Sync Tool**. If you installed other components on the same device, also select those. Their upgrade starts after you upgraded the Setup and Sync Tool.
5. Start the upgrade and follow the Setup Wizard.
6. Repeat this process on all devices on which you installed a Setup and Sync Tool.

## 5.3 Upgrade the Transaction Engine

1. Add the account of the target device to the Active Directory security group that has **db\_owner** rights to the Datastore. After the upgrade, you can remove this account again from the security group.
2. Run the Ivanti Identity Director Installer.
3. When prompted, choose **Select and install components** and click **Next**.
4. In the **Features** section, select **Transaction Engine**. If you installed other components on the same device, also select those. Their upgrade starts after you upgraded the Transaction Engine.
5. Start the upgrade and follow the Setup Wizard.
6. Repeat this process on all devices on which you installed a Transaction Engine.

## 5.4 Upgrade the Catalog Services

1. Add the account of the target device to the Active Directory security group that has **db\_owner** rights to the Datastore. After the upgrade, you can remove this account again from the security group.
2. Run the Ivanti Identity Director Installer.
3. When prompted, choose **Select and install components** and click **Next**.
4. In the **Features** section, select **Catalog Services**. If you installed other components on the same device, also select those. Their upgrade starts after you upgraded the Catalog Services.
5. Start the upgrade and follow the Setup Wizard.
6. Repeat this process on all devices on which you installed the Catalog Services.

## 5.5 Upgrade the Web Portal

1. Run the Ivanti Identity Director Installer on the target device.
2. When prompted, choose **Select and install components** and click **Next**.
3. In the **Features** section, select **Portal**. Optionally, you can upgrade other components. Their upgrade starts after you upgraded the Web Portal.
4. Start the upgrade and follow the Setup Wizard.
  - If you have not installed the Microsoft Visual C++ 2015 Redistributables prior to the installation of the Web Portal, the installer downloads and installs these packages as part of the prerequisites of the Web Portal. See **Prerequisites** (see page 3).
5. In the **Secure Binding** step, specify the settings to create an SSL binding for the Web Portal. This step is skipped if you already installed an Ivanti portal on the web server (e.g. an Ivanti Automation or Ivanti Workspace Control Management Portal).
  - The hostname must be known on your internal and external DNS servers.
  - The Web Portal is secured with SSL by default. It uses the HTTPS protocol and port 443 (or another port that you specified).
6. Associate a server certificate with the binding; either a certificate from a trusted Certificate Authority, or a self-signed certificate that is automatically generated.
  - You can obtain server certificates for example at <http://www.startssl.com/>.
  - Ivanti recommends using self-signed certificates only for testing purposes, not in a production environment.
7. Click **Next** to start the upgrade. In IIS, the upgrade creates the web site **RES** and deploys the Web Portal as a web application at this level.
  - If the web site **RES** already exists, a message is shown. Click **Yes** to continue the upgrade.
8. After the upgrade, open your browser and start the Web Portal.
9. The Web Portal opens at the **Setup** page. On this page, configure the connection settings to the Datastore and authentication settings.
  - See the **Getting Started with Ivanti Identity Broker** for further information on installation and configuration of the Ivanti Identity Broker.
10. Click **Test connection**.
11. If the settings lead to a successful connection, click **Finish**.

If you specified a hostname *ivantiproducts.ivanti.com*, the web application is available at <https://ivantiproducts.ivanti.com>

## 5.6 Upgrade the Windows Client

1. Run the Ivanti Identity Director Installer on the target device.
2. When prompted, choose **Select and install components** and click **Next**.
3. In the **Features** section, select **Windows Client**. If you installed other components on the same device, also select those. Their upgrade starts after you upgraded the Windows Client.
4. Start the upgrade and follow the Setup Wizard.
5. Repeat this process on all devices on which you installed the Windows Client.

## 5.7 Upgrade the Management Portal

During the upgrade, the Management Portal is uninstalled automatically, after which the new version is installed.

### Procedure

1. Run the Ivanti Identity Director Installer on the target device, for example the web server that also hosts the Web Portal. This opens the **Ivanti Identity Director Installer** window.
2. When asked, choose **Select and install components** and click **Next**.
3. In the **Features** section, select **Management Portal**. Optionally, you can upgrade other components. Their upgrade starts after you upgrade the Management Portal.
4. Start the upgrade and follow the Setup Wizard.
5. In the **Secure Binding** step, specify the settings to create an SSL binding for the Management Portal. This step is skipped if you already installed an Ivanti portal on the web server (e.g. an Ivanti Automation or Ivanti Workspace Control Management Portal, or an Ivanti Identity Director Web Portal).
  - The hostname must be known on your internal and external DNS servers.
  - The Management Portal is secured with SSL by default. It uses the HTTPS protocol and port 443 (or another port that you specified).
6. Associate a server certificate with the binding. This can be a certificate that you obtained from a trusted Certificate Authority, or a self-signed certificate that is automatically generated.
  - You can obtain server certificates for example at <http://www.startssl.com/>.
  - Ivanti recommends using self-signed certificates only for testing purposes, not in a production environment.
7. Click **Next** to start the upgrade. In IIS, the upgrade creates the web site **RES** and deploys the Management Portal as the web application **RES > IdentityDirector**.
  - If the web site **RES** already exists, a message is shown. Click **Yes** to continue.

