

Fusion Installer Instructions

This is the installation guide for the Fusion NaviLine installer. This guide provides instructions for installing, updating, and maintaining your Fusion REST web service. Each of these actions: installing, updating, or maintaining, has its own set of steps and instructions to follow. This guide explains what each of these actions does, and then guides and directs you to the steps you need to do for the action. iis

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Configuration Checklist

Before you start the installation, go through the configuration checklist below and fill out all the values. You will be prompted to enter this information during the install. You should also print this list and keep a copy for your records. If your configuration checklist is complete, click here:



Prerequisites to move to the next section.

ltem	Configuration Info	Customer's Value
1	Application ID and Key	
1a	Your App ID and App Key	AppID1:
	Note: Contact CentralSquare support to receive	АррКеу1:
	this value.	
	This is a paired key consisting of a short (App ID)	
	and long (App Key) encoded value.	
2	<u>iSeries Server Settings</u>	
2 a	Local iSeries user name	User:
2b	Local iSeries password	Password:
2c	Fully qualified local iSeries server name or IP	
2d	iSeries database name	
2e	iSeries program library	
2f	iSeries data library	
2g	iSeries environment label (if used)	
2h	iSeries registered library (defaults to program	
	library)	
3	Configuration Settings	
3 a	NaviLine Server Name	
	<u>Domain name</u>	
	This is the domain name used to access the site	
	externally.	
	I.e., Fusion.myCity.gov	



Prerequisites

This section goes over prerequisites of other programs that must be installed before running the Fusion installation. The installation will not be able to install without these already installed on the server.

Go through the following checklist before starting any installation. For instructions, press **CTRL+Click** on the <u>underlined</u> portion of the text, and it will guide you to the section for that requirement.

Pre-Start Checklist

Check	Confirmation
NaviLine Version is 9.1.14.5 or higher	[] NaviLine Version:
Hardware Specifications	
2 GHz processor	[] Processor
6 GB RAM	[] RAM
60 GB disk space	[] Disk Space
Windows Server and IIS Manager	
Windows 2019 Server with IIS 10	[] Windows 2019 / IIS 10
Windows 2016 Server with IIS 10	[] Windows 2016 / IIS 10
<u>Web Platform Installer</u> must be installed	[] Web Platform Installer
Error! Reference source not found. must be installed	[] Web Deploy
Configure IIS with SSL	
Symantec/DigiCert SSL certificate.	[] SSL certificate
Extended Validation (EV) is not required.	
Firewall access	
The server must be externally accessible, unless being	[] DMZ or NAT
queried by internal only resources.	
See the Firewall Access section for a list of ports to	[] ISeries Ports
Open to/from iseries	[] hat a weat Danta
Open ports 443 to the internet	
INICIOSOJI.NET Framework 4.5 of higher	[].NET 4.5
IBM TALLESS CHERICSOLUTIONS OF	Colution
	L 1 IBM Client Access
Payments	
Front Reference source not found package must be	[] Web Enablement
installed on the IDM iCories for neumonts	
	Check NaviLine Version is 9.1.14.5 or higher Hardware Specifications 2 GHz processor 6 GB RAM 60 GB disk space Windows Server and IIS Manager Windows 2019 Server with IIS 10 Windows 2019 Server with IIS 10 Web Platform Installer must be installed Error! Reference source not found. must be installed Configure IIS with SSL Symantec/DigiCert SSL certificate. Extended Validation (EV) is not required. Firewall access The server must be externally accessible, unless being queried by internal only resources. See the Firewall Access section for a list of ports to open to/from iSeries Open ports 443 to the Internet Microsoft.NET Framework 4.5 or higher IBM I Access V7R1 Payments Error! Reference source not found. package must be enterled on the IDM iferies for normants

8b	<u>Cash Receipts</u> batch must be configured to accept	[] Cash Receipt Batch
	payments from Fusion	
8c	Agnostic Payment Listener must be installed on POS	[] Payment Listener
	machines accepting credit card payments	

Completed? If all the above checks are completed, click here: <u>Installation Options</u> to continue to the next steps.

NaviLine Version

Fusion requires NaviLine version 9.1.14.5 or higher. However, changes are only supported for the prior two NaviLine versions. Support issues for older versions will be made on a 'best effor' basis.

Hardware Specifications

NOTE: Due to port conflicts with WebLogic, Fusion cannot be on the same server as C2G3.

