

# FileNet P8 Hardware and Software Requirements

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**FileNet Corporation** 

3565 Harbor Boulevard

Costa Mesa, California 92626

800.FILENET (345.3638)

Outside the U.S., call: 1.714.327.3400 www.filenet.com

# **Table of Contents**

Table of Contents	2
Revision Log	3
Software Requirements	
Client Components	5
Core Client Components	
Optional Client Components	
Server Components	
Core Server Components	
Optional Server Components	
LDAP Directory Server Support	
Database Support	
Basic Support	
Java Support	
Client Layer	
Application/Web Server Layer	
Custom Applications	
Application Development	
Scalability / High Availability / Disaster Recovery	
Web Farms	
Application Server Farms	
Web Content Manager Server Farms	
Back-end Server Farms	
High Availability	
Disaster Recovery	
Section 508	
EMC Centera Support	
Microsoft Terminal Services and Citrix Support	22
Server Virtualization Technologies	
Support Statement	
Known Issues	
IBM CrossWorlds InterChange Server Support	
Collocation Support	
Collocation within FileNet P8 Platform Components	
Collocation with IM Suite Components	25
Hardware Requirements	26

# **Revision Log**

Date	Revision
8/25/06	Added statement of non-support for direct modification of tablespaces in Database Support section.
	Clarified collocation requirements for Capture 4.1.
7/7/06	Updates Portal Server support to include IBM WebSphere 5.1.
	Adds hardware requirements for Portal Integration.
	Adds collocation requirements for Capture.
	Clarifies EMC Centera support.
	Updates Server Virtualization support.
12/16/05	Clarifying Records Manager collocation requirements
09/09/05	Adds support for Windows Server 2003 Service Pack 1
5/20/05	Major changes include:
	Added information regarding Web Content Manager (WCM)
4/06/05	Major changes include:
	Added information regarding Team Collaboration Manager (TCM)
	Clarified Crystal Reports requirements for Records Manager
	Added "Sun ONE Directory Server 5.1 SP2" to LDAP Directory Server Support
	Added support for VMware ESX 2.5
	Added platform support information for (1) FileNet Content SPI Integration for BEA and (2) Portal Integration for WebLogic Server
10/22/04	Major changes include:
	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 - 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 with FileNet P8 3.0.0
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
9/2/04	Under the Process Engine section, loosened the VERITAS Volume Manager requirement from version 3.5 to 3.x.

Date	Revision	
8/18/04	Major changes include:	
	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	
06/24/04	Initial document release	

# **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	Browsers:
	Windows 2000 Server, Advanced	IE 5.5 and 6.0
	Server SP4	Applications:
	Windows 2003 Server (all editions)	MS Office* 2000 SP3
	Windows XP Professional SP1	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	Windows 2000 Professional, SP4	NA
(Available with Capture patch	Windows XP Professional, SP1	
20)	Windows 2000 Server and Advanced Server	
	Windows 2003 (Standard and Enterprise)	
eForms for P8 Workplace	Same requirements as Workplace in	Internet Explorer 6.0 SP1 and higher.
	Core Client table above	Netscape 7.1
		Other browsers that support HTML 4.0 and Cascading Style Sheets 2.0.
eForms Designer 4.3.0	Windows 2000 Professional SP3	Internet Explorer 5.0.1 SP2 and higher
	Windows XP Professional SP2	(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.
Team Collaboration Manager	Any Windows operating system that	Internet Explorer 6.0
application	supports the browsers listed to the right	Netscape 6.2.1
		Other browsers that support HTML 4.0 and Cascading Style Sheets 2.0
Web Content Manager application	Same requirements as Workplace in table above	Same requirements as Workplace in table above.
		HTML editor applet requires downloading the Sun Java 2 plug-in 1.4.2 to the client.

