

## IMPLEMENTING THE RMEx GUI

This document discusses the system requirements to prepare for the RMEx GUI.

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## Introduction

RMEEx GUI, our *Graphical User Interface* is an innovative product for our Quantrax clients, providing a new and unique web-based environment for the user. User navigation is reduced, allowing the user to work more efficiently. The RMEEx GUI product will change the way you work, letting experienced agents work faster and reducing the learning curve and training time for new hires.

## The RMEEx GUI System Configuration

The installation of the GUI requires WebSphere Application Server (WAS) on the ISeries. Additionally, a separate Windows PC server is needed for the GUI delivery, which we will call the QServer.

**NOTE:** WAS can also run on a PC. Notify Quantrax if this is the direction you would like to take. There will be added costs associated with this set up.

The key configurations that will be needed for the GUI are as follows:

- Setting up VPN access with Quantrax
- Installing the WebSphere Application Server and related required software on the ISeries
- Installing and configuring QServer
- Installing RMEEx GUI

The implementation will take approximately 2 – 3 weeks from the time you order your QServer. Please use the checklist on the next page to guide you through the tasks that need to be completed before the RMEEx GUI installed.

Throughout this document you will be asked to verify and send Quantrax information about your systems.

**IMPORTANT:** As you read each section of this document **fill-out** and **print** the *GUI Implementation Client Info* form to notate the information requested. On the last page is a *GUI Implementation Checklist* for you to confirm all the tasks you need to complete prior to the GUI being installed.

Quantrax must have this document before we can install the RMEEx GUI.

**NOTE:** Directions/AS400 commands are listed in the following pages.

**Click** to open the *GUI Implementation – Client Info* form



## Pricing Information

### □ Graphical User Interface (GUI) Pricing

License	Cost
Up to 10 Users	\$2,000
Up to 25 Users	\$3,000
Up to 50 Users	\$5,000
Up to 75 Users	\$6,000
Up to 100 Users	\$7,500
Over 100 Users (per user)	\$80
Enterprise License	\$50,000

### □ QServer Pricing

If Quantrax builds the Windows Server, we will load and configure all applications ordered by clients prior to delivery for a total cost of \$1,500. Applications loaded after delivery will incur a fee of \$500 per application.

The Windows server can be purchased from **Velocite**. The cost for this server is \$2,790.00. We can order the server from Velocite, even if you would like to install the products.

**NOTE:** For clients who have 50 users or less, a single Windows server will be able to run all of the applications listed.

## VPN Access with Quantrax

Clients are asked to set up a Site-to-Site, SES-256-bit encrypted VPN link between your iSeries and our own systems. This is for the purpose of transmitting modifications or PTF's and to analyze a problem remotely, if required.

Using other client VPN Software such as Cisco, SonicWALL, WatchGuard, etc., running from remote PC's, instead of a Site-to-Site connection VPN, has caused PC and connection issues in the past, resulting in unwanted delays. Direct access has been the most reliable and efficient method, allowing us to avoid unnecessary delays regarding customer support, which we would like to always avoid if possible.

Information needed to establish a Site-to-Site VPN Connection:

**VPN Client information (send to Quantrax):**

- Firewall Type
- Remote IP Address
- Your LAN IP Address
- Your LAN Subnet
- iSeries address
- I-Tel address (if used)

**VPN Quantrax Information (Keep for your setup):**

- Firewall Type:* SonicWALL NSA 2400
- Our Remote FQDN:* vpn.quantrax.com  
(If you cannot use a domain name the IP address is 67.90.175.166)
- Encryption:* AES-256
- Authentication:* SHA1
- Key Lifetime:* 86400
- Shared Secret:* (We will exchange this at a later date)
- Our LAN:* 192.169.0.0
- Our Subnet:* 255.255.255.0

## System Requirments for End User PCs

The minimum requirements for end user PCs to run with RMEx are as follows:

- Minimum requirements for PC Hardware.
- Pentium 4.3.0 or better with 512mb of RAM.