Recommended hardware specifications:

- Windows 2016 or 2019, 64 bit
- 2 GHz processor (2 processors)
- 6 GB RAM
- 60 GB disk space

Windows Server and IIS Manager

IIS Manager must be installed on the Windows Server. The table below lists the supported operating systems (OS) and IIS version required.

Windows OS	IIS version
Windows Server 2019	IIS 10
Windows Server 2016	IIS 10

These instructions are for installing IIS 10 on Windows Server 2016. See <u>Appendix 1: IIS installation</u> <u>for Windows 2012</u> for similar instructions and screen shots using Windows Serveer 2012

Use the **Server Manager > Manage > Add Roles and Features** to enable the IIS Manager roles and features. If IIS was previously installed, some options may be already checked. Please step through the roles and features to make sure all the items below are set.



Select the Web Server role.



Checking the Web Server (IIS) prompts you with:



Add features that are require	d for Web Server (IIS)?
The following tools are required to m nave to be installed on the same serv	anage this feature, but do not er.
 Web Server (IIS) Management Tools 	
[Tools] IIS Management C	Console
Include management tools (if application of the second	oplicable)

- 1. Click Add Features
- 2. Click Next

This continues to Features.



Set the Features options under Web Server.

• Features: .NET Framework 4.6 Features > WCF Services > HTTP Activation



It prompts with:

Add features that are require	ed for HTTP Activation?	
You cannot install HTTP Activation u or features are also installed.	nless the following role services	
 ANET Framework 4.6 Features ASP.NET 4.6 Web Server (IIS) Web Server Application Developmen ASP.NET 4.6 ISAPI Extensions ISAPI Filters .NET Extensibility 4.6 Windows Process Activation Ser Configuration APIs 	ıt vice	
Process Model Include management tools (if a	pplicable) Add Features Cancel	

Click Add Features. Click Next.





Set the Web Server Role options

After enabling the Web Server role and features, it continues with settings for **Web Server Role** (IIS) > Role Services

📥 Add Roles and Features Wizard		-		×
Web Server Role	(IIS)	DESTINA EGQA-FUSTES	ITION SER T.DEVOPS.	/ER LCL
Before You Begin Installation Type Server Selection Server Roles	Web servers are computers that let you share information over the Internet, or extranets. The Web Server role includes Internet Information Services (IIS) 10.0 diagnostic and administration, a unified Web platform that integrates IIS 10.0, Communication Foundation.	through intr with enhanc ASP.NET, and	anets an ed securi d Windov	d ity, vs
Features Web Server Role (IIS) Role Services Confirmation Results	 The default installation for the Web Server (IIS) role includes the installation enable you to serve static content, make minor customizations (such as defa errors), monitor and log server activity, and configure static content comprese errors) is a server activity of the server static content comprese errors and log server activity is a server static content comprese errors and log server activity is a server se	of role servic ault documen ssion.	tes that Its and H	TTP
	More information about Web Server IIS			
	< Previous Next >	Install	Cance	ł



- Roles: Web Server > Common HTTP Features
 - Default Document
 - Directory Browsing
 - HTTP Errors
 - Static Content
 - HTTP Redirection





• Roles: Web Server > Health and Diagnostics

- HTTP Logging
- Logging Tools
- Request Monitor
- Tracing





• Roles: Web Server > Performance

- Static Content Compression
- Dynamic Content Compression





×

- Roles: Web Server > Security
 - Request Filtering
 - Basic Authentication
 - Windows Authentication

📥 Add Roles and Features Wizard





Roles: Web Server > Application Development

- .NET Extensibility 4.6
- ASP.NET 4.6
- Checking ASP.NET 4.6 will prompt to include the following pre-requisites
 - .NET Extensibility 4.6
 - ISAPI Extensions
 - ISAPI Filters
- o CGI
- o ISAPI Extensions
- o ISAPI Filters

📥 Add Roles and Features Wizard		– 🗆 X
Add Roles and Features Wizard	Select the role services to install for Web Server (IIS) Role services Role services Is Client Certificate Mapping Authenticatic IP and Domain Restrictions URL Authorization Windows Authentication NET Extensibility 3.5 NET Extensibility 4.6 Application Initialization ASP.NET 3.5 Server Side Includes WebSocket Protocol	— — — X DESTINATION SERVER EGQA-FUSTEST.DEVOPS.LCL Description Application Development provides infrastructure for developing and hosting Web applications. Use these features to create Web content or extend the functionality of IIS. These technologies typically provide a way to perform dynamic operations that result in the creation of HTML output, which IIS then sends to fulfill client requests.
	FTP Server FTP Service FTD Evtencibility	
	< Previous Next	> Install Cancel

.NET Extensibility 3.5 and ASP.NET 3.5 are not required.