# **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	Windows 2000 Server, SP4 (Server, Advanced Server)	IBM WebSphere Application Server / IBM WebSphere Business Integration Server
See Java Support section below further information	Windows 2003 Server, (Standard,	• 5.0.2.5
bolow farther information	Enterprise, Datacenter)	• 5.1.0.3
		BEA WebLogic Application Server
		• 7.0 SP4
		• 8.1 SP2
		JBoss 3.2.3 (includes Tomcat 4.1.29)
		Tomcat 5.0.18
	Solaris 8, Cluster Patch 29	IBM WebSphere Application Server /
	Solaris 9, Cluster Patch 11	IBM WebSphere Business Integration Server
		• 5.0.2.5
		• 5.1.0.3
		BEA WebLogic Application Server
		• 7.0 SP4
		• 8.1 SP2
		JBoss 3.2.3 (includes Tomcat 4.1.29) <sup>1</sup>
	AIX 5.1, Maintenance Level 4	IBM WebSphere Application Server /
	AIX 5.2, Maintenance Level 2	IBM WebSphere Business Integration Server
		• 5.0.2.5
	HP-UX 11i, Patch Bundle B.11.11.0306.1	• 5.1.0.3
		BEA WebLogic Application Server
		• 7.0 SP4
		• 8.1 SP2

<sup>&</sup>lt;sup>1</sup> 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)	Apache HTTPD v2.0.48 for SOAP listener
	Windows 2003 Server SP1*2,	IIS 5.0 (required only for WebDAV)
	(Standard, Enterprise, Datacenter)	MDAC 2.8
		JRE 1.4.1.01 – private copy <sup>3</sup>
		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)	JRE 1.4.2 <sup>4</sup>
	Windows 2003 Server, (Standard, Enterprise, Datacenter)	
	Solaris 8, Patch Cluster 29	JRE 1.4.2_04
	Solaris 9, Patch Cluster 12	One of the following for disk partitioning:
	Additionally, the J2SE patch cluster must be installed based on your OS level. It can be downloaded from:	<ul><li>VERITAS Volume Manager 3.x</li><li>Solstice DiskSuite 4.2.1</li></ul>
	http://sunsolve.sun.com/pub-cgi/show.pl?target=patches/J2SE	
	AIX 5.1, Maintenance Level 4	JRE 1.4.1
	AIX 5.2, Maintenance Level 2	
	HP-UX 11i, Patch Bundle B.11.11.0306.1	JRE 1.4.2_02
	Additionally, the following patches must be applied:	
	PHSS_26560	
	Patches identified at the following site:	
	http://www.hp.com/products1/unix/jav a/patches/index.html	

<sup>&</sup>lt;sup>2</sup> \*See the updated *FileNet P8 Platform 3.0.0 Installation Guide* on the FileNet Customer Service and Support web site for installation details and instructions.

<sup>&</sup>lt;sup>3</sup> This JRE is installed with Content Engine and will not conflict with other versions of JRE on the machine.

<sup>&</sup>lt;sup>4</sup> This JRE is installed with Process Engine.

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

Core Server Components	Operating Systems	Application/Web Servers Other Services
Custom applications developed using the Content and Process Java APIs which run outside of the application server (Customer applications running in an application server are bound by the requirements listed in the Application Engine row above.)	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.x or 1.4.x.	Sun JDK 1.3.x or 1.4.x on Windows Sun, IBM, or HP JDK 1.3.x or 1.4.x on the respective OS

# **Optional Server Components**

Optional Server Components	Operating Systems	Application/Web Servers Other Services
eForms for P8 Workplace	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 Must be co-located with the Application Engine.	
eForms Print Services	Windows 2000, SP3 (Server, Advanced Server, Datacenter Server)	.NET Framework 1.1
		IIS 5.0 or later
	Windows 2003 (Standard, Enterprise, Datacenter)	
Fax Server	Windows 2000, SP3 (Server, Advanced Server, Datacenter Server)	NA
	Windows 2003 (Standard, Enterprise, Datacenter)	

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.
FileNet Content SPI Integration for BEA	Windows 2000 Server, SP4 (Server, Advanced, Datacenter) Windows 2003 Server, (Standard, Enterprise, Datacenter) Solaris 8, Cluster Patch 29 Solaris 9, Cluster Patch 11 HP-UX 11i, Patch Bundle B.11.11.0306.1	WebLogic Platform 8.1 SP3
Portal Integration	Windows 2000 Server, SP4 (Server, Advanced, Datacenter) Windows 2003 Server, (Standard, Enterprise, Datacenter) Solaris 8, Cluster Patch 29 Solaris 9, Cluster Patch 11 HP-UX 11i, Patch Bundle B.11.11.0306.1	BEA WebLogic Platform 8.1 SP4 IBM WebSphere Portal Server 5.1

