

Oracle® Fusion Middleware

Oracle WebCenter Forms Recognition
Technical Specifications Guide

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About the Oracle WebCenter Forms Recognition Technical Specifications

WebCenter Forms Recognition automates the processing of incoming documents. WebCenter Forms Recognition automatically classifies these documents, extracts meaningful information, and exports that data for use by other systems. WebCenter Forms Recognition works with any document that is electronically available, including scanned images, and files.

This document provides the technical specifications for WebCenter Forms Recognition.

Use the requirements provided in this document as a guideline. The actual hardware and software configuration depends on your specific requirements.

Secure Environment Recommendations

The following recommendations are intended to help secure the installation environment and apply to all product installations. These recommendations should be followed as a minimum requirement for all products. The policies of your organization may have additional or more robust requirements that should also be followed.

Oracle products may have additional recommendations described in the specific documentation for that product. In some cases, the recommendations may change or may only apply when using certain Oracle products together in a solution.

- Use TLS for all HTTP traffic, including private network segments. TLS ciphers must be maintained to stay current over time.
- Use Secure FTP instead of standard FTP for all FTP traffic.
- End-to-end encryption is recommended for all data in transport, independent of a network segment. Note that some regulatory compliance requirements may require end-to-end encryption.
- Change all default passwords before activation of the production system. This applies to Oracle products as well as third-party products used by Forms Recognition (such as a MS SQL database server).
- Authorization rules should be configured and tested before activation of the production system. This applies to Oracle products as well as to file system folders and database user accounts.
- Use database encryption for all sensitive data persisted in the database.
- Use file system encryption for all sensitive data and content persisted on the file system.
- Enable encryption when available as part of a subsystem configuration. For example, since ODBC provides the capability to use strong encryption for data, it is recommended to have that option enabled.

Side-Channel Risks

Consider the following to mitigate side-channel risks:

- Ensure the latest application and operating system patches are applied.
- Ensure the latest firmware patches are applied for any hardware on-premises.

About WebCenter Forms Recognition Server Requirements

The primary WebCenter Forms Recognition server powers the WebCenter Forms Recognition processes such as licensing, OCR, classification, and extraction. All WebCenter Forms Recognition servers require a server-class system to run in a production environment.

The requirements do not include any amount of memory or disk space you require for the operating system, environment, or other software that runs on the same machine. In addition to the recommended disk space, we recommend hot swappable hard drives and the use of RAID controllers.

Minimum hardware recommendations vary based on the number of daily processed documents. If your daily volume exceeds 10,000 pages, contact your Oracle Support representative for recommendations.

For all software and operating systems listed, we recommend using the latest patch version.

The recommendations in this guide are based on a standard accounts payable project with the following properties.

- 1-3 page TIFF documents
- Document resolution of 300 dpi
- Average TIFF file size of approximately 80 KB
- Average WorkDoc size of approximately 21 KB
- A project size of less than 5 MB and less than 10 document classes
- Cleanup of exported batches within 1-3 days

Server Requirements

The following table lists the minimum requirements for WebCenter Forms Recognition servers.

Specification	Servers processing up to 500 pages per day	Servers processing up to 5,000 pages per day	Servers processing up to 10,000 pages per day
Processor	As a minimum requirement, use a dual core processor running at 3 GHz.	As a minimum requirement, use a quad core processor running at 3 GHz.	As a minimum requirement, use a 8 core processor running at 3 GHz
Memory	Minimum 4 GB, 2 GB per core	Minimum 8 GB, 2 GB per core	Minimum 16 GB, 2 GB per core
Disk space	20 – 40 GB	100-200 GB	Minimum 200 GB

Additional Server Requirements

The following table lists the additional requirements for WebCenter Forms Recognition servers.

Specification	Description
Operating Systems	<ul style="list-style-type: none"> ▪ Microsoft Windows Server 2016 ▪ Microsoft Windows Server 2019
Software	Microsoft .NET Framework 4.6

Network	A 100 MB/s network, configured at full duplex or auto-negotiate. We recommend a 1 GB/s network to provide optimal performance.
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WebCenter Forms Recognition Database Server

The WebCenter Forms Recognition database stores the data and processed documents. We do not recommend the use of network attached storage (NAS) devices.

The following table lists the minimum technical specifications required for WebCenter Forms Recognition database servers.

