



Seregon Mobile Application Platform

## **Installation and Deployment Guide**

Version 3.2

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# 1 Introduction

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

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 MAPDataServer, add and administer user accounts, and how to access log information.

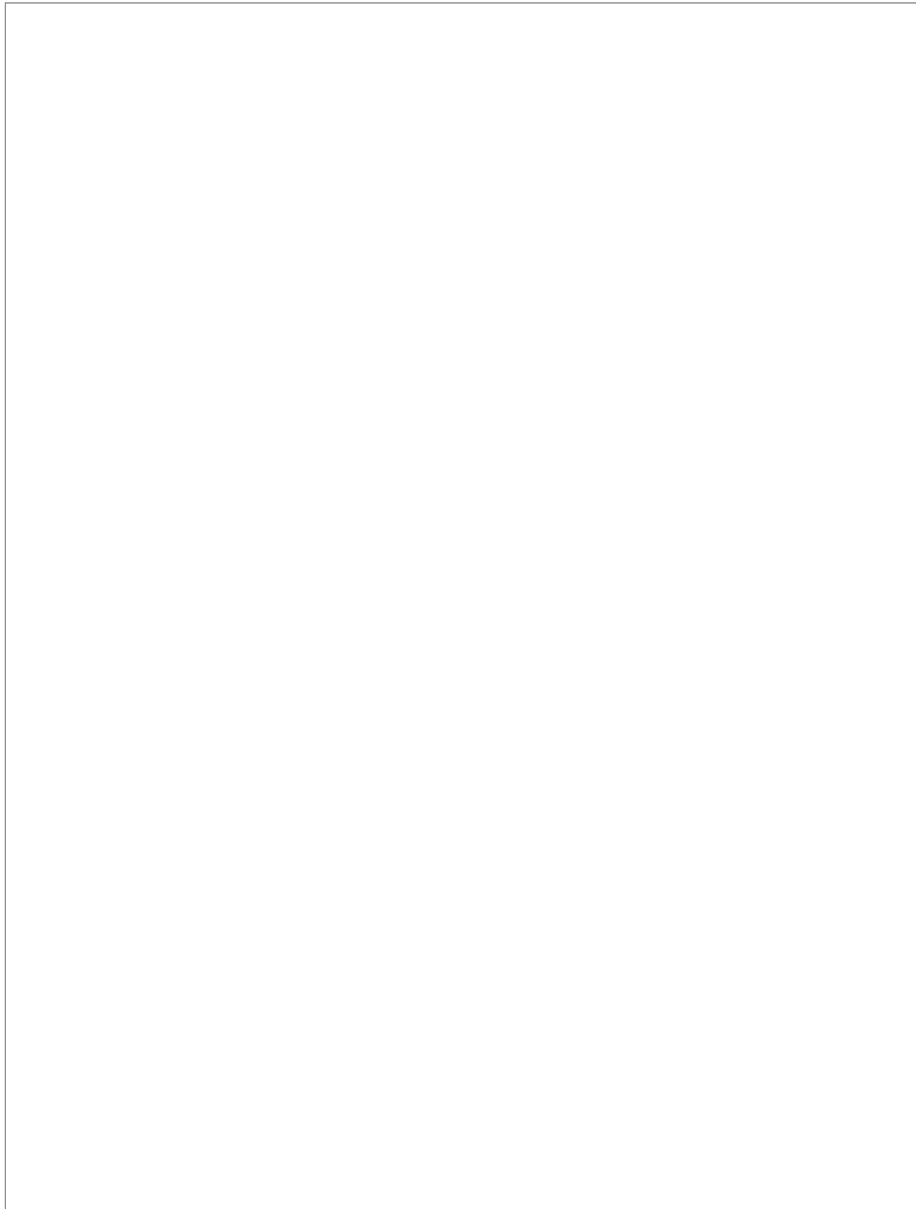
Section 4 describes how to install and administer MapDataServer including device and system administration.

## 1.1 What is Seregon MAP?

Seregon MAP is an intuitive environment for designing powerful mobile 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.

### 1.1.1 System Component Diagram

MAPDataServer 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 or backend data access and updates.



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

## 2 Requirements

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

**Please complete the following requirements are met to ensure that your systems is ready to begin the installation:**

### NETWORK REQUIREMENTS

The server running Tomcat and the MapDataServer web application must be accessible from the internet so that the device can access it, which normally requires a static IP or an assigned domain name, or a Blackberry 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).