Optional Server Components	Operating Systems	Application/Web Servers Other Services			
Process Analyzer	Windows 2000 Server, SP4 (Server,	MS SQL Server 2000 Enterprise, SP3a			
	Advanced, Datacenter) Windows 2003 Server, (Standard,	MS SQL Server 2000 Analysis Services, SP3			
	Enterprise, Datacenter)	MS Scripting Engine 5.6			
		MS SQL Server 2000 Driver for JDBC 2.2			
		When running Process Analyzer with a remote database, you 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)	MS SQL Server 2000 Driver for JDBC 2.2  NOTE Process Simulator requires a			
	Windows 2003 Server, (Standard, Enterprise, Datacenter)	dedicated Process Analyzer. The Process Analyzer used by the Process Engine cannot be used by the Process Simulato			
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			
		<ul> <li>Must be collocated with a Content Engine object store service and client connectivity module or can be collocated with the Content Engine Server</li> </ul>			
		<ul> <li>Must be part of the same FileNet         P8 domain as the Content Engine         server hosting the Records         Manager data model</li> </ul>			
		<ul> <li>Required Crystal Reports components:</li> </ul>			
		<ul><li>Report Designer</li></ul>			
		<ul> <li>Crystal Enterprise Embedded (formerly Report Application Server)</li> </ul>			
Custom applications developed using the Records	Windows 2000 Server, SP4 (Server, Advanced, Datacenter)	Sun JRE 1.3.1 on Windows Sun, IBM, or HP JRE 1.3.1 on the			
Manager Java API	Windows 2003 Server (Standard, Enterprise, Datacenter)	respective OS			
Records Manager Disposition	Solaris 8, Cluster Patch 29				
Sweep	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				
Team Collaboration Manager Application Server	Windows 2000 Server, SP4 (Server, Advanced, Datacenter)	BEA WebLogic Application Server 8.1 SP2			
	Windows 2003 Server (Standard, Enterprise, Datacenter)				

Optional Server Components	Operating Systems	Application/Web Servers Other Services
Team Collaboration Mail Server	Windows 2000 Server, SP4 (Server, Advanced, Datacenter) Windows 2003 Server (Standard, Enterprise, Datacenter)	Apache James Mail Server 2.2.0
Team Collaboration Engine	Windows 2000 Server, SP4 (Server, Advanced, Datacenter) Windows 2003 Server (Standard, Enterprise, Datacenter)	
Web Content Manager	Windows 2003 Server (Standard, Enterprise, Datacenter)	BEA WebLogic Application Server 8.1 SP4

# **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 ONE Directory Server 5.1 SP2	See Sun documentation
	Sun Java System Directory Server 5.2	
	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**

	ontent Engine – local DB	ontent Engine – remote DB	Process Engine – local DB	Process Engine – remote DB	Process Analyzer – local and emote DB	apture – batch scanning	Rendition Engine	eam Collaboration Manager	Veb Content Manager
MS SQL Server 2000, SP3 Standard Edition on:									
Windows 2000 Server Family SP3	Υ	Υ	Υ	<b>Y</b> <sup>5</sup>	N	Υ	Υ	Υ	Y
Windows 2003 Server Family									
MS SQL Server 2000, SP3 Enterprise Edition on:									
Windows 2000 Server Family SP3	Υ	Υ	Υ	<b>Y</b> <sup>5</sup>	Υ	Υ	Υ	Υ	Y
Windows 2003 Server Family									
Oracle 9.2.0.5 Standard and Enterprise Editions on:									
Windows 2000 Server Family SP3	Υ	Υ	Υ	Υ	N	N	<b>Y</b> <sup>6</sup>	Υ	N
Windows 2003 Server Family									
Oracle 9.2.0.5 Standard and Enterprise Editions on:									
Solaris 8 or 9, 64-bit	NA	Y	Y	Y	N	N	Y	N	N
• AIX 5.1 or 5.2, 64-bit	11/7	'	'	'	'*	14	'	14	
• HPUX 11i, 64 bit									

<sup>&</sup>lt;sup>5</sup> Remote MS SQL Server configurations are not available with Unix based Process Engines.

