



# **EM Services Management Dashboard**

11/12/2021

## **What are backend Server Services?**

It is a software program specially designed to work closely with the server operating system. It is like a custom extension to the server software. This allows the software to work as part of the server itself. There are some downsides to using services. They require more IT Administration, especially during install and update.

One of the reasons we use back-end services is to take some of the burden off the client-side of the program.

## **Overview**

The Services Management Dashboard (SrvMngDshBrd) is a tool to install, manage, update, and uninstall backend services. This is a tool for the IT department and will be ever-evolving.

## **Current Backend Services**

- EM Middle Tier
  - Configuration
- Express Analytics
  - Configuration
  - Install and update the database objects
- Dashboards
  - Configuration
- Mobile Service
  - Configuration

## **Setting up Server Folder Permissions for each Service**

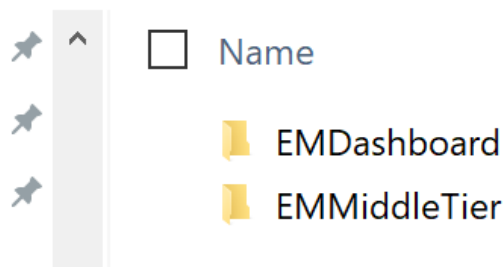
Depending on the version of Windows Server, you will have to set up additional security rights for the services to run and update control and write log files. If so, you may need to create the install directories manually and assign special security rights first. This is required as some of the



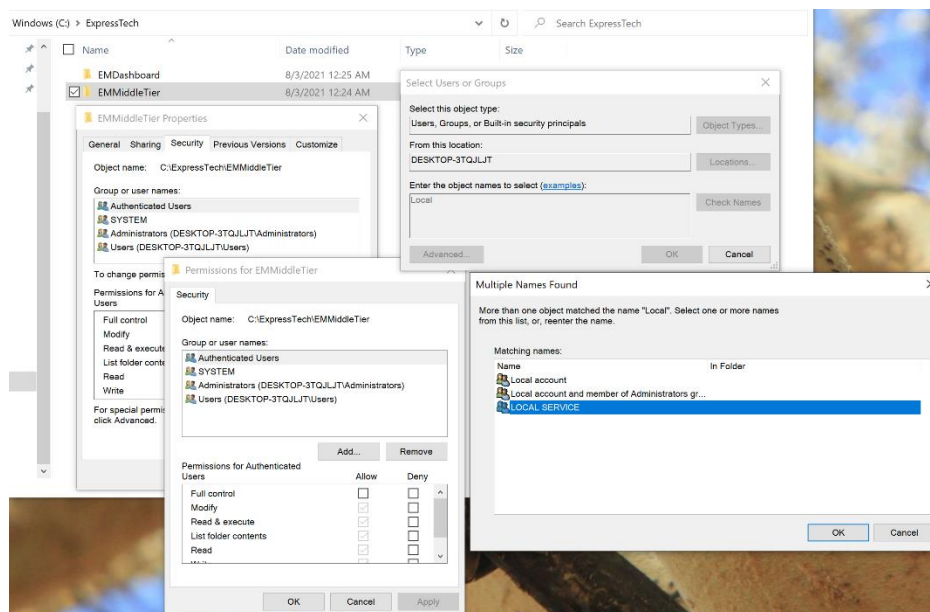
files and directories resist having their security updated after install. It is better to set the security level of the directories first and let the installed files inherit the security from the directory.

Choose the root install directory. For this example, we will use “C:\ExpressTech”. Make the directory **EMMiddleTier** and **EMDashboard**. Your directory structure should look like this:

Windows (C:) > ExpressTech >



Once the services directories are created, set the appropriate security rights for each directory. We are going to set **LOCAL SERVICE** rights for each directory and give the “user” **Modify** level rights.