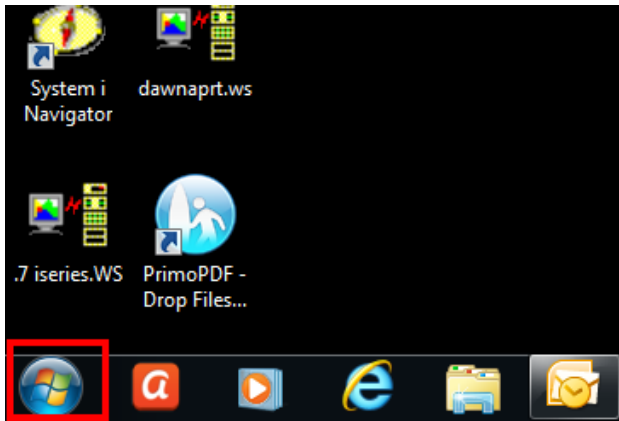
## Setting Up the QServer (Windows Server) for RMEx GUI

The minimum configuration for the QServer is as follows:

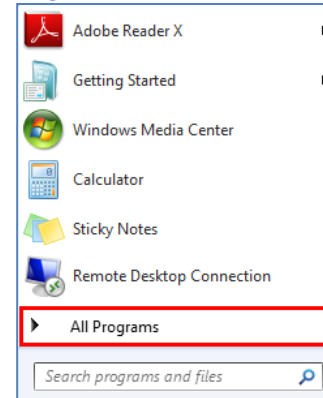
- Intel Xenon processor – 2.0 Ghz
- Windows 2008 server – 64 bit
- 8 GB RAM
- Raid 1
- 2 x 1TB Hard Drives
- Redundant power supply
- 1 x 1 GB Network card
- Minimum of Windows 2008
- Windows updates installed
- Internet Information Services (IIS)  
**NOTE:** IIS comes with Windows 2008
- System iAccess (ODBC drivers)
- .NET 3.5
- ASP.NET (in IIS Web Server)

# How to Find: Verify if iAccess (ODBC drivers) installed on the QServer?

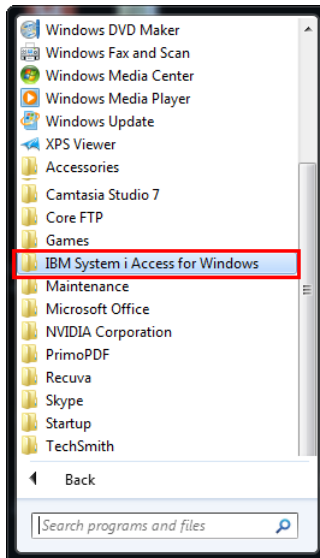
1. On Server from the Desktop, click **Start**



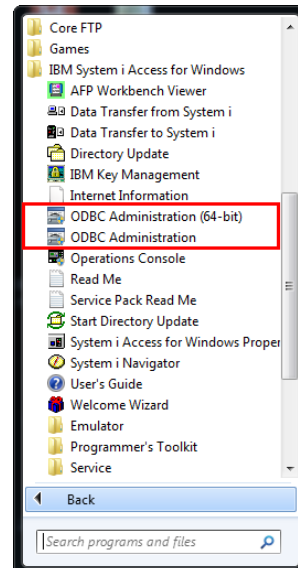
2. Click **All Programs**



3. Click **IBM System iAccess for Windows**



4. **ODBC Administration** items will display if it is installed



## QServer Installation

If Quantrax does not build your QServer, you must configure the server with the specifications provided by Quantrax. Please contact Quantrax for information regarding:


- Installing System iAccess (formerly called Client Access)
- Installing .NET 3.(in Server Manager)
- Registering ASP.NET in the IIS Web Server

# WebSphere Application Server (WAS) for RMEEx GUI

Verify that the minimum configuration for the WAS is as follows:

**NOTE:** AS400 should have IBM Operating System Version 6.1

- WebSphere Application Server (WAS)
  - NOTE:** Free product from IBM (may already be installed)
    - 5733W61 WebSphere Application Server V6.1 for i5/OS
    - 5733W61 WebSphere Application Server V6.1 Express
  - HTTP Admin or 5722DG1 IBM HTTP Server for i5/OS\*
- JAVA
  - JAVA5722JV1 option 6 Java Developer Kit 1.4 (5722JV1-6)
  - JAVA 5722JV1 option 7 Java Developer Kit 5.0 (5722JV1-7)
  - JAVA 5722JV1 option 8 J2SE 5.0 32 bit (5722JV1-8)

- iSeries PTF's are current  (click for list of PTFs)
- RMEEx is the latest version
- IBM HTTP Server is installed

Below are instructions to help you find the information needed to send to Quantrax prior to GUI implementation.