• Roles: Web Server (IIS) > Management Tools

- o IIS Management Console
- IIS Management Scripts and Tools

IIS 6 Management Compatibility is NOT requrired



Click Next to continue.



On the **Confirmation** page, click **Yes** to restart the destination server automatically if required.

Confirm installation	on selections
Before You Begin	To install the following roles, role services, or features on selected server, click install.
Installation Type	Restart the destination server automatically if required
Server Selection	Optional features (such as administration tools) might be displayed on this page because they have been selected automatically. If you do not want to install these optional features, click Previous to clear
Server Roles	their check boxes.
Features	
Web Server Role (IIS)	ASP NET 4.6
Role Services	WCE Services additional notifications. Do you want to allow automatic restarts?
Confirmation	HTTP Activ
	Web Server (IIS)
	Management T
	IIS Management Console
	Management Service
	IIS Management Scripts and Tools
	Web Server
	Export configuration settings Specify an alternate source path
lick Install.	
Add Roles and Features Wizard	– O X
Installation progres	SS DESTINATION SERVER EGQA-FUSTEST.DEVOPS.LCL
	View installation progress
	Feature installation
	i Feature installation
	i Feature installation Installation succeeded on EGQA-FUSTEST.DEVOPS.LCL.
	Feature installation Installation succeeded on EGQA-FUSTEST.DEVOPS.LCL. NET Framework 4.6 Features
	Feature installation Installation succeeded on EGQA-FUSTEST.DEVOPS.LCL. .NET Framework 4.6 Features ASP.NET 4.6
	Feature installation Installation succeeded on EGQA-FUSTEST.DEVOPS.LCL. NET Framework 4.6 Features ASP.NET 4.6 WCF Services HTTD Activation
Before You Begin Installation Type Server Selection Server Roles Features Web Server Role (IIS) Role Services Confirmation	Feature installation Installation succeeded on EGQA-FUSTEST.DEVOPS.LCL. NET Framework 4.6 Features ASP.NET 4.6 WCF Services HTTP Activation Web Sequer (IIS)
Before You Begin Installation Type Server Selection Server Roles Features Web Server Role (IIS) Role Services Confirmation Results	Feature installation Installation succeeded on EGQA-FUSTEST.DEVOPS.LCL. NET Framework 4.6 Features ASP.NET 4.6 WCF Services HTTP Activation Web Server (IIS) Management Tools
Before You Begin Installation Type Server Selection Server Roles Features Web Server Role (IIS) Role Services Confirmation Results	Feature installation Installation succeeded on EGQA-FUSTEST.DEVOPS.LCL. NET Framework 4.6 Features ASP.NET 4.6 WCF Services HTTP Activation Web Server (IIS) Management Tools IIS Management Console
Before You Begin Installation Type Server Selection Server Roles Features Web Server Role (IIS) Role Services Confirmation Results	Feature installation Installation succeeded on EGQA-FUSTEST.DEVOPS.LCL. NET Framework 4.6 Features ASP.NET 4.6 WCF Services HTTP Activation Web Server (IIS) Management Tools IIS Management Console Management Service US Management Service US Management Service US Management Service
Before You Begin Installation Type Server Selection Server Roles Features Web Server Role (IIS) Role Services Confirmation Results	Feature installation Installation succeeded on EGQA-FUSTEST.DEVOPS.LCL. NET Framework 4.6 Features ASPNET 4.6 WCF Services HTTP Activation Web Server (IIS) Management Tools IIS Management Console Management Service IIS Management Service
Before You Begin Installation Type Server Selection Server Roles Features Web Server Role (IIS) Role Services Confirmation Results	Feature installation Installation succeeded on EGQA-FUSTEST.DEVOPS.LCL. NET Framework 4.6 Features ASP.NET 4.6 WCF Services HTTP Activation Web Server (IIS) Management Tools IIS Management Console Management Service IIS Management Scripts and Tools Web Server Aopolication Development v
Before You Begin Installation Type Server Selection Server Roles Features Web Server Role (IIS) Role Services Confirmation Results	 Feature installation Installation succeeded on EGQA-FUSTEST.DEVOPS.LCL. INET Framework 4.6 Features ASP.NET 4.6 WCF Services HTTP Activation Web Server (IIS) Management Tools IIS Management Console Management Service IIS Management Service IIIS Management Service IIIS Management Service
Before You Begin Installation Type Server Selection Server Roles Features Web Server Role (IIS) Role Services Confirmation Results	 Feature installation Installation succeeded on EGQA-FUSTEST.DEVOPS.LCL. INET Framework 4.6 Features ASP.NET 4.6 WCF Services

When the installation finishes, click **Close**.