### 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>)

In case of difficulty, this link is the Apache Main page: <http://tomcat.apache.org/download-55.cgi>

**We recommend that you change the port used by Tomcat to port 8082 during the install.**

The Tomcat default port is 8080 which may conflict with the RIM MDS/BES, which is used to run by the Blackberry simulator and/or the RIM BES.

## 3 Installing MAPDataServer

### 3.1 Windows

#### Installation methods:

- Windows Setup

To install Seregon MAP DataServer, download and run the **MapDataServer\_setup.exe** package from the provided URL. This installation program copies the MapDataServer war file directly into the Tomcat webapps folder.

- Direct copy

You can also copy in the war file manually into the Tomcat folder, renaming it if a different instance name is needed, or install it using the Tomcat Manager.

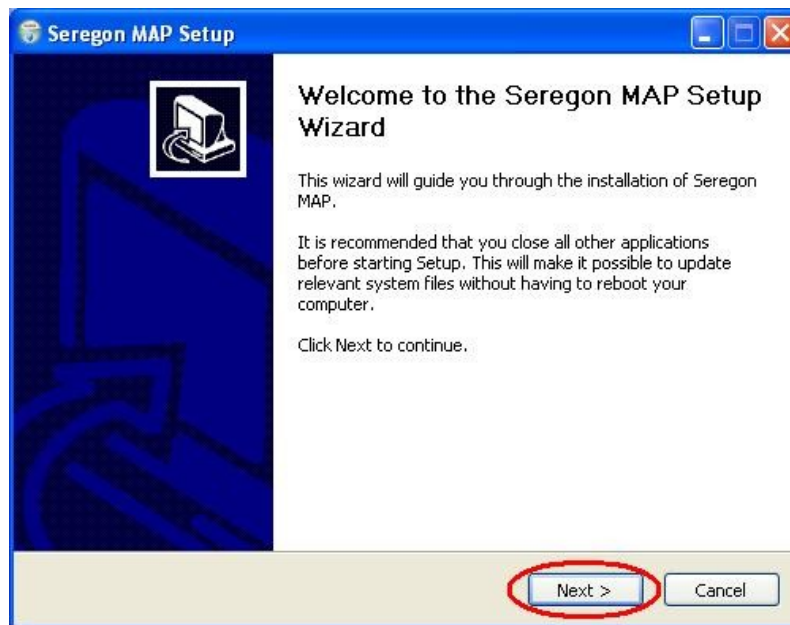
- Tomcat Manager

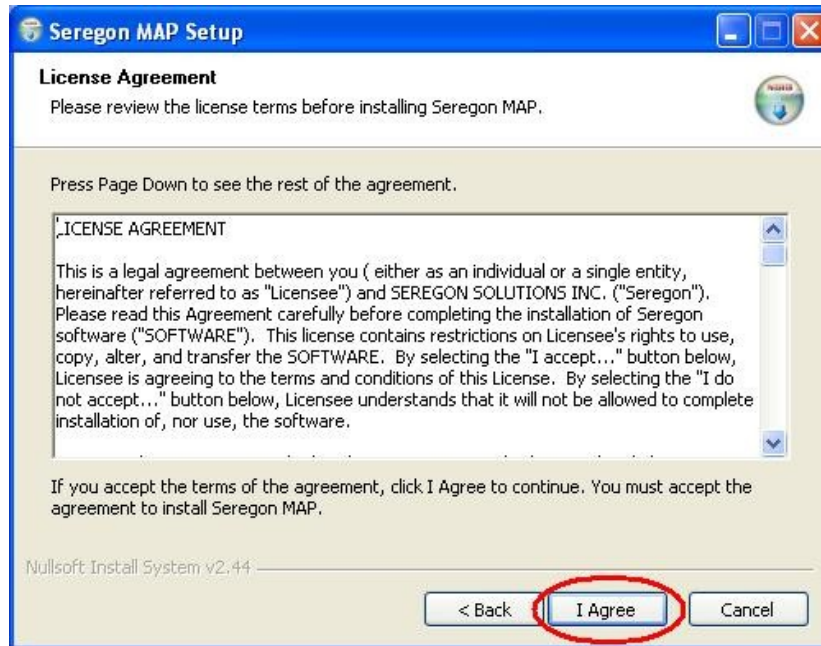
Using the manager, you can also start and stop individual web applications and is the recommended procedure for remote installation on customer sites. To enable Tomcat Manager, add an admin password to the tomcat -users.xml file in <Program Files>\Apache Software Foundation\Tomcat\conf, it will require a line such as this:

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

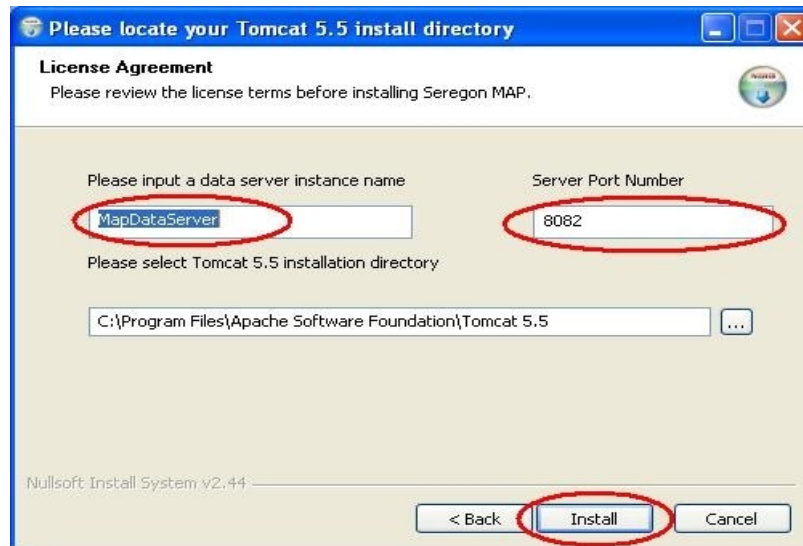
#### Installing from the Windows Setup - details

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



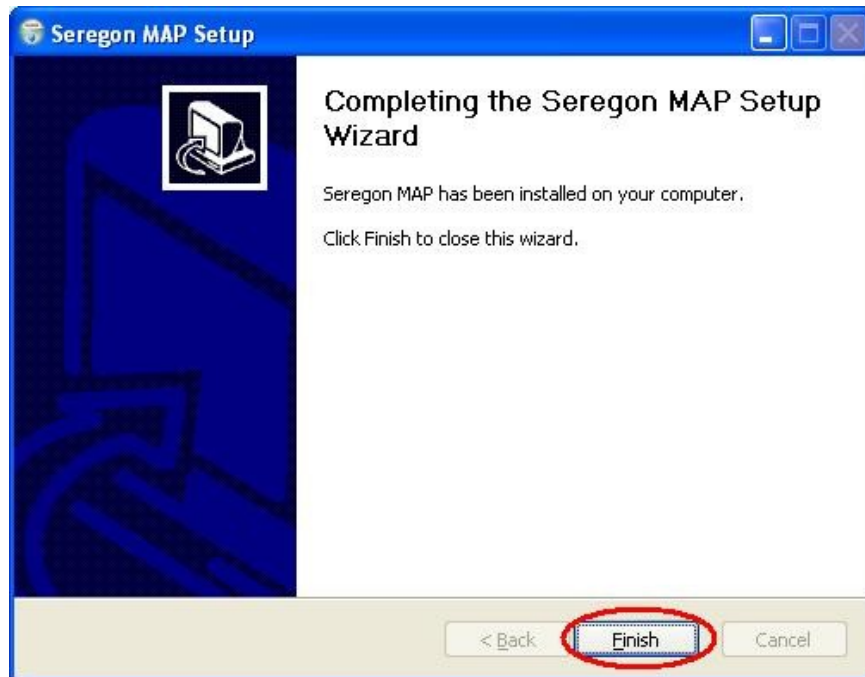
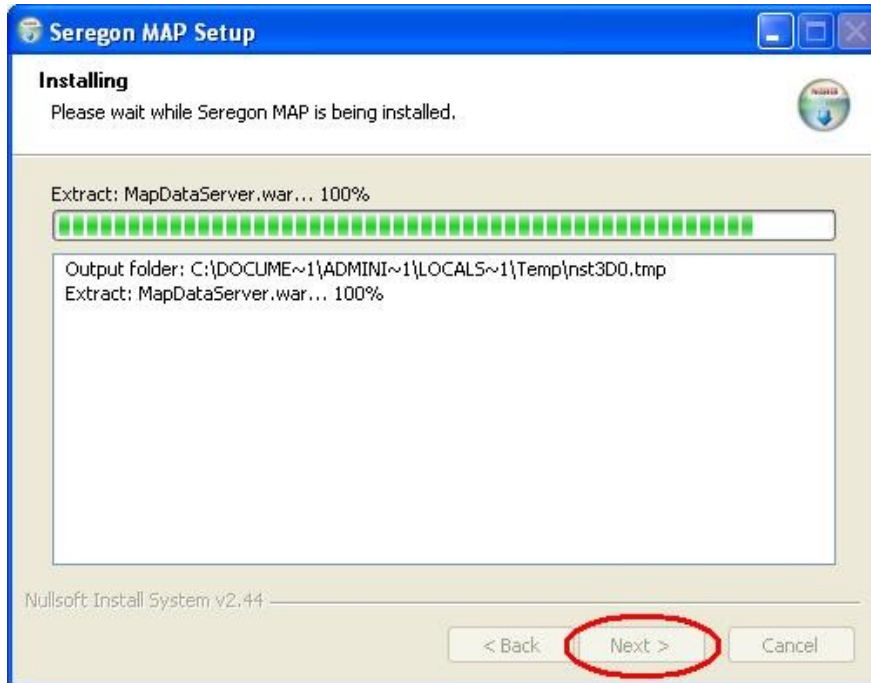