## How to Find: What version of WebSphere Application Server (WAS) running on your iSeries machine?

1. Sign on as QSECOFR and type, go *licpgm* on the command line to see *Licensed Programs*:
2. Take *option 10* from the Work with Licensed Programs screen.

```
MAIN                               System i Main Menu
Select one of the following:
  1. User tasks
  2. Office tasks
  3. General system tasks
  4. Files, libraries, and folders
  5. Programming
  6. Communications
  7. Define or change the system
  8. Problem handling
  9. Display a menu
 10. Information Assistant options
 11. System i Access tasks
 90. Sign off
Selection or command
==> 10 licpgm
F3=Exit  F4=Prompt  F9=Retrieve  F12=Cancel  F13=Info
```

```
LICPGM                               Work with Licensed Programs
Select one of the following:
  Manual Install
    1. Install all
  Preparation
    5. Prepare for install
  Licensed Programs
    10. Display installed licensed programs
    11. Install licensed programs
    12. Delete licensed programs
    13. Save licensed programs
Selection or command
==>
```

3. Roll down to see if WebSphere was installed. Remain on this screen for the next step.

4. Press **F11** (Display Release) to see version details. Our version shows **V6R1M0**. This is the minimum version you will need to have installed.

Remain on this screen for next section (use for **JAVA** options).

```

Display Installed Licensed Programs
Licensed Program Installed Status Description
5761WDS *COMPATIBLE System/36 Compatible COBOL
5761WDS *COMPATIBLE System/38 Compatible COBOL
5761WDS *COMPATIBLE OPM COBOL
5761WDS *COMPATIBLE ILE COBOL *PRV Compiler
5761WDS *COMPATIBLE ILE C
5761WDS *COMPATIBLE ILE C++
5761WDS *COMPATIBLE IXLC for C/C++
5761WDS *COMPATIBLE Workstation Tools - Base
5733W61 *INSTALLED WebSphere Application Server V6.1 for i5/OS
5733W61 *INSTALLED WebSphere Application Server V6.1 Express
5761XE1 *COMPATIBLE IBM System i Access for Windows
5761XH2 *COMPATIBLE IBM System i Access for Web
5761XW1 *COMPATIBLE IBM System i Access Family
5761XW1 *COMPATIBLE System i Access Enablement Support

Press Enter to continue.
F3=Exit F11=Display release F12=Cancel F19=Display trademarks

```

```

Display Installed Licensed Programs
Licensed Program Installed Release Description
5761WDS V6R1M0 System/36 Compatible COBOL
5761WDS V6R1M0 System/38 Compatible COBOL
5761WDS V6R1M0 OPM COBOL
5761WDS V6R1M0 ILE COBOL *PRV Compiler
5761WDS V6R1M0 ILE C
5761WDS V6R1M0 ILE C++
5761WDS V6R1M0 IXLC for C/C++
5761WDS V6R1M0 Workstation Tools - Base
5733W61 V6R1M0 WebSphere Application Server V6.1 for i5/OS
5733W61 V6R1M0 WebSphere Application Server V6.1 Express
5761XE1 V6R1M0 IBM System i Access for Windows
5761XH2 V6R1M0 IBM System i Access for Web
5761XW1 V6R1M0 IBM System i Access Family
5761XW1 V6R1M0 System i Access Enablement Support

Press Enter to continue.
F3=Exit F11=Display option F12=Cancel F19=Display trademarks

```

## How to Find: JAVA Product Options 6, 7 & 8 needs to be installed as shown below (5722JV1-6 5722JV1-7 5722JV1-8)

5. From **Licensed Programs PG-UP** to see if **JAVA** is installed:

```

Display Installed Licensed Programs
Licensed Program Product Option Description
5722BZ1 *BASE IBM Business Solutions
5722DG1 *BASE IBM HTTP Server for i5/OS
5722DG1 1 Triggered Cache Manager
5722JC1 *BASE IBM Toolbox for Java
5722JS1 *BASE IBM Advanced Job Scheduler for i5/OS
5722JV1 *BASE IBM Developer Kit for Java
5722JV1 5 Java Developer Kit 1.3
5722JV1 6 Java Developer Kit 1.4
5722JV1 7 Java Developer Kit 5.0
5722JV1 8 J2SE 5.0 32 bit
5722OU1 *BASE IBM Query for iSeries
5722ST1 *BASE DB2 Query Mgr and SQL DevKit
5722TC1 *BASE IBM TCP/IP Connectivity Utilities for i5/OS
5722WDS *BASE WDS for iSeries

Press Enter to continue.
F3=Exit F11=Display status F12=Cancel F19=Display trademarks