Web Platform Installer

The Web Platform Installer is used to download additional IIS components.

1. Click to download the <u>Web Platform Installer</u>



2. Web Platform Installer will open after installed.

🔇 Web Platform	Installer 5.0			– 🗆 X
<u>Spotlight</u>	Products Applications			م
	Name		Released	Install
	Microsoft Azure PowerShell		7/18/2017	Add
M	Microsoft Azure SDK for .NET for Visual Studio 2017 - double click to learn more		5/10/2017	Add
M	Microsoft Azure SDK for .NET (VS 2015) - 3.0.1		5/10/2017	Add
M	Visual Studio Community 2015 with Microsoft Azure SDK - 3.0.1		5/10/2017	Add
	Microsoft Azure Cross-platform Command Line Tools		7/13/2017	Add
0 Items to be	<u>e installed</u>	<u>Options</u>	Install	Exit

3. Click in the search bar in the upper-right corner, enter "Recommended" in **Search**, and press **Enter**.



Web Platform Installer 5.0

Search results for Recommended

	Name		Released	Install	^
S.	IIS Recommended Configuration		11/9/2010	Add	
- 87	Recommended Server Configuration for Web Hosting Providers		6/7/2012	Add	
php	PHP 7.0.21 (x86)		12/9/2015	Add	
php	PHP 7.1.7 (x86) For IIS Express		1/17/2017	Add	
php	PHP 5.3.28		5/7/2012	Add	
php	PHP 5.6.31		9/7/2014	Add	
php	PHP 5.4.45		3/9/2012	Add	
) Maria	SQL Server Express 2008 R2 Service Pack 2		2/4/2013	Add	
php	PHP 7.0.21 (x86) For IIS Express		12/9/2015	Add	
php	PHP 5.5.38		4/9/2014	Add	
	SQL Server 2008 Express with Advanced Services		3/17/2009	Add	~
0 Items	to be installed	<u>Options</u>	Install	Exit	

- 4. Select Recommended Server Configuration for Web Hosting Providers and click Add
- 5. Click Install
- 6. On the Prerequisites page, click I accept.



Web Deploy

Web Deploy (msdeploy.exe) is used to deploy web applications to IIS. It is an IIS extension that is downloaded and installed separately. It should be located in one of the folders below if it is installed on your machine.

C:\Program Files\IIS\Microsoft Web Deploy V3\msdeploy.exe

C:\Program Files (x86)\IIS\Microsoft Web Deploy V3\ msdeploy.exe

Use this link to install Web Deploy

https://download.microsoft.com/download/0/1/D/01DC28EA-638C-4A22-A57B-4CEF97755C6C/WebDeploy amd64 en-US.msi

For more information, go to

https://www.iis.net/downloads/microsoft/web-deploy

URL Rewrite

URL Rewrite is an IIS module used for redirecting http calls to https for OWASP security settings. It needs to be downloaded and installed in IIS through the Web Platform Installer.

Use this link to install URL Rewrite <u>https://www.iis.net/downloads/microsoft/url-rewrite</u>.

Configure IIS with SSL

To use SSL security, you will need to configure certificates in IIS. The sections below allow you to create a temp certificate to initially set up SSL and test that you can browse to the site using the https protocol. Once you obtain a valid certificate from a CA, you can install the certificate on your IIS server and set it to use SSL only.

CentralSquare supports Symantec/DigiCert certificates. Extended Validation (EV) certificates are not required. Pricing can be found here: <u>https://www.digicert.com/compare-and-buy-ssl-certificates/</u>

The Fusion installer will create the FusionServices under the Default Web Site. It will use the http / https settings from the Default Web Site. You can configure the SSL settings before or after installing Fusion.

