

Event Based Interface

This application note describes how to configure the real-time “Event Based” interface between Mattec MES and CMS..

1. Overview

Mattec’s sister company, CMS, is a leading provider of ERP software, manufacturing software, and supply chain management software solutions to manufacturers and distributors.

Today, there are three main methods for exchanging data between CMS and Mattec MES, including:

- Data, such as master files, work orders, and schedules are passed from CMS directly into the Mattec MES database.
- “CMS Batch” – Data, such as production history, is passed directly from the Mattec MES database into CMS. Data can be passed frequently or once per shift and can be posted automatically or reviewed by a user and then posted.
- “CMS Event Based” – Data, such as job changes, shift changes, and production information, is passed directly from the Mattec MES system into CMS via CMS’s “Event Based” interface.

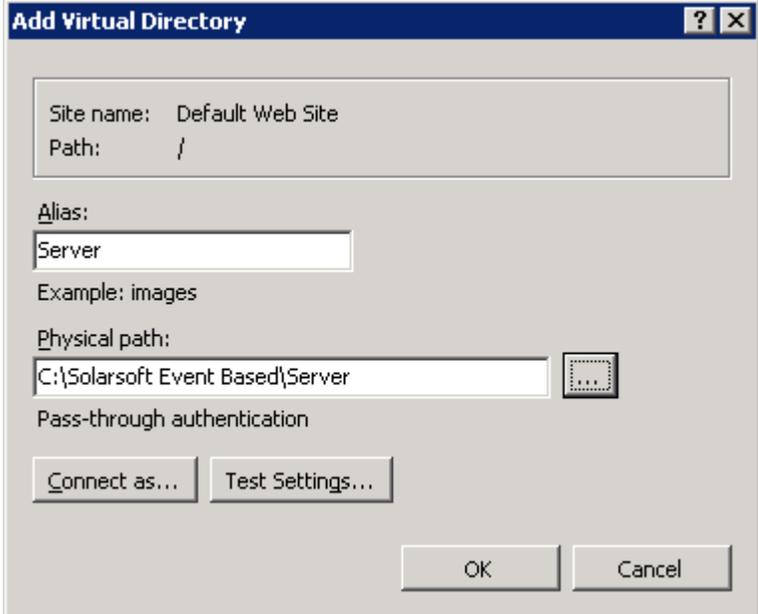
This application note will describe how to configure the Event Based interface for use with Mattec MES on Windows Server 2008.

2. Installation and Configuration

To install and configure the Event Based interface on the Mattec MES server computer, follow these steps:

- 1 Install the IBM Client Access program on the Mattec MES server computer. This is generally installed by the customer from software that they received with their CMS application. This is the software that will allow you to run the ivp client from a windows system.
- 2 Copy the files provided by Mattec's Manufacturing Department, including the Client, Tools, Configuration, and Server directories, to the directory "C:\Solarsoft Event Based" on the server computer.
- 3 Install IIS.
- 4 Add a new Virtual Directory named "Server" for the directory "C:\CMS Event Based\Server". To do this, open the Sites folder, right-click on the Default Web Site, and select Add Virtual Directory. Set the Connect As for a specific user and use a local admin account such as the MattecService account that we usually create. Then test your settings to confirm access.

Creating a Virtual Directory



Add Virtual Directory

Site name: Default Web Site
Path: /

Alias:
Server

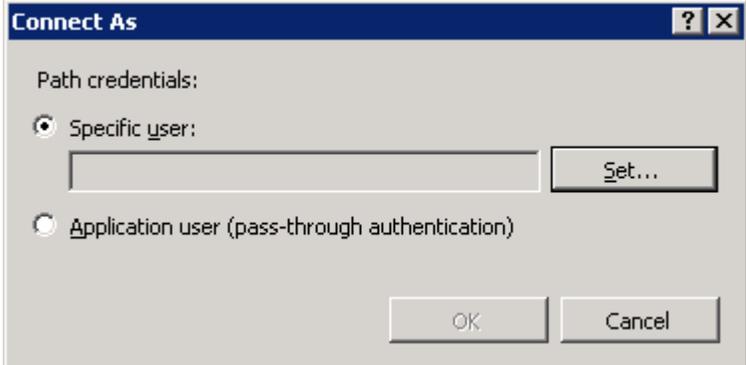
Example: images

Physical path:
C:\Solarsoft Event Based\Server

Pass-through authentication

Connect as... Test Settings...

OK Cancel



Connect As

Path credentials:

Specific user:
[Text Box] Set...

Application user (pass-through authentication)

OK Cancel

Set Credentials [?] [X]

User name:
mattecservice

Password:
●●●●●●●●

Confirm password:
●●●●●●●●

OK Cancel

Test Connection [?] [X]

Results:

Test	Setting
✓ Authentication	User name (mattecservice)
✓ Authorization	Path is accessible (C:\Solarsoft Event Based\Server).