```



## How to Find: What is your admin console IP address (the IP address of your iSeries – machine where WAS is installed)?

1. Type *netstat* on a command line and enter. The following screen will be presented. (You need to use the ADMIN user id/password e.g., QSECOFR)
2. Select *option #1 Work with TCP/IP interface status*.

```
MAIN I5/OS Main Menu System: S10E986C
Select one of the following:
1. User tasks
2. Office tasks
3. General system tasks
4. Files, libraries, and folders
5. Programming
6. Communications
7. Define or change the system
8. Problem handling
9. Display a menu
10. Information Assistant options
11. iSeries Access tasks
90. Sign off
Selection or command
==> netstat
```

```
Work with TCP/IP Network Status
Select one of the following:
1. Work with TCP/IP interface status
2. Display TCP/IP route information
3. Work with TCP/IP connection status
4. Work with IPv6 interface status
5. Display IPv6 route information
6. Work with IPv6 connection status
Selection or command
==>
```

3. Now you will see the IP address of the iSeries where you installed the WAS.

```
Work with TCP/IP Interface Status System:
Type options, press Enter.
5=Display details 8=Display associated routes 9=Start 10=End
12=Work with configuration status 14=Display multicast groups
Internet Network Line Interface
Opt Address Address Description Status
1 127.0.0.1 127.0.0.0 *LOOPBACK Active
2 192.169.0.7 192.169.0.0 ETHLINO1 Active
```

## How to Find: Verify that the HTTP server for WAS is running

1. Type **WRKACTJOB** on command line.

2. The status of the HTTP server under **QHTTPSVR** sub system will display as shown below if active. Once these steps are answered/verified we can configure the WAS server and proceed.

```
MAIN                i5/OS Main Menu                System: S10E9B6C
Select one of the following:
1. User tasks
2. Office tasks
3. General system tasks
4. Files, libraries, and folders
5. Programming
6. Communications
7. Define or change the system
8. Problem handling
9. Display a menu
10. Information Assistant options
11. iSeries Access tasks
90. Sign off
Selection or command
==> wrkactjob
F3=Exit  F4=Prompt  F9=Retrieve  F12=Cancel  F13=Information Assistant
F23=Set initial menu
```

```
Work with Active Jobs                S10E9B6C
CPU %: 2.1  Elapsed time: 00:56:15  Active jobs: 432
01/25/11  07:38:37
Type options, press Enter:
2=Change  3=Hold  4=End  5=Work with  6=Release  7=Display message
8=Work with spooled files  13=Disconnect ...
Current
Opt Subsystem/Job User Type CPU % Function Status
---
ADMIN QTMHTTP BCH .0 PGM-QZHBMAIN SIGH
ADMIN QTMHTTP BCH .0 PGM-QZSRLOG SIGH
ADMIN QTMHTTP BCH .0 PGM-OLMISVR JVAH
ADMIN QTMHTTP BCH .0 PGM-QZSRHTTP SIGH
ADMIN BUDDHIKA BCH .0 PGM-QYUNLANG TIMH
ADMIN INTGUI2 BCH .0 PGM-QYUNLANG TIMH
Parameters or command
==>
F3=Exit  F6=Refresh  F7=Find  F10=Restart statistics
```

