



FileNet P8

Hardware and Software Requirements

Release 3.0.0

October 22, 2004

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Revision Log

Date	Revision
06/024/04	Initial document release
8/18/04	Major Changes include: <ul style="list-style-type: none"> • Application Engine support for JBoss on Solaris is now available. • Records Manager - minimum supported level of Crystal Reports is 10.0. • Clarification to Co-location section • Hardware Requirements section now includes recommended memory requirements
9/2/04	Under the Process Engine section, loosened the VERITAS Volume Manager requirement from version 3.5 to 3.x.
9/15/04	Application Engine support for JBoss is available on Solaris 9 – not Solaris 8 Capture 4.1 is now supported with P8 3.0
10/22/04	<ul style="list-style-type: none"> • Process Engine on Solaris 9 now supports Patch Cluster 12 • Clarification on support of Installation and Administration with Terminal Services • Clarification on support for IBM application server support - with the 5.1 release, WebSphere Application Server Enterprise has been replaced by IBM WebSphere Business Integration Server Foundation. • VMware ESX Server 2.1.2 and GSX Server 3.1.0 are now supported win P8 3.0

Software Requirements

IMPORTANT Except as noted, you can install and run with more current patch releases, service packs, or minor releases of the software listed in the following subtopics as long as they are forward-compatible.

Client Components

The following three tables list platform support requirements for P8 client components.

Core Client Components

Core Client Components	Operating Systems (OS)	Browsers/ Applications
Workplace Workplace Applets Custom applications developed using Web Application toolkit or Workplace Customization Toolkit	Any OS (including Windows and Unix) supported by the browsers listed in the next column Mac Clients are currently not supported.	MS Internet Explorer (IE) 5.5 SP2 Netscape 6.2.1 Other browsers that support HTML 4.0 and Cascading Style Sheets 2.0 Workplace applets require downloading the Sun Java 2 plug-in 1.4.2 to the client.
Microsoft Office and Outlook Integration Custom applications developed with the Application Integration toolkits	Windows 2000 Professional SP4 Windows XP Professional SP1	MS Office 2000 SP3 MS Office XP SP2 MS Office 2003 + Office 2003 Update: KB828041
Enterprise Manager	Windows 2000 Professional SP4 Windows XP Professional SP 1 Windows 2000 Server SP4 (all editions) Windows 2003 Server (all editions)	NA

Core Client Components	Operating Systems (OS)	Browsers/ Applications
WebDAV	Windows 2000 Professional SP4 Windows 2000 Server, Advanced Server SP4 Windows 2003 Server (all editions) Windows XP Professional SP1	Browsers: IE 5.5 and 6.0 Applications: MS Office* 2000 SP3 MS Office* XP SP2 MS Office* 2003 Macromedia DreamWeaver 4.0.1, MX, MX 2004 Adobe GoLive 6.0 Windows Explorer *excluding MS Access

Optional Client Components

Optional Client Components	Operating Systems (OS)	Browsers/ Applications
Capture 4.1 (Available with Capture patch 20)	Windows 2000 Professional, SP4 Windows XP Professional, SP1 Windows 2000 Server and Advanced Server Windows 2003 (Standard and Enterprise)	NA
eForms for P8 Workplace	Same requirements as Workplace in Core Client table above.	<ul style="list-style-type: none"> • Internet Explorer 6.0 SP1 and higher. • Netscape 7.1 • Other browsers that support HTML 4.0 and Cascading Style Sheets 2.0.
eForms Designer 4.3.0	<ul style="list-style-type: none"> • Windows 2000 Professional SP3. • Windows XP Professional SP2. 	Internet Explorer 5.0.1 SP2 and higher (for viewing Help files).
Process Analyzer client	Any Windows operating system that supports the applications listed to the right	MS Excel 2000, SP3 MS Excel XP, SP2 MS Excel 2003 (with query analyzer and pivot table support)
Records Manager application	Same requirements as Workplace in table above.	Same requirements as Workplace in table above.

Server Components

The following three tables list platform support requirements for P8 server components.

