kinsey™

Technical Overview, Server Requirements and Technical Flowcharts

Transaction Auditing, Activity Monitor, Segregation of Duties, Security Auditing, Security Reporting and Security Modeling

Author: Mike Nitka

2021

Kinsey Application Server Overview 3
WebSphere Application Flowchart 4
Transaction Processing 5
Application Storage Flowchart 6
Hardware Requirements 7
Kinsey Application Server (minimum requirements) 7
Server Operating System Options 7
Server Software (to be installed by Kinsey) 7
Miscellaneous Lawson LDAP Configuration 7
Supported Software Versions 8
Connection Requirements (ports required to be open) 8
Lawson & System Users Required (for all Lawson systems to be connected to Kinsey applications) 8
Installed Web Sphere Components 9
Enterprise Applications 9
Service Bus 9
JMS Connection Factory 9
JMS Queues 9
JMS Activation Specification 9
Shared Library 9
Troubleshooting 10
Potential Lawson Problems 10
Kinsey Application Server Monitoring 11

Kinsey Application Server Overview

Kinsey recommends the installation of a virtual server, either Windows or Linux, for hosting the Kinsey applications, Tomcat, Java and either a MySQL or MariaDB database. The database contains 3 types of tables; system parameters, Lawson metadata and client data. The system parameters are required for all Kinsey's applications including our WebSphere application that sends transactions from the Lawson server to the Kinsey application server. This is only the case for customers running S3 Transaction Auditing or Activity Monitor (Listener).

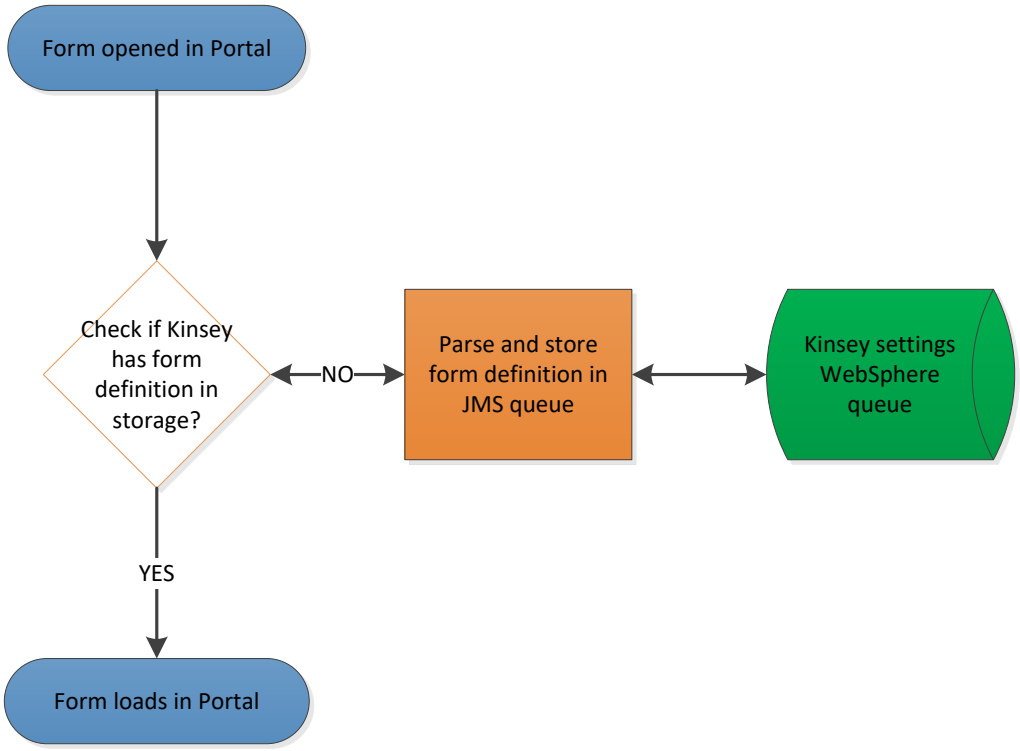
The Lawson metadata is used strictly for Kinsey reports. This includes information about form names and function code descriptions. This data is collected on the initial installation of the application and can be refreshed manually when Lawson applications are updated. Instructions on updating the metadata tables can be found in the Administration Guide.

Depending on the applications purchased the client data can consist of anything from transaction level data to LDAP security settings. However, unless you are running Kinsey's Transaction Auditing application Lawson application data will never be collected. Security (LDAP) data is collected via a scheduled process that generally runs every night. You can also run the processes manually as needed. Instructions on updating the client tables can be found in the Administration Guide. This application will never collect or store user passwords.

Transaction Auditing and Activity Monitor (Listener) data are collected real time. There is not a scheduled task for these processes.

