Kofax MarkView

Planning Guide for Oracle E-Business Suite

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KOFAX

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Preface

This guide includes system information, such as the protocols required for communication between servers, hardware and software prerequisites, and minimum RAM requirements.

Use this guide in conjunction with the *Technical Specifications* document on the Kofax website to learn about the prerequisites for implementing Kofax MarkView products and prepare a site for product installation.

Other recommended products to review:

- Kofax Capture
- Kofax Import Connector
- Kofax Transformation Modules

Who should read this guide

The audience for this document includes:

- Oracle Database Administrators who are experienced with Oracle RDBMS, can edit and run PL/SQL scripts, and are familiar with their ERP system.
- Application Server Administrators who have J2EE technology knowledge.
- Windows Server Administrators who have Microsoft Windows experience and who can install and configure Windows applications and hardware.
- Customers who are planning a new installation or a migration from a previous release of any MarkView product.

Related documentation

The documentation set for Kofax MarkView is available online:[1]

http://docshield.kofax.com/Portal/Products/MarkView/10.0.0-drbywob7qp/MarkView.htm

In addition to this guide, the documentation set includes the following items:

Kofax MarkView Features Guide

Use this guide to learn about the features included and options available with MarkView; to become familiar with MarkView products; and to decide which are important to the business challenges you face and best suit your site. This guide includes information about how features impact the workflow, the

[1] You must be connected to the Internet to access the full documentation set online. If the security policy for your organization requires offline access (without an Internet connection), see the Installation Guide.

interaction between features, the touch points with the ERP system, and how features address business problems.

Kofax MarkView Installation Worksheet

Use this worksheet to collect and record the information you need to install or upgrade MarkView products.

Kofax MarkView Installation Guide

Use this guide in conjunction with the *Kofax MarkView Installation Worksheet* to install and configure MarkView products and to configure third-party products that integrate with MarkView.

Kofax MarkView Upgrade Guide

Use this guide in conjunction with the *Kofax MarkView Installation Worksheet* to upgrade and configure MarkView products.

Kofax MarkView Reintegration Guide for Upgrades to Oracle E-Business Suite R12 or 12.2

Use this guide to reintegrate MarkView after an upgrade to Oracle E-Business Suite R12 or 12.2.

Kofax MarkView Administrator's Guide, Volume 1

Use this guide to administer the MarkView system. This guide describes how to configure and maintain the applications, solutions, and users that make up the MarkView Suite. The guide also describes how MarkView influences the administration of other servers and software that interface with MarkView applications.

The MarkView Administrator should be well-versed in database administration, application server setup, tuning and maintenance, or should know where to get such information. The administrator's guide does not replicate this information, but conveys MarkView product-specific information.

Kofax MarkView Administrator's Guide, Volume 2

Use this guide to maintain MarkView components that are administered outside of the MarkView interface. This guide includes advanced administrative tasks and describes MarkView custom packages and join points.

Kofax MarkView Release Notes

Use this document to learn what is new with the latest MarkView release, identify outstanding defects and workaround solutions where applicable, and learn which defects the release fixes.

Get help for Kofax products

Kofax regularly updates the Kofax Support site with the latest information about Kofax products.

To access some resources, you must have a valid Support Agreement with an authorized Kofax Reseller/Partner or with Kofax directly.

Use the tools that Kofax provides for researching and identifying issues. For example, use the Kofax Support site to search for answers about messages, keywords, and product issues. To access the Kofax Support page, go to www.kofax.com/support.

The Kofax Support page provides:

- Product information and release news

  Click a product family, select a product, and select a version number.

- Downloadable product documentation

  Click a product family, select a product, and click **Documentation**.
- Access to product knowledge bases

  Click **Knowledge Base**.
- Access to the Kofax Customer Portal (for eligible customers)

  Click **Account Management** and log in.

  To optimize your use of the portal, go to the Kofax Customer Portal login page and click the link to open the *Guide to the Kofax Support Portal*. This guide describes how to access the support site, what to do before contacting the support team, how to open a new case or view an open case, and what information to collect before opening a case.
- Access to support tools

  Click **Tools** and select the tool to use.
- Information about the support commitment for Kofax products

  Click **Support Details** and select **Kofax Support Commitment**.

Use these tools to find answers to questions that you have, to learn about new functionality, and to research possible solutions to current issues.