Core Server Components

Core Server Components	Operating Systems	Application/Web Servers Other Services
Application Engine See Java Support section below further information	Windows 2000 Server, SP4 (Server, Advanced Server) Windows 2003 Server, (Standard, Enterprise, Datacenter)	IBM WebSphere Application Server / IBM WebSphere Business Integration Server <ul style="list-style-type: none"> • 5.0.2.5 • 5.1.0.3 BEA WebLogic Application Server <ul style="list-style-type: none"> • 7.0 SP4 • 8.1 SP2 JBoss 3.2.3 (includes Tomcat 4.1.29) Tomcat 5.0.18
	Solaris 8, Cluster Patch 29 Solaris 9, Cluster Patch 11	IBM WebSphere Application Server / IBM WebSphere Business Integration Server <ul style="list-style-type: none"> • 5.0.2.5 • 5.1.0.3 BEA WebLogic Application Server <ul style="list-style-type: none"> • 7.0 SP4 • 8.1 SP2 JBoss 3.2.3 (includes Tomcat 4.1.29) ¹
	AIX 5.1, Maintenance Level 4 AIX 5.2, Maintenance Level 2	IBM WebSphere Application Server / IBM WebSphere Business Integration Server <ul style="list-style-type: none"> • 5.0.2.5 • 5.1.0.3
	HP UX 11i, Patch Bundle B.11.11.0306.1	BEA WebLogic Application Server <ul style="list-style-type: none"> • 7.0 SP4 • 8.1 SP2

¹ Supported on Solaris 9; not supported on Solaris 8

Core Server Components	Operating Systems	Application/Web Servers Other Services
Content Engine	Windows 2000 Server, SP4 (Server, Advanced, Datacenter) Windows 2003 Server, (Standard, Enterprise, Datacenter)	Apache HTTPD v2.0.48 for SOAP listener IIS 5.0 (required <i>only</i> for WebDAV) MDAC 2.8 JRE 1.4.1.01 – private copy ² Microsoft Windows Domain Controller NOTE Workgroup or Microsoft Active Directory Application Mode are NOT supported as an alternative – you must install Content Engine into a Windows domain.
Process Engine	Windows 2000 Server, SP4 (Server, Advanced, Datacenter) Windows 2003 Server, (Standard, Enterprise, Datacenter) Solaris 8, Patch Cluster 29 Solaris 9, Patch Cluster 12 Additionally, the J2SE patch cluster must be installed based on your OS level. It can be downloaded from: http://sunsolve.sun.com/pub-cgi/show.pl?target=patches/J2SE AIX 5.1, Maintenance Level 4 AIX 5.2, Maintenance Level 2 HP UX 11i, Patch Bundle B.11.11.0306.1 Additionally, the following patches must be applied: PHSS_26560 Patches identified at the following site: http://www.hp.com/products1/unix/java/patches/index.html	JRE 1.4.2 ³ JRE 1.4.2_04 One of the following for disk partitioning: <ul style="list-style-type: none"> • VERITAS Volume Manager 3.x • Solstice DiskSuite 4.2.1 JRE 1.4.1 JRE 1.4.2_02

² This JRE is installed with Content Engine and will not conflict with other versions of JRE on the machine.

³ This JRE is installed with Process Engine.

