

**TORQUE**  
SOFTWARE



**FINANCIAL MANAGEMENT COMPLIANCE SYSTEM**  
Installation and Upgrade Guide

September 2018

NIG-MNL-v5.2.0

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## INTRODUCTION

The purpose of this document is to provide initial installation and upgrade instructions for the Financial Management and Compliance System (FMCS) developed and supplied by Torque Software.

This document describes all aspects of the installation and upgrade process.

Note: see the FMCS Technical Guide for further information, including application schematics, architecture and security.

### Checklist

A number of skills and pieces of information are required to install the FMCS; following is a breakdown of the tasks involved, the information required (and from whom) as well as the skills required to perform those tasks.

Component	Details	Responsible
Implementation Coordination	Coordinate implementation of FMCS as per this guide	FMCS Implementation Project Manager
IIS Configuration	Application installation on IIS server, configuration of IIS and Windows Components	IIS Administrator; Windows Server Administrator
FMCS System Configuration	Providing FMCS with technical resources, e.g. SQL Server details and SMTP Server credentials	SQL Database Administrator (DBA); Windows Server Administrator
Database Configuration	Access to SQL Server to create database; Running SQL Server scripts	SQL Database Administrator (DBA)
FMCS Administrator Training	Training FMCS Users in how to administer and maintain the FMCS	FMCS Administrators; Torque Software

Installation requires that the user have expertise in Windows Server, Microsoft IIS and SQL Server configuration and management, with a working knowledge of deploying ASP.NET applications.

If you do not have access to the required level of skill or require assistance, please contact Torque Software to arrange technical resources and implementation support.

## Best Practice Approach

As per information technology best practice, Torque Software strongly recommends implementation of two FMCS instances: one for testing and training and one for the production system.

The Test instance of the FMCS should not have any access to the production environment to ensure that implementation and new version testing does not interfere with the production instance.

# IIS SERVER CONFIGURATION

## Before you begin

The FMCS runs on Microsoft's Internet Information Services (IIS) platform. IIS administration requires expert knowledge; if you do not have access to the necessary skillset please contact Torque Software.

## Server Pre-requisites

- Windows Server 2012 or later running IIS8 or later
- CPU: recommended: 4 or more cores, 2GHz or faster
- Memory recommended: 8GB RAM or greater
- Disk Space required for software and initial database: 100mb
- Server must be on the AD domain to allow single sign-on (if not on domain, users will be prompted to log in with Logon ID and FMCS password)

## Installation Requirements

The following Server Roles must be installed at a minimum:

- Server Roles
  - Application Server
    - .NET Framework 4.5
  - Web Server (IIS)
    - Common HTTP Features
    - Performance
      - Static Content Compression
      - Dynamic Content Compression
    - Security
      - Basic Authentication
      - Windows Authentication
    - Application Development
      - .NET Extensibility 4.5
      - Application Initialization
      - ASP.NET 4.5
      - ISAPI Extensions

- ISAPI Filters
- Server Side Includes
- Management Tools
- Features
  - .NET Framework 4.5
    - .NET Framework 4.5
    - ASP.NET 4.5

Optional: The Organisation structure and users within the FMCS may be updated Organisation Structure & User Update via Web Services. If this service is to be used, ensure the following features are also installed:

- Features
  - .NET Framework 4.5
    - WCF Services
      - HTTP Activation
      - TCP Port Sharing
  - Windows Process Activation Service
    - Process Model
    - Configuration APIs

## New Instance Installation

This section only applies when you are installing a new FMCS instance. If you are upgrading an existing FMCS instance, please read Existing Instance Upgrade below.

1. Unpack the provided .zip file to the c:\inetpub\wwwroot folder on the web server, ensuring that the folder structure and filenames are retained when unzipping.

## Existing Instance Upgrade

This section only applies when you are upgrading an existing FMCS instance. If you are installing a new FMCS instance, please read New Instance Installation above.

