



Seregon Mobile Application Platform

Installation Guide

Version 3.1

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SECTION 1: INTRODUCTION

This User's Manual explains how to install Seregon Mobile Applications Platform (MAP) DataServer and using it to deploy, maintain and administer sophisticated mobile enterprise (database driven) applications. It does not cover installation or use of the design environment – this is covered in the Seregon MAP Design Studio User Guide.

What is Seregon MAP?

Seregon MAP is an intuitive environment for designing powerful mobile **enterprise** applications without the need for programming. With Seregon-powered mobile applications, users can download, view and modify selected database records, or create new records, on their smartphone. New and modified records are uploaded to the server and the database is automatically updated.

Using Seregon MAP, a business analyst can create a broad range of complex mobile enterprise applications in a visual drag and drop environment without the need for any programming. However, programming and scripting logic can easily be incorporated to accomplish the most sophisticated application requirements.

Seregon MAP is a software tool that greatly simplifies the design, deployment, maintenance and administration of database-driven mobile enterprise applications. Seregon MAP is comprised of three major components:

- MAP Design Studio;
- MAP Data Synchronization Engine; and
- MAP mobile runtime engines for BlackBerry, Windows Mobile and other smartphones.



The MAP Design Studio is a visual drag and drop design tool that runs on a Windows desktop environment and greatly simplifies the design, development, testing and publishing of mobile enterprise applications.

MAP Data Server is a Windows or Linux server component that acts as the bridge between mobile devices and enterprise databases. On one hand, it manages the communications with the mobile device, including queuing of transactions during periods of network unavailability; and, on the other hand, ensures proper synchronization of database access and updates.

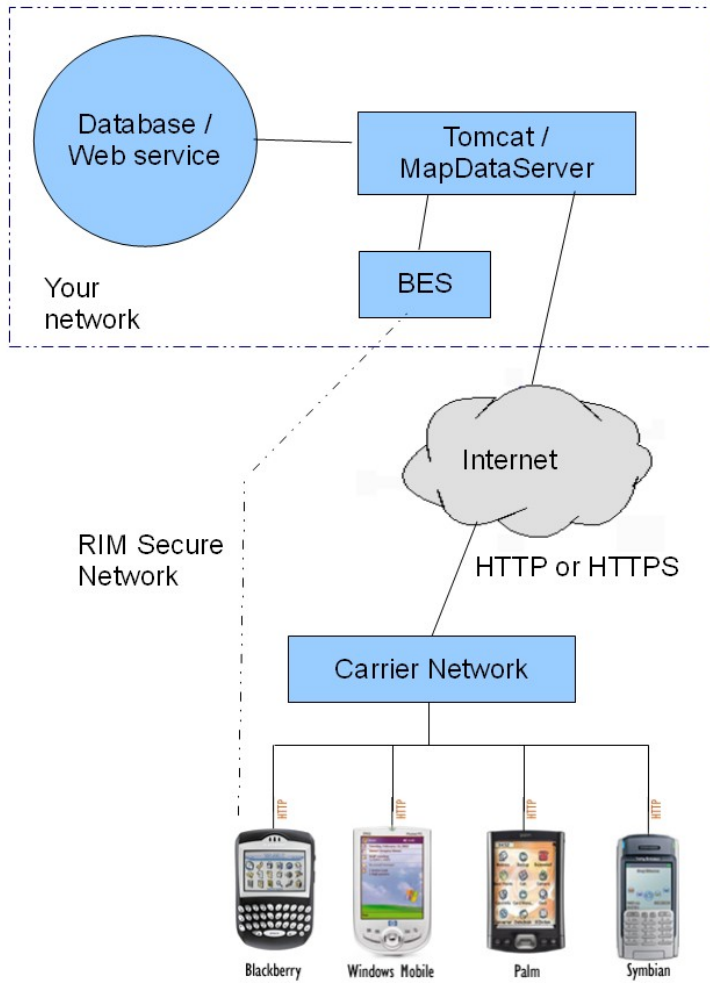
The MAP mobile runtime engines are thick clients for BlackBerry, Windows Mobile and other smartphones that runs the application on the handheld device, with or without a network connection.