Chapter 1

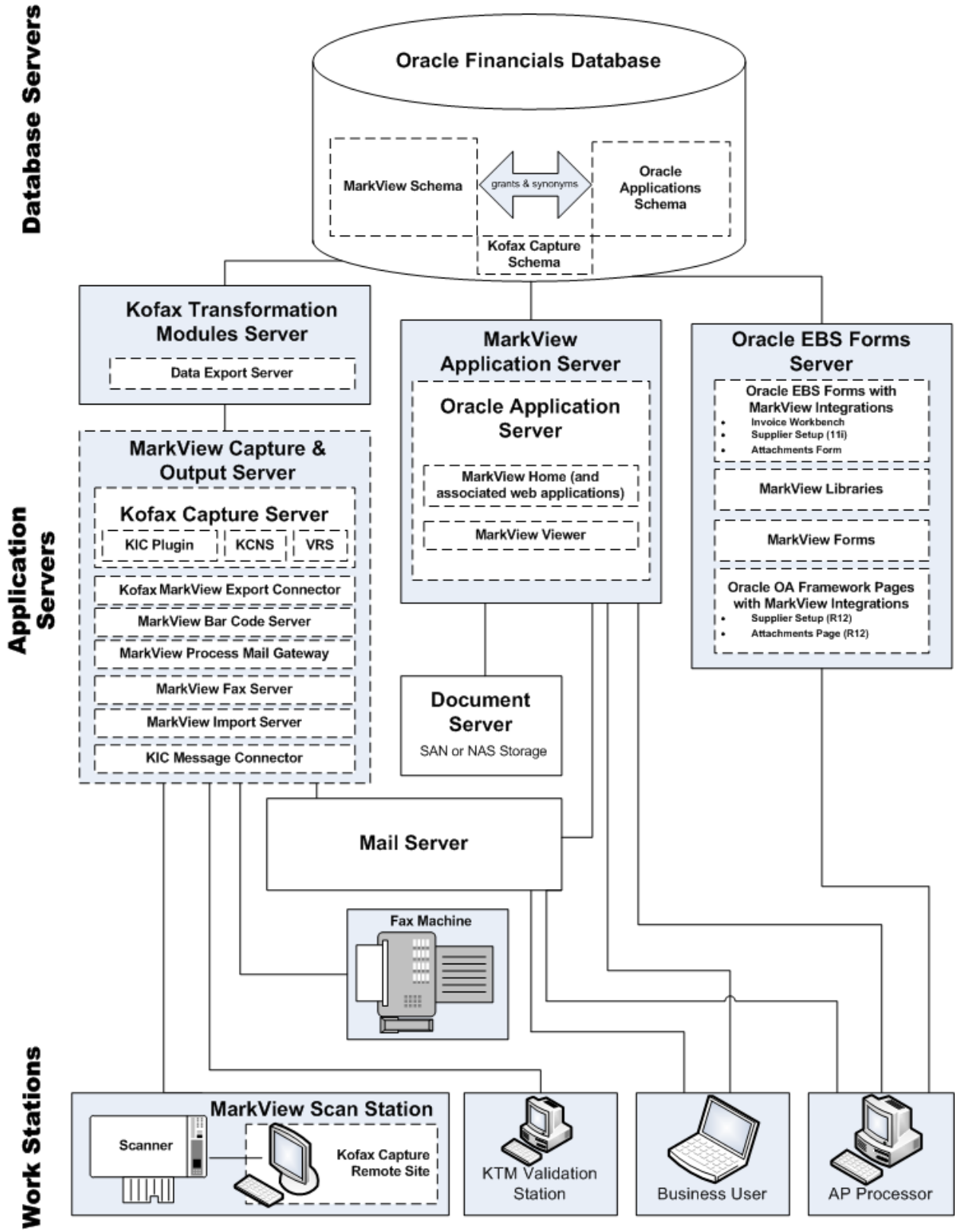
Required servers

The Kofax MarkView system includes:

- Database Servers: The The Oracle Financials database must include the MarkView schema.
  Kofax Capture Server leverages a database that is located either:
  - as an additional schema within the Oracle Financials database.
  - a database schema on any supported database server.
  - as a stand-alone SQL Server Express database.
- Application Servers
  - MarkView application servers: Provide MarkView functionality. These are standalone or domain servers running the MarkView application server software as a J2EE application.
  - MarkView capture and output servers: Facilitate the capture of images and metadata content into MarkView. Kofax Capture and Kofax Import Connector can use this server as a common point of image capture.
  - Oracle EBS Forms server: Includes MarkView custom libraries and forms.
  - Document server: The file storage system where MarkView stores image files.
- Work Stations with end-user systems:
  - Kofax Capture Scan Stations: Scanners compatible with Kofax Capture and the attached computers.
  - KTM validation stations: Stations in which users validate captured invoice data prior to the data import to Oracle Financials.