1. Backup the FMCS database
2. Backup the FMCS application folder (typically c:\inetpub\wwwroot)
3. Delete all files from the application folder (the new application package will include all support files required)
4. Unpack the provided .zip file to the c:\inetpub\wwwroot folder on the web server, ensuring that the folder structure and filenames are retained when unzipping.

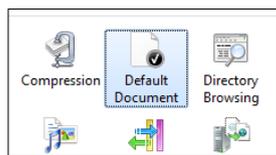
## IIS Configuration

If you are upgrading from an existing instance of the FMCS which is Version 3.99 or earlier, skip steps 1-8 below and start at step 9.

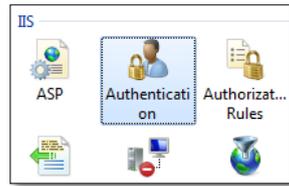


Note: these instructions assume configuration of the FMCS as the default IIS web site.

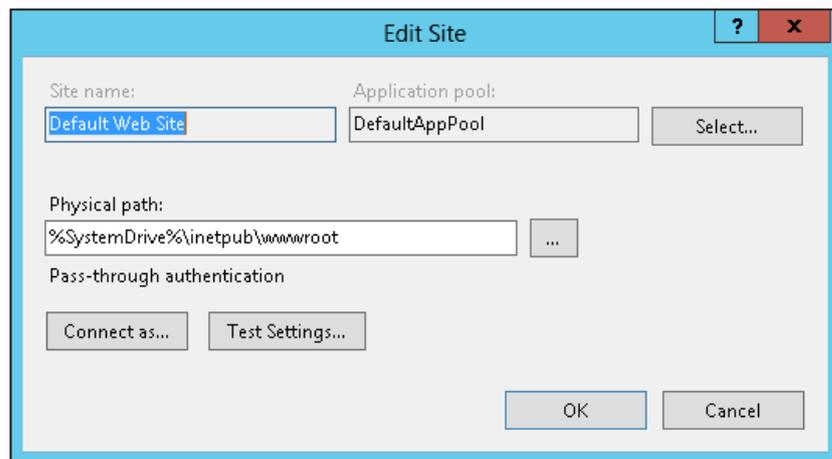
1. Go to Start → Control Panel → Administrative Tools and open Internet Information Services (IIS) Manager
2. Expand the server name and the Sites folder, then select Default Web Site in the list
3. Double click the Default Document icon



4. Move default.aspx to the top of the list, then click back into Default Web Site.
5. Double click the Authentication icon



6. Enable Windows Authentication and disable Anonymous Authentication, then click back into Default Web Site
7. Click Basic Settings, you will see a dialog like the one below:



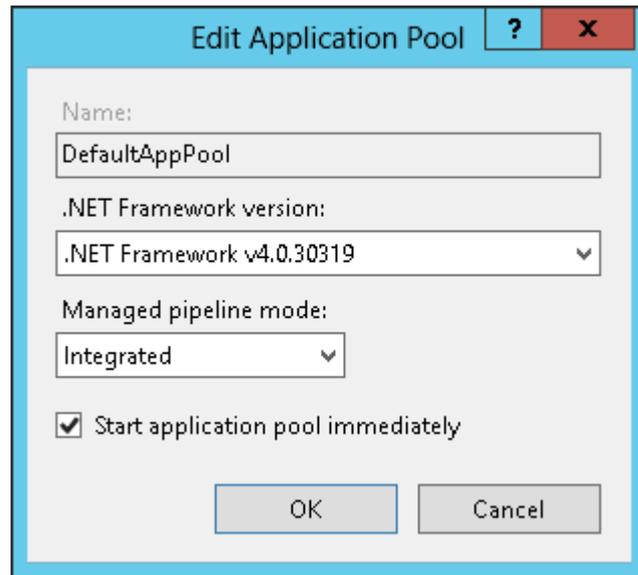
8. Ensure the Physical path is pointing to the same location you unzipped the application files (typically %SystemDrive%\inetpub\wwwroot).
9. Click on Application Pools in the tree on the left



Note: to find the name of your FMCS instance's application pool, select the FMCS site and then select Basic Settings from the Actions menu on the right.