Section 2 of this manual identifies the system requirements for each of the Seregon MAP components and describes the installation process.

Section 3 describes how to register your copy of Seregon MAP Data Server, add and administer user accounts and how to access log information.

Section 4 describes how to install and configure Seregon Map Design Studio including the device emulators.

System Component Diagram (BlackBerry install)



SECTION 2: REQUIREMENTS

System requirements

Seregon MAP DataServer requires an Apache Tomcat 5.5 server running on Linux, Windows XP or Windows Server 2003 or later. (or equivalent, contact Seregon for details)

Pre-installation requirements - general

Prior to installing Seregon MAP, you are advised to complete the following steps to ensure that your systems is ready to begin the installation:

NETWORK REQUIREMENTS

The server running Tomcat and the MapDataServer web application requires a static IP and/or a domain name. It must be accessible from the internet so that the device can access it, or if a Blackberry BES is being used, accessible from the BES. The port chosen for the Tomcat install (8082 recommended) should be open on the Windows firewall and on your network.

HARDWARE REQUIREMENTS

Depending on the workload and number of users, either Windows Server (any version), Windows XP or later, or Linux (Ubuntu has been tested at Seregon). Installation on Linux is not covered by this manual.

SOFTWARE REQUIREMENTS

Java

Download and install Java™ SE Runtime Environment versions 1.6 update 12 or higher. The download is available at <http://java.sun.com/javase/downloads/index.jsp>

Web Server (Apache Tomcat 5.5)

Download and install Apache Tomcat 5.5. Please download the Core Windows Service installer. (<http://apache.raffsoftware.com/tomcat/tomcat-5/v5.5.28/bin/apache-tomcat-5.5.28.exe>)

The Apache Main page is here in case of difficulty: <http://tomcat.apache.org/download-55.cgi>

We recommend changing the port used by Tomcat to 8082 during the install, since the default port 8080 is also used by the RIM MDS, which is used to run the Blackberry simulator.

SECTION 3: INSTALLING MAP DATASERVER

(Windows)

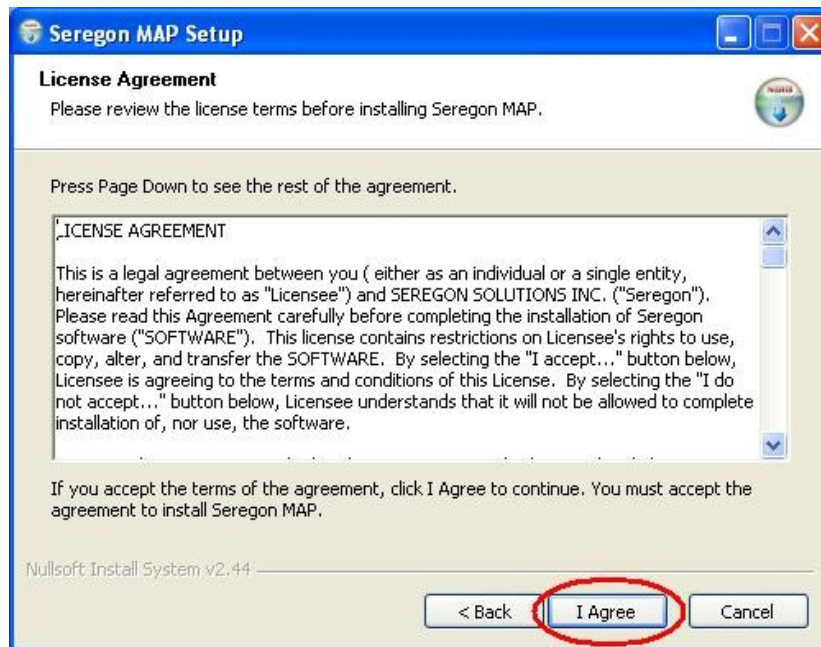
To install Seregon MAP DataServer, download the **server_setup** package from the provided URL and click **Run**. This installation program copies the MapDataServer war file directly into the Tomcat webapps folder.