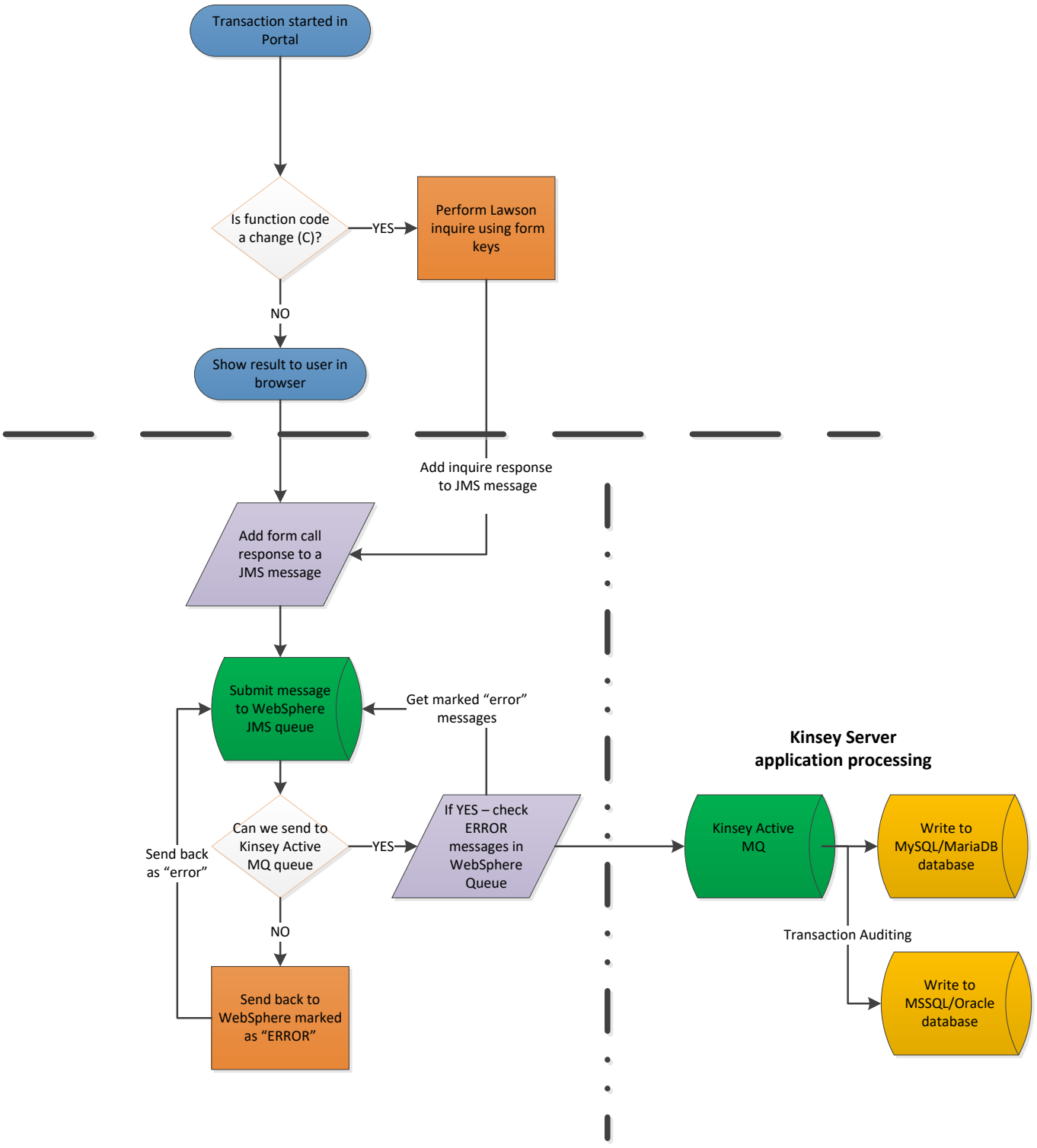
WebSphere Application Flowchart

**Related to Transaction Auditing and Activity Monitoring only*

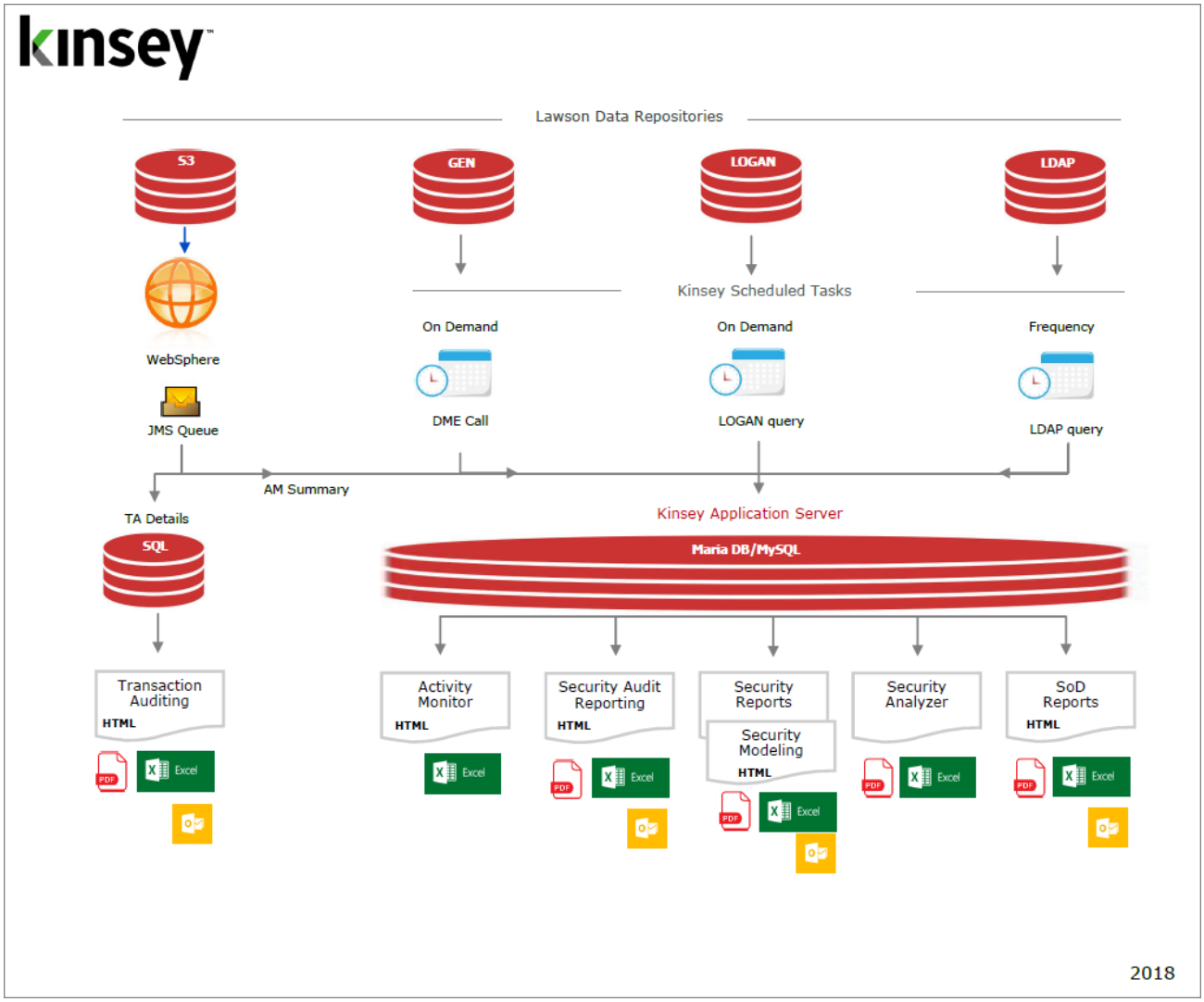


Transaction Processing

**Related to Transaction Auditing and Activity Monitoring only*



Application Storage Flowchart



Hardware Requirements

Kinsey Application Server (minimum requirements)

- 4 Core CPU
- 12 GB RAM
- 50 GB free Hard Drive space (not including OS)

Server Operating System Options

- Windows 2008 or greater
- Linux (kernel version 4.x or above)

Server Software (to be installed by Kinsey)

- MariaDB (v 10.5+) or MySQL (8.0+)
- Tomcat (v 9.x)
- Java (v 14.2)
- Active MQ Artemis

Miscellaneous Lawson LDAP Configuration

If LDAP Paging is **not** used by Lawson, then the LDAP server *MaxPageSize* may need to be adjusted.

This setting is different – depending on the Lawson LDAP server flavor:

- For Microsoft ADAM LDAP Servers
  - MaxPageSize - http://support.microsoft.com/kb/315071
- For Tivoli LDAP Server
  - SetMaxSize - http://www-01.ibm.com/support/docview.wss?uid=swg21285866

The **MaxPageSize** size limit should be set to:
Unlimited **or** *(Lawson user count) x (Lawson possible identity count) x 1.5*

For example: (500 Lawson users) x (5 possible identities) x 1.5 = 3750 is the **MaxPageSize** number to use

Application Software and Connection Requirements

Supported Software Versions

Supported Applications	MS Excel 2007-2019
LS Reporting	Yes
LS Analyzer	Yes
LS Auditing	Yes
LS Modeling	Yes
LS Segregation of Duties	Yes
Activity Monitor (Listener)	Yes
Transaction Auditing	Yes
Landmark Security Reporting	Yes

