Installation Guide

QAD Mobile Field Service

70-3246-3.5
QAD Mobile Field Service 3.5
March 2014

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Contents

QAD Mobile Field Service Install Guide Change Summary v

Chapter 1 Overview 1

QAD Mobile Field Service Deployment 2
System Requirements 3
QAD Enterprise Applications Database Server 3
Synchronization Server 3
Client Devices (Laptops) 4
Network Requirements 4

Chapter 2 Installing QAD Mobile FS 5

Installation Overview 6
Updating QAD Enterprise Applications 6
Updating QAD Enterprise Applications Databases 6
Loading Procedure and Field Help 8
Installing and Configuring QXtend Inbound 8
Installing and Configuring QXtend Outbound 9
Installing Tomcat Synchronization Server 13
Installing Client Components 14

Chapter 3 Setting Up QAD Mobile FS 15

Setting Up SSM Data in QAD Enterprise Applications 16
Setting Up QAD Mobile FS User Accounts 16
Configuring QAD Mobile FS Control Settings 19
Suppressing QAD Mobile API Warnings in QAD Enterprise Applications 21
Configuring Mobile Field Service Workspaces 22
Setting Up Client Devices 24
Performing Initial Full Sync 26
Recreating the Device Database 26
Understanding Synchronized Data 27
Customizing Field Service Reports 28

Product Information Resources 29

Index. 31

QAD Mobile Field Service Install Guide Change Summary

The following table summarizes significant differences between this document and previous versions.

Date/Version	Description	Reference
March 2014/3.5	Updated the Software Prerequisites	page 3
September 2013/3.4	Updated the Software Prerequisites	page 3
	Updated the steps for installing and configuring QXO	page 9
	Updated the steps for installing Tomcat synchronization server	page 13
	Updated the default directories for FSR template location and software update location	page 23
March 2013/3.3	Changed the .NET Framework version from 3.5 to 4	Throughout
	Updated the Software Prerequisites	page 3
September 2012/3.2	Updated the Software Prerequisites	page 3
	Removed RegisterAddressChange from the profiles	page 11
	Removed QADMobileAddress from the business objects	page 12
	Removed the options for the user to choose how to apply the new sync settings after changing the sync settings Added FSR Required option in Configuring QAD Mobile FS Control Settings	page 21
	Updated the locations for the FSR templates, the MobileFS reports, the QADMobileFS database, and the software update	--
April 2012 (Rev)/3.1	Added Tomcat Web server requirements	page 3
	Added Tomcat deployment recommendations	page 4
	Added an option of deploying the synchronization web application to the existing .NET Tomcat	page 13
	Changed the .NET Framework version from 2.0 to 3.5	page 14
	Removed user ID and password from the workspace configuration utility	page 22
March 2012/3.1	Separated previous *Technical Reference* into separate *Installation Guide* and *User Guide* volumes	--
	Removed system requirements, installation, and configuration instructions for personal digital assistant (PDA) devices	--
	Removed OneBridge installation and configuration instructions	--
	Updated the QAD Mobile FS deployment diagram and instructions	page 2
	Added installation instructions for the Tomcat synchronization server	page 13
	Updated the instructions on setting up QAD Mobile FS user accounts	page 16

Date/Version	Description	Reference
	Added instructions on configuring QAD Mobile FS workspaces	page 22
	Updated the instructions on customizing field service reports	page 28

Chapter 1

Overview

QAD Mobile Field Service is a set of programs to enable engineers and technicians to review and create data in the field using laptops. This chapter summarizes the product deployment and system requirements.

QAD Mobile Field Service Deployment 2
Explains how QAD Mobile FS is deployed

System Requirements 3
Describes hardware and software requirements for the QAD Mobile FS server and clients

QAD Mobile Field Service Deployment

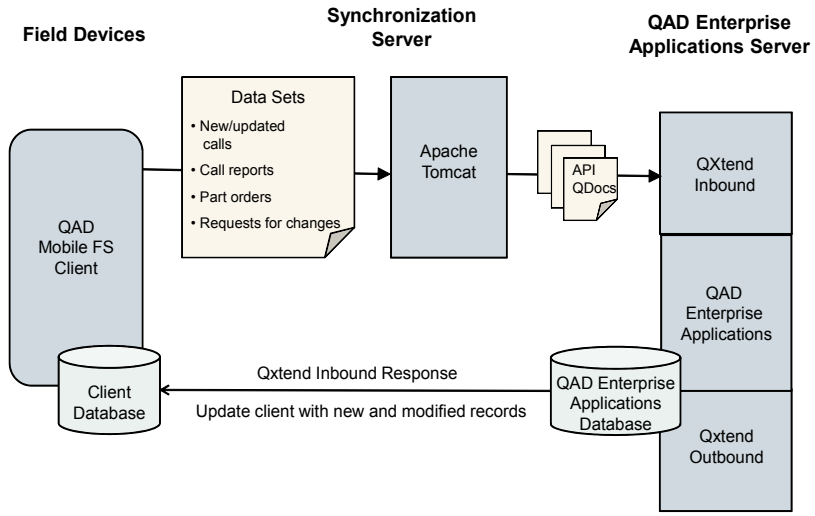
QAD Mobile FS assumes a production installation of QAD Enterprise Applications and both QAD QXtend Inbound (QXI) and QAD QXtend Outbound (QXO). For details on these installations, see the installation guide for your QAD Enterprise Applications version and *Installation Guide: QAD QXtend.* You must also install Apache Tomcat as a means of synchronizing programs and data between the host and the clients to ensure the currency of the mobile application.

QAD Mobile FS is a set of field service programs installed to field devices. It requires the QAD Enterprise Applications Service/Support Management module (SSM) as the base application. SSM serves as the source of QAD Mobile FS data and the target for QAD Mobile FS updates.

Between the QAD Mobile FS field devices and the QAD SSM server, there is a synchronization server. The synchronization server delivers the QAD Mobile FS application and application updates to the field devices. It also synchronizes the QAD Enterprise Applications server and the field device data. It is recommended that the synchronization server be installed on the same machine as the QAD Enterprise Applications server.

The software required to synchronize the data are Apache Tomcat, QXI, and QXO. On the client, QAD Mobile FS is required.

Fig. 1.1
QAD Mobile FS Architecture



During a synchronization, the QAD Mobile FS client on the device first generates data to be sent to QAD Enterprise Applications of any new or changed calls, visits, call reports, or parts orders. The data is put into datasets, which are passed through QXI Service API. QXI then updates the appropriate tables in the QAD Enterprise Applications database with changes made on the device.

QXO is used to record the changes made to related QAD Enterprise Applications tables. The changes—Add, Modify, and Delete—need to be applied in the client, added to output datasets, and sent out through QXI Service API.

Apache Tomcat serves as the synchronization server that provides connectivity and synchronization between data servers—such as QAD SSM—and laptops. The Tomcat server provides the following services for QAD Mobile FS:

- Establishing connectivity between devices and the SSM server
- Authenticating users during synchronization

QAD Mobile FS client is installed on the laptop. The components required to create the client database are included with the QAD Mobile FS client.

System Requirements

Before installing QAD Mobile FS, install Progress, QAD Enterprise Applications, and QAD QXI. The Progress install for each platform may include UNIX kernel changes and patches.

QAD Enterprise Applications Database Server

The database server contains Progress and QAD Enterprise Applications. The requirements listed are only for the incremental QAD Mobile FS requirements beyond the requirements of Progress and QAD Enterprise Applications.

Hardware Requirements

- 1 MB of free disk space
- High-speed 100-Mbps network card
- ISO9660 CD-ROM
- two disk controller channels (minimum)

Software Prerequisites

- Operating system patches
- OpenEdge 10.1C03 or later
- Compatible version of QAD Enterprise Applications: 2014 EE
- QAD QXtend (QXI and QXO) version 1.7 or later.

Upgrading QAD Enterprise Applications after Installing QAD Mobile

If you decide to upgrade your QAD Enterprise Applications after installing QAD Mobile, you will need to preserve the data setup in the QAD Enterprise Applications database. Before beginning such an upgrade, contact QAD Support for specific instructions relevant to your implementation.

Synchronization Server

Apache Tomcat serves as the synchronization server and can be installed on the QAD Enterprise Applications server or on a separate machine.