## How to Find: Verify that the current PTFs are installed on AS400

1. On Command Line type **go licpgm**

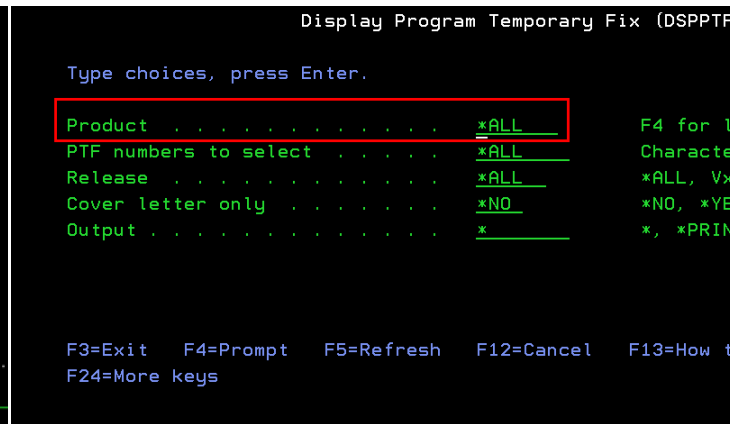
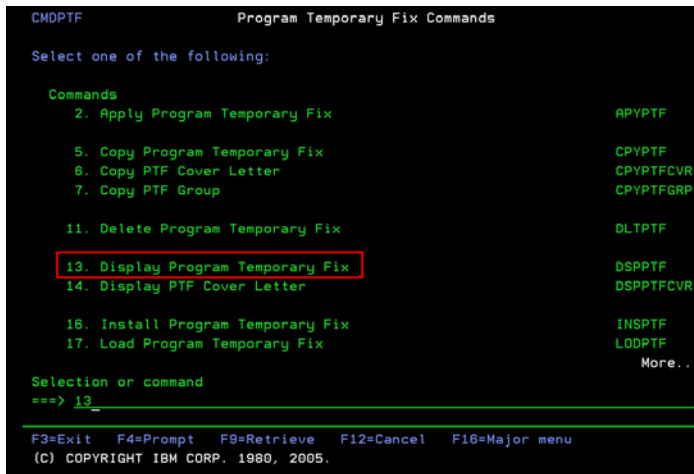
2. **Page Down** to Related Commands menu and select **option 71-Program temporary fix commands**

```
MAIN                i5/OS Main Menu
Select one of the following:
1. User tasks
2. Office tasks
3. General system tasks
4. Files, libraries, and folders
5. Programming
6. Communications
7. Define or change the system
8. Problem handling
9. Display a menu
10. Information Assistant options
11. iSeries Access tasks
90. Sign off
Selection or command
==> go licpgm
F3=Exit  F4=Prompt  F9=Retrieve  F12=Cancel
F23=Set initial menu
```

```
LICPGM                Work with Licensed Programs
Select one of the following:
Completion Status
50. Display log for messages
Related Commands
70. Save and restore commands
71. Program temporary fix commands
72. Licensed commands
Selection or command
==> 71
F3=Exit  F4=Prompt  F9=Retrieve  F12=Cancel  F13=In
F16=System Main menu
```