<sup>&</sup>lt;sup>6</sup> Rendition Engine is not supported on Windows 2003

**CAUTION** FileNet does not support direct modification of database values in FileNet-created tablespaces. Use only FileNet-provided tools or API calls to update these database values.

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 (Process Engine, Rendition Engine and Content Engine)

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 Content Engine client machines only:

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

NOTE MTS refers to Oracle's Microsoft Transaction Server, not Oracle's Multi-Threaded Server

The following components must be installed on the Web Content Manager servers

- DataDirect JDBC Drivers (from the FileNet P8 Web Content Manager DataDirect Connect for JDBC 3.0.0 CD)
  - o FSbase.jar
  - FSsqlserver.jar
  - FSutil.jar
- (Optional) If a Rendition Engine will be used, then drivers for the Rendition Engine database must also be installed on the Web Content Manager servers
  - o ojdbc14.jar (appropriate for your version of Oracle)
  - MS SQL Server driver (appropriate for your version of MS SQL)

#### **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. The Web Content Manager installer also bundles this JRE for the HTML editor 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.

#### **Web Content Manager Server Farms**

FileNet Web Content Manager supports BEA weblogic clusters for Performance Scalability and for High Availability. Hardware based load balancing is required to support multiple WCM nodes servicing UI requests

#### **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 Process Engine 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 Basic, Compliance, and Compliance Plus storage devices. This capability is qualified with the Centera SDK version 2.3.290 and supported in connection with all versions of CentraStar that are compatible with this version of the SDK. Please note that support is limited to the functional scope of the Content Engine integration with Centera as described in the P8 3.0.0 documentation and that it should not be assumed that new features appearing in a release of CentraStar are automatically supported.

**NOTE** According to EMC, all current versions of CentraStar are backward compatible with all versions of the Centera SDK, provided that the Centera device is configured to be compatible with the environment that the Centera SDK supports. Specific versions of the SDK are backward compatible with CentraStar from a specific release up. Refer to the Centera documentation for SDK/CentraStar compatibility."

# **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)
- nterprise 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;

### **Server Virtualization Technologies**

FileNet is continually striving to meet our clients' diverse and ever changing needs. There is an increasing trend in the marketplace towards the use of virtualization technologies to maximize hardware efficiency and to minimize costs. These technologies (examples include: VMWare, Microsoft Virtual Server, Sun Dynamic System Domains, HP VSE, and LPARS) primarily focus on the ability to operate several "virtual" machines on one physical machine thus utilizing system resources more efficiently in a "managed" environment.

Many of our clients have requested qualification of our product offerings under some of these different virtualization technologies. FileNet makes extensive use of some of these technologies in our development, QA and support organizations to develop, test, and support our products in these different environments. However, it is important to note that FileNet does not attempt to certify every possible setup of all our product offerings in every different virtualization metaphor and cannot individually certify specific client configurations.

That said, these virtualization technologies are designed to be transparent to the software that they host and to not require special effort from software providers to code and test for their use.

FileNet's products have been tested and qualified on specific operating systems. With very few exceptions, we consider configurations or virtualizations that are supported for that operating system to be an acceptable configuration unless we have identified issues and documented it as unsupported.

Unless explicitly stated otherwise and assuming FileNet Software in installed in an environment that is natively supported for the hardware/OS in question, FileNet does not require that its products be run in isolation of other 3rd party products. In the event a specific 3rd party product interferes with the correct functioning of its products, FileNet may, at its sole discretion, opt to address the issue in its products or, alternatively, require that its products not be colocated with this specific 3rd party product. FileNet has not tested and makes no claims with reference to the performance of its products in environments where its products are co-located with 3rd party products. FileNet does not guarantee that requirements and restrictions for co-location with 3rd party products will be maintained in future product releases.