MarkView with transformation requires Kofax Transformation Modules and Kofax Capture. See Kofax Capture and Kofax Transformation Modules documentation for more information.

This diagram shows a very simple MarkView implementation. Because of CPU and RAM requirements, co-locating the Kofax Transformation Module server with other MarkView capture and output server components may have a negative impact on system performance in more complex implementations.


Database Servers
Oracle Financials Database
MarkView Schema
grants & synonyms
Oracle Applications Schema
Kofax Capture Schema
Application Servers
Kofax Transformation Modules Server
Data Export Server
MarkView Application Server
Oracle Application Server
MarkView Home (and associated web applications)
MarkView Viewer
Oracle EBS Forms Server
Oracle EBS Forms with MarkView Integrations
Invoice Workbench
Supplier Setup (11i)
Attachments Form
MarkView Libraries
MarkView Forms
Oracle OA Framework Pages with MarkView Integrations
Supplier Setup (R12)
Attachments Page (R12)
MarkView Capture & Output Server
Kofax Capture Server
KIC Plugin
KCNS
VRS
Kofax MarkView Export Connector
MarkView Bar Code Server
MarkView Process Mail Gateway
MarkView Fax Server
MarkView Import Server
KIC Message Connector
Document Server
SAN or NAS Storage
Mail Server
Fax Machine
Work Stations
MarkView Scan Station
Scanner
Kofax Capture Remote Site
KTM Validation Station
Business User
AP Processor

Software Requirements

The primary source of information about supported operating systems and other MarkView requirements is the *Technical Specifications* document which is available on the Kofax website.

Oracle Financials database

All systems require a database server, which consists of:

- A version of the Oracle RDBMS listed in the *Technical Specifications* document. The RDBMS must include XML DB and must be running the Java option (JServer).
- The MarkView database components, which consist of the MarkView schema and the logic to store and retrieve data. The Kofax Capture schema can also reside on the database server.
- Oracle Text, if your system includes MarkView Document Library and the full-text search option is configured.

Estimating your Oracle RDBMS block size

This section describes sizing estimates for storing document metadata in the database. Document images are not stored in the database. The installation procedure will prompt you to enter the size of your database.

Database block size

If you have not yet installed the Oracle RDBMS, make sure it has a block size of at least 8k. The Oracle installation default setting is 8k. If you make the block size smaller, you may experience performance problems.

Disk space

The amount of disk space required is based on the number of document pages that must be stored annually. This table provides estimates of the database server disk space used annually by MarkView. These estimates include the base MarkView software plus MarkView for Accounts Payable.

Size	Invoices Per Year	Disk Space Consumed Per Year
Large	> 1,000,000	35 GB
Medium	~ 500,000	17 GB
Small	~ 100,000	4 GB

The ratio of table data to index data is from approximately 55 to 45 percent. For example, in a database consuming 10 GB of disk per year, approximately 5.5 GB is table data and 4.5 GB is index data.

Capture and Output servers

The capture and output applications bring information into and out of the MarkView system.

MarkView capture and output servers include:

- Kofax Capture
  - KIC Message Connector (Optional)
  - Kofax Capture Network Server (KCNS) (Optional)
  - Kofax Capture Server
  - Kofax Import Connector (KIC) plugin (Optional)
  - Kofax Transformation Modules (Optional)
  - Kofax VirtualReScan (VRS)
- MarkView
  - MarkView Bar Code Server
  - MarkView Data Export Servers that provide data from Oracle to KTM for validation.
  - Kofax MarkView Export Connector that enables you to export documents from Kofax Capture to MarkView.
  - MarkView Import Server
  - MarkView Process Mail Gateway

Technical overview

The host machine must meet the requirements described in Hardware requirements on page 21. The capture and output components are Windows services.

Depending on your configuration, certain third-party software , such as Oracle Data Provider for .NET, may also be required. See the *Technical Specifications* document for details.

Co-locating

You may co-locate all these items on the same MarkView capture and output server with the following exception.

Because of CPU and RAM requirements, Kofax recommends against co-locating the Kofax Transformation Module server except for very simple configurations.

Other design requirements

This section lists general rules for locating capture and output components in your network.