Specification	Description
Hardware	As a minimum requirement, use a quad-core processor running at 3 GHz. Hardware requirements specified by respective DBMS vendors are necessary in addition to WebCenter Forms Recognition-specific requirements. We recommend installing the database on a separate server.
Memory	Minimum 8 GB
Disk Space	Minimum 100 GB
Operating Systems	<ul style="list-style-type: none"> ▪ Microsoft Windows Server 2016 ▪ Microsoft Windows Server 2019
Software	Microsoft .NET Framework 4.6
DBMS	<ul style="list-style-type: none"> ▪ Oracle 12c R2 ▪ Oracle 19c ▪ Microsoft SQL Server 2014 SP2 or newer ▪ Microsoft SQL Server 2016 SP1 or newer ▪ Microsoft SQL Server 2017 ▪ Microsoft SQL Server 2019 <p>If you use Oracle as a database, you must install a 32-bit Oracle client on any workstation or server where WebCenter Forms Recognition communicates with the database, such as when using Designer or Verifier.</p>
Network	A 100 MB/s network, configured at full duplex or auto-negotiate. We recommend a 1 GB/s network to provide optimal performance.

Web Verifier Server

The following table lists the minimum technical specifications required for Web Verifier servers.

Specification	Description
Hardware	We recommend installing Web Verifier server on a dedicated server. Minimum hardware recommendations vary based on the number of concurrent supported users. As a minimum requirement, for 2-4 users, use a quad-core processor running at 3 GHz, plus 1 additional core for every 2 additional concurrent users.
Memory	Minimum 4 GB for 2-4 users plus 500 MB for each additional user
Disk Space	Minimum 50 GB Minimum 30 GB for the operating system
Operating Systems	<ul style="list-style-type: none"> ▪ Microsoft Windows Server 2016 ▪ Microsoft Windows Server 2019
Software	<ul style="list-style-type: none"> ▪ Microsoft .NET Framework 4.6 ▪ Internet Information Services (IIS)

About Virtual Machines

Oracle supports running WebCenter Forms Recognition products on the named operating systems, regardless of whether the system runs in a virtual environment, such as Oracle VirtualBox or Oracle Cloud Infrastructure. Unless otherwise noted in this document, we support specific operating systems, web server configurations, and web browsers – not hardware configurations. Virtual platforms operate on, and interact with, the hardware abstraction layer provided by the virtual platform vendor.

The virtual platform vendor supports a set of certified operating systems and hardware.

In virtual environments, WebCenter Forms Recognition supports virtualization but not paravirtualization.

About WebCenter Forms Recognition Client Requirements

A WebCenter Forms Recognition system includes several clients and a WebCenter Forms Recognition server. The following sections provide the technical specifications for each client application.

Designer

The Designer client creates and maintains WebCenter Forms Recognition projects and applications. Designer does not require a separate desktop system, and typically runs on the same machine as the WebCenter Forms Recognition server.

The following table lists the minimum technical specifications required for this client.

Specification	Description
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Oracle WebCenter Forms Recognition Technical Specifications

Hardware	As a minimum requirement, use a one-core processor running at 2.4 GHz. The required minimum screen resolution is 1024 x 768. We recommend 1280 x 1024 SVGA.
Operating Systems	Microsoft Windows 10
Software	Microsoft .NET Framework 4.6
Network	A 100 MB/s network, configured at full duplex or auto-negotiate. We recommend a 1 GB/s network to provide optimal performance.
Memory	Minimum 1 GB in addition to the memory recommended for the operating system
Disk Space	Minimum 40 GB
DBMS	When using Oracle for the WebCenter Forms Recognition DBMS, you must install a 32-bit Oracle client on every desktop that runs a Designer client.

Verifier

The Verifier client is the quality assurance component of the WebCenter Forms Recognition system. Verifier allows users to perform data verification, Advanced Verifier operations, and learn set management.

The following table lists the minimum technical specifications required for Verifier.

Specification	Description
Hardware	As a minimum requirement, use a one core processor running at 2.4 GHz. The required minimum screen resolution is 1024 x 768. We recommend 1280 x 1024 SVGA.
Operating Systems	Microsoft Windows 10
Software	Microsoft .NET Framework 4.6
Network	A 100 MB/s network, configured at full duplex or auto-negotiate. We recommend a 1 GB/s network to provide optimal performance.
Memory	Minimum 1 GB in addition to the memory recommended for the operating system.
Disk Space	Minimum 40 GB
DBMS	When using Oracle for the WebCenter Forms Recognition DBMS, you must install a 32-bit Oracle client on every desktop that runs a Verifier client.