Click the link below for the latest instructions on how to create a SSL Certificate for IIS. <u>http://www.iis.net/learn/manage/configuring-security/how-to-set-up-ssl-on-iis</u>



Create a temp certificate

These steps create a temporary SSL certificate so you can set up SSL and test it locally.

- 1) Open IIS Manager
 - a) Start > Control Panel > System Security > Administrative Tools > Internet Information Services (IIS) Manager

🖄 I 🚯 🕞 🗢 I	Shortcut Tools	Application Tools	Adr	ministrative Tools	L-	. 🗆 X
File Home Share View	Manage	Manage				^ 🕐
Copy Paste Copy path	re Copy Dele	ete Rename	Pr Pr Pr	roperties	Select all Select none	
Clipboard	Organize		New	Open	Select	
🔄 🍥 🔻 🕇 🔯 🕨 Control Panel	🍥 💿 🔻 † 🗟 ► Control Panel ► System and Security ► Administrative Tools ► 🗸 🗸 Search Administrative Tools 🔎					
🔆 Favorites Name	•		Date modified	Туре	Size	^
🌗 Installs - Shortcut 🌗 Term	inal Services		8/22/2013 11:39 AM	File folder		
퉬 FusionServices - Shc 🛛 者 Com	ponent Services		8/22/2013 2:57 AM	Shortcut	2 KB	
🛄 Desktop 🛛 🛃 Com	puter Manageme	nt	8/22/2013 2:54 AM	Shortcut	2 KB	
🗼 Downloads 🛛 📸 Defra	gment and Optin	nize Drives	8/22/2013 2:47 AM	Shortcut	2 KB	
📃 Recent places 🛛 🔝 Event	Viewer		8/22/2013 2:55 AM	Shortcut	2 KB	=
🗎 Interr	et Information Se	ervices (IIS) Manager	8/22/2013 2:50 AM	Shortcut	2 KB	-
🖳 This PC 🛛 🔝 iSCSI	Initiator		8/22/2013 2:57 AM	Shortcut	2 KB	
🔁 Local	Security Policy		8/22/2013 2:54 AM	Shortcut	2 KB	
🗣 Network 🛛 😰 Micro	soft Azure Servic	es	7/24/2014 12:02 AM	Shortcut	2 KB	

2) Select the server from the tree on the left





% Internet Information Services (IIS) Manager _ 0 GN-FUS-QATEST > 🐱 🖄 🔞 🗸 File View Help Actions Connections **GN-FUS-QATEST Home** 🔩 - 🔚 | 🖄 | 象 Manage Server 📲 Start Page Restart 🕶 🐨 Go 👒 🙀 Show All | Group by: Area -Filter: 🛛 🖣 GN-FUS-QATEST (LI Start ASP.NET ^ Stop E R 5 404 细 ab **View Application Pools** .NET .NET .NET Error .NET .NET Trust Application Connection Machine Key View Sites Pages and Authorizat Compilation Pages Globalization Levels Settings Strings Controls Deploy 22 • Export Server Package... 🝯 Import Server or Site Package... Providers Session State SMTP E-mail Change .NET Framework Version IIS • Get New Web Platform Components Į 4 -Ē 2 10 2 404 0 Help Authentic... Compression Default Directory Error Pages Handler нттр ISAPI and ISAPI Filters Document Browsing Mappings Respon... CGI Restri.. 8 ¢, **P** 2 -----1 -----Logging MIME Types Modules Output Request Server URL Rewrite Worker Caching Filtering Certificates Processes Management h 0 ⁄= Configurat... Feature Shared Web Editor Delegation Configurat... Platfor... Features View Content View ш < • Ready

3) On the Features View tab, select Server Certificates

4) Under Actions on the right, click on Create Self-Signed Certificate





5) Give the certificate a **name**, such as Temp Certificate.

6) Click OK.

Create Self-Signed Certificate				
Specify Friendly Name				
Specify a file name for the certificate request. This information can be sent to a certificate authority for signing: Specify a friendly name for the certificate:				
Temp Certificate				
Select a certificate store for the new certificate: Personal V				
ок	ancel			



Add Https Binding

These steps tell the IIS Manager to accept URLs using the https protocol.



2) Right click and select Edit Bindings...