You must click **I Agree** to continue with the installation.



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**



## 3.2 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/ ", 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.

## 3.3 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 war files 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.folder.

See [TroubleShooting](#).

Check that your server is available using your external URL, e.g. <http://www.yourserver.com:8082>

IMPORTANT

**Make sure the Tomcat installation is also accessible from your device. To check this, repeat the above steps but use the external url for your server. If your device has Wifi, the internal address may be used. On the device you should get a Application Download page.**

## 3.4 Setting up the MAPDataServer

To initialize MAP DataServer, using 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 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. SMTP settings are used to notify Administrators of new user registrations. 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, together with a choice of Debug or Release settings.

### Instance: MapDataServer

Please enter new path to Server Instance Data

DataServer Data Path

Create Folder?  (path does not exist)

This server will be used for:

Debug

Login not required for project upload from Studio  
New devices added upon request

Release

Login required for project upload from Studio  
New devices added as pending, with request page entry

Check the 'create' checkbox together with the appropriate choice of Debug or Release and click **Submit** again.

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

## SeregonMap Data Server

Instance name: MapDataServer

Version: 3.2.3823

Startup messages:

Android.zip not installed

SMTP Host not configured; Admin Email notifications will not be available

Please Login

UserName	<input type="text" value="admin"/>
Password	<input type="password" value="....."/>

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

Click **Login** and navigate to the User List page to change the default password – see below

For additional details on adding users and other systems administration functions, please refer to the next section.

# 4 MAP Systems Administration

## 4.1 Introduction

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

### Licensing

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

#### 4.1.1 Licensing your MAPDataServer

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

Click **Submit**.

## 4.2 Device / User Management

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

The MAPDataServer 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 or be automatically registered by connecting to the MAPDataServer 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 version last used by each device.

#### 4.2.1 New Device Handling

##### PRE-REGISTERING NEW USERS

New mobile users that are created by an Administrator and set to 'User' role are authorized to download and use MAP applications as soon as they connect to the MAPDataServer. The PIN number of the device is required to register users using this method.





**MapDataServer Admin**  
Evaluation

<a href="#">System Settings</a>	<a href="#">Project</a>	<a href="#">Users</a>	<a href="#">Logs</a>	<a href="#">Logout</a>
---------------------------------	-------------------------	-----------------------	----------------------	------------------------

[View All Users](#) | [Add User](#) |

Max users available: 2  
Current user count: 2

**Add User**

UserName	<input type="text" value="mobile"/>
Password	<input type="password" value="••••"/>
Reenter Password	<input type="password" value="••••"/>
DeviceId	<input type="text" value="20C9123"/>
Email	<input type="text" value="mobile@myemail.com"/>
Role	<input type="text" value="Select role"/> ▾

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

#### **AUTOMATIC ADDITION AND PRE-APPROVAL OF NEW DEVICES**

There are 4 options to control the addition of new users to a system.

- New mobile devices can be added automatically upon request, with full User status to allow immediate download.
- New mobile devices can be added automatically upon request, with Pending status, to await approval by an Administrator.
- Users can be directed to a web page where they self-register with username and password (PIN is populated automatically), with full User status, to allow immediate download.
- Users can be directed to a web page where they self-register with username and password (PIN is populated automatically), with Pending status, to await approval by an Administrator.