You can also copy in the war file manually or use the Tomcat Manager. The Tomcat Manager can also start and stop individual web applications and is the recommended procedure for remote installation on customer sites. . Tomcat Manager requires an admin password which is set in <Program Files>\Apache Software Foundation\Tomcat\conf\tomcat-users.xml, it will require a line such as this:

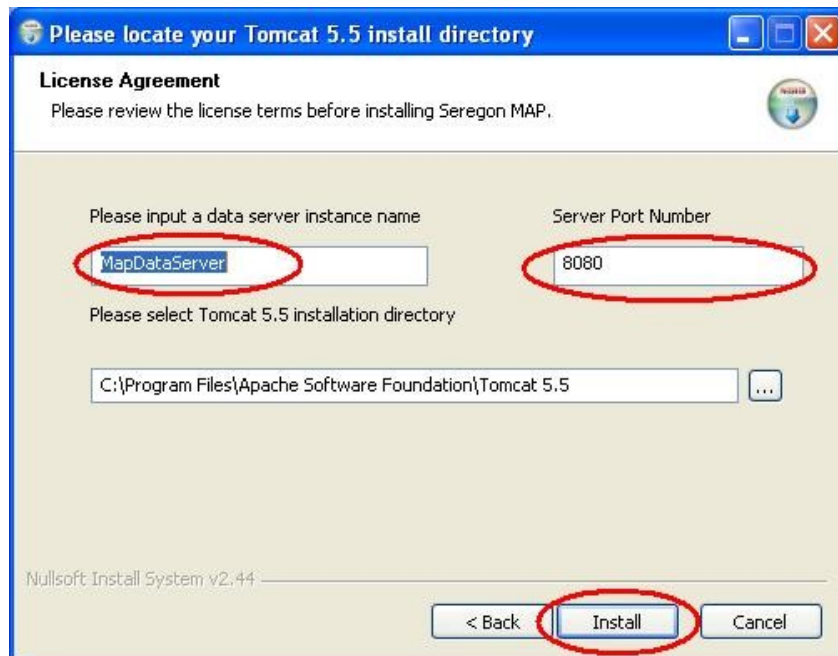
```
<user username="admin" password="mypassword" roles="admin,manager"/>
```

The following installation steps for the packaged MapDataServer install are intuitive, but are nonetheless included for reference.