Tomcat Web Server Requirements

- 2.4 GHz Dual Core system with 2 GB RAM at 133 MHz minimum
- 200 GB hard drive storage recommended
- TCP/IP LAN connection

Deployment Recommendations

- Installation in the DMZ to support client connections from outside the firewall
- Implementation of an SSL Certificate to provide for encrypted communication of data between clients and web server via HTTPS
- Server-class machine that supports industry standards for hard drive redundancy

Client Devices (Laptops)

Hardware Requirements

- Intel Pentium (or compatible) processor
- Minimum OS required disk space and memory

The QAD Mobile FS application and database require 3–4 MB in storage and an additional 3–4 MB in resources when executing.

Software Requirements

- Windows XP SP1 or higher, Windows 7, Windows 8
- QAD Mobile FS client
- Microsoft Access (run-time version included with OS install)
- Microsoft .NET Framework 4
- Microsoft Visual J# 2.0 Second Edition

Network Requirements

Set up your network to support Progress networking specifications. See the *Progress Networking Guide* for details. QAD Mobile FS requires 10 Megabit (Mb) Ethernet or faster network.

Chapter 2

Installing QAD Mobile FS

This chapter describes the installation of QAD Mobile FS components required to connect and synchronize field devices with QAD SSM.

Installation Overview 6
Outlines the QAD Mobile FS installation steps.

Updating QAD Enterprise Applications 6
Explains how to configure QAD Enterprise Applications for use with QAD Mobile FS.

Installing and Configuring QXtend Inbound 8
Describes the procedure for installing and configuring QXtend Inbound.

Installing and Configuring QXtend Outbound 9
Describes the procedure for installing and configuring QXtend Outbound.

Installing Tomcat Synchronization Server 13
Describes how to install Tomcat synchronization server.

Installing Client Components 14
Explains how to install client components.

Installation Overview

This chapter guides you through the steps required to install and configure QAD Mobile FS. After completing these steps, set up data required by the application before you can sync the devices and begin to use the product. These additional steps are described in Chapter 3.

This chapter covers the following steps:

1. Update QAD Enterprise Applications by loading schema and data files, compiling code, and loading field help.
2. Configure QXtend Inbound to recognize the QDocs needed to pass information from the device to QAD Enterprise Applications.
3. Configure QXtend Outbound to log changes made to related QAD Enterprise Applications tables.
4. Install Tomcat synchronization server.
5. Install the required components on the client devices.

Note If QAD QXtend has been installed before, reinstall the QXtend Inbound Adapter and QXtend Outbound Adapter.

Updating QAD Enterprise Applications

Complete the following two steps to configure QAD Enterprise Applications for use with QAD Mobile FS:

- Load schema and data files and compile code.
- Load field help for the new QAD Enterprise Applications program.

Updating QAD Enterprise Applications Databases

1. Stop all servers, including Tomcat Webapps, WebSpeed brokers, and QAD Enterprise Applications database servers.
2. Copy all the files from the `\Server\SSM\`*`QADERPVer`* directory on the QAD Mobile FS installation media into the *`QADERPInstallDir`*`\ssmpatch` directory.
3. Run MFG/UTIL and choose Database|Load Database Schema to load the following schemas into the QAD Enterprise Applications databases.

   Note Use QDTAdmin instead of MFG/UTIL if you are running QAD EE. It applies to all subsequent steps.

   - Load *`QADERPInstallDir`*`\ssmpatch\db\ssmpatch.df` and *`QADERPInstallDir`*`\ssmpatch\db\mfstriggers.df` into the production database.
   - Load *`QADERPInstallDir`*`\ssmpatch\db\ssmpatch.df` and *`QADERPInstallDir`*`\ssmpatch\db\mfstriggers.df` into the empty database.
4. Perform this step only if you are using QAD 2009 SE or QAD 2009 EE.

   Run *`QADERPInstallDir`*`/ssmpatch/xrc/utssmbrw.p` from a Progress editor that is connected to both the main production database and admin database.

5 In MFG/UTIL, choose Database|Load System Data into Database to load data into the QAD Enterprise Applications databases.

   a Load data from *QADERPInstallDir*\ssmpatch\data into the production database. Accept default-selected tables in the process.

   b Load data from *QADERPInstallDir*\ssmpatch\data into the administration database. Accept default-selected tables in the process.

   c If you have implemented additional languages, load data from *QADERPInstallDir*\ssmpatch\data*LanguageCode* into the production database. Accept default-selected tables in the process.

6 Perform a full system compile. The Compile PROPATH should include the *QADERPInstallDir*\ssmpatch\xrc directory before the *QADERPInstallDir*\xrc directory.

7 Compile SSM bolt-on code.

   a Choose Programs|Generate Compile List File.

   b Use *QADERPInstallDir*\ssmpatch\xrc as the Source Directory.

   c Choose Programs|Compile Procedures.

   d Enter the compile list file from the previous step. For QAD SE, use the following PROPATH:

   QXOAdapterInstallDir,*QADERPInstallDir*\ssmpatch\xrc,*QADERPInstallDir*\xrc

   For QAD EE, use the following PROPATH:

   QXOAdapterInstallDir,*QADERPInstallDir*\ssmpatch\xrc,*QADERPInstallDir*\xrc,*QXOAdapterInstallDir*\src

   Specify *QADERPInstallDir*\ssmpatch as the destination directory.

   e If you have implemented additional languages, repeat the compile process using the appropriate language and language-specific compile database set.

8 Compile QAD Enterprise Applications Desktop code. In MFG/UTIL, choose UI|Build UI Configuration and add *QADERPInstallDir*\ssmpatch\xrc,*QXOAdapterInstallDir* in front of the PROPATH.

9 Edit the PROPATH in all client scripts to add *QADERPInstallDir*\ssmpatch,*QXOAdapterInstallDir* in front of the PROPATH.

10 Add a database connection for qxevents (alias_qxevents as logical name) in the server startup/shutdown scripts and .pf files.

11 Modify the ubroker.properties file.

- If you use QAD .NET UI, add *QADERPInstallDir*\ssmpatch,*QXOAdatperInstallDir* in front of the PROPATH. Also, add `srvrStartupProc=mfaistrt.p` and `srvrStartupProcParam=qra` to the qadui AppServer.
- If you do not use QAD .NET UI, manually create an AppServer entry. Use the following example as a guide:

```
[UBroker.AS.qadui]
   srvrLogFile=QADERPInstallDir/qadui/qadui.server.log
   brokerLogFile=QADERPInstallDir/qadui/qadui.broker.log
   portNumber=39795
   initialSrvrInstance=2
   maxSrvrInstance=5
   operatingMode=Stateless
   autoTrimTimeout=600
   appserviceNameList=qadui
   controllingNameServer=NS1
   environment=qadui
   uuid=2993d17cfa993b70:-2eefabaf:11c88180435:-8000
   description=AppServer Transaction server for qadui
   srvrStartupParam=-pf QADERPInstallDir/qadui.pf (include the qxevents db with
logical name alias_qxevents and the qxo db with logical name qxodb)
   PROPATH=
QXOAdapterInstallDir:QADERPInstallDir/ssmpatch:QADERPInstallDir:QADERPInstallDir/s
smpatch/qra.pl:.
   srvrStartupProc=mfaistrt.p
   srvrStartupProcParam=qra
```

12 Restart all QAD Enterprise Applications database servers, WebSpeed brokers, AppServers, and Tomcat Webapps.

13 Run *QADERPInstallDir*\ssmpatch\xrc\utssmse.p from a Progress editor that is connected to the main production database and admin database to perform data conversion.

Note Do not perform this step if you are using QAD 2009 SE, QAD 2009 EE, or later.

Loading Procedure and Field Help

1 Log in to QAD Enterprise Applications.

2 Go to Field Help Load (36.4.19).

3 Specify US as the language and *QADERPInstallDir*\ssmpatch\data\fieldhlp.fhd as the field help load file.

4 Press Go.

Installing and Configuring QXtend Inbound

1 Install QXI following the QXI installation instructions in *Installation Guide: QAD QXtend*.

2 Access the QXtend Manager at:

`http://hostname:tomcat_port/qxi/`

3 Suspend QXI.

4 Create an SI API connection pool to connect to the qadui AppServer.

5 Create a receiver for QADSE or QADEE depending on which QAD Enterprise Applications version you are using.

6 Create the following custom schemas and link them to the receiver you created. The schema files can be found under `\Server\QXI\schema\eB2_1` on the QAD Mobile Field Service installation media. The XML Syntax for each schema should be QDoc 1.1 and the Route should be SI API Adapter.