The Edit Site dialog lists the Application pool name.

10. Right click the name of the FMCS instance's application pool noted in the list on the right, select Basic Settings and ensure the .NET Framework version is set to v.4.0.x:



11. Right click the name of the application pool again and select Recycling. Turn off all recycling conditions except Specific Time, which should be set to 4:00AM (or some other convenient time for the application to recycle). Click Next
12. Turn on all event log types, click Finish

# NEW DATABASE INSTALLATION

Note: Only perform the instructions in this section if you are installing a new instance of the FMCS. If you are upgrading an existing FMCS instance, skip this section and perform the upgrade steps outlined in the EXISTING EXISTING DATABASE UPGRADE section.

## Before you begin

The FMCS database runs on Microsoft's SQL Server platform. SQL Server administration requires expert knowledge; if you do not have access to the necessary skillset please contact Torque Software.

### Server Requirements

- SQL Server 2008 or later
- Expect the database to increase in size by approximately 200-500mb per year (attachments to breaches and applications are the primary source of database growth)

### Installation Requirements

- IIS Configuration and application setup complete; site should be accessible via nominated URL
- SQL Server administrative access
- Details of initial FMCS administrator
- FMCS License (provided by Torque Software)
- SMTP Server configuration, including account to be used by the FMCS

## Initial System Configuration

Once you have deployed the FMCS application files and configured IIS, access the site by its URL and you will be presented with the New Instance Setup screen:

**WELCOME TO THE FMCS - NEW INSTANCE SETUP**  
Configure your new FMCS database instance here.

**DATABASE**  
Define the authentication details for how the FMCS will connect to this database.

Create or Connect

- Create a new FMCS database
- Connect to an existing FMCS database

Server

Database

Authentication mode

- Integrated Authentication  
You must manually assign appropriate permissions for account TIM-OFFICE\Tim
- SQL Server Authentication

**AUTHENTICATION MODE**  
Configure the way your users will connect to the FMCS. If you are unsure, select Integrated Authentication.

Mode

- Integrated Authentication  
Windows single sign-on, must be hosted on your domain
- Forms Authentication  
User must enter username and password

Step through the New Instance Setup ensuring you have access to the information identified in the Installation Requirements above.

If you wish to create a new FMCS database select the "Create a new FMCS Database".

Enter all the relevant information in the New Instance Setup screen. For help at any time during the initial setup process, click the Help icon in the top right.

If you selected the "Create a new FMCS Database" option you are presented with the option of automatically creating the FMCS database or manually creating the FMCS database by generating the script required to create it.

### Automatic Database Creation

The FMCS has the capability to connect to your SQL Server and create its own database, ensuring correct implementation without the need to run any scripts manually.

Automatic Manual

### CREATE DATABASE AUTOMATICALLY

Enter authentication details - the nominated user must have permission to create and modify databases on your SQL Server instance.

Authentication Mode

Integrated Authentication

SQL Server Authentication

Create Database

1. Select the Authentication Mode to connect to the SQL Server – the nominated security context (integrated or the SQL user) must be a member of the sysadmin role on the server.
2. Click Create Database, the FMCS will run the appropriate scripts and notify you of the outcome.



Note: no security information is retained from this step – it is only used to create the database at this time.

## Manual Database Creation

1. To generate the script required to create and configure the FMCS database, change to the Manual tab:

Automatic Manual

### MANUAL CREATION VIA SCRIPT

Click the Generate Script button to compile the script required to create the database manually, based on your settings above.