Ensure access to database and document servers

Capture and output applications must transfer data to and from the database server and the document server.

The MarkView application server, the MarkView capture and output server, the MarkView document server, and the Oracle Financials Database should all be on the same network.

Ensure Mail Gateway access to SMTP server

The MarkView Mail Gateway requires a SMTP connection to your mail server. This component sends outbound email notifications and reminders to the user base.

MarkView application servers

Use the guidelines in this section to determine how many servers you need.

Each application server consists of:

- Host machines that meet the hardware requirements described in Hardware requirements on page 21.
- An operating system. For more information, see the *Technical Specifications* document.
- MarkView application server components.
  - A JRE for the installer to run.
  - A JDK – See the *Technical Specifications* document for the recommended JDK for your operating system.

    For the 64-bit WebLogic client, you need a separate JDK. See www.oracle.com for the correct 64-bit distribution of WebLogic and 64-bit JDKs.
  - A configured instance for each of the following: WebLogic Admin Server, Node Manager and a MarkView dedicated Managed Server.

Technical overview

The MarkView application server components are J2EE applications. J2EE institutes a standard framework of coding and execution common to all MarkView J2EE applications.

This table lists the MarkView application server components, some of which are optional and sold separately.

J2EE Application	Purpose
MarkView Bar Code Generator	Generates bar codes.
MarkView Document Export	Converts MarkView images to PDF or TIFF and then emails the resulting image. It also provides print server functionality.

J2EE Application	Purpose
MarkView Document Transport Module (DTM)	Provides the logic for the document server. It stores and provides access to all the documents that have been scanned, emailed, or otherwise loaded into the MarkView system. The DTM authenticates all parties sending requests to the document server. The machine that hosts this DTM process is sometimes called the document server, even though the MarkView image files may be stored on another server that the DTM accesses or a storage area network. MarkView leverages the CCITT Group IV TIFF image format for standard image storage. MarkView can still store "Non-MarkView" document type files in the document server in their native format.
MarkView Graphics Server	Serves image files for icons in the MarkView GUI.
MarkView Self-Service Invoice (SSI)	Enables creation and submission of invoices to Oracle Payables.
MarkView Process Monitor	Lets administrators monitor the progress of MarkView work items through a workflow.
MarkView Target Registry Service	Stores information such as module versions in the MarkView database.
MarkView PL/SQL Servlet	Serves web pages from stored procedures.

Clustering

See your application server documentation for specific instructions.

Other design requirements

Review these considerations before you design your system:

- If your system will be configured to send outbound email messages using MarkView Document Export, the application server that hosts MarkView Document Export must connect to the SMTP Server.
- Only HTTP is supported for the Export Server job.
- If you are localizing MarkView, the appropriate language must be installed in your ERP. For example, if you have users who will interact with MarkView in French, install French in your Oracle instance.
- To use MarkView Document Export batch printing capabilities, ensure that the printers involved are defined locally on the application server where MarkView Document Export is installed. You must also ensure that Java can see these printers.

Oracle EBS Forms server

MarkView includes components that are installed into the Oracle EBS Forms server.

Technical overview

The Oracle EBS Forms server generates many of the forms and applets that provide the GUI for Oracle E-Business Suite. Client programs download these forms and applets. Therefore, the parts of the MarkView system that interact with the Oracle EBS GUI rely on the Oracle Forms system.

Co-locating

To co-locate MarkView application server components and the Oracle EBS Forms server:

- The server must be configured to handle the load of all MarkView application server and Oracle EBS Forms processes. Co-locating MarkView application server components and the Oracle EBS Forms server on an undersized server will result in performance issues for all processes running on that server.
- MarkView must run in its own instance of the application server and cannot share it with any other application running on the server.
- The MarkView application server must meet the requirements in the *Technical Specifications* document.

Work stations

End users interact with MarkView documents through MarkView Viewer.

MarkView Viewer

MarkView Viewer is browser-based. The viewer requires a browser and JavaScript enabled. See the *Technical Specifications* document for a list of supported browsers.

Terminal Server environments

The MarkView suite supports Terminal Server environments, such as Citrix XenApp Server. You must pre-install the software on the Terminal Server host and configure the environment in advance of end users running viewer sessions. See the *Technical Specifications* document for more detailed prerequisites. For instructions on setting up the environment, see MarkView System Administration. For information about using Terminal Services or Virtual User Sessions solutions, see Support Policy for Virtual Computing on www.kofax.com/support.