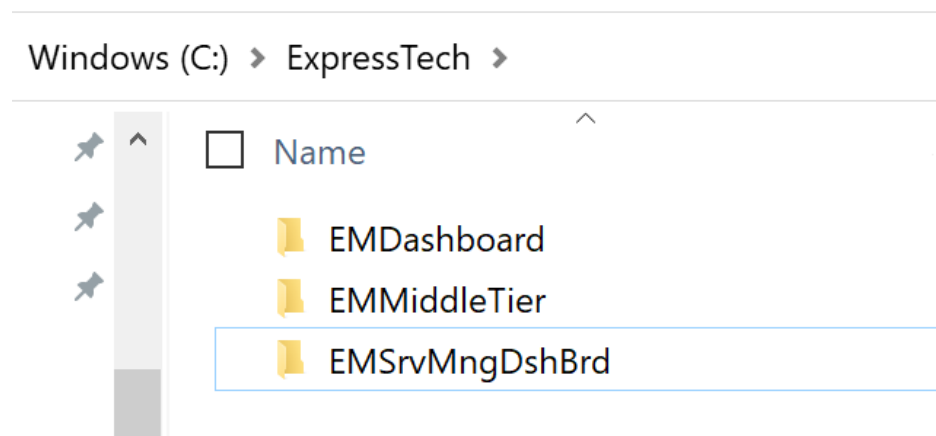
- Right-click on the folder
- Select Properties and then select the Security Tab.
- Select Edit and a screen will pop up, select Add



- A search screen will open, Type in “Local” and select Check Names
- A selection screen will open and choose LOCAL SERVICE.
- This will bring you back to the Permission for EMMiddleTier.
- Select Modify in the lower half of the screen.
- Select OK on the screen and then OK on the Properties screen.
- Repeat for each service directory

## How to Install and Register EM Services

Running the EMMTServiceInstall.exe doesn’t actually install (register the service with the operating system) the services. It just copies the files needed to manage and install the service to the hard drive. You should install the EMMTServiceInstall files in the root directory you chose when creating the services directories in the security step. In this case **\ExpressTech**. If you don’t install the services in the exact directory, it won’t install in the proper directories with the appropriate security settings.

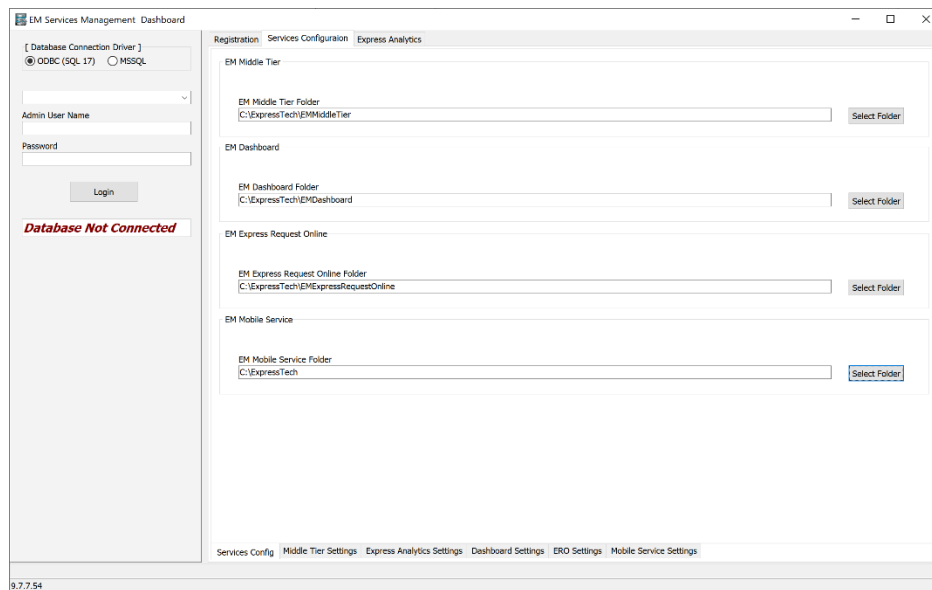


Once the files are on the hard disk, proceed to the EMSrvMngDshBrd directory and run EM Services Manager Dashboard with the **Run as Administrator** option. You must configure the service before you register and run the service. Early adopters will sometimes need to manually configure the service and/or manually install the service. You can find service install/registration instructions [here](#). In addition, technical support is also available to assist.



# How To Use The Services Dashboard

For the EM Services Management Dashboard (SrvMngDshbrd) to configure the installed services, you have to first tell it where the services are installed. Express Request Online is currently in development. EM Mobile Service current version must be installed in the same directory as Express Maintenance.



## Configuring the Middle Tier and other services.

The EM Middle Tier (*EMMiddleTier.exe*) is the heart of the EM Services family of products. It will have multiple services within it as well as the bulk of the database connectivity. Early adopters will have more manual steps and may require tech support. Each new release of SrvMngDshbrd will add new configuration capabilities for new services as well as more automation to quickly set up new services.

### Database Security

You should create a specific user(s) for service connectivity. You will need to decide how granular you want your database security. We recommend that you create a user per service, but you should also be fine with one user for all services.