Generate Script

2. Click Generate Script and you will be presented with a screen containing the script:

**MANUAL DATABASE SCRIPT - GENERATED**

Copy and run the script below. When you are finished, [click here to restart the system and log in.](#)

```
USE [master];
GO
CREATE DATABASE [FMCS];
GO
USE [FMCS];
GO
CREATE ROLE fmcs_users AUTHORIZATION db_securityadmin;
GO
/***** Object: Table [dbo].[BreachNoted] Script Date: 09/29/2011 15:38:10 *****/
SET ANSI_NULLS ON
GO
SET QUOTED_IDENTIFIER ON
GO
CREATE TABLE [dbo].[BreachNoted](
    [BreachNotedId] [int] IDENTITY(1,1) NOT NULL,
    [BreachNoted] [nvarchar](50) NOT NULL,
    [SortOrder] [int] NULL,
    [Active] [bit] NOT NULL,
    CONSTRAINT [PK_BreachNoted] PRIMARY KEY CLUSTERED
(
    [BreachNotedId] ASC
) ON [PRIMARY]
) ON [PRIMARY]
```

3. Copy and run the script on your SQL Server then click the link to restart the system and log in.



Note: the FMCS is now operational.

## EXISTING DATABASE UPGRADE

Note: Only perform the instructions in this section if you are upgrading an existing FMCS instance. If you are installing a new FMCS instance, go to the NEW EXISTING DATABASE UPGRADE section and perform the new installation instructions.

### Before you begin

The FMCS database runs on Microsoft's SQL Server platform. SQL Server administration requires expert knowledge; if you do not have access to the necessary skillset please contact Torque Software.

### Config File Update

If you are upgrading from version 3.1 or earlier of the FMCS:

1. Open the web.config file in the old backed up application root and copy the FMCSConnectionString details from the connectionStrings section
2. Open the connection.config file under the application root / config folder
3. Set the connectionString property to the value you saved from Application Upgrade above into the GovernorConnectionString key
4. Save the file

If you are upgrading from any version of the FMCS between version 3.2 and version 4.99:

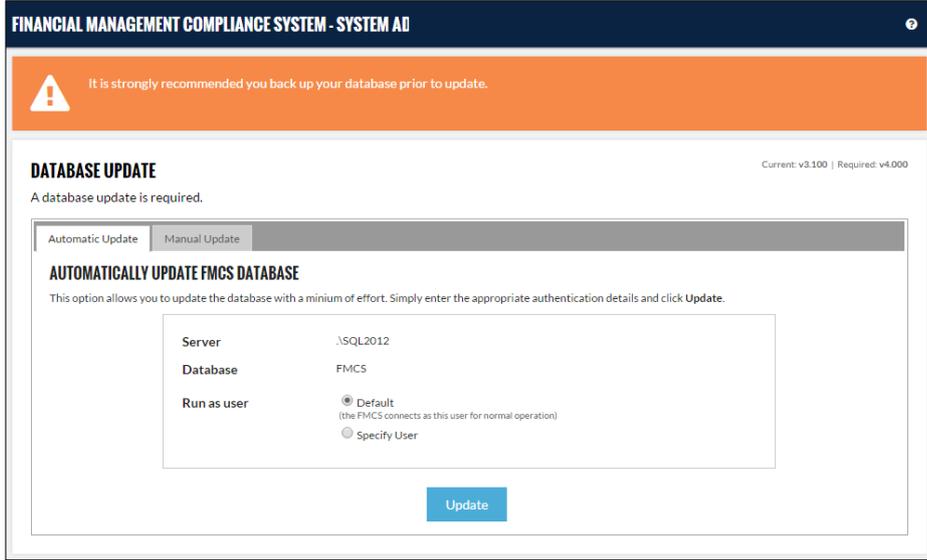
1. Replace the connection.config file under the application root / config folder with the same file backed up during the Existing Application Upgrade section above
2. Open the connection.config file under the application root / config folder
3. Change the word FMCSConnectionString to GovernorConnectionString
4. Save the file

If you are upgrading from version 5.x of the FMCS:

1. Replace the connection.config file under the application root / config folder with the same file backed up during the Existing Application Upgrade section above

## Database Update Routine

Once the FMCS upgrade has been completed and the config file has been updated, launching the FMCS will result in the Database Update Required screen as seen below:



The screenshot shows the 'FINANCIAL MANAGEMENT COMPLIANCE SYSTEM - SYSTEM AD' interface. At the top, an orange banner with a warning icon states: 'It is strongly recommended you back up your database prior to update.' Below this, the 'DATABASE UPDATE' section is displayed. It includes a sub-header 'DATABASE UPDATE' and a status 'Current: v3.100 | Required: v4.000'. A message reads: 'A database update is required.' There are two tabs: 'Automatic Update' (selected) and 'Manual Update'. Under the 'Automatic Update' tab, the section is titled 'AUTOMATICALLY UPDATE FMCS DATABASE' with a note: 'This option allows you to update the database with a minimum of effort. Simply enter the appropriate authentication details and click Update.' A form contains the following fields: 'Server' with value '.\SQL2012', 'Database' with value 'FMCS', and 'Run as user' with two radio button options: 'Default (the FMCS connects as this user for normal operation)' (selected) and 'Specify User'. An 'Update' button is located at the bottom of the form.

To apply the database update:

1. Select either the Automatic or Manual method.
2. For Automatic update, simply select the appropriate user to run as (this user must have full permission on the FMCS database) and click Update
3. For Manual Update, select this tab, copy the script and run it in SQL Server Management Studio (or similar). When you have run the script, click the link [click here to login](#).



The FMCS should now run as normal, and present either the Login screen, or the dashboard (when using Windows authentication).

# POST INSTALLATION CONFIGURATION

## Scheduled Task

To ensure the FMCS runs its maintenance tasks, such as emailing out the periodic reports and sending reminder emails, a Windows Scheduled Task must be set up.

### Server Requirements

- Any server (can be the same as the IIS server) from which to run the scheduled task
- Configuring user must have administrative access to server

### Installation Requirements

- The FMCS must be pre-configured and running correctly

### Scheduled Task Configuration

Create a Windows Scheduled Task to access the following URL at least once an hour: [http://<FMCS\\_URL>/RunMaintenance.aspx](http://<FMCS_URL>/RunMaintenance.aspx)

## Test Mode

Test mode is useful in a test environment to prevent automated emails being inadvertently sent to users who are not part of the test team. Turn test mode on by adding the following to the test instance /config/settings.config file:

```
<add key="TestMode" value="1" />  
<add key="TestEmailGroup" value="Test Members" />
```

## Organisation Structure & User Update via Web Services (Optional)

The web services are SOAP-based, and allow updating of the organisation structure and system users within the FMCS. Updates can be performed at any frequency, however overnight is recommended.

To enable the web service functionality within the FMCS, please ensure the relevant WCF Components are installed on the IIS server, as specified in IIS SERVER CONFIGURATION / Installation Requirements above.

For more information on integrating with the FMCS web services, visit the FMCS knowledge base at <http://help.fmcs.com.au/web-service-integration/>

## TROUBLESHOOTING

Following are examples of problems encountered and their suggested solutions.

### System Responsiveness

IIS's default behaviour is to "put sites to sleep" after a specified idle period (typically 30 minutes). After this time, the next user to hit the site will cause the application to be loaded into memory and cached, resulting in a sometimes-significant lag while loading depending on the capabilities of the IIS server.

If you wish to avoid this behaviour, the suggested approach is to change the application pool timeout duration to a period longer than your business hours, and set up a scheduled task to "ping" the website just prior to the start of the work day to "wake up" the FMCS.



Note: Microsoft and Torque Software do not recommend disabling application pool timeouts – we strongly recommend allowing the application pool to recycle at least once a day.

### Required permissions cannot be acquired

If you see this message after installation and configuration of the FMCS, see <http://stackoverflow.com/questions/1846816/iis7-failed-to-grant-minimum-permission-requests> for a possible solution.

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To learn more about Torque Software, contact us on 1300 795 581 or visit [www.torquesoftware.com.au](http://www.torquesoftware.com.au).

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