3. **Select option 13-Display Program Temporary Fix**

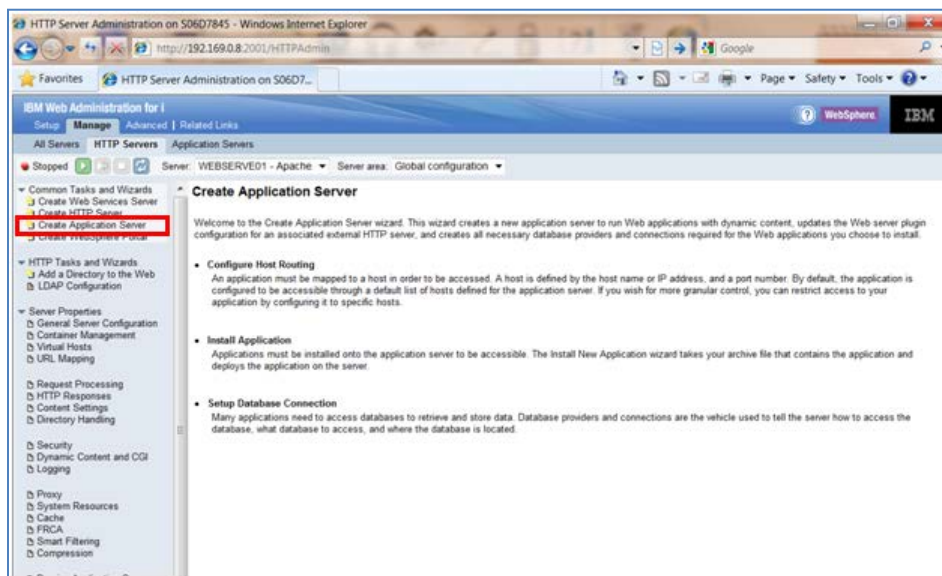
4. **Press Enter key to see all PTF's**



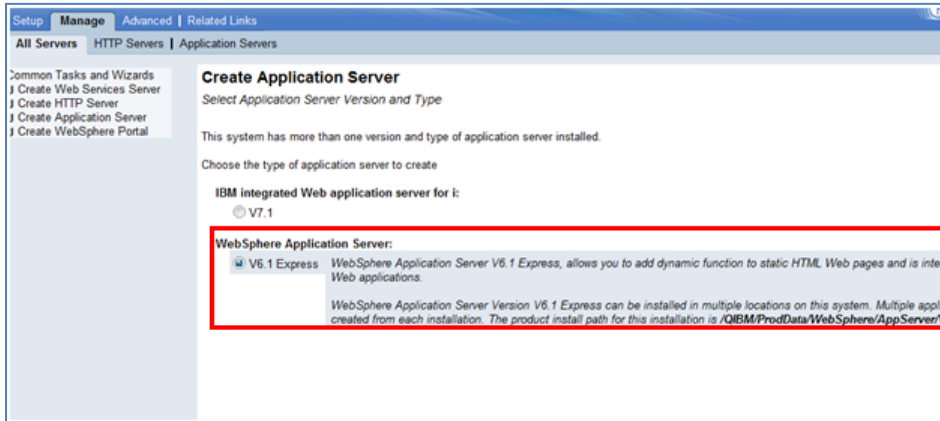
## Creating a WAS Instance

**NOTE:** We also recommend that clients use Internet Explorer to open a GUI session. We currently require Internet Explorer 6.0 with SP1 or later to run the RMEEx GUI.

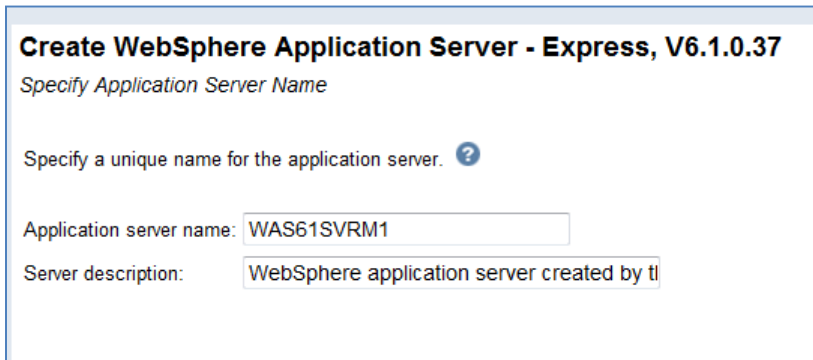
1. Select **Create Application server** on the left hand side



2. Select **V6.1 Express** and click next



3. Type in the **unique name**



4. For *HTTP server type*, select **Do not associate an external HTTP server with this application**



5. For the *Create WebSphere Application Server port range*:
  - a. If this is the first instance you are creating take the default
  - b. If this is **not** the first instance, enter the first number for the beginning of the next range

**Create WebSphere Application Server - Express, V6.1.0.37**  
*Specify Internal Ports Used by the Application Server*

The application server uses several internal services such as internal HTTP transport service, S... other services to perform its processing. In order for these services to be configured, you must... system. Specify the first TCP port number in the range and the wizard will assign the ports that... the first port in the range, then ports 10000 to 10014 will be configured.

First port in range:  ?

6. Uncheck **Default Applications** as shown below

**Create WebSphere Application Server - Express, V6.1.0.37**  
*Select Sample Applications*

You may optionally install sample applications into this application server. Choose the applications you want to install.

Select which sample applications to install:

- Query - Provides dynamic query service for EJB client applications. This service is accessible only to applications.
- Default Applications - A set of samples, including SnoopServlet, that may be used to verify your application.

7. Do not configure identity tokens, click next to move ahead

**Create WebSphere Application Server - Express, V6.1.0.37**  
*Configure Identity Token SSO for Web to Access IBM i*

Identity Token SSO is a mechanism where a single user signon action permits access to multiple IBM... back-end applications without having to prompt for additional authentication. Identity Tokens are important... relationships between Web users and IBM i user profiles. The application server creates a token for...