Connections	_	C	Default W	eb Site H	ome
💐 🗄 🔟 🕅					
Start Page		Filter:		- 🐺 Go	- 🕁 Sho
GN-FUS-QATEST	(LKM\craig.w	ASP.NET	•		
Application Po	JOIS	:			6
b B Defau	1.00			404	4
	Explore		ł	.NET Erro	or .l
	Edit Permissi	ons	iti	on Pages	Globi
	Add Applicat	ion		Ĭ	
	Add Virtual D	lirectory	2		6
<u> </u>			tic	on Machine K	ey Pag
	Edit Bindings				00
	Manage Web	site	•		_
62	Refresh				
×	Remove		ssi	on Default	Dire
1	Install Applic	ation From Ga	allery	Documer	nt Bro
	Deploy		•	a a a a a a a a a a a a a a a a a a a	
	Rename		٧P	es Modules	s Oi Ca
	Switch to Co	ntent View			

3) On the **Site Bindings** dialog, click **Add**.

			Site	Bindings	? X
Type http net.tcp net.m net.pi	Host Name	Port 80	IP Address *	Binding Informa 808:* localhost localhost *	Add Edit Remove Browse
					Close

- 4) In the Add Site Binding dialog
 - a) Set the Type to https
 - b) You can leave the **Port** number as the default of 443 or change it to a different port number
 - c) Select the temp certificate you added in the steps above.
 - d) Click OK

Add Site Binding					
Type: IP address: Port https ✓ All Unassigned ✓ 443 Host name:					
SSL certificate: Temp Certificate Select OK	View Cancel				



Test the <u>https://localhost</u> URL

You can now test the localhost URL using https to validate the SSL connection.

1) In Internet Explorer or other web browser, enter <u>https://localhost</u> into the address bar.



- 2) It will come up with a page showing a certificate error. This is because it is using a temporary certificate and not one from an authorized certificate authority (CA).
 - a) Click Continue to this website (not recommended)

🚖 🍄	Certificate Error: Navigation Blocked	·
8	There is a problem with this website's security certificate.	
	The security certificate presented by this website was issued for a different website's address.	
	Security certificate problems may indicate an attempt to fool you or intercept any data you send to the server.	
	We recommend that you close this webpage and do not continue to this website.	
	Click here to close this webpage.	
	Solution to this website (not recommended).	
	More information	

3) The IIS Welcome page should appear





Domain name

This is your domain name as it will appear in the URL to your site, and used in your SSL Certificate. Do not include https or www. Example: Fusion.myCity.gov.

Request an Internet Server Certificate

These are the steps to request a certificate from a CA vendor. The latest steps for this process can be found online at: <u>https://technet.microsoft.com/en-us/library/cc732906(v=ws.10).aspx</u>

- 1) Open IIS Manager
 - a) Start > Control Panel > System Security > Administrative Tools > Internet Information Services (IIS) Manager



2) Select the server from the tree on the left





On the Features View tab, select Server Certificates



3) Under Actions on the right, click on Create Certificate Request





- 4) On the **Distinguished Name Properties** page of the **Request Certificate** wizard, type the following information, and then click **Next**.
 - a) In the **Common name** text box, type in your domain name as it will appear in the URL to your site. Do not include https or www.
 - b) In the **Organization** text box, type the name of the organization in which the certificate will be used.
 - c) In the **Organizational unit** text box, type the name of the organizational unit in the organization in which the certificate will be used.
 - d) In the **City/locality** text box, type the unabbreviated name of the city or locality where your organization or organizational unit is located.
 - e) In the **State/province** text box, type the name of the state or province where your organization or organizational unit is located.
 - f) In the **Country/region** text box, type the name of the country or region where your organization or organizational unit is located.
 - g) Click Next

	Request Certificate ?	ĸ						
Distinguished Name Properties								
Specify the required informa official names and they cann	tion for the certificate. State/province and City/locality must be specified as not contain abbreviations.							
Common name:	SunGardCity.gov							
Organization:	City of SunGard							
Organizational unit:	Fusion							
City/locality	SunGardCity							
State/province:	FL							
Country/region:	US v							
	Previous Next Finish Cancel]						



- 5) On the **Cryptographic Service Provider Properties** page
 - a) select either Microsoft RSA SChannel Cryptographic Provider or Microsoft DH SChannel Cryptographic Proveder from the Cryptographic service provider drop-down list. By default, IIS 7 uses the Microsoft RSA SChannel Cryptographic Provider.
 - b) In the **Bit length** drop-down list, select a bit length that can be used by the provider. By default, the RSA SChannel provider uses a bit length of 1024. The DH SChannel provider uses a bit length of 512. A longer bit length is more secure, but it can affect performance.
 - c) Click Next