Web Verifier Client

Web Verifier is the web-based version of the Verifier client, and does not require a separate workstation.

The following table lists the minimum technical specifications required for this client.

Specification	Description
Hardware	As a minimum requirement, use a dual-core processor running at 2.0 GHz. The required minimum screen resolution is 1024 x 768. We recommend 1280 x 1024 SVGA.
Operating Systems	Microsoft Windows 10
Web Browsers	<ul style="list-style-type: none"> ▪ Google Chrome

Network	A 100 MB/s network, configured at full duplex or auto-negotiate. We recommend a 1 GB/s network to provide optimal performance.
Memory	Minimum 2 GB in addition to the memory recommended for the operating system
Disk Space	Minimum 40 GB

RTS Remote Admin Client

The Remote Admin client manages the Runtime Server (RTS). This client does not require a separate workstation. It typically runs on a WebCenter Forms Recognition server or any network-accessible system where the Microsoft Management Console is available for the RTS Remote Admin snap-in.

The following table lists the minimum technical specifications required for this client.

Specification	Description
Hardware	As a minimum requirement, use a one-core processor running at 2.4 GHz. The required minimum screen resolution is 1024 x 768. We recommend 1280 x 1024 SVGA.
Operating Systems	Microsoft Windows 10
Software	<ul style="list-style-type: none"> ▪ Microsoft .NET Framework 4.6 ▪ WebCenter Forms Recognition RTS Remote Admin MMC Snap-in
Network	A 100 MB/s network, configured at full duplex or auto-negotiate. We recommend a 1 GB/s network to provide optimal performance.
Memory	Minimum 1 GB in addition to the memory recommended for the operating system.
Disk Space	Minimum 40 GB

About Verifier Clients Using Citrix or Remote Desktop Services

The WebCenter Forms Recognition core applications are not designed to work with any specific desktop presentation platform. You can use third party products like Citrix and Microsoft Remote Desktop Services. However, you are responsible for providing, configuring, and supporting the environment.

Transport Layer Security (TLS)

WebCenter Forms Recognition supports TLS 1.2.

Scripting Component

WebCenter Forms Recognition supports the following WinWrap versions

- WinWrap 9.0.0.56
- WinWrap 10.0.38

WebCenter Forms Recognition Development and Test Environments

In addition to the production server environment, we recommend a development and test environment. A typical development or test environment consists of a single server capable of processing up to 500 pages per day.

The following table lists the minimum technical specifications for a system that houses WebCenter Forms Recognition server, Web Verifier server, and WebCenter Forms Recognition database server.

Specification	Description
Hardware	As a minimum requirement, use a quad-core processor running at 3 GHz.
Memory	Minimum 8 GB
Disk Space	Minimum 100 GB
Operating Systems	<ul style="list-style-type: none"> ▪ Microsoft Windows Server 2016 ▪ Microsoft Windows Server 2019
Software	<ul style="list-style-type: none"> ▪ Microsoft .NET Framework 4.6 ▪ WebCenter Forms Recognition RTS Remote Admin MMC snap-in ▪ Internet Information Services (IIS)
DBMS	<ul style="list-style-type: none"> ▪ Oracle 12c R2 ▪ Microsoft SQL Server 2014 SP2 or newer ▪ Microsoft SQL Server 2016 SP1 or newer ▪ Microsoft SQL Server 2017 ▪ Microsoft SQL Server 2019 <p>When using Oracle as a database, you must install a 32-bit Oracle client on any workstation and server where WebCenter Forms Recognition communicates with the database, for example, when using Designer or Verifier.</p>

ABBYY FineReader

WebCenter Forms Recognition is compatible with the following versions of ABBYY FineReader.