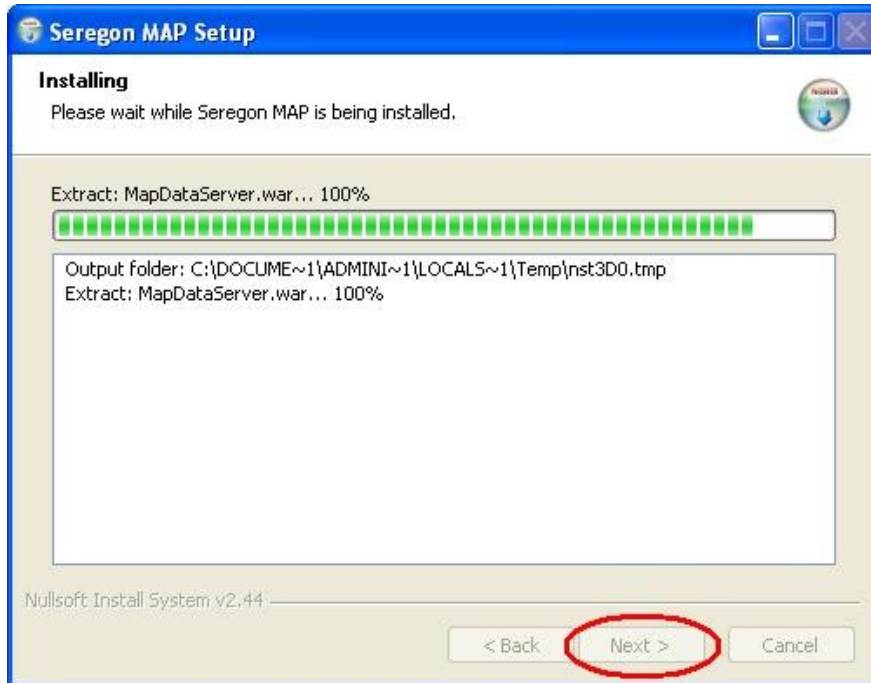


You must click **I Agree** to continue with the installation.



The **data server instance name** can be any name you wish.

Change the **Server Port Number** corresponds to the port specified when you installed Apache Tomcat. Click **Install**



(Linux)

Copy the MapDataServer war file into the webapps folder of the Apache Tomcat installation. MapDataServer makes use of Java preferences, some Linux Java installs are not setup correctly by default. The user that is running Java requires read/write access to a folder "~/.java/.userPrefs/ " and to all which is used to store preferences for individual Java apps. The symptom is that when the server starts, it does not remember the location of the MapServer folder. To fix this, create a folder "~/.java/.userPrefs/ if it does not exist and give all users read-write privileges to that folder and all its subfolders.

Check the System

To check your system is installed correctly, verify the Tomcat install by entering <http://localhost:8082> into your browser. You should see the Apache default start page.

To check that MapDataServer is installed correctly, enter:

<http://localhost:8082/MapDataServer>

You should see the start screen below. If reinstalling an updated version of MapDataServer, the login screen will be shown. Check the version number on the page matches the version you installed. Tomcat does not always reload new versions immediately, and it may be necessary to shutdown and restart Tomcat, and/or shutdown of Tomcat coupled with deletion of the MapDataServer folder (or whatever your instance name is) in the Apache\Tomcat5.5\Webapps.

See TroubleShooting.

IMPORTANT

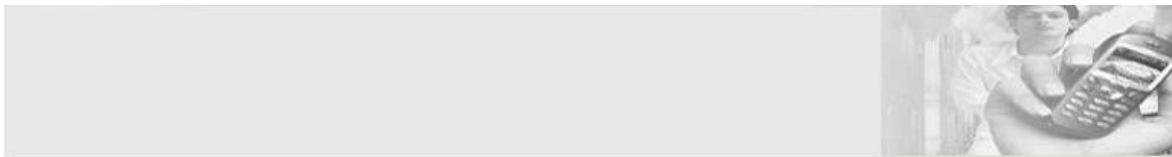
Make sure the Tomcat installation is also accessible from your device, either using access via a BES, or from the internet. To check this, repeat the above steps but use the external url for your server, e.g.

<http://www.yourserver.com:8082>

First do this from the computer, to ensure that your server is accessible externally, and then check using the browser in your device.

Setting up the MAPDataServer

To start MAP DataServer, in your web browser go to the URL of the server on which you installed Tomcat and the data server instance; e.g.,
<http://localhost:8082/MapDataServer> or <http://yourserver:8082/MapDataServer>



SeregonMAP Data Server

Instance: MapDataServer

Please enter new path to Server Instance Data

DataServer Data Path

Startup Errors:

Warning: no project file loaded

SMTP Host not configured; Admin Email notifications not available

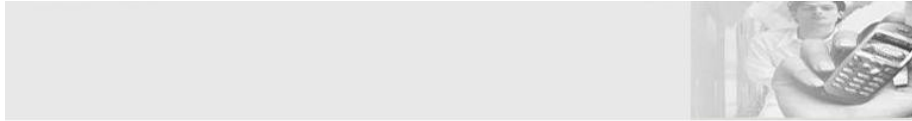
The first time MapDataServer loads, it will show the startup screen as above. Note that at the bottom of this startup page, the message “Startup Messages: SMTP Host not configured; Email notifications not available. No project file installed”. You will be able to configure the SMTP host after login through the “System Settings / Email Setup” option. The project will be loaded as part of the project publish step either from the Settings / project page or from MAP Design Studio.