Core Server Components	Operating Systems	Application/Web Servers Other Services
Rendition Engine	<p>Windows 2000 Server, SP4 (Server, Advanced, Datacenter) (English version of OS only)</p> <p>Note: The Rendition Engine is currently not supported on the Windows 2003 Server family.</p>	<p>IE 6.0 or MS XML 3.0</p> <p>MDAC 2.7</p> <p>Supported Applications:</p> <p>Rendition to HTML</p> <p>MS Office 2000 SP3 (MS Word, MS Excel, MS PowerPoint)</p> <p>MS Office XP SP2 (MS Word, MS Excel, MS PowerPoint)</p> <p>Note: MS Office 2003 documents are not certified for use with the Renditions Engine.</p> <p>Word Perfect 10</p> <p>Rendition to PDF</p> <p>Adobe Acrobat 5.0.5</p> <p>Adobe FrameMaker 6.0</p> <p>Adobe FrameMaker+SGML 6.0</p> <p>Adobe Illustrator 9.0</p> <p>Adobe PageMaker 6.5</p> <p>Adobe Photoshop 6.0</p> <p>AutoCAD 2000</p> <p>Corel Draw 9.0</p> <p>Corel Quattro Pro 9.0</p> <p>Corel WordPerfect 9.0</p> <p>Corel WordPerfect 10.0</p> <p>ISIS Draw 2.4</p> <p>Macromedia FreeHand 9.0</p> <p>Microsoft Office 2000 SP3(Excel, PowerPoint, and Word)</p> <p>Microsoft Visio Professional 2000 (SR1)</p> <p>QuarkXPress 4.1</p> <p>Microsoft Office XP, SP1 (Excel, PowerPoint, Project, and Word)</p>

<p>Custom applications developed using the Content and Process Java APIs which run outside of the application server</p> <p>(Customer applications running in an application server are bound by the requirements listed in the Application Engine row above.)</p>	<p>Windows 2000 Server, SP4 (Server, Advanced, Datacenter)</p> <p>Windows 2003 Server, (Standard, Enterprise, Datacenter)</p> <p>Solaris 8, Cluster Patch 29</p> <p>Solaris 9, Cluster Patch 11</p> <p>AIX 5.1, Maintenance Level 4</p> <p>AIX 5.2, Maintenance Level 2</p> <p>HP UX 11i, Patch Bundle B.11.11.0306.1</p> <p>Any other OS that supports running Sun or IBM JDK 1.3.x or 1.4.x.</p>	<p>Sun JDK 1.3.x or 1.4.x on Windows</p> <p>Sun, IBM, or HP JDK 1.3.x or 1.4.x on the respective OS</p>
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Optional Server Components

Optional Server Components	Operating Systems	Application/Web Servers Other Services
eForms for P8 Workplace	<p>Same requirements as Application Engine in the “Core Server Components” table above.</p> <p>Note: Must be co-located with the Application Engine.</p>	Same requirements as Application Engine in the “Core Server Components” table above.
eForms Print Services	<p>Windows 2000, SP3 (Server, Advanced Server, Datacenter Server)</p> <p>Windows 2003 (Standard, Enterprise, Datacenter)</p>	<ul style="list-style-type: none"> • .NET Framework 1.1 • IIS 5.0 or later.
Fax Server	<p>Windows 2000, SP3 (Server, Advanced Server, Datacenter Server)</p> <p>Windows 2003 (Standard, Enterprise, Datacenter)</p>	NA

Optional Server Components	Operating Systems	Application/Web Servers Other Services
Image Services Resource Adapter 3.1 Patch 3 is minimal level supported.	Same Requirements as Application Engine in the “Core Server Components” table above.	Same requirements as Application Engine in the “Core Server Components” table above. Note: Tomcat is NOT supported with ISRA 3.1.
Portal Integration	Same requirements as Application Engine in table above.	To be determined.
Process Analyzer	Windows 2000 Server, SP4 (Server, Advanced, Datacenter) Windows 2003 Server, (Standard, Enterprise, Datacenter)	MS SQL Server 2000 Enterprise, SP3a MS SQL Server 2000 Analysis Services, SP3 MS Scripting Engine 5.6 MS SQL Server 2000 Driver for JDBC 2.2 When running Process Analyzer with a remote database, you would only need the following on your Process Analyzer server: MS SQL Server Desktop Engine Analysis Manager MS Scripting Engine 5.6 MS Data Access Components (MDAC) version 2.8 MS SQL Server 2000 Driver for JDBC 2.2
Process Simulator	Windows 2000 Server, SP4 (Server, Advanced, Datacenter) Windows 2003 Server, (Standard, Enterprise, Datacenter)	MS SQL Server 2000 Driver for JDBC 2.2
ILog Rules Engine 4.6	Same requirements as Application Engine in table above.	