If you specified a hostname *ivantiproducts.mydomain.com*, the web application is available at *https://ivantiproducts.mydomain.com/IdentityDirector*.

## 5.8 Upgrade the Mobile Gateway

1. Run the Ivanti Identity Director Installer on the target device.
2. When prompted, choose **Select and install components** and click **Next**.
3. In the **Features** section, select **Mobile Gateway**. Optionally, you can install other components. Their installation starts after you installed the Mobile Gateway.
4. Start the installation and follow the Setup Wizard.
5. In the **Secure Binding** step, specify the settings to create an SSL binding for the Mobile Gateway. This step is skipped if you already installed an Ivanti portal on the web server (e.g. an Ivanti Automation or Ivanti Workspace Control Management Portal, or an Ivanti Identity Director Web Portal).
  - The hostname must be known on your internal and external DNS servers.
  - The Mobile Gateway is secured with SSL by default. It uses the HTTPS protocol and port 443 (or another port that you specified).
6. Associate the server certificate with the binding. This can be a certificate that you obtained from a trusted Certificate Authority, or a self-signed certificate that is automatically generated.
  - You can obtain server certificates for example at <http://www.startssl.com/>.
  - Ivanti recommends using self-signed certificates only for testing purposes, not in a production environment.
7. Click **Next** to start the installation. In IIS, the installation creates the web site **RES** and deploys the Mobile Gateway as the web application **RES > Mobile**.
  - If the web site **RES** already exists, a message is shown. Click **Yes** to continue.
8. At the end of the installation, configure the connection settings to the Datastore.
9. Click **Test**.
10. If the settings lead to a successful connection, click **OK**.

If you specified a hostname *ivantiproducts.ivanti.com*, the web application can be accessed with the Mobile Client at *https://ivantiproducts.ivanti.com/mobile*

## 5.9 Upgrade the Mobile Client

After you upgraded the Mobile Gateway, you can upgrade the Mobile Client on your mobile device. You can download the new version from the Apple App Store (iOS) and Google Play Store (Android). You can find the app as **Ivanti Identity Director**.

See the **Ivanti Identity Director Administration Guide** for a user manual of the Mobile Client.

## Chapter 6: Compatibility Matrix

Irrespective of this compatibility matrix, Ivanti does not support versions of products for which End of Life (EOL) has been declared by their respective vendors.

**Supported Microsoft Windows operating systems** (on page 11)

**Supported database systems** (on page 13)

**Supported browsers** (on page 14)

**Supported Ivanti products** (on page 14)

### 6.1 Supported Microsoft Windows operating systems

Ivanti Identity Director supports the following Microsoft Windows Server versions for all Windows and Web applications:

Windows Server version	Edition
Windows Server 2016	Server 2016 Datacenter
	Server 2016 Standard
	Server 2016 Essentials
Windows Server 2012 R2	Server 2012 R2 Datacenter
	Server 2012 R2 Standard
	Server 2012 R2 Essentials
	Server 2012 R2 Foundation
Windows Server 2012	Server 2012 Datacenter
	Server 2012 Standard
	Server 2012 Essentials
	Server 2012 Foundation
Windows Server 2008 R2	Server 2008 R2 Datacenter
	Server 2008 R2 Enterprise
	Server 2008 R2 Standard
	Server 2008 R2 Web Edition

Ivanti Identity Director supports the following Microsoft Windows versions for all Windows applications (Setup and Sync Tool, Transaction Engine, Catalog Services and Windows Client):

Windows version	Edition
Windows 10	Windows 10 Enterprise
	Windows 10 Enterprise LTSC
	Windows 10 Pro
	Windows 10 Education
Windows 8.1	Windows 8.1 Enterprise
	Windows 8.1 Pro
Windows 8	Windows 8 Enterprise
	Windows 8 Pro
Windows 7	Windows 7 Enterprise
	Windows 7 Professional
	Windows 7 Ultimate
	Windows 7 Home Premium
	Windows 7 Home Basic
	Windows 7 Starter

**Notes**

- Ivanti Identity Director also supports IIS 7.0 on Microsoft Windows Server 2008 R2.
- For the installation of the web components, PowerShell 4.0 or higher is required. Please note that Microsoft Server Windows 2008 R2 is preinstalled with PowerShell 2.0. If you try to install any of the web components with this version, the installation fails. Update your version of PowerShell to the correct version prior to the installation.



## 6.2 Supported database systems

Database type	Version
Microsoft SQL Server	2016
	2014 SP2
	2014 SP1
	2014
	2012 SP3
	2012 SP2
	2012 SP1
	2012
	2008 R2 (including Express Edition)
Microsoft Azure SQL Database	
My SQL	5.8
	5.6
	5.5
Oracle	12c
IBM DB2	11.1
	10.5
	10.1
	9.7

### 6.3 Supported browsers

Browser	
Microsoft Internet Explorer 11	
Microsoft Edge 25 and higher	
Mozilla Firefox	Latest version
Google Chrome	Latest version
Opera	Latest version
Safari (Mac only)	Latest version

### 6.4 Supported Ivanti products

Product	
Workspace	Ivanti Workspace Control 10.2 (currently in development)
	RES ONE Workspace 10.0 and higher
Automation	Ivanti Automation 10.2 and higher
	RES ONE Automation 10.0 and higher