The first step is to create a new folder for the MapDataServer configuration files. The specified folder is used to store the user database, the uploaded project file, log files, and configuration settings

Click **Submit**.

A checkbox 'Create Folder?' will appear. Check it and click **Submit** again.

The MAPDataServer application will restart and the Login page will be shown.



SeregonMap Data Server

Instance name: MapDataServer
Version: 3.1.2881

Startup messages:

SMTP Host not configured; Admin Email notifications not available

| Please Login | |
|--------------------------------------|---|
| UserName | <input type="text" value="admin"/> |
| Password | <input type="password" value="password"/> |
| <input type="button" value="Login"/> | |

Enter your **username** and **password**. The default admin username is “admin” and the corresponding password is “password”. Click **Login**.

For additional details on adding users and other systems administration functions, please refer to **Section 3 – MAP Systems Administration**, which follows.

SECTION 4: MAP SYSTEMS ADMINISTRATION

Introduction

The MAP DataServer Admin pages provide the ability to add and manage user accounts, change various option settings, view logs, manage the uploaded project, setup e-mail, and manage user database.

Licensing

Each licensed copy of the MAP DataServer is provided a license name. A server installed without a license (using the 'evaluation' license is allowed two users in its user database, an admin user and a regular user. If a license is entered, the MapDataServer checks the license against a central database when changes are made to the user list in the Admin pages, and when new projects are published to the server.

Licensing your MAP DataServer

After login, click **System Settings \ License**. Enter the License Registration code that was provided to you at the time of purchase.

Indicate whether the server instance will be used for testing (debug) or production (release). A debug install uses somewhat more relaxed security settings to make testing easier.

Click **Submit**.

User Management

MAP DataServer contains an internal user database that is used by default for administration of users and for device user authentication. This database can be replaced by any other JDBC database. Changes to this list automatically invoke a permissions request to the Seregon License Server, in accordance with the licensing agreement.

The MAP DataServer Admin pages can be used to create and modify users. Upon installation, a default Admin user is created with username 'admin' and password 'password'. New users can be "pre-registered" by an Admin user or can "self-register" by connecting to the MAP DataServer from their smartphone. All Admin users are notified by email whenever a new user is self-registered.

The system tracks the device model and OS last used by each user.

PRE-REGISTERING NEW USERS

New mobile users that are pre-registered by an Administrator are automatically "approved" and are authorized to download and use MAP applications as soon as they connect to the MAP DataServer.

Seregon MAP DataServer
MapDataServer Admin

[Settings](#) | [View All Users](#) | [Add User](#) | [Project](#) | [Database](#) | [Logs](#) | [Email Setup](#) | [Logout](#) |

Max users available: 2
Current user count: 1

Add User

| | |
|-------------|--|
| UserName | mobile |
| Password | •••••• |
| Re-Password | •••••• |
| DeviceId | 204C0A9F |
| Email | mobile1@seregon.com |
| Role | Select role ▼ Admin User Pending |

MapDataServer Copyright Seregon Solutions
2009. (Version: 3.0.1819)

Simply complete the form, select the role and click **Insert**.