Optional Server Components	Operating Systems	Application/Web Servers Other Services
Records Manager	Same requirements as Application Engine in the “Core Server Components” table above.	Same requirements as Application Engine in the “Core Server Components” table above. Optional component for reporting capabilities: Crystal Reports 10.0 (Developer, Embedded, Enterprise) – must be co-located with a CE server (Windows 2000 or Windows 2003 only).
Custom applications developed using the Records Manager Java API Records Manager Disposition Sweep	Windows 2000 Server, SP4 (Server, Advanced, Datacenter) Windows 2003 Server (Standard, Enterprise, Datacenter) Solaris 8, Cluster Patch 29 Solaris 9, Cluster Patch 11 AIX 5.1, Maintenance Level 4 AIX 5.2, Maintenance Level 2 HP UX 11i, Patch Bundle B.11.11.0306.1 Any other OS that supports running Sun or IBM JDK 1.3.1	Sun JRE 1.3.1 on Windows Sun, IBM, or HP JRE 1.3.1 on the respective OS

LDAP Directory Server Support

LDAP Support	LDAP Server	Operating Systems (OS)
LDAP Directory Servers	MS Active Directory	Windows 2000 Server, SP4 (Server, Advanced, Datacenter) Windows 2003 Server (Standard, Enterprise, Datacenter)
	Sun Java System Directory Server 5.2	See Sun documentation
	Novell eDirectory 8.7.1	See Novell documentation

Note: The Process Engine supports only low-order ASCII characters on UNIX platforms for LDAP users and groups. On Windows platforms, the Process Engine supports both low-order and high-order ASCII characters.

Database Support

Basic Support

	Content Engine – local DB	Content Engine – remote DB	Process Engine – local DB	Process Engine – remote DB	Process Analyzer – local and remote DB	Capture – Batch Scanning	Rendition Engine
MS SQL Server 2000, SP3 Standard Edition on: <ul style="list-style-type: none"> Windows 2000 Server Family SP3 Windows 2003 Server Family 	Y	Y	Y	Y ⁴	N	Y	Y
MS SQL Server 2000, SP3 Enterprise Edition on: <ul style="list-style-type: none"> Windows 2000 Server Family SP3 Windows 2003 Server Family 	Y	Y	Y	Y ⁴	Y	Y	Y
Oracle 9.2.0.5 Standard and Enterprise Editions on: <ul style="list-style-type: none"> Windows 2000 Server Family SP3 Windows 2003 Server Family 	Y	Y	Y	Y	N	N	Y ⁵
Oracle 9.2.0.5 Standard and Enterprise Editions on: <ul style="list-style-type: none"> Solaris 8 or 9, 64-bit AIX 5.1 or 5.2, 64-bit HPUX 11i, 64 bit 	NA	Y	Y	Y	N	N	Y

⁴ Remote MS SQL Server configurations are not available with Unix based Process Engines.

⁵ Rendition Engine is not supported on Windows 2003

The following components must be installed on the Oracle **server**

- Oracle 9iR2 Patch Set 9.2.0.5.0 (Oracle ID 3501955)

Note: Oracle Universal Installer (OUI) 10.1.0.2 – must be installed first

The following components must be installed on the Oracle **client** machines (PE, RE and CE)

- Oracle 9iR2 Patch Set 9.2.0.5.0 (Oracle ID 3501955)

Note: Oracle Universal Installer (OUI) 10.1.0.2 – must be installed first

The following are required for the CE client machines only:

- OLEDB 9.2.0.4 (Oracle ID 3262468)
 - Oracle OLEDB 9.2.0.4
 - MTS 9.2.0.4
- OLEDB 9.2.0.4.1 (Oracle ID 3557062)
- MTS 9.2.0.4.1 (Oracle ID 3252645)

Java Support

Client Layer

JRE 1.4.2 is required for all FileNet P8 Platform Java applets. The Application Engine installer bundles this JRE and downloads it to the client, if it's not already installed.

Application/Web Server Layer

FileNet P8 Platform 3.0.0 runs within the J2EE environments specified earlier.