## SeregonMap Data Server

### MapDataServer Admin

<a href="#">System Settings</a>	<a href="#">Project</a>	<a href="#">Users</a>	<a href="#">Logs</a>	<a href="#">Logout</a>
---------------------------------	-------------------------	-----------------------	----------------------	------------------------

[Settings](#) | [Email Setup](#) | [License](#) |

Project Upload Requires Login

External User Database

New Device Handling

Data Folder C:\MapServer\MapDataServer\ [Change](#)

#### Update Blackberry Device Runtime

#### Update Windows Mobile Device Runtime

#### Update Android Device Runtime

The device PIN number, and the username if using the self-registration option, will be added to the device list in the server. For each new user, an email will be sent to all the administrators of the system that have an email address set up in their profile (this requires SMTP settings to be setup on the server).

### MANUAL APPROVAL OF SELF-REGISTERED USERS

The Administrator can select the **View Users** page, as shown below, check the **Select** radio button for a specific user and click **Update**.

SeregonMap Data Server  
MapDataServer Admin

---

System Settings | Project | Users | Logs | Logout

---

Search Users / DeviceIds

Username	DeviceId	Email	Role	MAP Ver	Device	Actions
2100000a	2100000a		user	3.2.3811	BB 9000 4.6.0.150	<input type="button" value="Change"/> <input type="button" value="Delete"/> <input type="button" value="Wipe Device"/> <input type="button" value="Show Logs"/>
admin			admin			

Max Users: 5

SeregonMap ( Version: 3.2.3823 )

The Update User page will be displayed as above. To approve a pending user, in the **Role** drop-down box, select **User** and click **Update**.

### 4.3 Viewing Logs

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

MapDataServer Admin  
Evaluation

---

System Settings | Project | Users | Logs | Logout

---

Log Level:

Log Data

**Download Log Files** [1](#) [2](#) [3](#) [4](#) [5](#) [6](#) [7](#) [8](#) [9](#) [10](#)

[Recent Table Synch Data](#)

[Recent Logs](#)

In the **Log Level** drop down box, select the log level desired. For servers with large amounts of traffic, or data, a level of 'error' is recommended.

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

## 4.4 Deployment

Projects can be deployed using Project pages. 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 installation of project updates without affecting any custom settings already configured for that instance.

MapDataServer Admin  
Evaluation

System Settings	<b>Project</b>	Users	Logs	Logout
-----------------	----------------	-------	------	--------

[Project Details](#) | [Database](#) |

Project: **horizgrid** [View Project Xml](#)  
(Wed Jun 23 16:58:02 EDT 2010)

**Upload new project, update Database Settings from project**

**Upload new project, keep existing database settings**

# 5 Installing the Windows Mobile Runtime on a device

## 5.1 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)**

## 5.2 Method 2: Using the Internet


1. On the device browser, go to the address of the MapDataServer, e.g.  
  
http://www.yourserver.com:8082/MapDataServer
2. A Dialog will open. 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.

## 6 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. Below 'Set Application Permissions', select "Download". Upon completion – it will take a minute or two - it will indicate success by "The application was successfully installed.". Select OK.

Exit the browser and return to the BlackBerry desktop. Scroll to and run the application using the blue square icon . It could be located in the Main Menu, Applications Folder, or Downloads Folder, depending on device settings.

### 6.1 Starting the Application:

#### Windows Mobile

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

[www.yourserver.com:8082/MapDataServer](http://www.yourserver.com:8082/MapDataServer)

#### Blackberry devices:

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

#### Setting or changing the server address (required on Windows Mobile only)

- In the Setup screen, Select "Change".
- Enter the Server URL: I.e. The URL of your MapDataServer with no suffix, note 'http://' is not required. e.g. :  
[www.yourserver.com:8082/MapDataServer/](http://www.yourserver.com:8082/MapDataServer/)

(note the instance name is case sensitive) then scroll down and select "OK".

1. Scroll down and select "Reload" . This will reload the application.
2. A question may appear in the 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.
  - If your system has been set to approve new users automatically, 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.
  - 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 and start the application.

3. Select 'Reload', the application will now load and the project name will appear in the box. Scroll down and select "Start"

A progress screen will now show while the application downloads the data required from the server. The application will then show the initial screen defined for the project.

If the application is closed and restarted, it will restart at the initial screen.

### **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. On devices with no keyboard, a Setup menu is added to the top level form Menu button.

#### **Windows Mobile and Android**

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

# 7 Troubleshooting

## 7.1.1 Getting Help

We are here to help you. Please email [support@seregon.com](mailto:support@seregon.com)

### **Reinstalling MAPDataServer.war fails:**

Sometimes Tomcat does not recognize that 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 is showing the original version on the Administration page, 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.