Details:

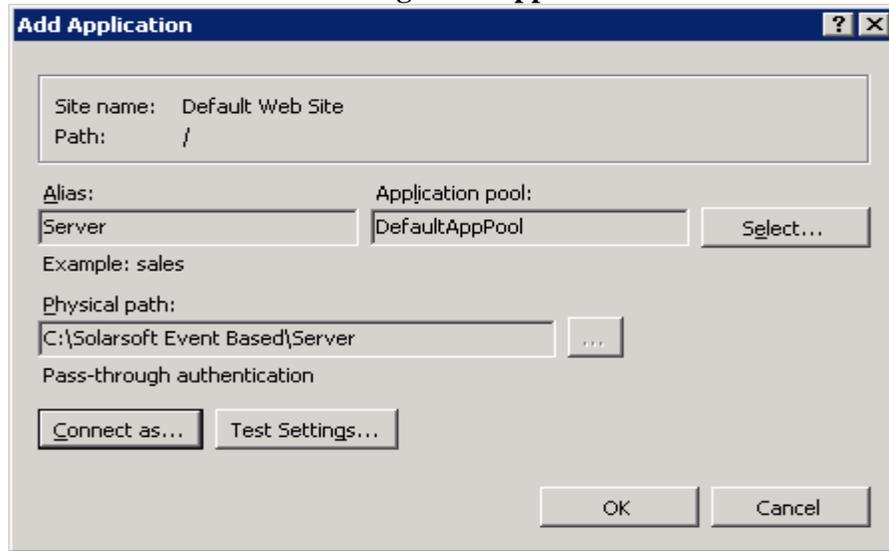
The specified user credentials are valid.

[More information about configuring and diagnosing UNC connections](#)

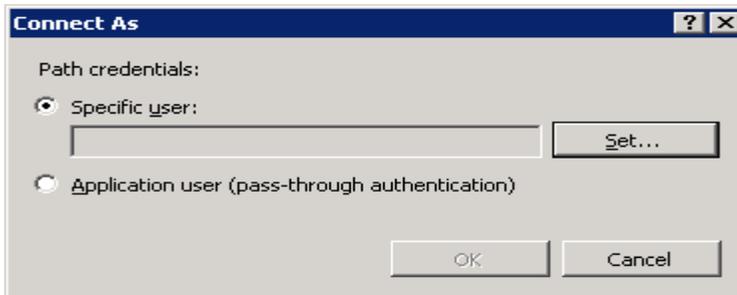
Close

5 Convert the “Server” virtual directory to an application by right clicking on the server folder and selecting convert to application. Then change the Connect as again to use your local admin account and test your settings.

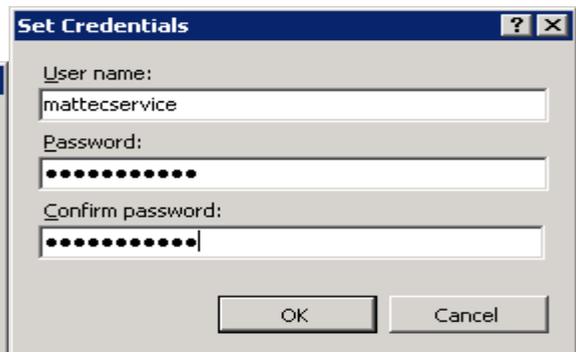
Converting to an Application



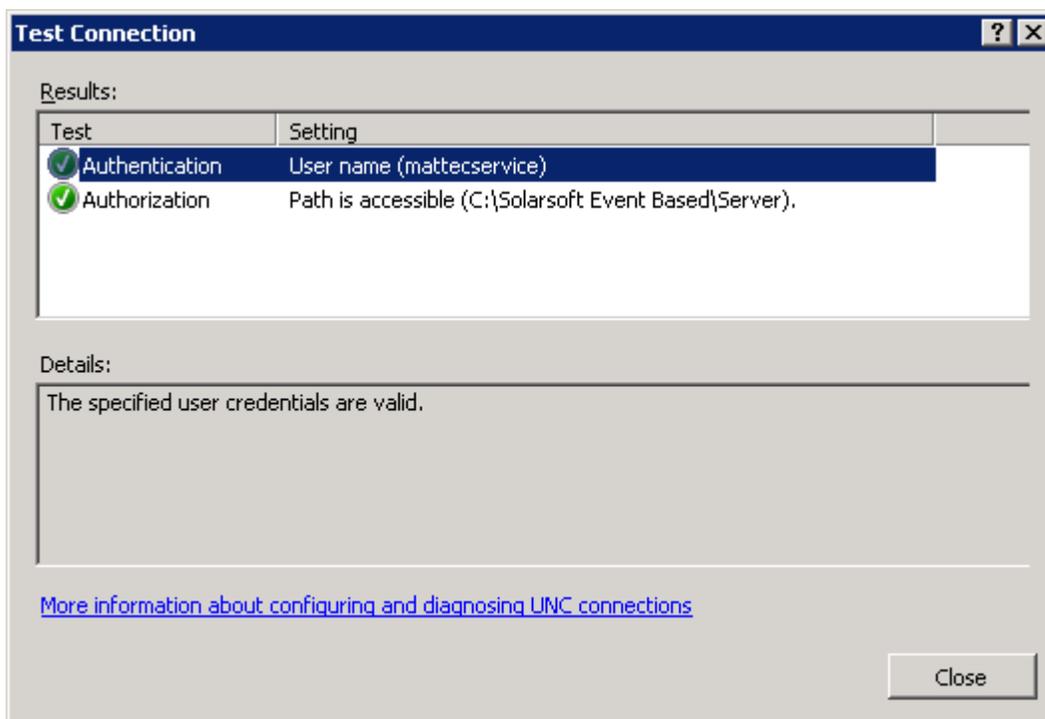
The "Add Application" dialog box is used to configure a new application. It includes fields for Site name (Default Web Site), Path (/), Alias (Server), Application pool (DefaultAppPool), Example (sales), Physical path (C:\Solarsoft Event Based\Server), and Pass-through authentication. Buttons for "Connect as...", "Test Settings...", "OK", and "Cancel" are present.



The "Connect As" dialog box allows selecting the authentication method. The "Specific user" radio button is selected. A "Set..." button is next to the user name field. "OK" and "Cancel" buttons are at the bottom.