FileNet will support the version of the JDK that is installed by default with the supported Application Servers. All later service packs will be supported when they are made generally available by the App Server vendors. Alternate JDKs, such as JRockit are **not** supported.

WebSphere Application Server and WebSphere Application Server Network Deployment products **are** supported. WebSphere Express Editions **are not** supported.

WebLogic Express Basic and Express Premium Editions **are not** supported.

Backend Server Layer (Content Engine and Process Engine)

64 bit-versions of the JREs **are not** supported.

Custom Applications

Custom applications developed with the Content and Process Java APIs are supported on operating systems and application servers that support the following JDKs:

- Sun JDK 1.3.1, JVM 1.3.1
- IBM JDK 1.3.1, JVM 1.3.1

FileNet P8 Java APIs may be used to develop EJBs as long as the application is deployed on an App Server that supports EJB 2.0 (like BEA WebLogic Server 8.x. and IBM WebSphere Application Server 5.x).

Application Development

For Java and COM development, any development tool can be used.

For Web Services development, the following tools are supported:

- Visual Studio .NET 2003 with Web Services Enhancements 2.0

Scalability / High Availability / Disaster Recovery

Web Farms

FileNet P8 Platform supports configurations that separate HTTP servers from Application Servers. In such cases, you could use hardware-based solutions, such as Cisco routers, to build a web farm of HTTP servers.

Application Server Farms

FileNet Application Engine supports both hardware-based and software-based load balancing. Some examples would be:

- Use BEA WebSphere Server or WebLogic Application Server along with a Cisco router (hardware-based load balancing)
- Use IBM WebSphere Clones (software-based load balancing) combined with a router
- Use BEA WebLogic Clusters (software-based load balancing) combined with a router

FileNet eForms Server supports the same high-availability options as Application Engine.

Back-end Server Farms

In addition to web farms, Content Engine can be load balanced in a farm environment using third-party farming software or hardware.

Rendition Engine provides its own multi-server support mechanism for scalability. When you add Additional plug-in servers are required when more Rendition Engine servers are added.

High Availability

Content Engine and Process Engine are supported with Cluster Server products such as:

- Microsoft Cluster Server (version 1.1 on Windows 2000 and version 1.2 on Windows 2003)
- VERITAS Cluster Server 3.5

Details regarding support will be defined in the *FileNet P8 Platform High Availability Technical Notice*.

Disaster Recovery

FileNet P8 Platform components support VERITAS NetBackup and VERITAS Volume Replicator, as follows:

Operating System	Net Backup	Volume Replicator
AIX 5.1 and AIX 5.2	4.5	3.2.2
HP UX 11i	4.5	3.5
Solaris 8 and Solaris 9	4.5	3.5
Windows 2000 and 2003 Server Families	4.5	3.1

Coverage with these products includes:

- Content Engine: replication and backup of file store data, file store transaction logs, database files (MS SQL Server and Oracle data files, redo logs)
- Process Engine: replication and backup of PE configuration data (fnsw/local-solaris, fnsw_loc-windows directories), database files (MS SQL Server and Oracle data files, redo logs)
- Application Engine: bootstrap.properties file

Section 508

The following applications have been qualified using the JAWS reader:

- Workplace
- eForms for P8 Workplace
- Records Manager

EMC Centera Support

Content Engine 3.0.0 provides a new option for storing content on EMC Centera storage devices. This capability is certified with a 2.x Centera hardware/software platform, on both the Compliance and Compliance Plus licensing models.

Microsoft Terminal Services and Citrix Support

The following is a list of applications that are supported for use with Microsoft Windows 2000 Terminal Services, Microsoft Windows Server 2003 Terminal Services, and Citrix:

- Workplace HTML interfaces and Image Viewer (other applets are not supported)
- Enterprise Manager
- Records Manager
- eForms (HTML forms)

Installation of the Application Engine via Terminal Services is supported; installation of the Content Engine and Process Engine is NOT supported.