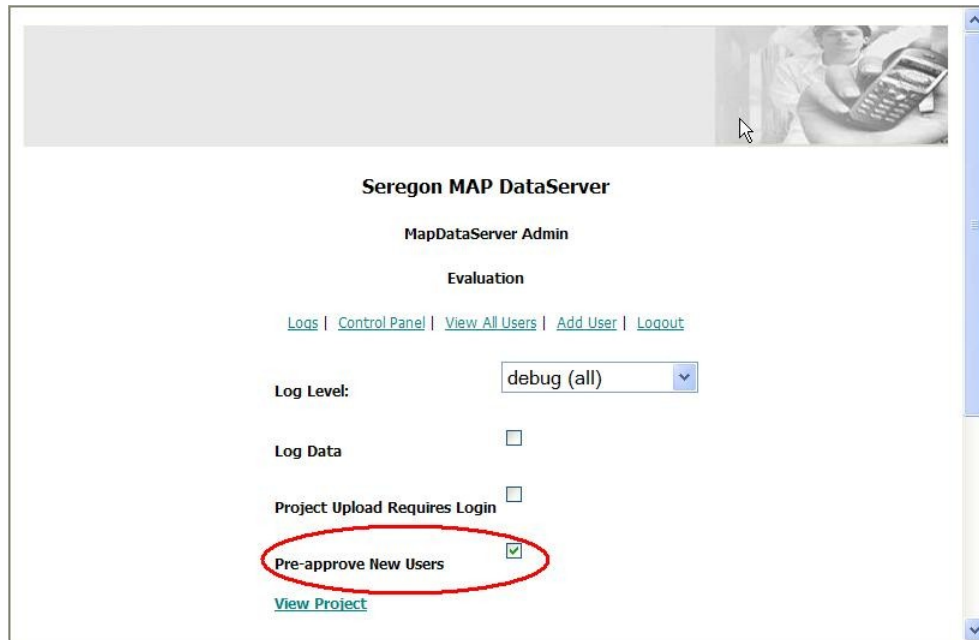
PRE-APPROVAL OF NEW USERS

New mobile users that self-register may require further approval before they are authorized to download and use MAP applications. This is determined by the “Pre-approve New Users” checkbox in the Control Panel.

If the **Pre-approve** box is checked, new self-registered mobile users will be automatically authorized to download and use MAP application without further action or intervention. Otherwise, the new user will be set to **pending** status and will require intervention by an Administrator to reset their status to user.

SELF-REGISTRATION OF NEW USERS

When a mobile user first connects to the MAP DataServer, downloads the MAP runtime client onto their smartphone and connects to a MAP project, a request is automatically made to add that user to the selected project. If the user has not been pre-registered by an Administrator, the user will be given the option to **self-register**. If the MAP DataServer is

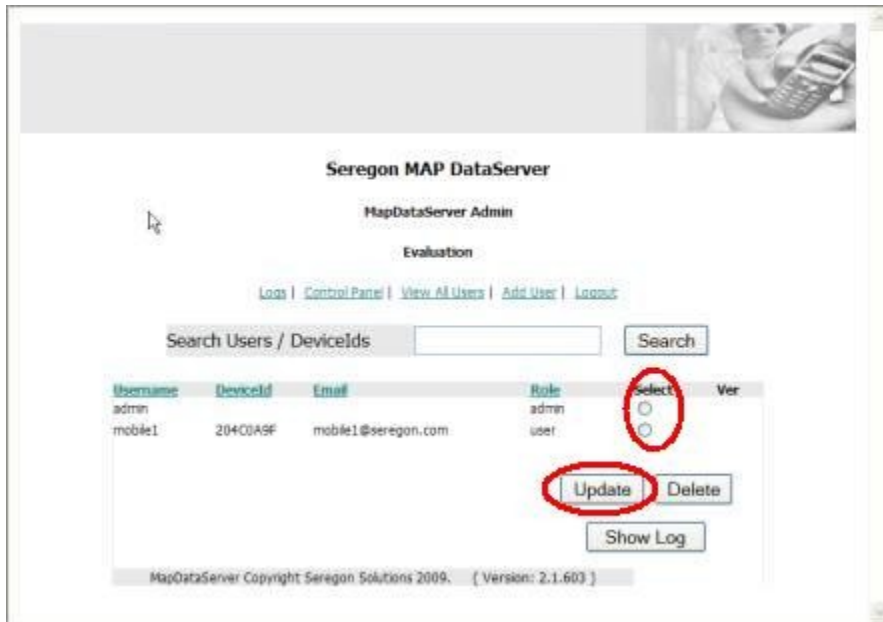


set to **pre-approve new users**, the new user will be automatically authorized to download and use MAP application without further action or intervention. Otherwise, the new user will be set to **pending** status and will require intervention by an Administrator to reset their status to user. Regardless of checkbox status, an email will be sent to all the administrators of the system that have an email address set up in their profile.