Request Certificate	?	x
Cryptographic Service Provider Properties		
Select a cryptographic service provider and a bit length. The bit length of the encryption key determines the certificate's encryption strength. The greater the bit length, the stronger the security. However, a greater bit length may decrease performance. Cryptographic service provider:		
Microsoft RSA SChannel Cryptographic Provider		
Bit length: 1024 V		
Previous Next Finish C	ancel	



- 6) On the File Name page, type in a file name or click the browse button (...) to locate a file.
 - a) Selecting your Documents folder to save it to will ensure you have permission to write the file to the folder.
 - b) Use the .txt extension to save it as a plain text file. The information will be encrypted within the text file, but will allow you to copy and paste the information when sending it to the certificate authority (CA).
 - c) Click Finish

Request Certificate	?	x
File Name		
Specify the file name for the certificate request. This information can be sent to a certification authority for signing.		
Specify a file name for the certificate request:		
C:\Users\user.name\Documents\SunGardCityCertificateRequest.txt		
Previous Next Finish C	ancel	

7) Send the certificate request to a public CA



Install an Internet Server Certificate

When you receive a response from a public certification authority (CA) to whom you sent a certificate request, you must complete the process by installing the server certificate on your web server. You can install the server certificate only on the computer from which you sent the certificate request.

The latest steps for this process can be found online at: <u>https://technet.microsoft.com/en-us/library/cc771816(v=ws.10).aspx</u>

- 1) Open IIS Manager
 - a) Start > Control Panel > System Security > Administrative Tools > Internet Information Services (IIS) Manager



2) Select the server from the tree on the left





3) On the Features View tab, select Server Certificates

4) Under Actions on the right, click on Create Certificate Request





- 5) On the Complete Certificate Request page,
 - a) In the **File name containing the certification authority's response** text box, click the browse button (...) to select the response file from the CA.
 - b) Type a friendly name for the certificate in the Friendly name text box
 - c) Click **OK**.

Complete Certificate Request	?)	¢
Specify Certificate Authority Response			
Complete a previously created certificate request by retrieving the file that contains the certificate authority's response.			
File name containing the certification authority's response:			
C:\Users\user.name\Documents\SunGardCity.cer			
Friendly name:			
SunGardCert			
Select a certificate store for the new certificate:			
Web Hosting 🗸			
ОК Са	ancel	I	


6) Select the Default Web Site

2			In	ternet Inf
GN-FUS-QATE	ST 🕨 Sites 🕨	Default Web	Site 🕨	
File View Help				
Connections	Q De	fault Web	Site Ho	me
GN-FUS-QATEST (LKM\craig.w	Filter: ASP.NET		• 🚏 Go 🔹	Show A
⊿ Sites ▷ 🛞 Default Web Site			404	9
	.NET Authorizat	.NEI Compilation	.NET Error Pages	.NE I Globalizat

7) Right click and select Edit Bindings...





٥١	On the Cite Dindings dialog	coloct the lating type and click Falit
0)) On the Site Dinuings dialog,	, select the mups type and click Eult .

	Site Bindings					
Type http net.tcp net.m msm net.pi https	Host Name	Port 80 443	IP Address *	Binding Informa 808:* localhost localhost *		Add Edit Remove Browse
						Close

9) In the Edit Site Binding dialog

- a) Select the certificate you added in the steps above.
- b) Click **OK**

Edit Site Binding	? X
Type: IP address: https All Unassigned Host name:	Port:
SSL certificate: SunGardCert ✓	Select View OK Cancel



10) In Internet Explorer or other web browser, enter https:// followed by your domain name into the address bar. Ex. <u>https://fusion.myCity.com</u>

(/fusion.sungardps.com/
G Google	×

11) The IIS Welcome page should appear without a waning about the website's security certificate.



Add URL Rewrite to IIS

URL Rewrite allows the Fusion service to force a redirect from http to https. This is required for <u>OWASP</u> security compliance. If this is not installed, Fusion functionality will not be affected, but the Fusion diagnostics page will show a warning under HTTPS Security.

A	IIS URL Rewrite URL Rewrite module not available in IIS. See install guide section: 'Add URL Rewrite to IIS'
	IIS Rewrite rules to automatically redirect http calls to https will not be available. This will not affect Fusion functionality, but is recommended by OWASP security audits.
<u>.</u>	Http -> Https Redirect Http -> Https redirect rule is not set. After the URL Rewrite module is added to IIS, rerun the Fusion install to enable.
	This will not affect Fusion functionality, but is recommended by OWASP security audits.