- ABBYY FineReader 11
- ABBYY FineReader 10

Supported Bar Codes

Cleqs Barcode Engine	QualitySoft Barcode Engine	FineReader11 Barcode Engine
<ul style="list-style-type: none"> ▪ Datalogic 2 of 5 ▪ Iata 2 of 5 ▪ Industrie 2 of 5 ▪ Interleaved 2 of 5 ▪ Inverted 2 of 5 ▪ Matrix 2 of 5 ▪ Code 32 ▪ Code 39 ▪ Code 93 ▪ Code 128 ▪ EAN 8 ▪ EAN 13 ▪ ADD2 ▪ ADD5 ▪ UPC-A ▪ UPC-E ▪ BCD Matrix ▪ Codabar 2 	<ul style="list-style-type: none"> ▪ Patchcode 2 of 5 Family ▪ Datalogic 2 of 5 ▪ Iata 2 of 5 ▪ Industrie 2 of 5 ▪ Interleaved 2 of 5 ▪ Inverted 2 of 5 ▪ Matrix 2 of 5 ▪ BCD Matrix EAN / UPC ▪ EAN 8 ▪ EAN 13 ▪ UPC-A ▪ UPC-E Miscellaneous ▪ Code 93 ▪ Codabar ▪ Code 128 ▪ EAN/UCC128 Code 39 Family ▪ Code 32 ▪ Code 39 ▪ Code 39 extended 2D ▪ PDF 417 ▪ Datamatrix ▪ Codablock 	<ul style="list-style-type: none"> ▪ Patchcode 2 of 5 Family ▪ Iata 2 of 5 ▪ Industrie 2 of 5 ▪ Interleaved 2 of 5 ▪ Matrix 2 of 5 Code 39 Family ▪ Code 32 ▪ Code 39 ▪ Code 39 extended EAN / UPC ▪ EAN 8 ▪ EAN 13 ▪ UPC-A ▪ UPC-E Miscellaneous ▪ Code 93 ▪ Codabar ▪ Code 128 ▪ EAN/UCC128 Postal 1D bar codes ▪ Postnet ▪ Intelligent Mail 2D Note: The 2D bar codes require separate licensing. ▪ PDF 417 ▪ Datamatrix ▪ QR code ▪ Aztek ▪ Maxicode

UI Languages

The following table lists the available UI languages for each WebCenter Forms Recognition application. This does not pertain to the Verifier form itself. Localization support of the Verifier form in other languages requires custom services.

Language	Designer	Verifier	Web Verifier
Chinese (Simplified)			Yes
Chinese (Traditional)			Yes
Danish			Yes
Dutch (Dansk)			Yes
English	Yes	Yes	Yes
Finnish (Suomi)			Yes
French		Yes	Yes
German (Deutsch)	Yes	Yes	Yes
Italian			Yes
Japanese			Yes
Korean			Yes
Norwegian			Yes
Polish			Yes
Portuguese (Brazilian)			Yes
Romanian			Yes
Russian			Yes
Spanish			Yes
Swedish			Yes
Turkish			Yes

Network Port Usage

WebCenter Forms Recognition and its related products use specific network ports as part of the default implementation. If needed, you can modify port assignments. The following table lists the Internet Assigned Number Authority (IANA) for networking protocols. It is possible that your networking group has changed ports for LDAP, SMTP or for database traffic to meet your organization's security requirements.

Port	Usage
50607	RTS - instances
3000	ABBYY FineReader 10 Network License Manager
3011	ABBYY FineReader 11 Network License Manager
1521	Oracle database
1433	Microsoft SQL Server database

About Firewalls

WebCenter Forms Recognition requires a non-encapsulated LAN environment without firewalls or other traffic-filtering devices.

About System Level Admin User Requirements

Some WebCenter Forms Recognition applications and users, including internal accounts, may require the user account involved to have local system admin level access. Below are the known situations that you need to be aware of.

- **WebCenter Forms Recognition Service Manager** (internal service account)

This account should be a member of the Local Administrators Group. This is needed to start and stop services and add RTS instances.

- **WebCenter Forms Recognition Designer**

All users accessing this application need local system admin access.

Considerations for WebCenter Forms Recognition

When sizing the hardware for a production environment, consider the following factors.

- Input volume: The number of documents and pages to process daily.
- Completion time: The time required from scanning the document into the time required to exporting the document out of the system.

- Complexity of input documents: Includes single or multi-page TIFF, scanning resolution, and document size, number of OCR pages per document.
- Output requirements: Includes data extraction, validation, export, and number of documents processed per day.
- Complexity of workflow customization: This includes but is not limited to scripting.
- Third-party software integration requirements: Includes third-party software such as Oracle, Oracle Financials, JD Edwards and ECM and CRM systems.
- Disaster recovery: Includes backup, fault tolerance and up time.
- Room for growth: Includes increasing input and output and other system requirements.
- Number of concurrent users: Includes the number of users for Verifier and Web Verifier.
- Batch retention time: Retention time for a batch of documents in the system after export.
- Number of projects: Number of WebCenter Forms Recognition projects per country and per solution.
- Installed components: Other components such as Visibility or databases. For a production environment, we recommend installing these software products on separate servers.
- Network: Network operating system platform and network environment.