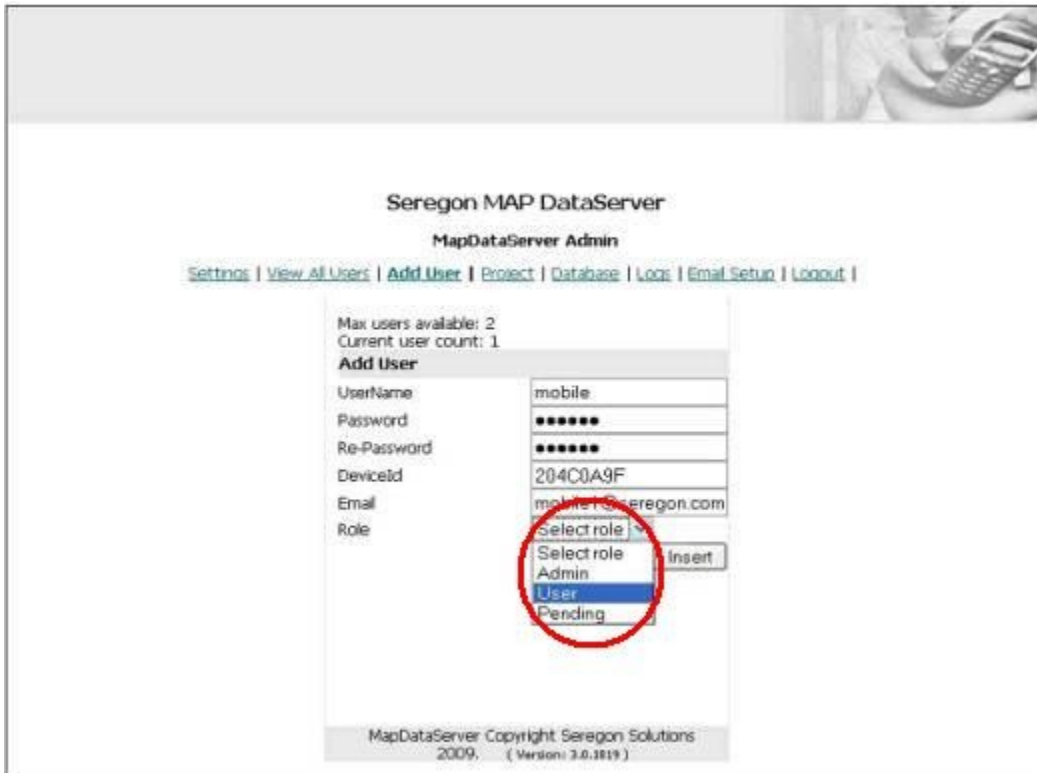
MANUAL APPROVAL OF SELF-REGISTERED USERS

If the Pre-approve new users box is not checked in the Control Panel, self-registered users will be placed in “pending” status until approved manually by an Administrator.

An email is automatically sent to all Administrators each time a new user self-registered. (Email Settings must be entered). The Administrator can select the **View Users** page, as shown below, check the **Select** radio button for a specific user and click **Update**.



The Update User page will be displayed.



To approve a pending user, in the **Role** drop-down box, select **User** and click **Update**.

Viewing Logs

The MAP DataServer Admin pages allow an Administrator to select various logging levels and to view selected logs.



In the **Log Level** drop down box, select the log level desired.

To view the logs, click **Recent Logs**.

Deployment

Projects can be deployed directly from the Administration pages without using Map Design Studio. Click **Project / Project Details** to show the Project Details page. A project can either be installed using the database settings embedded in the project, or custom settings applicable to that instance, as required. This allows update of the project without affecting any custom settings already configured.

Setting of custom data connector properties.