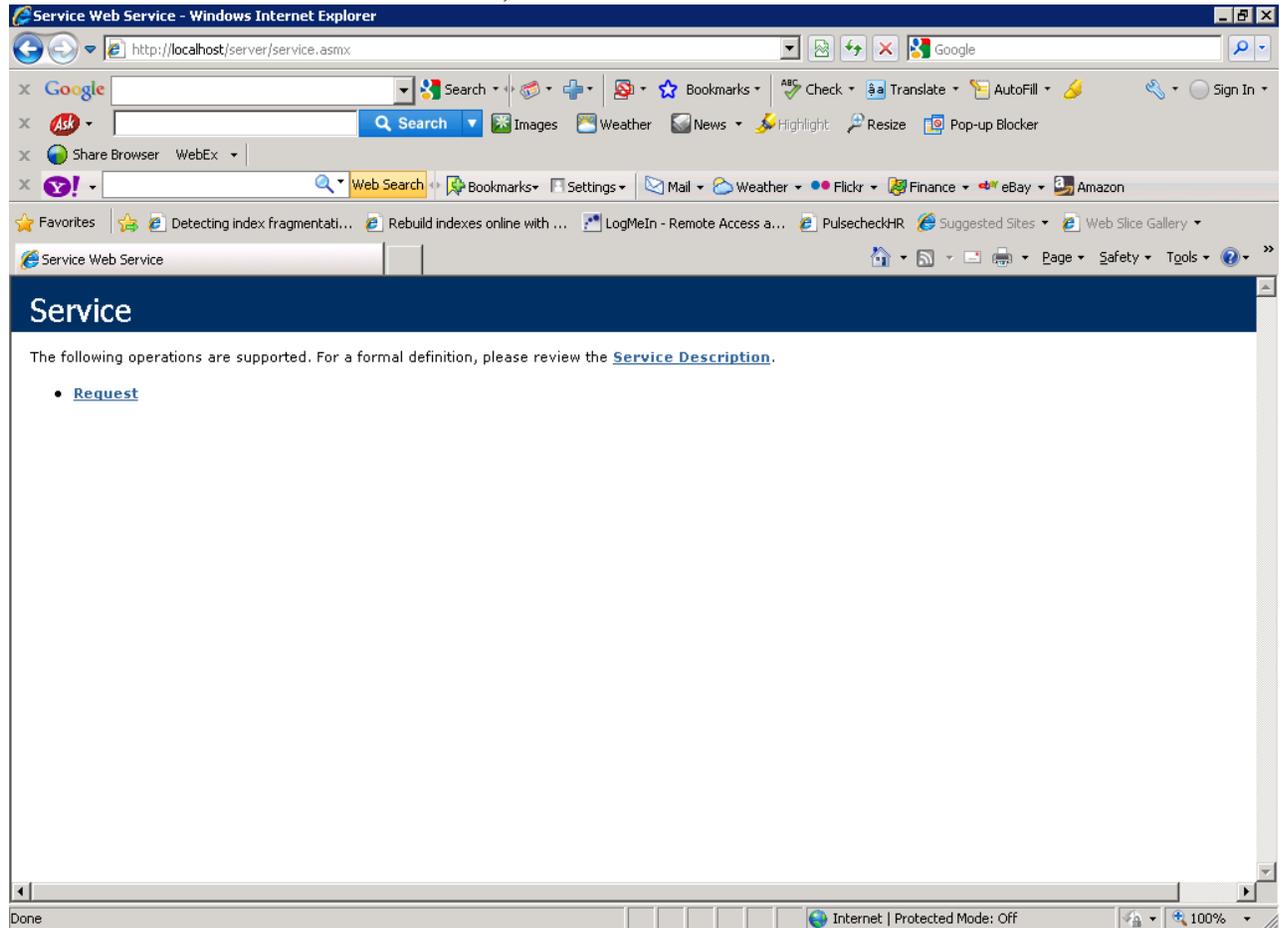
The "Set Credentials" dialog box is used to enter user information. It has fields for User name (mattecservice), Password (masked with dots), and Confirm password (masked with dots). "OK" and "Cancel" buttons are at the bottom.



The "Test Connection" dialog box displays the results of the connection test. It shows a table with two rows: Authentication (User name (mattecservice)) and Authorization (Path is accessible (C:\Solarsoft Event Based\Server)). A "Details" section contains the message "The specified user credentials are valid." A link for "More information about configuring and diagnosing UNC connections" is provided. A "Close" button is at the bottom right.

Test	Setting
✓ Authentication	User name (mattecservice)
✓ Authorization	Path is accessible (C:\Solarsoft Event Based\Server).

6 Open Internet Explorer and launch the URL `http://localhost/Server/Service.asmx`. Do not continue until this returns without errors, as shown below:



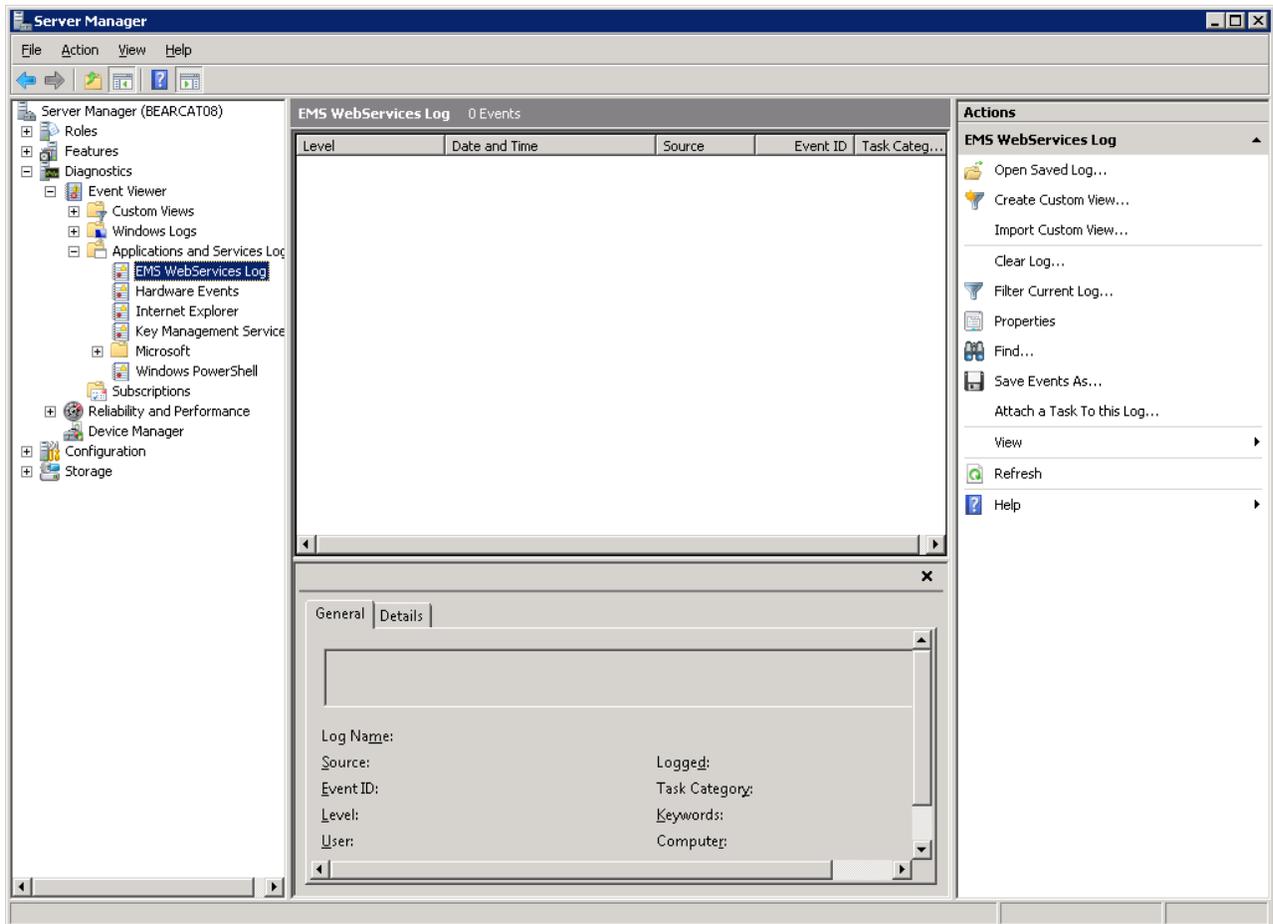
7 Modify the file `C:\CMS Event Based\Server\Web.config` as necessary. The excerpt shown below is the only areas you should have to edit:

```
SFI5ConnConfigSection connectionString="Provider=IBMDA400;Data
Source=CMS402;Persist Security Info=True;User ID=MATTEC_I5;Password=MATTEC_I5;"
>
    <connectionHandlers>
        <!-- Set the I5 data queue information here -->
        <addHandler id="0" i5SendQueue="SF223DQI" i5ReceiveQueue="SF223DQO"
i5DQLib="TEST1"/>
    </connectionHandlers>
</SFI5ConnConfigSection>
```

The items changed in here are generally as follows:
Data Source = CMS IBM Server Computer Name
User = CMS admin user account created on the CMS side
Password = Password for this user
I5DQLIB = Database to connect to. This will either be there live database or a test database.

8 Execute the file C:\CMS Event Based\Configuration\Server.bat. This will register all files that are needed and add “EMS WebServices Log” into the Windows Event Viewer.

Event Viewer – EMS Web Services Log



9 Ensure the files EventBased.exe and EventBased.config exist in the directory C:\Program Files\Mattec\ProHelp\Bin. Modify the file EventBased.config as necessary. Run the test program EventBased.exe and verify that events are being sent correctly and logged in the Windows Event Viewer.

10 Copy the files EventBased.exe.config, Moller.exe.config and Pcmiu.exe.config into the directory C:\Program Files\Mattec\ProHelp\Bin on the Mattec Server.

11 Modify the file pcmiu.exe.config. The existing file will look like the example below:

```
<?xml version="1.0" encoding="utf-8" ?>
<configuration>
<configSections>
</configSections>
<appSettings>
<add key="etWebServiceUrl" value="http://localhost/Server/Service.asmx"/>
<add key="DefaultEmsUserID" value="1001"/>
<add key="ReportingFacility" value="1"/>
</appSettings>
</configuration>
```

The following line needs to be modified:

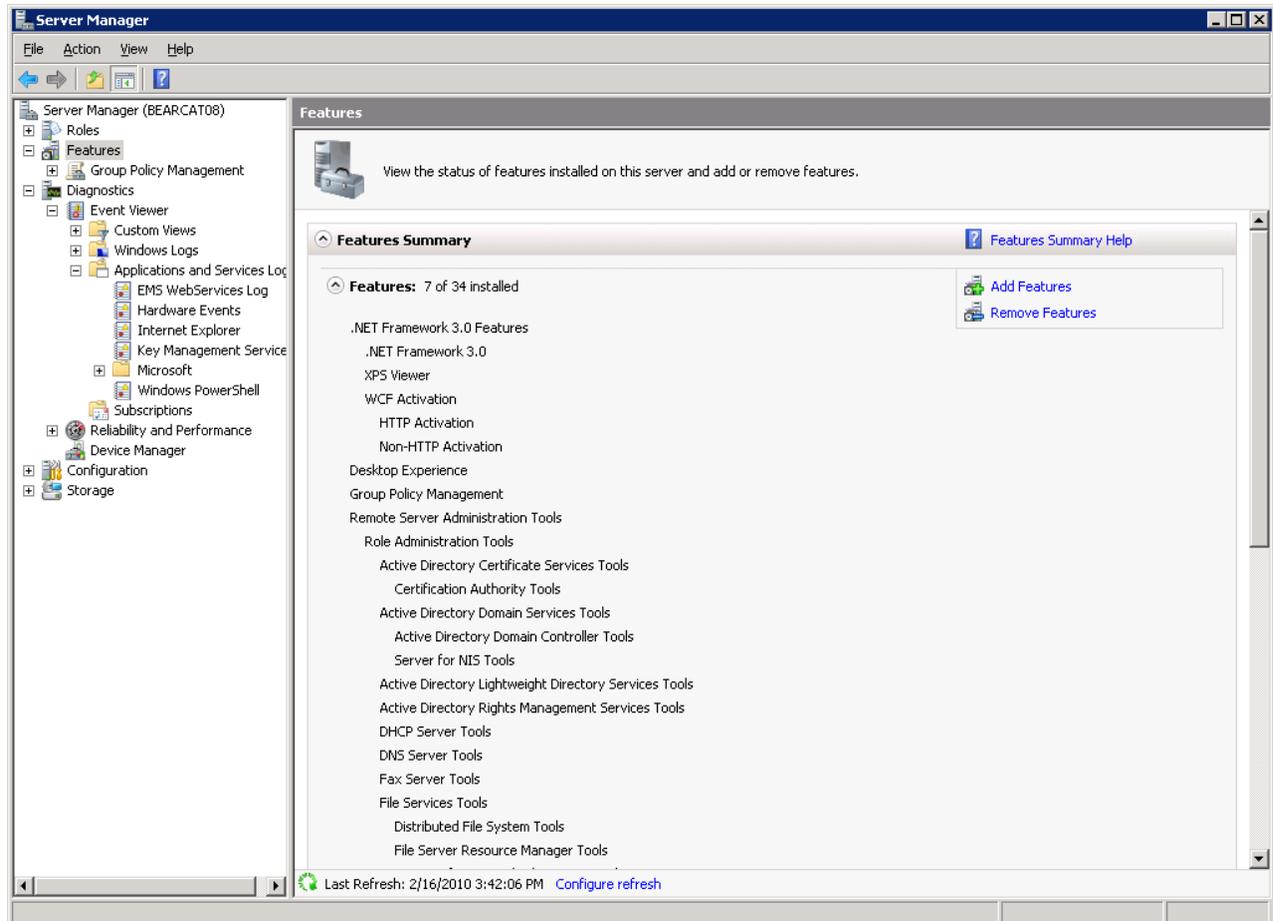
```
<add key="etWebServiceUrl" value="http://localhost/Server/Service.asmx"/>
```

This line needs to have the name of the Mattec server put in the place of the localhost entry. On the example system, the name of the Mattec server is SERVER2008, so the line looks like the following:

```
<add key="etWebServiceUrl" value="http://SERVER2008/Server/Service.asmx"/>
```

Make changes as appropriate and save the changes.

12 Install Message Queuing by going to Server Manager and then Features and click on Add Feature and then select the Message Queuing and run through the install of this feature.



Add Features Wizard



Select Features

Features

Confirmation

Progress

Results

Select one or more features to install on this server.

Features:

- .NET Framework 3.0 Features (Installed)
- BitLocker Drive Encryption
- BITS Server Extensions
- Connection Manager Administration Kit
- Desktop Experience (Installed)
- Group Policy Management (Installed)
- Internet Printing Client
- Internet Storage Name Server
- LPR Port Monitor
- Message Queuing**
- Multipath I/O
- Network Load Balancing
- Peer Name Resolution Protocol
- Quality Windows Audio Video Experience
- Remote Assistance
- Remote Differential Compression
- Remote Server Administration Tools (Installed)
- Removable Storage Manager
- RPC over HTTP Proxy
- Simple TCP/IP Services
- SMTP Server
- SNMP Services

Description:

[Message Queuing](#) provides guaranteed message delivery, efficient routing, security, and priority-based messaging between applications. Message Queuing also accommodates message delivery between applications that run on different operating systems, use dissimilar network infrastructures, are temporarily offline, or that are running at different times.

[More about features](#)