**Note:** EIM is hosted on an LDAP server that must be configured and running before continuing.

Configure Identity Tokens: ?

- Do not configure Identity Tokens
- Configure Identity Tokens

8. This is the final screen showing the details of the options you selected. **Print this screen for your records and send Quantrax a copy** of this screen so we can begin the GUI install. This is the **WAS Instance Information Sheet**.

(NOTE: Based on the screen below if another instance needed to be created the starting port number could be 10015)

**Create WebSphere Application Server - Express, V6.1.0.37**

*Summary*

When you click **Finish** this WebSphere application server will be created.

**Application Server**

WAS version: 6.1.0.37 Express  
Application server name: WAS61SVRM1  
Server description: WebSphere application server created by the Create Application Server wizard.  
Internal port range: 10000 - 10014  
Virtual host: default\_host  
Profile root: /QIBM/UserData/WebSphere/AppServer/V61/Express/profiles  
External HTTP server association: None  
Server URL: http://S06D7845:10000  
Business applications: None  
Sample applications:

Application name	URL to access application
query	Used by EJB client applications

Note: The application server must be started before any requests can be processed.

## Installing RMEEx GUI

Quantrax will install the RMEEx GUI once all the tasks on the RMEEx GUI Checklist has been completed.

## Installing Microsoft Silverlight

After RMEEx GUI has been installed, Silverlight must be installed on each user's PC for the RMEEx GUI to display. The first time users logon to GUI, the system will prompt them to download and install Silverlight when they are in the Account Details screen.

## Troubleshooting

Each desktop must have the ability to reach the AS400 and QServer.

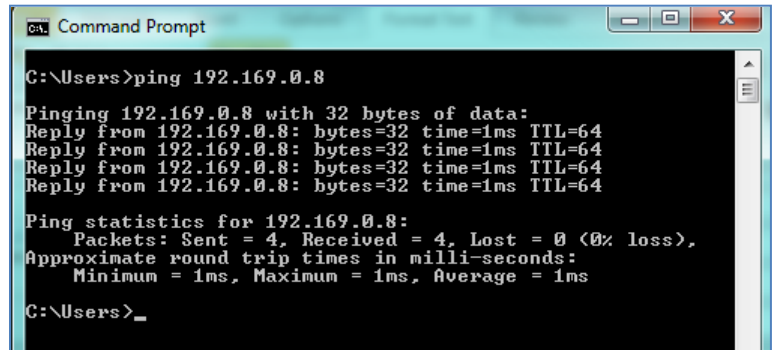
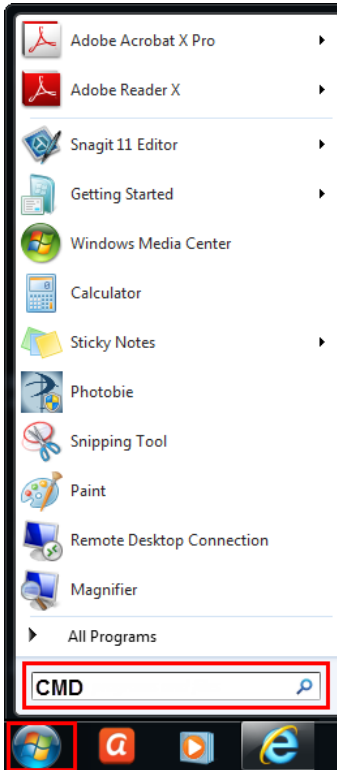
- After installing the GUI if you cannot see it on the PC, *ping* the AS400 server

- After installing the GUI if you cannot see the *Notes* section in *Account Detail* screen, ping the QServer

To *ping* the AS400 or the PC Server to make sure the PC can reach them:

**NOTE:** You need the IP address for the server you want to reach. In this example we will use the IP address of **192.169.0.8**

1. In Windows, click on the **START** button and in the dialog box type **CMD** and press **Enter**
2. At DOS prompt type, **PING 192.169.0.8** and press **Enter**



After you hit **Enter** a "*Reply from*" message means you can reach that server.

If you get a message that states "*Request timed out*", they you are *not* able to reach that server