Request Path	Response Path	Procedure	Method Name
getAck-eB2_1.xsd		fsmfsent.p	getAck
getCallData-eB2_1.xsd	getCallDataResponse-eB2_1.xsd	fsmcaent.p	getCallData
getDomains-eB2_1.xsd	getDomainsResponse-eB2_1.xsd	fsmfsent.p	getDomains
getEndUserData-eB2_1.xsd	getEndUserDataResponse-eB2_1.xsd	fsmeuent.p	getEndUserData
getInventoryData-eB2_1.xsd	getInventoryDataResponse-eB2_1.xsd	fsmcrent.p	getInventoryData
getMOData-eB2_1.xsd	getMODataResponse-eB2_1.xsd	fsmmoent.p	getMOData
getMFSUsers-eB2_1.xsd	getMFSUsersResponse-eB2_1.xsd	fsmfsent.p	getMFSUsers
getSSMData-eB2_1.xsd	getSSMDataResponse-eB2_1.xsd	fsmfsent.p	getSSMData
updateCallData-eB2_1.xsd		fsmcaent.p	updateCallData
updateCARData-eB2_1.xsd		fsmcrent.p	updateCARData
updateMOData-eB2_1.xsd		fsmmoent.p	updateMOData
updateSyncTime-eB2_1.xsd		fsmfsent.p	updateSyncTime
registerDataChange-eB2_1.xsd		fsmfsent.p	registerDataChange

7 Restart the Tomcat server.

Installing and Configuring QXtend Outbound

1 Install QAD QXO following the QAD QXO installation instructions in *Installation Guide: QAD QXtend*.

2 Do the following:

a Back up `compile.lst` in *`QXOAppServerInstallDir`*`\install`.

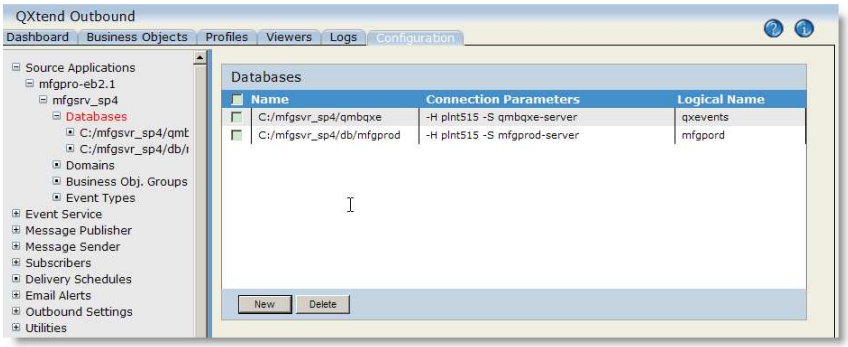
b Modify *`QXOAppServerInstallDir`*`\install\compile.sh` to reflect the correct DLC and QXOSRV values.

c Run *`QXOAppServerInstallDir`*`\install\compile.sh` to compile the patch.

d Restart the Tomcat Server.

3 Create a source application that is appropriate for your QAD core product; for example, create a QADSE source application for QAD 2008 SE, or a QADEE source application for QAD 2009 EE.

Fig. 2.1
Create Source Application

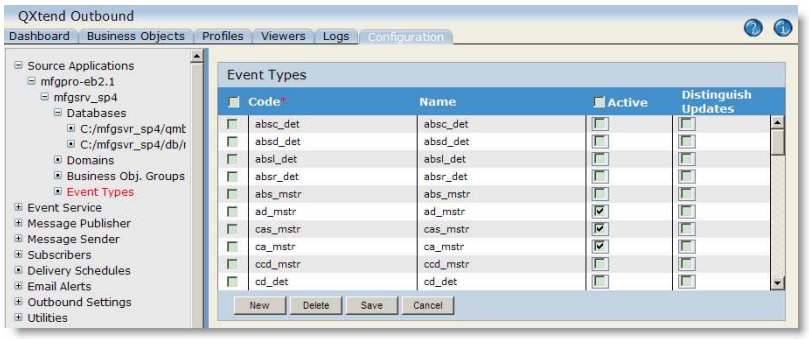


4 Copy `Server\QXO\events\event.xml` to *`QXOAppServerInstallDir`*`\events\`*`SrcAppType`*

where *`SrcAppType`* is the source application type; for example, `QADSE` for QAD 2008 SE and `QADEE` for QAD 2011 EE.

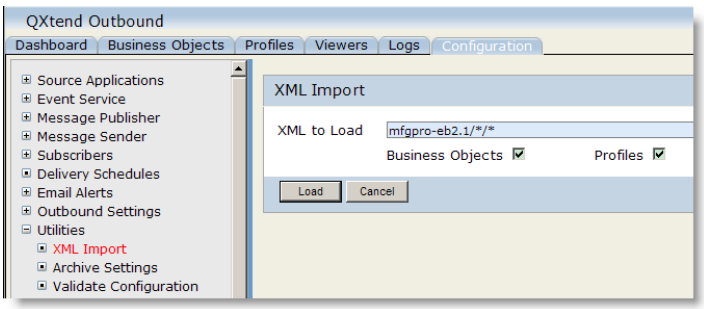
5 Click the Import button and select the Active check box for all the event types.

Fig. 2.2
Add Event Types



6 In QXO, select Utilities|XML Import. Enter *`SrcAppType`*`/QADMobile*/*` as the XML to Load and load both business objects and profiles.

Fig. 2.3
Import XML



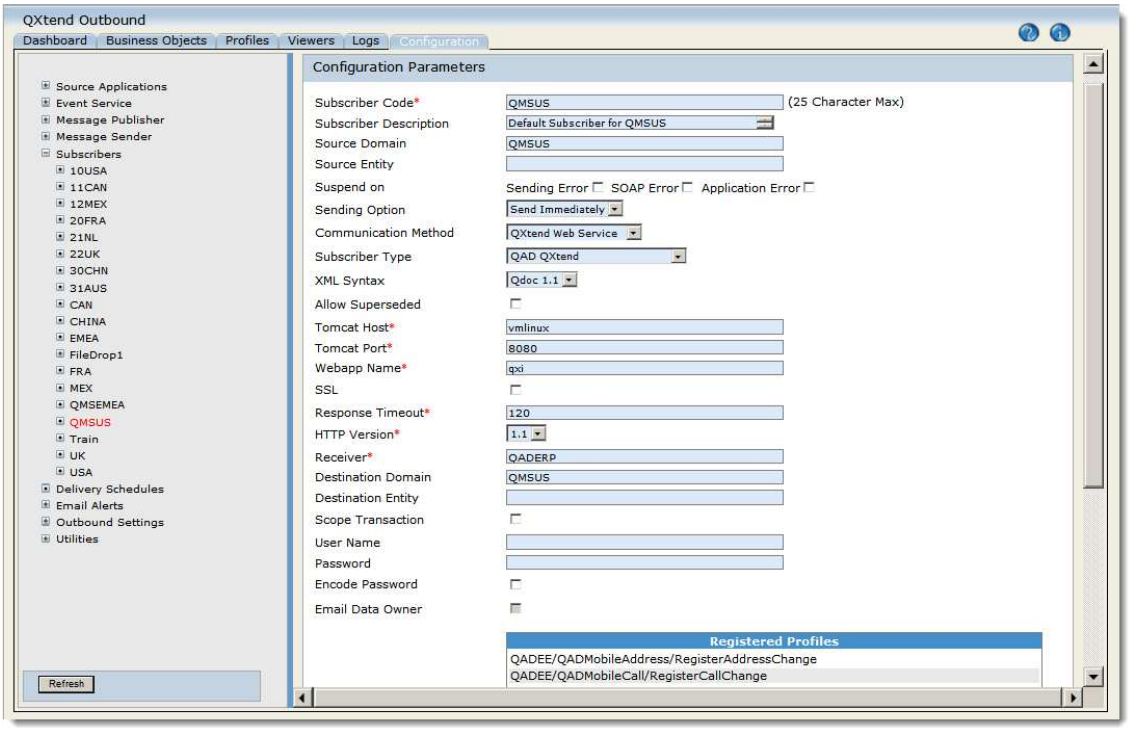
7 Create a subscriber with the following parameter values:

Parameter	Value
Source Domain	The domain in which you want to track changes
Allow Superseded	Enabled
Communication Method	QXtend Web Service
XML Syntax	Qdoc 1.1
Tomcat Host / Port	For QXI
Webapp Name	For QXI
Receiver	For QAD application to receive registerDataChange
Destination Domain	Same as the source domain
Encode Password	Enabled

Register your source application and the following profiles with the subscriber (use profile filter “Register*” to simplify the selection):

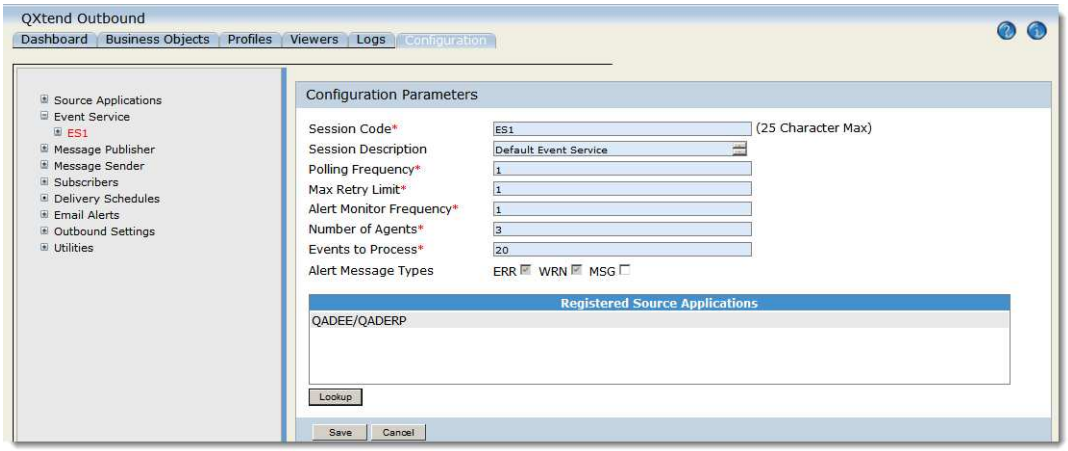
RegisterCallLineChange, RegisterCallStatusChange, RegisterCallChange, RegisterCodeChange, RegisterCommentChange, RegisterContractLineChange, RegisterEndUserChange, RegisterEngineerChange, RegisterInventoryChange, RegisterISBConfigChange, RegisterISBChange, RegisterItemChange, RegisterMOLineChange, RegisterMOChange, RegisterPartsChange, RegisterReturnStatusChange, RegisterSerialMOChange, RegisterStdOpChange, RegisterSvcCategoryChange, RegisterSvcTypeChange, RegisterVisitChange, RegisterWorkCodeChange

Fig. 2.4
Create a Subscriber



8 Create an event service and register your source application.

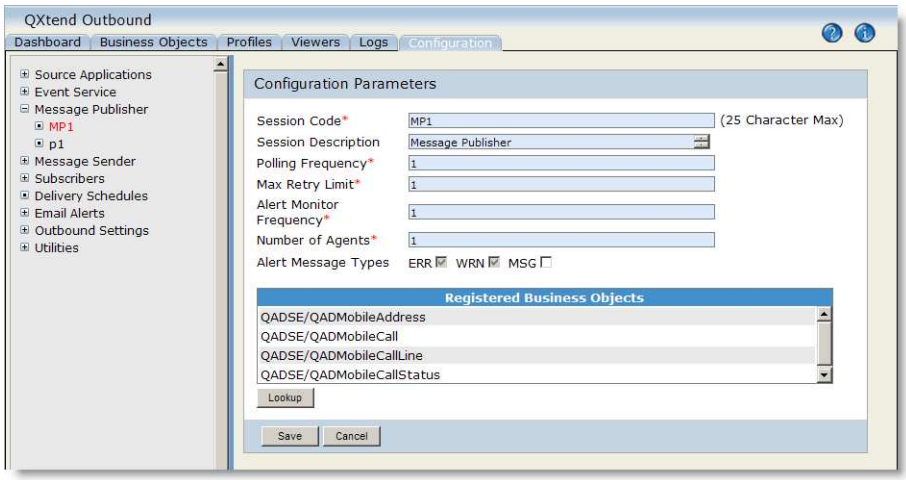
Fig. 2.5
Create an Event Service



9 Create a message publisher and register the following business objects with it:

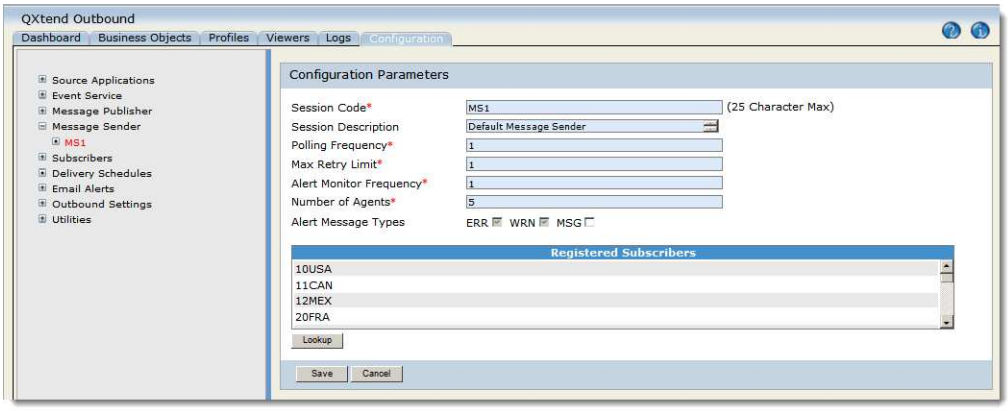
QADMobileCallLine, QADMobileCallStatus, QADMobileCall, QADMobileCode, QADMobileComment, QADMobileContractLine, QADMobileEndUser, QADMobileEngineer, QADMobileInventory, QADMobileISBConfig, QADMobileISB, QADMobileItem, QADMobileMOLine, QADMobileMO, QADMobileParts, QADMobileReturnStatus, QADMobileSerialMO, QADMobileStdOp, QADMobileSvcCategory, QADMobileSvcType, QADMobileVisit, QADMobileWorkCode

Fig. 2.6
Create a Message Publisher



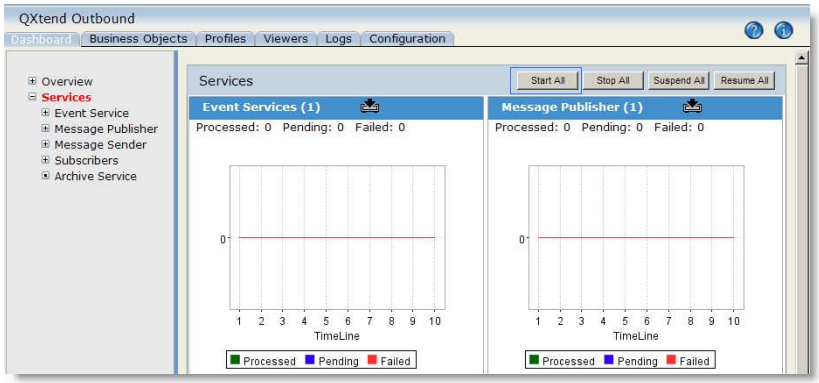
10 Create a message sender and register your subscriber with it.

Fig. 2.7
Create a Message Sender



11 Restart QXtend Outbound by going to Dashboard|Services and selecting the Start All button.

Fig. 2.8
Restart QXtend Outbound



Installing Tomcat Synchronization Server

You can deploy the synchronization Web application to the existing .Net Tomcat. Or you can install a separate Tomcat for cases where field service engineers are not required to access the corporate network before they can use MFS.

Note If the synchronization Web server is deployed outside the firewall, deploy the server a separate machine since the Enterprise Applications would not be deployed outside the firewall.

To install a separate Tomcat synchronization server:

1 Install Tomcat 6.0 or later version.

You can get the Tomcat installer from the Apache Tomcat website.