## Registering Your Database

With the introduction of Dashboards, you will need to register your database with the middle tier for connectivity. The key for this record is UniqueDatabaseId. You can find this by running the following statement:

```
SELECT UniqueDatabaseId FROM dbo.Defaults
```

Select the corresponding service and fill out the rest of the database login information. Save the record. If there is an issue with the login information, the system will display a warning message. If the login information is good, it will just save the record.

## Middle Tier Service Settings

Set and remember the port setting. If you have a firewall set up on this system or an “intranet” firewall, you will need to open this port. This will need to be set in EM Maintenance in the settings screen (directions below). Also, turn on Multicore. This helps with speed and reliability. Currently, the Authentication feature is not active. The assumption is both the client and service will be inside your firewall. This is a future feature.

## Express Analytics Service Settings

EM Services Management Dashboard

[ Database Connection Driver ]  
☒ ODBC (SQL 17) ☐ MSSQL

MAS-DEVWINTST1\DBSCRIPTTEST

Admin User Name  
admin

Password  
\*\*\*\*\*

Login

**Database Not Connected**

Middle Tier Configuration Express Analytics

[ Database Connection Driver ]  
☐ ODBC (SQL 17) ☒ MSSQL

\* Express Analytics Requires the MSSQL driver.

☐ Use Multi Tenant DB Config

Express Analytics  
Server Name  
CUSTOMERSQL\MSSQLINSTANCE

Database  
ExpressAnalytics

User Name  
EMMiddleTier

Password  
\*\*\*\*\*

Test Connection

**Database Not Connected**

Save As File Name  
C:\ExpressTech\EMMiddleTier\EMMTService.exe.json

Open Save Save As

Middle Tier Settings Express Analytics Settings Dashboard Settings ERO Settings Mobile Service Settings



The MSSQL driver is required for Express Analytics. There is a restriction in the ODBC driver limiting parameters to a total of 255 bits. There is a problem with passing a long list of database sources to the stored procedures. The database server settings are derived from the Express Analytics database setup page. All but the Server Name will be automatically filled in. You can set this up now as close as possible to what you think the setting should be and it will get updated with the final settings when you complete the database part of the setup for Express Analytics. The login information should be where the data warehouse part of analytics is set up.

## Dashboard Service Settings

Set and remember the port setting. Fill out the Top and Bottom portion of the Registration tab in the Dashboard.

EM Services Management Dashboard

[ Database Connection Driver ]  
☒ ODBC (SQL 17) ☐ MSSQL

Admin User Name  
Password  
Login

**Database Not Connected**

Registration Services Configuration Express Analytics

Customer Account	Customer Name	Insert TimeStamp	Update TimeStamp
TEST DB	TEST Customer	8/2/2021 11:02:21 AM	11/12/2021 2:17:16 PM

Database Reference Name	Service Name	License Key	Server Name	Database Name
TEST CER	Dashboard		DESKTOP-0IM87SG\SQLEXPRESS	11_23_2020
TEST CER	Express Request Online		DESKTOP-0IM87SG\SQLEXPRESS	11_23_2020

Database Connection User Security

If you have a firewall set up on this system or an “intranet” firewall, you will need to open this port. This will need to be set in EM Maintenance in the settings screen (directions below).

## Express Request Online (ERO) Service Settings

Not yet active.



As with the other services, the configuration data files must be in the same directory as the service. Select the directory at the bottom of the page. If this is a new setup, it will prompt you to continue as a new setup and create the configuration data files.

Add new connection as needed with an appropriate access key.

EM Services Management Dashboard

[ Database Connection Driver ]  
☒ ODBC (SQL 17) ☐ MSSQL

Admin User Name:   
Password:

**Database Not Connected**

Registration Services Configuration Express Analytics

Mobile Service Port: 4200 Log SQL Errors ☒

Drag a column header here to group by that column

SQL Server	SQL Database	SQL Login	SQL Password	Encryption	Access Key (auto assigns if blank)
MAS-DEV31/DEV3SQLEXP2019	Dairy	sa		Y	123456

Services Config Middle Tier Settings Express Analytics Settings Dashboard Settings ERO Settings Mobile Service Settings

9.7.7.54





## How To Install Express Analytics Database Portion

You will have to log in to the database using an Admin level login that can create DB objects, create logins, create users, and set security rights. For MS SQL Server, the “sa” user has all the rights necessary to complete the setup.