Installing the Windows Mobile Runtime on a device

Method 1: Using Active Sync

1. On your desktop computer browse to the provided install link with your internet browser.
2. Select the link marked as Windows Mobile and download the application
3. Using Active Sync copy the file to a directory on your mobile device. (You can explore your device by going to tools in active sync and selecting explore)
4. On the device, select the CAB file
5. Once the file has finished installing go to the **Start Menu** and **click on SeregonMap (the blue rectangle icon)**

Method 2: Using the Internet

1. On the device, use the browser1 to go to the address of the MapDataServer,

http://www.yourserver.com:8082/MapDataServer
2. A Dialog will open up. Make sure the "Open File after download " is selected and **click YES**
3. If the file already exists a dialog box will pop up asking if you want to replace it, **click yes**.
4. If a previous version of the app exists it will warn you that it will be removed. **Click OK**
5. Go to the Start Menu and click on SeregonMap.

Installing the BlackBerry Runtime on a device

On the BlackBerry, use the Internet browser (not the WAP browser) to go to the address of the MapDataServer, e.g.

<http://www.yourserver.com:8082/MapDataServer>

A download screen will appear. Select "Download". Upon completion, it will indicate success by "The application was successfully installed.". Select OK.

Return to the main BlackBerry application landing page. Scroll to and run the application using the blue square icon.

Starting the Application:

Blackberry devices with OS 4.2.1 and Windows Mobile

When SeregonMap first starts, a setup screen is displayed where the address of your server can be entered, e.g.,

www.mydomain.com:8082/MapDataServer

Blackberry devices with OS 4.3 and above:

The address of your server will be setup as part of the initial install and the application will automatically download and start.

Setting the server address

1. In the Setup screen, Select "Change".
2. Type the Server URL of your MapDataServer with no suffix for "Server URL", note "http://" is not required. e.g. :
www.your_domain.com:8082/MapDataServer/

(note the Server URL is case sensitive) then scroll down and select "OK".
3. Scroll down and select "Reload" . This will reload the application.
4. A question may appear in a browser screen (depending on your system setup):
"This device is not yet authorized, do you wish to request access?" Select "YES". An internet browser page will appear, please fill in a username, and a password if required for your project. Click the trackball to send this form, you should now see a new page, "Thank you, your request has been approved.". Exit out of the browser back to the Seregon Map application, and exit back to the Setup screen. Note if the system administrator has not enabled pre-authorization of new users, you will instead see a message "Your request has been sent". Once the system administrator has approved your request, you will be able to download the application.
5. Repeat 4, Scroll down and select "Start"

A user name and password may also be required, depending on the systems administration policies. Please refer to [User Management](#) for details. Once the address is entered, the project can be downloaded into the device, and the project started.

The username /password is used to identify the user of this device, and can be used to filter data sent to the device

If a [StartScreen](#) has not been defined the main screen application will immediately start.

If an StartScreen has been defined in the project, this will now be shown. Clicking on an application link will start the application and its main screen will be shown.

If the application is closed and restarted, it will restart at the StartScreen, if one has been defined.

When starting an application for the first time, the datastore will be empty and the application will request all data from the server using the “Get All” synchronization rule.

Changing the server address or reloading the application.

Blackberry:

The setup screen can be accessed by pressing the Alt key, followed by the context menu button, this will show the MAP system menu, which includes Setup.

Windows Mobile

The setup screen can be accessed from the Menu button at the bottom left of the screen.

TroubleShooting

Reinstalling MAPDataServer fails:

Sometimes Tomcat does not recognize a new version of the MapDataServer webapp has been installed.

1. If possible, shutdown and restart Tomcat using the Tomcat service manager.
2. If it still is showing the old version, shutdown Tomcat and delete the <Program Files>\Apache Software Foundation\Tomcat 5.5\webapps\MapDataServer folder. Restart Tomcat
3. If shutdown of Tomcat is not possible, run Tomcat Manager (see Section 2) and undeploy MapDataServer. You should not be able to delete the folder as in step 2 above, and redeploy.