Note Ensure that you have installed JAVA 1.6 or later version on the system.

2 Get the `qadmfs.war` file from Server/Webapp in the QAD Mobile FS CD and put it to `/tomcat/webapps`.

3 If you are installing Tomcat on the same machine as the QAD Enterprise Applications server, you must:

- Edit the `/conf/server.xml` configuration file to make sure that the two Tomcat server port numbers do not conflict
- Edit the environment startup script to make sure the *`CATALINA_HOME`* variables point to the paths of the two Tomcat instances correctly.

Installing Client Components

1 Install Microsoft .NET Framework 4

Run `\Redistribute\Microsoft.NET\dotnetfx.exe` from the QAD Mobile FS CD to install Microsoft .NET Framework 4.

2 Install Microsoft Visual J# 2.0 Second Edition

Run `\Redistribute\Microsoft.NET\vjredist.exe` from the QAD Mobile FS CD to install Microsoft Visual J# 2.0 Second Edition.

3 Install the QAD Mobile FS Client

a Run `\Client\Installation.exe` from the QAD Mobile FS CD.

b Choose QAD Mobile FS Client for Windows and click Install Now.

c The QAD Mobile FS client for Windows Setup screen displays. Follow the on-screen instructions to complete the installation of QAD Mobile FS client.

d Continue with the activities described in “Setting Up Client Devices” on page 24.

4 Install the MFS Workspace Configuration Utility (Administrator)

If you are the administrator, install the MFS Workspace Configuration utility to configure QAD Mobile FS environment settings and access controls to synchronize data with QAD Enterprise Applications.

On your laptop, simply execute the MFS Workspace Configuration installer from the QAD Mobile FS CD and follow the on-screen instructions to complete the setup.

Chapter 3

Setting Up QAD Mobile FS

Before you can begin to use QAD Mobile FS, complete some setup steps in QAD Enterprise Applications as well as on the mobile device. This chapter covers those steps.

Setting Up SSM Data in QAD Enterprise Applications 16
Explains how to set up data in the Service and Support Module (SSM) in QAD Enterprise Applications.

Setting Up QAD Mobile FS User Accounts 16
Explains how to set up QAD Mobile FS user accounts and how they are associated with QAD Enterprise Applications accounts.

Configuring QAD Mobile FS Control Settings 19
Explains how to set up settings that manage how information is updated on the QAD Mobile FS client.

Configuring Mobile Field Service Workspaces 22
Explains how to use the MFS Workspace Configuration utility to configure the synchronization server environment and set up user access rights to different QAD EA databases and domains.

Setting Up Client Devices 24
Explains how to set up client devices in the QAD Mobile FS main menu.

Performing Initial Full Sync 26
Describes how to perform an initial full sync with details on recreating the device database and understand synchronized data.

Customizing Field Service Reports 28
Describes how to customize field service reports with templates or independently.

Setting Up SSM Data in QAD Enterprise Applications

Before you can use QAD Mobile FS, set up all of the required data to support call tracking in the Service/Support Management (SSM) module. The setup includes data such as QAD, call statuses, types, queues, work codes, severity codes, and default call information.

Setting up call defaults helps to reduce data entry errors and ensure that the synchronization is error free. See “Setting Up Call Defaults” in *QAD Enterprise Applications User Guide: Service/Support Management* for details. You are also required to define the end users you plan to support and the types of service coverage you offer.

To help streamline the synchronization of item data between QAD Enterprise Applications and the remote devices, you can associate service groups with items in Service Item Maintenance (11.3.7). You can then specify a range of service groups in QAD Mobile User Maintenance (11.1.12.1) to limit records to synchronize.

Setting Up QAD Mobile FS User Accounts

QAD Enterprise Applications user accounts are used in the synchronization process for logging in to QAD Enterprise Applications and updating data in SSM. In a synchronization request, field engineers provide the account credentials to pass the synchronization server authentication and to identify themselves in SSM.

The system administrator can set up QAD Mobile FS user (also called sync engineer) accounts before field engineers can use QAD Mobile FS and synchronize data with QAD Enterprise Applications.

Ensure that a QAD Mobile FS user is in association with an engineer defined in QAD SSM. The QAD Mobile FS user does not necessarily link to a QAD Enterprise Applications user.

Multiple QAD Mobile FS users can be associated with a single engineer in QAD SSM, so that you do not have to create an engineer record for each QAD Mobile FS user. It is useful when you want multiple QAD Mobile FS users to share engineer code.

Before setting up the MFS user accounts, you are required to enter an MFS license code into QAD Enterprise Applications to enable some user access to the MFS application.

To create a QAD Mobile FS user:

1. If you have not created the engineer record associated with the QAD Mobile FS user, create it first in QAD Enterprise Applications.

   a. Create an employee using Employee Maintenance (2.17.1) in QAD SE or Employee Create (36.1.7.1) in QAD EE. Optionally, associate the employee with a QAD Enterprise Applications user.

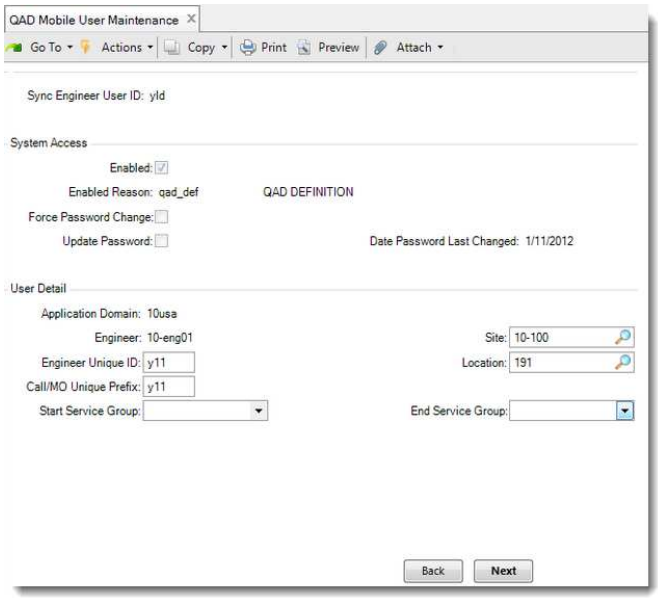
   b. In Engineer Maintenance (11.13.1), create an engineer for the QAD Mobile FS user.

2. In QAD Mobile User Maintenance (11.1.12.1), create records for individual users that access QAD Enterprise Applications. Mobile User Maintenance (11.1.12.1) lets you link a remote user ID with an engineer defined in QAD Enterprise Applications. You can also specify a QAD Enterprise Applications domain with which the engineer synchronizes data through the sync engine user ID.

The values defined in this program affect which item and inventory records are available on a specific engineer's device:

- The site and location determine the inventory detail records (ld_det) available during call activity recording for service item usage and returns as well as the records listed on the Inventory List screen.
- The start and end service groups filter the items (pt_mstr) replicated from the item master that can be selected for a call or for a parts order.
- In addition to these records, the following item data is also available on the device:
  - Installed base records belonging to an end user on a call sent to the device
  - Installed base records belonging to an end user whose primary engineer is the engineer associated with the device
  - Items that do not match the service group but that are on a call or parts order sent to the device
  - Installed base records can be accessed when creating or updating a call, when returning an item while recording call activity, and when viewing the Installed Base Item List

Fig. 3.1
QAD Mobile User Maintenance (11.1.12.1)



Sync Engine User ID. Enter the ID that a field service engineer uses when connecting to the synchronization server. This value is necessary for the Tomcat synchronization server.

System Access

When the sync engineer user is not associated with a QAD Enterprise Applications user, the System Access frame is displayed. You can configure security-related access settings for the QAD Mobile FS user. When associated, the settings for the QAD Mobile FS user default from QAD Enterprise Applications. Then, the System Access frame is not displayed.

Enabled. Indicate whether this user ID can be used to log in to QAD Mobile FS client.

Enabled Reason. Enter a reason code indicating the reason for modifying the setting of Enabled.

Force Password Change. Indicate whether the system force this user to create and validate a new password the next time they log in to the system using the current password.

Update Password. Indicate whether this user requires a new password. For new users, the system selects this check box by default, and you cannot change it.