The Terminal Server host must meet the minimum hardware requirements set by the underlying application, such as Citrix. Then, add an additional 256 MB of RAM for each concurrent viewer session. Beyond this, there is no simple formula for scaling to the number of anticipated users. Consult the terminal server capacity planning documentation for guidelines.

Scan stations

A MarkView scan station consists of a scanner and a Kofax Capture installation.

Through Kofax Capture, you can use a wide range of desktop and production-level scanners to enter documents into the MarkView system. These include:

- Low-end Group 1, 2, and 3 SCSI models using ISIS drivers
- VirtualReScan (VRS) ready scanners. (VRS is installed automatically when you install Kofax Capture.)

Kofax recommends that your scanner:

- Includes a USB port
- Can scan duplex
- Has a page feed mechanism that supports your business methods

See the Kofax Scan Configurator website for information about supported scanners:

http://scadmin.kofax.com

MarkView Self-Service Invoice system requirements for email submission

If you plan to enable MarkView Self-Service Invoice (SSI) users to submit follow-up documents in email messages, Kofax Import Connector (KIC) must be installed with the MarkView system and the SSI user's client machine must have an email client installed.

Chapter 2

Designing the system

This chapter describes the following:

- Communications protocols
- Security and firewalls
- Port requirements for Kofax Capture
- Hosted environments
- Production and non-production environments

Communications protocols for connecting servers

Each machine in a MarkView system needs to transmit requests and data to at least one other machine. The following communication protocols employed:

- SQL*Net transmits information between the Oracle Financials Database and the following MarkView components:
  - MarkView application servers
  - MarkView capture and output servers
  - MarkView scan stations
- HTTP(S) transmits data between the MarkView application server and the following components:
  - MarkView J2EE applications
  - MarkView capture and output servers
  - End user machines
- HTTP(S) transmits data between Kofax Capture Server and Kofax Capture Remote Sites
- HTTP(S) transmits data between the MarkView capture and output servers and the MarkView DTM. To secure transmissions between a capture and output server and the document server, we recommend HTTPS.
- SMTP transmits outbound email requests. The requests are sent from both the MarkView application server (Export Server) and the MarkView capture and output server (Mail Gateway).
- POP3 or IMAP transmit inbound mail through MarkView Mail Gateway.
- POP3/IMAP/EWS transmit inbound mail through Kofax Import Connector.

Secure topology

If your site plans to use SSL to implement secure communication between servers, obtain certificates signed by a certain certifying authority.

To ensure the integrity and security of your data, we recommend that you enable SSL.

Firewalls

The following table provides information about MarkView servers that are commonly protected by a firewall. Server connections must be bi-directional.

Server	Default Ports	Protocol
MarkView Application Server	WebLogic: • HTTP port: typically 8001 but can also be 26000 due to port conflicts with other products. • Admin Console port: typically 7001 WildFly or JBoss EAP: • HTTP port: typically 26000. • Admin Console port: typically 9090	HTTP(S)
Oracle RDBMS Server	DB listener port (typically 1521)	TCP (access via SQL*Net or JDBC)
SMTP Mail Server	SMTP port (typically 25)	

The following table provides information about example firewall rules.

Source	Destination	Example Port	Protocol
MarkView User accessing MarkView Home	MarkView Application Server	8001	HTTP
MarkView Bar Code Server	MarkView Application Server	8001	HTTP
	MarkView Database	1521	TCP (SQL*Net)
MarkView Process Mail Gateway	MarkView Application Server	8001	HTTP
	MarkView Database	1521	TCP (SQL*Net)
	MarkView Database Mail Server	25	TCP (SMTP)
MarkView Application Server	MarkView Database	1521	TCP (JDBC-Thin)
	Mail Server	25	TCP (SMTP)
	MarkView Document Server (if not co-located)	8001	HTTP
MarkView Database (using Export Server)	MarkView Application Server (Export Server)	8001	HTTP

Kofax Capture port requirements

These requirements may affect your firewall or other security settings.

Client/Server configuration

- Kofax Capture uses port 2424 for managing licenses and volume usage.
- Port 2424 must be open between the client and server.

The Kofax Capture server uses TCP ports for communication between clients and the server. The standard database configuration (SQL Server 2005 Express Edition) also requires a specific UDP port for name resolution of Named Instances. These ports are:

- UDP port 1434
- TCP ports 1433, 1434, and a dynamically assigned port. Locate the dynamically assigned port in the System Registry:

  HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQLServer\AscentCapture\MSSQLServer\SuperSocketNetLib\Tcp\TcpPort
- Port 1521 for the Oracle database (TCP port used for the MarkView schema).