#### **Support Statement**

Unless otherwise noted, FileNet does support deployments in a virtualized environment. Virtualization technologies are designed to be transparent to the software that they host, and not require special effort from the software vendors for their use. Testing in the FileNet labs has found that while this is largely true, systems deployed in a virtualized environment may have issues related to performance and communication with peripheral devices and other hardware components.

With regard to performance, running in a virtualized environment is likely to result in increased CPU utilization or other hardware resource consumption. As a result of this increase, system workload capacity may be reduced, and transaction response times may increase.

To that end, assuming that the virtualized machine is configured per FileNet requirements, FileNet supports deployments of all its products, unless otherwise noted, in a virtualized environment. However, in a virtualized environment, FileNet may not be able to resolve issues related to system performance or issues that FileNet suspects are related to communication with peripheral devices, and other hardware components (such as network cards, disk controllers, etc.).

In the event that FileNet determines a particular issue is specific to virtualization technologies (such as performance or communication with peripheral and hardware components), FileNet may require that the customer reproduce the issue

in a non-virtualized configuration. Due to the nature of virtualization technologies, FileNet cannot guarantee resolutions to issues that are caused because a deployment is virtualized.

Additionally, it is the customer's responsibility to ensure that other associated 3rd party software is supported to run in the given virtualized environment (such as application severs, RDBMS, OS, etc.) by the original vendor of that software.

#### **Known Issues**

Items listed in this section are known issues when certain FileNet components are deployed in a virtualized environment.

#### **Content Engine**

When deployed on VMWare, there are known performance issues related to content retrieval and authoring when using the Content Engine. The severity of the performance issue can vary depending on other specifics of the deployment. Each customer will need to perform their own testing to ensure the system configuration is performing to their satisfaction. FileNet has reported this issue to VMWare, and it is currently under investigation.

#### **Image Services**

Optical libraries attached via SCSI hardware are known to be incompatible with VMWare because Image Services must maintain exclusive control over the hardware.

#### **Capture**

When deployed on VMWare, the operating system may have issues recognizing scanners and scan cards.

### 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 3<sup>rd</sup> 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. Content Engine and Process Engine 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 Application Engine, Content Engine and Process Engine
  engines cannot be co-located on a single server.
- ISRA 3.1 and the Application Engine cannot be collocated on Tomcat.
- Web Content Manager and the Application Engine can run on the same machine. However, Web Content Manager must be installed in its own JVM.

For a list of recommended configurations, refer to the "Sample Configuration" topic in the *FileNet P8 Platform 3.0.0 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.
- Capture 4.1 must be installed on a server that is in the same Windows domain as the Content Engine and requires
  that the Content Engine client connectivity modules are installed on the Capture station. However, Capture 4.1
  should not be collocated with either the Content Engine or FileNet Enterprise Manager. These restrictions do not
  apply to Capture 5.x.

#### 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 and eProcess cannot share the same database instance. A Process Engine database instance and eProcess database instance can reside on the same remote database server.

# **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	Processor Speed	
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	27 <sup>7</sup>	512 MB		
(Does not include space required for Office or Outlook)				
eForms				
Designer	40	512 MB		
Server	30	Per JVM		
		2 GB		
Print Server	10	1 GB		

<sup>&</sup>lt;sup>7</sup> 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.

Component	Disk Space (MB)	Memory	Processor Speed
Portal Integration			
FileNet P8 Portal Integration	170	1.5 GB, with 1.0 GB for JVM	AIX, HP, Solaris: 1 GHz
			Windows: 2 GHz
Records Manager			
Records Manager		Per JVM	
Windows	200	2 GB	
AIX, HP, Solaris	300	2 GB	
Team Collaboration Manager			
Team Collaboration Manager Server Components	26 MB		
Collaboration Engine	12 MB	40 MB	
Collaboration Mail Server	19 MB	30 MB	
Content Engine Integration	2 MB		
WorkFlow Integration	19 MB		
Capture – refer to the Capture Installation Guide			
Web Content Manager			
Web Content Manager		Per JVM	
Windows	110 MB	1 GB	
Web Content Manager components on the Application Engine	6 MB		
Web Content Manager components on the Content Engine	0.2 MB		
Web Content Manager Java API	13 MB		