User Detail

Use the following field definitions to create records for individual users that access QAD Enterprise Applications through mobile devices:

Application Domain. Enter the code identifying an active domain that a field engineer synchronizes with from remote devices through this sync engine user ID. The domain name displays next to the code.

The engineer code, site, location, and start/end service group that you set in the User Detail frame are associated with this domain. The engineer unique ID and Call/MO unique prefix you define in the User Detail frame are also associated with the domain.

If you change the domain for an existing sync engine user ID and confirm the update, all entries in the User Detail frame are cleared.

A domain represents a business operation with a single currency and chart of accounts. Each database can have one or more domains. Each domain can include one or more entities, one of which is designated as the primary entity.

Engineer. Enter the engineer code—defined in Engineer Maintenance (11.13.1)—associated with this QAD Mobile user ID. The system uses this value to determine which calls and parts orders to return for a particular sync engine user ID and how to create calls and orders in QAD Enterprise Applications.

Site and location default from the engineer record if they are defined.

You can delete a record when your cursor is in this field.

Engineer Unique ID. Enter a unique ID (1–3 alphanumeric characters) to associate with call reports created for this engineer. The system uses this ID as a prefix for call activity reports and QDocs. The prefix ensures that record values coming from many devices are unique when created in QAD Enterprise Applications. This value and Call/MO Unique Prefix display in the Unique Prefix field in the Settings page on the Admin menu on the mobile device.

Call/MO Unique Prefix. Enter a unique prefix (1–3 alphanumeric characters) to associate with calls and parts orders created for this engineer when Generate Doc IDs on Client is Yes. The system uses this ID as a prefix for calls and parts orders, similar to the Engineer Unique ID. The prefix ensures that record values coming from many devices are unique when created in QAD Enterprise Applications. This value displays in the mobile device on the Settings page on the Admin menu.

Site/Location. Optionally, enter the site and location from which this engineer normally obtains parts and supplies used in completing call activity. Site is defined in Site Maintenance (1.1.13) and location defined in Location Maintenance (1.1.18). These fields default from the site and location associated with the engineer in Engineer Maintenance.

The list of inventory records available for usage or return in CAR and the Inventory List screen on the device are based on inventory detail records at the site and location. If site or location is blank, no inventory data displays on the engineer's mobile device for the activity recording screens.

Note The list of items that displays in the Call screen, Parts Order screen, and in the drop-down for the Item field in Call Activity on the mobile device is based on records from the QAD Enterprise Applications item master. These items are filtered by service group, not by site and location.

Start and End Service Group. Enter a range of service group values for limiting item data to be synchronized with the mobile device for this engineer. Associate service groups with items in Service Item Maintenance (11.3.7).

This field can be left blank. If specified, it is validated against values defined in Generalized Codes Maintenance for field pt_svc_group.

Only item master records with a non-blank service group that falls within the range defined by start and end service group are synchronized with the device. Use this to prevent overloading the storage space on the device.

The list of items that displays in the Call screen, Parts Order screen, and in the drop-down for the Item field in Call Activity on the mobile device is based on records from the QAD Enterprise Applications item master, filtered by service group. The item lists that display in Call Activity for parts and returns and the Inventory List screen are based on inventory detail records at the engineer site and location.

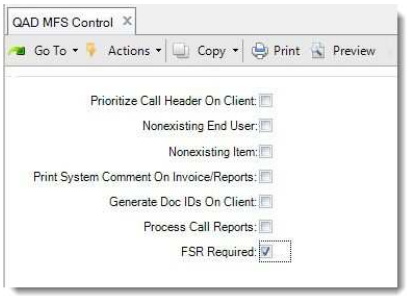
3 Optionally, move inventory in each engineer's site and location to be available for assigned calls using functions on the Inventory Control menu (3).

4 Optionally, associate the engineer with end users that they will regularly support by specifying their ID as the Engineer Code field of the Service Office Detail frame of End User Address Maintenance (11.9.1).

Configuring QAD Mobile FS Control Settings

Use QAD MFS Control (11.1.12.24) in QAD Enterprise Applications to specify settings that manage how information is updated on the QAD Mobile FS client. You define whether data at the call header or call line level determines what displays on the QAD Mobile FS client.

Fig. 3.2
QAD MFS Control (11.1.12.24)



Prioritize Call Header on Client. Indicate whether you want values associated with the call header or the call line to determine the work code and status displayed on the mobile device and updated in QAD Enterprise Applications.

No: The call line values display on the device. When changes are made on the device, only the call line in QAD Enterprise Applications is changed.

Yes: The call header values display on the device. When changes are made on the device, the call line value is updated in QAD Enterprise Applications and the call header value is updated as well.

Note You cannot use a device to change the status of a call or call line to the close status as defined in Call Management Control. Calls can only be closed in QAD Enterprise Applications.

This setting is typically set to Yes only when you normally create calls with a single-line item. When Prioritize Call Header on Client is Yes and two call lines have different statuses, the call list on the device displays the call header status for both lines.

This setting applies to all records you define in this program. It defaults to No until you create a record for a user. Then it defaults to the value for the first detail record. If you change the value for this field, the system prompts you to update all currently defined records with the new value. If you respond No, none of the records are updated.

Nonexisting End User. Indicate whether end-user IDs are validated during call entry on a QAD Mobile FS device:

No: The end-user ID entered on a call in QAD Mobile must exist on the client.

Yes: The mobile user can enter the ID of an end user that does not exist on their device. When the device is synchronized, this end-user record must exist in QAD Enterprise Applications or an error is generated.

Note See “Understanding Synchronized Data” on page 27 for a description of which end-user records exist on the device.

Setting this field to Yes lets your remote engineer create a call for an end user for whom they have not previously provided service. It is useful in an emergency when the regular engineer is not available.

Nonexisting Item. Indicate whether item numbers are validated during data entry on a QAD Mobile FS device:

No: The item number entered on a call or parts order in QAD Mobile must exist on the client.

Yes: The mobile user can enter an item number that does not exist on their device. For parts orders, this item must exist in QAD Enterprise Applications or an error is generated during synchronization. For calls, if the item does not exist, it is treated like a memo item in QAD Enterprise Applications when the data is synchronized.

Note See “Understanding Synchronized Data” on page 27 for a description of which item records exist on the device.

Print System Comment on Invoices/Reports. Indicate how you want the system to display comments that are automatically generated when a call is created on a QAD Mobile device. Call comments are always associated with the call header.

No: The generated comment is placed on its own page and marked to be included on internal reports only.

Yes: The generated comment is placed on the first page of comments along with the other notes. By default, they are printed on both internal and external invoices and reports.

Note Each time the device is synchronized, any new comments created on the device create a page of comments in QAD Enterprise Applications.

Generate Doc IDs on Client. Indicate whether you want to generate temporary or permanent record IDs on the device for calls and parts orders.

No: Temporary record IDs are created on the client for new calls and parts orders. The IDs are prefixed with three asterisks (***). After synchronizing with the server, the new calls receive a permanent ID before activity can be recorded for them.

Yes: Permanent IDs are created on the client. The IDs are created using the value of Call/MO Unique Prefix entered in this program and the next sequential number maintained on the device.

When this field is Yes, you can update activity reports for a new call created on the device and not yet synchronized with your production database.

Process Call Reports. Specify whether the system automatically processes a call line that is set to the complete status on the client device and synchronized to the server.

Yes: The system automatically processes the call line and if successful, sets the call line status to complete. If the call line is completed, all unclosed visits scheduled for it are canceled and removed from the client device.

No: The system does not process the call line data. The call line remains in its original status until it is manually processed on the server side.

FSR Required. Specify whether the system checks the availability of the Field Service Report when the QAD MFS client is synchronizing with the server.

Yes: When synchronizing with the server, the system checks if the corresponding FSR exists in the directory: `%APPDATA%\QAD\MFS\workspaces\[workspacename]\FSR\out`. If the FSR is not found in the directory and the Log Level is set to Warning in the QAD Mobile FS Settings, the warning message is recorded in the View Log window after the synchronization is finished.

No: The system does not check the availability of the FSR.

Suppressing QAD Mobile API Warnings in QAD Enterprise Applications

You can specify in Service Management Control (11.24) in QAD Enterprise Applications whether you want the system to suppress some less important QAD Mobile API warning messages returned by QAD Enterprise Applications to QXtend and displayed in the QXtend Queue Manager. Suppressing these warnings may help you to identify more important warning messages.