KCNS remote site configuration

In addition to the Client/Server configuration port requirements, port 2424 must also be open between the KCN Services and the KCN Web Server.

Hosted environments

The MarkView schema and MarkView application server components can reside on a hosted environment. As with any multi-tiered environment, configure your firewall to permit secure traffic between the hosted environment and your site. Review the proposed configuration with your Kofax Practice Manager to ensure that your setup complies with the MarkView suite requirements, including:

- Separate Local Area Networks (LANs) for the data center and users
- Open and documented communication pathways
- Installing MarkView in a hosted environment may require increased coordination.
- Some MarkView system components may reside outside the hosted environment. For example, MarkView may perform SMTP/POP/IMAP communication with a Mail Server located in the client network, rather than the hosted network.

Production and non-production environments

Kofax strongly recommends that you maintain a non-production environment that is a reasonable replication of your production environment. Migrating your production database to a non-production environment gives you an environment for testing new functionality, training new users, or reproducing issues which may be encountered in a production environment. Some customers also host multiple non-production environments (for example, “Development,” “Test,” “QA”) on the same hardware.

Do not co-locate a non-production environment on the production hardware. You must have separate hardware for non-production environments. This is an industry standard practice for enterprise software and ensures minimum production downtime.

See the *Kofax MarkView Installation Guide* for information about using the Migration Utility to migrate your production database to a non-production environment.

Chapter 3

Hardware requirements

Application server requirements

Non-production servers must have a minimum of 4GB of RAM to start the application server with the MarkView applications deployed.

Memory and CPU requirements increase in proportion to the number of concurrent MarkView sessions to be supported. Use the application server native support for multiple server instances as well as clustering to implement scaling with maximum efficiency.

For systems with 25,000 or fewer invoices per month, Kofax recommends 8CPU Cores and 16GB RAM.

MarkView Document Server requirements

MarkView leverages the CCITT Group IV TIFF format at a resolution of 300dpi to store images. The average image size for 8.5 x 11" pages is 50 kilobytes.

Calculate your average volume of invoices and the average number of pages per invoice. Then, multiply the total number of pages by 50 kilobytes to make a rough estimate of the overall storage requirements.

Capture and Output requirements

This section describes requirements for the MarkView capture and output components with a separate dedicated KTM server and these servers co-located:

- MarkView Bar Code Server
- MarkView Import Server
- MarkView Import API
- MarkView Mail Gateway
- Kofax Capture
- Kofax Capture Network Server
- Kofax Import Connector (KIC)

For more information on co-locating these components, see Co-locating.

For the MarkView capture and output components minimum requirements, see the *Technical Specifications* document on the Kofax website.

The minimum values for all other capture and output components at your site will fall into the ranges in this table.

Kofax Import Connector (KIC) requirements

Allocate 4 GB of RAM for KIC production systems.

See the KIC documentation and the *Technical Specifications* document for additional information such as the requirements for Microsoft Office and a Service Account for email processing, and the infrastructure needed to enable image capture with Fax-Over-IP.

End-user systems

This table describes system requirements for end users.

Parameter	Requirement
CPU	multi-core CPU
RAM	2 MB minimum, 4 GB recommended
Hard Disk	100 MB disk space

Monitor recommendations

To maximize the size of the image area in the viewer, deploy dual monitors for MarkView users in Accounts Payable and Purchasing departments. The users can then use one monitor to display the Oracle EBS in landscape mode and one to display MarkView in portrait mode. This setup increases workspace and effectiveness by reducing the distractions associated with repeatedly opening and resizing application windows for MarkView and the ERP. Dual-monitor requirements sometimes include a second video card and drivers that enable users to pivot one monitor to display portrait mode and the other to display in landscape mode.

An alternative to two monitors is a single, high-resolution monitor that is large enough to display the ERP and MarkView interfaces side by side.

Appendix A

Third-party license agreement

BEA Public License Version 2.1

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.
   - "License" shall mean the terms and conditions of this agreement.
   - "Licensor" shall mean BEA Systems, Inc.
   - "Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means

     (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or

     (ii) ownership of fifty percent (50%) or more of the outstanding shares, or

     (iii) beneficial ownership of such entity.
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   - "Object Format" shall mean any form resulting from mechanical transformation or translation of a Source Format, including but not limited to compiled object code, generated documentation, and conversions to other media types.
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