Connection Requirements (ports required to be open)

From Kinsey server to Lawson environment –

1. Lawson Portal port (port examples: 80, 443)
2. Lawson LDAP port (port examples: 389, 40000)

From Lawson environment to Kinsey –

1. Port – 61617 (Active MQ JMS Server)

Lawson & System Users Required (for all Lawson systems to be connected to Kinsey applications)

Lawson Portal service account with access to:

1. All *GEN* product line tables
2. All token (form) access in application product lines (minimum access "Inquire only" to all tokens)
3. File access to *LSAUDIT* table in *LOGAN* product line
4. File access to *EMPLOYEE* table in primary application product line

Lawson LDAP service account with access to:

1. Read entire LDAP tree structure that Lawson security is stored in (minimum access is "Read-Only")

NOTE: This is not a Lawson Security account, but rather a LDAP structure browser user similar to what you would use to connect with jxplorer or in Lawson's install.cfg.

Lawson Landmark service account with access to:

1. Application administrator and Security Administrator roles

Installed Web Sphere Components

**Related to Transaction Auditing and Activity Monitoring only*

Enterprise Applications

- KKFilter
- KKFilterConfiguration

Service Bus

- KKFilterBus

JMS Connection Factory

- KKQConnectionFactory

JMS Queues

- KKQueue
- KKSettings

JMS Activation Specification

- KKJMSActivationSpec

Shared Library

- KKSharedLib

Troubleshooting

Potential Lawson Problems

Portal screens aren't responding.

Applies to: Transaction Auditing, Activity Monitor (Listener)

It's critical that the Kinsey application server is fully operational prior to starting Lawson. More specifically, Tomcat and MySQL/MariaDB must be running on the Kinsey application server. Kinsey's WebSphere application will try to connect to the Kinsey application server and retrieve configuration settings stored in MySQL/MariaDB. If a connection cannot be made, Lawson's Portal application will not respond correctly.

Note: The Kinsey application server can be restarted anytime without stopping Lawson. When the Kinsey application server is offline you will not be able to collect data from the Lawson server for reporting purposes, but it will not impact Lawson. See the "WebSphere Hangs" section below for exception to this note.

Corrective Steps

Restart Lawson after each step until Lawson Portal is responding

1. Make sure the Kinsey application server is running, if not start the server and validate that you can access the Kinsey portal page.
2. Restart MySQL/MariaDB and Tomcat on the Kinsey application server in that sequence and validate that you can access the Kinsey portal page.
3. If Lawson still won't start then reboot the Kinsey application server and validate that you can access the Kinsey portal page.
4. If Lawson still won't start then deactivate Listener (refer to the installation guide)

If Activity Monitor (Listener) needs to be deactivated please schedule time with Kinsey to evaluate the condition of the Kinsey application server prior to reactivating the application. Possible problems include hardware failure, network configuration changes (i.e. Lawson or application server IP address changes), MySQL/MariaDB corruption, hard drive is full or JAVA update has changed the settings.

WebSphere hangs

Applies to: Transaction Auditing, Activity Monitor (Listener)

The Kinsey application uses the JMS queues to collect and send data to the Kinsey application server. If the Kinsey server is unable to received messages for any reason the JMS queues will hold the transactions until the Kinsey server is back online. This is similar to an email message being stuck in the outbox. If the Kinsey server is left off-line for an extended period of time the JMS queues can fill up and potentially fill up the hard drive where the WebSphere system logs are kept. By default the WebSphere JMS queues will store 500MB of data per node. Kinsey does not change this setting. For instance, if you have 5 nodes on your system you need to make sure you have at least 2.5GB of available hard drive space on the same drive where the WebSphere logs are kept.

Provided you have sufficient room on the drive and the 500MB limit is reached the JMS queue will stop accepting new messages (AM and TA data). This will not cause the system to crash but these transactions will not be collected by the Kinsey application. Once the Kinsey application server is back online any transactions still in the queue will be sent to the Kinsey server.

Corrective Steps:

1. Validate that you have enough room on your log drive to hold 500MB x # of nodes.
2. Manually purge the JMS queue and restart WebSphere

Kinsey Application Server Monitoring

This is a list of items that should be monitored on the Kinsey server:

PORT CHECK:

MySQL/MariaDB – Port 3306

Should return something similar to:

J5.6.20t>♥%h`*K{M☻ Ç§#_75D6"FwG=<mysql_native_password

TOMCAT – Port 80

PING:

Kinsey Server (for network connection check)

For Linux Installations Only

SERVICE CHECK (if possible):

MySQL - (service mysqld status) OR (ps -ef | grep mysql)

Tomcat - (ps -ef | grep tomcat)