- DB Acronym is used mostly by hosted systems to differentiate between different companies. Most customers should leave it blank.
- Initial Process Date allows the user to set how far back they would like the warehouse to hold data. Having several years of data will be beneficial in the future as we grow the analytics capabilities of the reports.
- Set the EM DB user name (default is “EMMiddleTier”) and password.
- Update the scrips based on the DB Acronym and Initial Process Date settings.
- Step #1 is to create the EMStaging database and ExpressAnalytics database.
- Step #2 is to create the database objects needed to populate and process data into the warehouse.
- Step #3 is to create the database objects for each individual client database object. Select the databases you want to include in the warehouse process. Once processed, you need to also process the initial data push.
- Go to the Express Analytics setting page from earlier in the process. Select the appropriate JSON file to be updated and save the settings for the server and user.





**EXPRESS  
MAINTENANCE**  
THE RIGHT TOOL FOR THE JOB  
A Subsidiary of Manufacturing Asset Solutions

(888) 571-8556  
support@mas.systems  
expressmaintenance.com

## Final Step

If the services are already installed and running, you will need to restart the services. There is no need to uninstall them but just cycle the services (stop/start or restart). The services read the configuration information on startup (like the database driver configuration and the port). Some also read the database login information at startup too (like Express Analytics).

# How to configure Express Maintenance

Select the Administration tab and open the Configuration screen. It is important to understand that only one service can be bound to one port. Each service must have its own port.

## EM Middle Tier

Expand the Middle Tier section. Fill in either the MT URL or MP IP Address with the server information where the Middle Tier service is installed. It is recommended that you use the MP IP Address. It is faster (no need to do a DNS lookup for the IP address) and more reliable. If you are running Express Maintenance on the same computer as the service use “localhost”. Normally,

your IT person will install the services and configure them on the server. As part of the install process, the service will be bound to a port. Enter the port number from the services install into the Port field.



**EXPRESS  
MAINTENANCE**  
THE RIGHT TOOL FOR THE JOB  
A Subsidiary of Manufacturing Asset Solutions

(888) 571-8556  
support@mas.systems  
expressmaintenance.com

Configuration - ExpressMaintenance: Hiland Dairy 70

File Administration Maintenance Purchasing Dashboard Express Analytics Utilities

Configuration Services Codes Terms Employees User Activity Ch  
Cost Centers Locations Reports Em  
Companies Field Locks Registration SQ

Setup Manage

Configuration

▲ Edit Configuration ✓ Save Changes ✕ Cancel Changes ? ✕

+ General Settings  
+ Security Settings  
+ Data Settings  
+ Performance Settings  
+ Email Settings  
+ Companies  
+ Equipment (Units)  
+ Parts Inventory  
+ Purchase Orders  
+ Scheduling  
+ Work Orders  
+ Express Request  
+ Mobile App Settings  
+ URL Links  
- Middle Tier

MT URL	
MT IP Address	localhost
MT Port	7376

+ Dashboard

## EM Dashboard

Expand the Dashboard section. Fill in either the Dashboard URL or Dashboard IP Address with the server information where the Dashboard service is installed. It is recommended that you use the Dashboard IP Address. It is faster (no need to do a DNS lookup for the IP address) and more reliable. If you are running Express Maintenance on the same computer as the service use "localhost". Normally, your IT person will install the services and configure them on the server. As part of the install process, the service will be bound to a port. Enter the port number from the services install into the Port field.



# EXPRESS MAINTENANCE

THE RIGHT TOOL FOR THE JOB

A Subsidiary of Manufacturing Asset Solutions

(888) 571-8556

support@mas.systems

expressmaintenance.com

Configuration - ExpressMaintenance: Hiland Dairy 70

File Administration Maintenance Purchasing Dashboard Express Analytics Utilities

Configuration Services Codes Terms Employees User Activity Check Up  
Cost Centers Locations Reports Email Test  
Companies Field Locks Registration SQL Stater

Setup Manage

Configuration

▲ Edit Configuration ✓ Save Changes ✕ Cancel Changes ? ✖

- + General Settings
- + Security Settings
- + Data Settings
- + Performance Settings
- + Email Settings
- + Companies
- + Equipment (Units)
- + Parts Inventory
- + Purchase Orders
- + Scheduling
- + Work Orders
- + Express Request
- + Mobile App Settings
- + URL Links
- + Middle Tier
- Dashboard
  - Dashboard URL http://www.mas.systems
  - Dashboard IP Address localhost
  - Dashboard Port 8077