Set Suppress API Warnings to Yes to suppress QAD Mobile API warning messages that are considered not important.

Configuring Mobile Field Service Workspaces

Use the MFS Workspace Configuration utility to configure the synchronization server environment settings and set up user access rights to different QAD Enterprise Applications databases and domains from the QAD Mobile FS client.

1 From the Windows Start menu, launch MFS Workspace Config. The MFS Workspace Configuration window is displayed.

2 Enter credentials to log in to the Synchronization server.

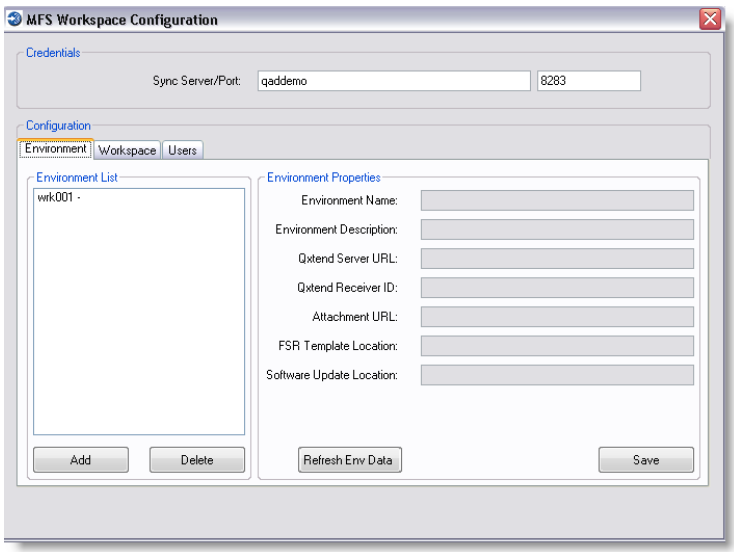
Sync Server/Port. Enter the host name and port number of the Tomcat synchronization server. If the server is installed on the same machine as the QAD Enterprise Applications server, make sure that the port numbers for the two Tomcat servers do not conflict.

3 Under the Environment tab, configure multiple general settings and save them as environments.

An environment specifies QXtend settings that point to a QAD Enterprise Applications database QAD Mobile FS connects to and serves as a template for configuring other domain-level settings or workspaces. You can configure multiple environments to connect to different QAD Enterprise Applications databases; for example, a test database and a production database.

The Environment List box displays all existing configured environments and you can add new ones and delete existing ones using the corresponding buttons at the bottom. Edit Environment properties in the right pane.

Fig. 3.3
MFS Workspace Configuration - Environment



Environment Name. Specify a unique name for the environment. Once a new environment is created, the name cannot be changed any more.

Environment Description. Enter a brief description of the environment.

QXtend Server URL. Specify the URL of the QXtend Inbound (QXI) Server through which to synchronize data into QAD SSM. Once saved, this value cannot be changed for the environment.

QXtend Receiver ID. Specify the receiver name configured for QAD SSM to receive data in QXI. Once saved, this value cannot be changed for the environment.

Attachment URL. Specify the location on the QAD .NET UI home server where to synchronize field service reports as attachments:

HomeServerURL`/webdav/configurations/SystemEnv/storage/attachments/`

You can find the HomeServerURL value in the `QAD.client.exe.config` file located under the `container` folder in the .NET UI client installation directory. *`SystemEnv`* is the system environment you want to synchronize field service reports with.

FSR Template Location. Specify the global template file for generating the field service report. The default is `/FSR/template`.

Software Update Location. Specify the location where to update the software if a newer version is available. The default is `/SOFTWARE`.

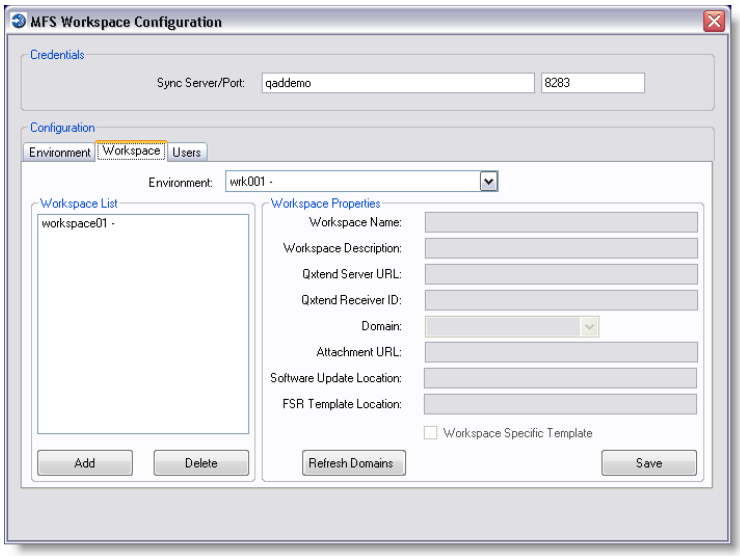
To save your changes, click Save.

4 Under the Workspace tab, configure domain-level settings for each environment. A workspace is associated with a domain in a specified QAD Enterprise Applications database.

Note Though called the same, the workspace in QAD Mobile FS is different from the workspace in QAD Enterprise Applications, which is a combination of domain and entity.

From the Environment list, select an existing environment. The Workspace List box displays all existing configured workspaces under that environment, and you can add new workspaces and delete existing ones using the corresponding buttons at the bottom. Edit workspace properties in the right pane.

Fig. 3.4
MFS Workspace Configuration - Workspace



Most of the workspace properties are carried over from the environment properties with a few new fields:

Workspace Name. Specify a unique name for the workspace. Once a new workspace is created, the name cannot be changed.

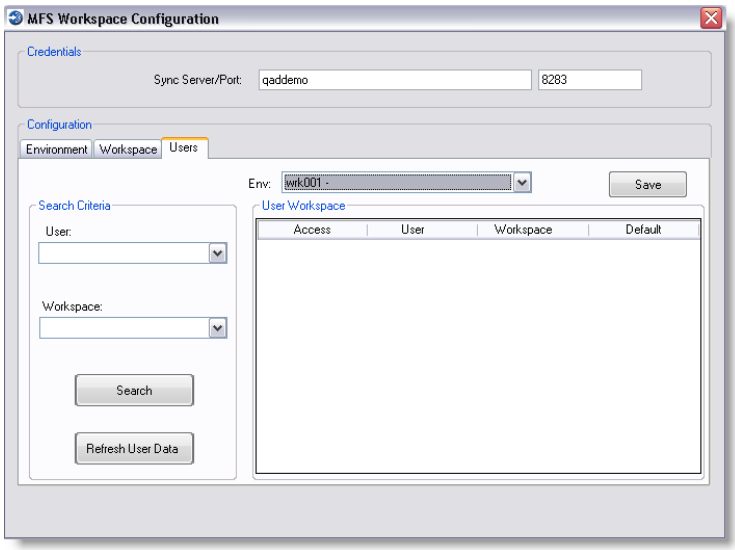
Domain. Specify which QAD Enterprise Applications domain that the workspace is associated with. The workspace properties are only specific to this domain.

Workspace Specific Template. Specify whether the FSR templates in the FSR Template Location are domain-specific or global.

To save your changes, click Save.

5 Under the Users tab, configure access control of MFS users on the MFS client.

Fig. 3.5
MFS Workspace Configuration - Users



a Select an environment and click Refresh User Data to display all the possible MFS user and workspace combinations in the User Workspace box.

b To narrow down the list, use the search criteria to display a specified user and/or workspace in the filtered list.

c To grant a user access to a workspace, select the Access box next to the user; to set a default workspace for a user, select the Default box next to the workspace.

d Click Save to save your changes.

e Restart the Tomcat synchronization server to implement the changes.