< Previous Next > Install Cancel

3. Event Based Configuration

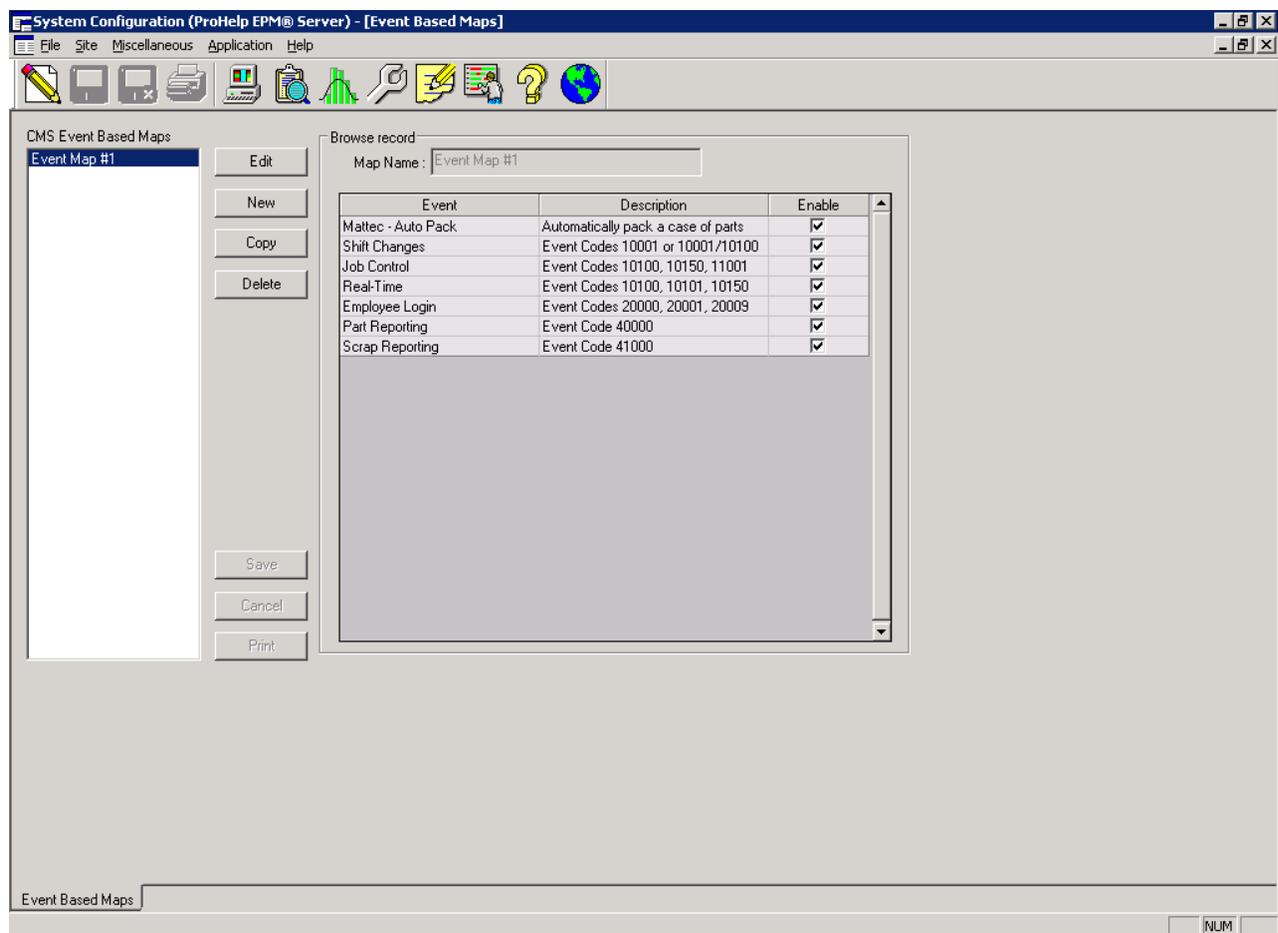
You have control over which machines will send data to CMS using the Event Based interface and even have control over which collection of CMS Events will be used. You can even use Event Based entry for some machines and use the Batch Interface for other machines.

To configure a CMS Event Based Map within Mattec MES, follow these steps:

- Start the **System Configuration** program. To do this, start the **Main Menu** and press the **Launch System Configuration** icon.
- Click the **Site** menu and select **CMS Event Based Maps**. The **CMS Event Based Maps** screen will be displayed.

CMS Event Based Maps Configuration

You can view existing Event Based Maps, edit existing Event Based Maps, create new Event Based Maps, and delete existing Event Based Maps if you have been assigned appropriate security permissions by the System Manager. You can not delete an Event Based Map if the map is assigned to a machine.