Administration of the Application Engine and Content Engine (Enterprise Manager) is supported; administration of the Process Engine including the Process Router on the Application Engine is NOT supported;

Hardware Virtualization Technologies (VMware)

The Application Engine, Content Engine, Process Engine, and Rendition Engine are supported on the following server virtualization technologies:

- Sun Dynamic System Domains (not applicable to Content Engine)
- VMware ESX Server 2.1.2
- VMWare GSX Server 3.1.0

IBM CrossWorlds InterChange Server Support

Content Engine and Process Engine provide connectors to be used with the CrossWorlds Interchange Server for integration between FileNet and other 3rd party applications such as CRM, ERP, and legacy applications. The version supported is 4.1.1.

Collocation Support

Collocation within FileNet P8 Platform Components

You can collocate FileNet P8 components as follows:

- A Content Engine and a Process Engine can share the same MS SQL Server 2000 or Oracle servers and database instances. The CE and PE support default and named instances of MS SQL Server 2000 for both local and remote databases.
- Multiple instances of the Application Engine can run on the same machine.
- FileNet recommends that you *not* collocate the Application Engine with either Content Engine or Process Engine components.
- The Rendition Engine co-located with the Content Engine is not a supported production configuration. Production environments must have a dedicated server for the Rendition Engine.
- eForms Server must be collocated on an Application Engine machine.
- Records Manager must be collocated on an Application Engine machine.
- For development and demo purposes only, all the FileNet P8 Platform and Add-On components can be collocated on the same Windows 2000 or Windows 2003 server (except the Rendition Engine which is supported on Windows 2000 only). A single-machine setup is not a typical production deployment scenario, and is only appropriate for development and demonstration purposes. Although supported, best practices for having highly available and scalable configurations suggest that the AE, CE and PE engines cannot be co-located on a single server.
- ISRA 3.1 and the Application Engine cannot be collocated on Tomcat.

For a list of recommended configurations, refer to the “Sample Configuration” topic in the *FileNet P8 3.0.0 Platform Installation Guide*.

Collocation with IM Suite Components

Clients

- IDM Desktop and WebServices 3.2 and 3.3 thick and thin clients (except Application Integration controls) can be collocated with Workplace and custom P8 Platform applications. The same is true for Open Client.
- WebServices 3.2 and 3.3 thin Application integration controls can be collocated with Workplace Application Integration controls.

Services

- FileNet P8 Platform Engines cannot be collocated with any IM Suite based services including IS, CS, Workflow Services, and Web Services.

Databases

- Process Engine database servers and databases cannot be collocated with those of eProcess Workflow servers.

Hardware Requirements

The table below identifies the recommended minimum disk space and memory requirements. Disk space requirements are for FileNet software only; additional space is required for data and related third-party applications, such as Microsoft Office for Rendition Engine and Application Integration. Memory requirements are highly dependent upon actual transaction workload and user activity. Recommendations below are estimates for entry-level deployments.

Component	Disk Space (MB)	Memory
Content Manager and Business Process Manager Server Components		
Workplace		Per JVM
• Windows	150	2 GB
• AIX, HP, Solaris	250	2 GB
Content Engine	600	2 GB
Process Engine		
• Windows	230	2 GB
• AIX, HP, Solaris	1000	2 GB
Process Analyzer	60	2 GB
Process Simulator	60	2 GB
Rendition Engine	55	1 GB
Documentation	100	512 MB
Content Manager and Business Process Manager Client Components		
Enterprise Manager	70	512 MB
Microsoft Office and Outlook Integration (Does not include space required for Office or Outlook)	27 ⁶	512 MB
eForms		
Designer	40	512 MB
Server	30	Per JVM 2 GB
Print Server	10	1 GB
Capture – refer to the Capture Installation Guide		

⁶ 16 MB of the 27 MB of space is used during the installation process for temporary files. These temporary files are removed at the end of the installation process.

Disk Space Used to Install FileNet P8 Components

Records Manager		
Records Manager		Per JVM
<ul style="list-style-type: none"> • Windows 	200	2 GB
<ul style="list-style-type: none"> • AIX, HP, Solaris nt 	300	