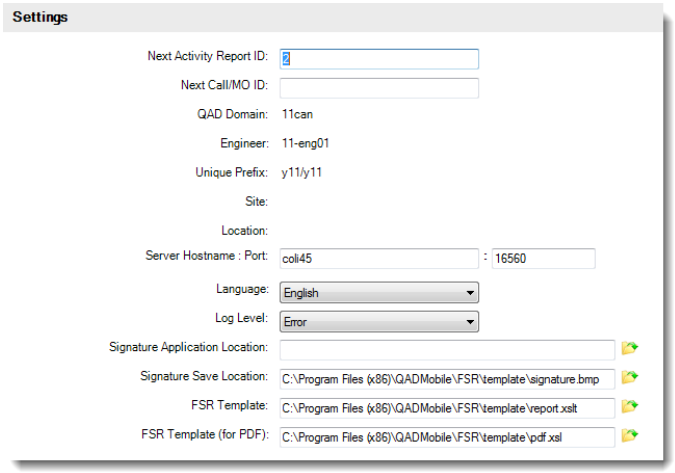
Once you set up access control for MFS users, each user can only access the authorized workspaces and associated domains from the MFS client.

Setting Up Client Devices

QAD Mobile FS administration includes a page of control settings. Settings in the Admin page are populated after synchronization.

From the QAD Mobile FS main menu page, select Admin from the menu. A submenu displays. Select Settings. The Settings page displays.

Fig. 3.6
QAD Mobile FS Settings



Next Activity Report ID. Specify the value the device uses to create the numeric portion of the next activity report ID, combined with first portion of the string displayed for Unique Prefix (before the /). This value is incremented each time a CAR is created. In general, set this during implementation and leave it unchanged. It can be modified later if needed.

Next Call/MO ID. Specify the value that the device uses to create the next call or parts order ID.

This value is incremented each time a call or parts order is created. Set it during implementation; if you reset it after this, you must specify a number greater than the last used value.

How call and parts order IDs are generated depends on the value of Generate Doc IDs on Client in QAD MFS Control. If set to No, the number is preceded by three asterisks (***) and leading zeroes in the call or parts order ID fields to show that the value is temporary. If set to Yes, the Call/MO Unique Prefix is prefixed to the number. This value displays in the Unique Prefix field, after the /.

QAD Domain. Displays the value of the QAD Enterprise Applications Domain you synchronize data with as defined in QAD Enterprise Applications QAD Mobile User Maintenance following the initial synchronization.

Engineer. Displays the value of the engineer defined using QAD Mobile User Maintenance in QAD Enterprise Applications following the initial synchronization.

Unique Prefix. Displays the value of the Engineer Unique ID field followed by the Call/MO Unique Prefix as defined in QAD Mobile User Maintenance.

- The system uses Engineer Unique ID when creating CAR IDs and for naming QDocs to ensure uniqueness of records from multiple devices.
- The system uses CALL/MO Unique Prefix for calls and parts orders when Generate Doc IDs on Client is Yes.

Site, Location. Displays the values defined in QAD Mobile User Maintenance following the initial synchronization.

Server Hostname: Port. Enter the host name and port of the Tomcat synchronization server.

Language. Specify the language used for the QAD Mobile FS client user interface.

Log Level. Choose whether to generate system logs and select from the five log detail levels: all, debug, information, warning, and error.

Signature Application Location. Specify the full path to the program file that launches the digital signature application.

Signature Save Location. Specify the local folder and file name for saving the digital signature on the field service report.

FSR Template . Specify the template file for generating the field service report in the .mht format. The default is `%APPDATA%\QAD\MFS\general\FSR\template\report.xslt`.

FSR Template for PDF. Specify the template file for generating the field service report in the .pdf format. The default is `%APPDATA%\QAD\MFS\general\FSR\template\pdf.xslt`.

Performing Initial Full Sync

Perform an initial full sync to set up the client data. The initial sync creates the required database on the client device.

1. From the Start menu, choose Programs|QAD Mobile FS|QAD Mobile.
2. Select Full from the list and click Synchronize.
3. The system prompts for sync server credentials. Enter your user ID and password for authentication.
4. The synchronization process begins.

Recreating the Device Database

The Admin menu provides an option to Create DB. This option is rarely needed. It is provided when the client database is corrupted for some reason and requires recreation.

Warning This function completely overwrites the local QAD Mobile FS database.

To execute this function, follow these steps.

1. Select Create DB from the Admin menu.

   When you select the Create DB option, an informational message displays.

   ```
   Option should only be performed after first consulting with your system
   administrator. Some data will not be recoverable after resynchronizing with
   QAD Enterprise Applications such as call activity reports
   ```

   Click Ok to continue.

2. A confirmation message displays.

   ```
   Overwrite database
   %APPDATA%\QAD\MFS\workspaces\[syncServer+username]\QADMobileFS.mdb?
   ```

Choose Yes.

Note A warning prompt displays if you overwrite the database and have data on the device that has not been synchronized. You can choose to disregard this warning and continue to re-create the database.

Understanding Synchronized Data

Your QAD Enterprise Applications database may include many records. Each engineer typically interacts with only a subset of the items, end users, and calls that exist in QAD Enterprise Applications. QAD Mobile FS has been designed to enhance performance and streamline data entry by presenting only the information that the engineer needs to have on the device.

To accomplish this, records are synchronized to the device only when they meet certain criteria. Table 3.1 lists some data types that can be displayed in lookups and screens in QAD Mobile FS and the criteria used for selecting relevant records.

Note Because the records on the device are a subset of all records in QAD Enterprise Applications, engineers can enter items and end users that do not exist on their device. This setting is available in QAD Mobile User Maintenance.

Table 3.1
Data Selected for Synchronization

Data Type	Records Selected
Item Master Records	Items on any call line in QAD Enterprise Applications with the engineer's ID in the Assigned field Items on any material order in QAD Enterprise Applications associated with one of the call lines selected by the previous criteria Items belonging to a service group within the range specified for the engineer in QAD Mobile User Maintenance Items on a call that has a visit assigned to the engineer. Items on an installed base record synchronized to the device
Inventory Detail	Records in the site and location specified for the engineer in QAD Mobile User Maintenance
End Users	End-user records where the engineer is designated as Primary in End User Address Maintenance (11.9.1) (full sync only) End-user records associated with a call line that the engineer is assigned to (quick sync and full sync) End-user records associated with a visit that the engineer is assigned to (quick sync and full sync) End-user records in which the engineer is secondary on the end user End-user records where the end user's service area matches the engineer's service area
Installed Base Item Detail	Items and any associated installed base structure associated with any of the end users replicated to the device

Customizing Field Service Reports

QAD Mobile FS lets you generate professional-looking field service reports from CAR data on your mobile devices. You can customize the reports to meet your specific requirements.

By default, two global field service report templates are provided:

- `%APPDATA%\QAD\MFS\general\FSR\template\report.xslt` for .mht format reports
- `%APPDATA%\QAD\MFS\general\FSR\template\pdf.xslt` for .pdf format reports

You can use the templates as provided or tailor them for your own needs.

Any number of FSR templates can be added to the *TomcatInstallDir*`\webapps\qadmfs\fsr` directory on the sync server; the templates are synchronized out to each MFS client to use. Engineers must choose which template to use by using Menu|Settings on the client.

You can also specify workspace-specific Field Service Report (FSR) templates in the MFS Workspace Configuration utility to tailor FSR reports for different domains.

Product Information Resources

QAD offers a number of online resources to help you get more information about using QAD products.

QAD Forums (community.qad.com)
Ask questions and share information with other members of the user community, including QAD experts.

QAD Knowledgebase (knowledgebase.qad.com)*
Search for answers, tips, or solutions related to any QAD product or topic.

QAD Document Library (www.qad.com/documentlibrary)
Get browser-based access to user guides, release notes, training guides, and so on; use powerful search features to find the document you want, then read online, or download and print PDF.

QAD Learning Center (learning.qad.com)*
Visit QAD's one-stop destination for all courses and training materials.

*Log-in required

Index

A
Admin functions 25
architecture 2

D
database server
  requirements 3
domain
  QAD Enterprise Applications 25

E
Engineer Maintenance 18

H
hardware requirements 3
  network 4

I
installation 6
  QAD Enterprise Applications updates 6
  QAD Mobile FS Client 14
  QXtend Inbound 8

L
laptops
  requirements 4
Location Maintenance 18

N
network
  requirements 4

P
prefix
  engineer 25
Progress
  versions 3

Q
QAD Enterprise Applications Domain 25
QAD Enterprise Applications users 19
QXtend Inbound
  installation 8

R
requirements 4
  database server 3
  server 3

S
Site Maintenance 18
software prerequisites 3
system requirements
  network 4

U
users
  QAD Enterprise Applications 19