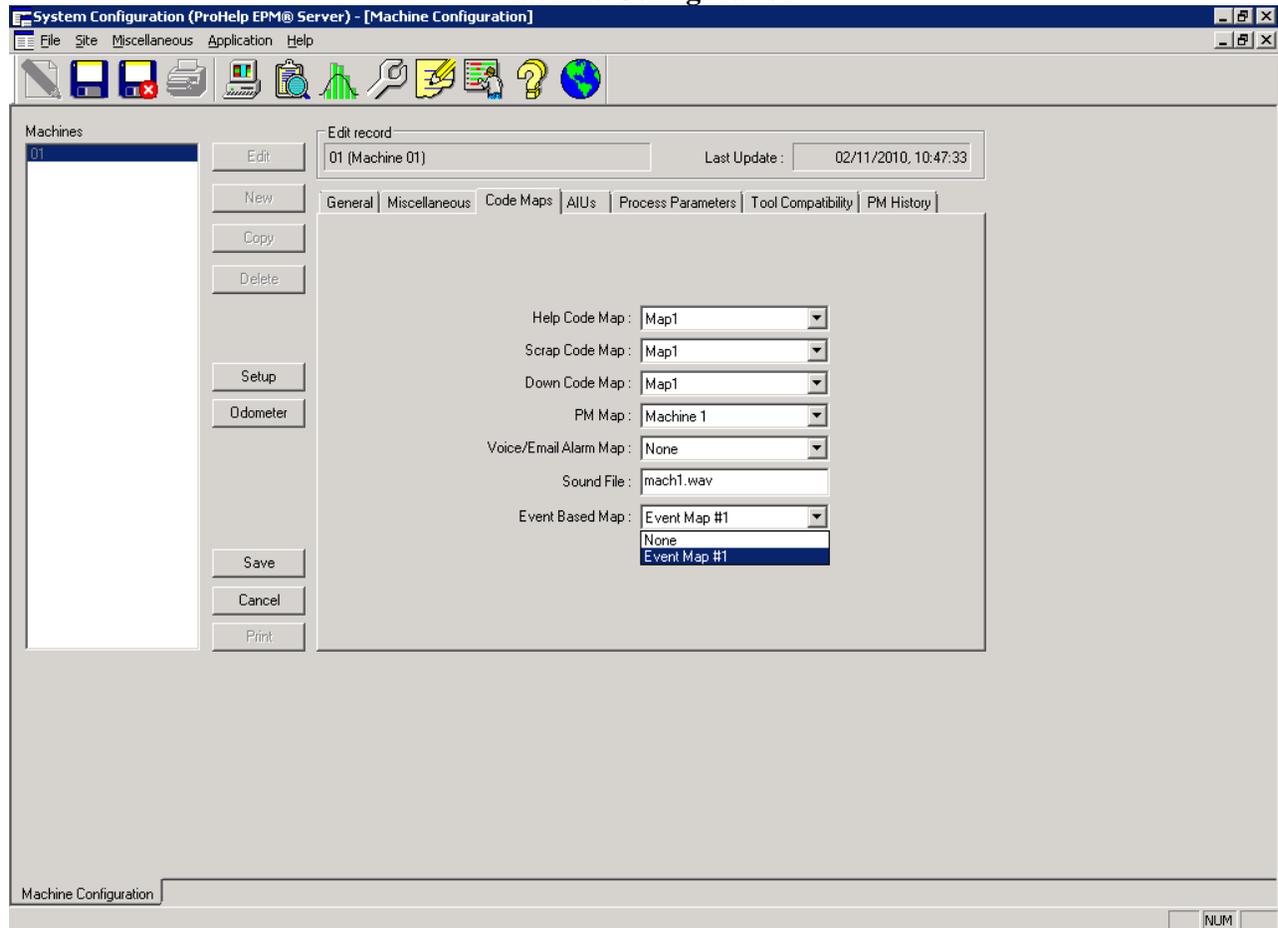


Once you have created a CMS Event Based Map, you must assign it to one or more machines.

To assign a CMS Event Based Map to a machine, follow these steps:

- Start the **System Configuration** program. To do this, start the **Main Menu** and press the **Launch System Configuration** icon.
- Click the **Site** menu and select **Machine Configuration**. The **Machine Configuration** screen will be displayed. Press the **Code Maps** tab. Specify a CMS Event Based Map, as appropriate.

Machine Configuration



4. Miscellaneous Configuration

The System Configuration program is used to configure additional CMS-related settings.

To configure additional CMS-related fields within Mattec MES, follow these steps:

- Start the **System Configuration** program. To do this, start the **Main Menu** and press the **Launch System Configuration** icon.
- Click the **Site** menu and select **System Configuration**. The **System Configuration** screen will be displayed. Press the **CMS** tab and modify these values, as appropriate.

CMS Software Configuration

The “Event Based Host URL” is a URL that can be launched from Mattec’s PCMIU application. It can be used to take you to the JGO or JGO Rich Event Based application within CMS.

System Configuration (ProHelp EPM@ Server) - [System Configuration]

File Site Miscellaneous Application Help

Calculations Solarsoft Field Length MIU Process Sheet Prompt ProStat@ SPC/SQC Purge Real-Time Display Report

Edit
Copy
New
Delete

Solarsoft Event Based Interface

Event Based Host URL :

Facility Code :

Idle Downtime Code : IDLEINACTV

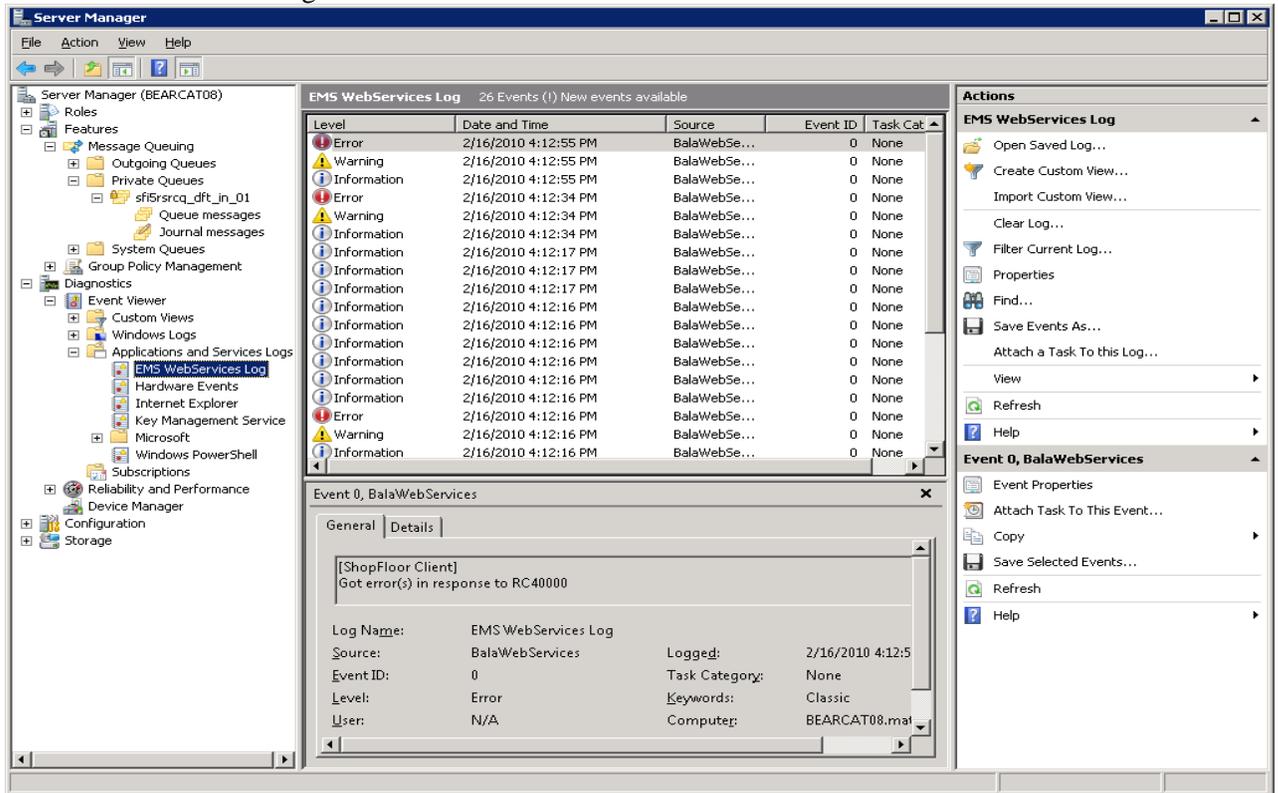
Save
Cancel
Print

System Configuration NUM

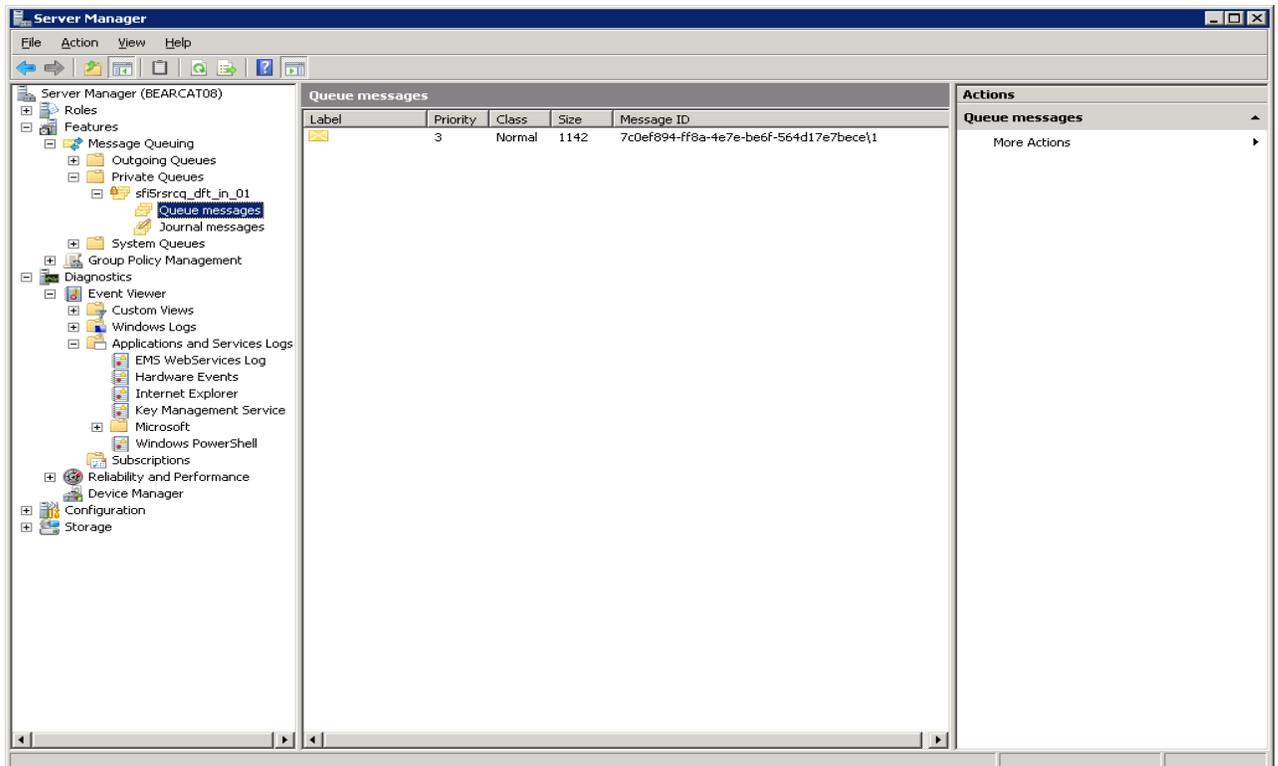
The “Facility Code” and “Idle Downtime Code” must correspond to the settings in your CMS software and have to be setup prior to using Event Based reporting.

5 Troubleshooting

All troubleshooting will take place in the Server Manager of Windows. You can view the log files in the EMS WebServicesLog:



You can view the data queues in the Message Queuing portion of Server Manager. You will have a Queue for each machine setup to use Event Based under Private Queues with the machine number listed at the end of the queue name. Each message in here is a different Event Based code waiting to be sent to CMS:



6. Client Installation

To install CMS event based software on client machines, a few additional steps must be performed.

For LOCAL, or REMOTE client installations, you must copy the CMS Event based folder and place it on the root of the C: drive on the client computer.

When done, you should have a folder structure that has the following:

C:\CMS event based

Under this should be the folders:

Client

Configuration

Monitor

Server

Tools

Once this is done, you will need to do the following:

Open up my computer and navigate to the c:\windows\system32 folder.

Inside this folder find the file called cmd.exe. Right click on this item and choose RUN AS ADMINISTRATOR. (you may not need to do this on Windows XP machines).

While running the command prompt as an administrator, change directories to the c:\CMS event based\configuration folder. Once in this folder, execute the file called client.bat. This should register all components as needed for the client to work correctly.

For LOCAL clients, you must copy the file called pcmiu.exe.config from the Mattec Server's \prohelp\bin folder into the same location as the client's file pcmiu.exe. By default this would be in the C:\Program Files\Mattec\Prohelp\Bin folder. Please verify that this file has been modified as described above in Section 2, step 11. If not, please follow those steps and configure as necessary.

For REMOTE clients, this step is not necessary as the file already resides in the location necessary.