URL Rewrite is an IIS module that needs to be downloaded and installed through the IIS Web Platform installer. See the sections <u>Use Web Platform Installer to install Web Deploy</u> for adding URL Rewrite into IIS



Set IIS to use SSL only

Once you are done testing your site and have a valid CA certificate, you can set IIS to only use the https protocol, and disable the http protocol.





2) On the Feat	ures View	tab, sele	ect SSL S	ettings				
V			Int	ernet Inforn	nation Serv	ices (IIS) Ma	inager	
GN-FUS-QATE	G GN-FUS-QATEST > Sites > Default Web Site >							
File View Help								
Connections	Filter:	ault Web	Site Hor ▼ ▼ Go → Q	ne	Group by: Ar	ea	▼ 22 ▼	
Application Pools Application Pools Default Web Site P aspnet_client P Constant P Consta	Aspriver NET Authorizat Application Settings	.NET Compilation Tab Connection Strings	NET Error Pages	.NET Globalization Pages and Controls	.NET Profile	.NET Roles	.NET Trust Levels SMTP E-mail	.NET Users
	Authentic	Compression F MIME Types	Default Document Modules	Directory Browsing Output Caching	Error Pages	Handler Mappings	HTTP Respon URL Rewrite	ISAPI Filters
	Managemer Configurat Editor	Web Platfor	t View					

- 3) On the SSL Settings page,
 - a) check the Require SSL checkbox

b) Click Apply



4) In Internet Explorer or other web browser, enter http://localhost into the address bar.



(<-) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (<->) (/localhost/	
<i>e</i> New tab	×	

5) It will come up with a page showing a HTTP 403 – forbidden error. This is because it now requires the https protocol to be used.

IS 8.5 Detailed Error - 403.4 🗙			
HTTP Error 403.4 - Forbidden			
The page you are trying to access i	s secured with Secure Se	ockets Layer (SSL).	
Most likely causes:			
 Secure Sockets Layer (SSL) is enable. The name request was made over H 	led for the URL requested.	request from a secure channel that uses HT	TPS
- The page request was made over th	in , but the server requires the	request nom a secure channel that ases m	
This as your and they			
• Browse to the LIRL over a secure of	annel by using the "https:" prefi	r instead of "http:"	
Things you can try: • Browse to the URL over a secure of • If the Web site does not have an Si • Verify the SSL Settings in IIS Mana • Verify the configuration/system.web	annel by using the "https:" prefi SL certificate or should not requir ger by connecting to the server, bserver/security/access@sslFlags	x instead of "http:". e HTTPS, disable the setting. site, application or page and opening the SS attribute at the server, site, application, or	iL Settings feature. page level.
Things you can try: • Browse to the URL over a secure of • If the Web site does not have an St • Verify the SSL Settings in IIS Mana • Verify the configuration/system.we Detailed Error Information:	nannel by using the "https:" prefi SL certificate or should not requir ger by connecting to the server, bserver/security/access@sslFlags	<pre>x instead of "http:". e HTTPS, disable the setting. site, application or page and opening the SS attribute at the server, site, application, or</pre>	iL Settings feature. page level.
Things you can try: • Browse to the URL over a secure of • If the Web site does not have an S: • Verify the SSL Settings in IIS Mana • Verify the configuration/system.we Detailed Error Information: Module IIS Web Core	annel by using the "https:" prefi SL certificate or should not requir ger by connecting to the server, bserver/security/access@sslFlags Requested URL	<pre>x instead of "http:". e HTTPS, disable the setting. site, application or page and opening the SS attribute at the server, site, application, or http://localhost:80/</pre>	L Settings feature. page level.
Things you can try: • Browse to the URL over a secure of • If the Web site does not have an S: • Verify the SSL Settings in IIS Mana • Verify the configuration/system.we Detailed Error Information: Module IIS Web Core Notification BeginRequest	annel by using the "https:" prefi SL certificate or should not requir ger by connecting to the server, bserver/security/access@sslFlags Requested URL Physical Path	<pre>x instead of "http:". e HTTPS, disable the setting. site, application or page and opening the SS attribute at the server, site, application, or http://localhost:80/ C:\inetpub\wwwroot</pre>	L Settings feature. page level.
Things you can try: • Browse to the URL over a secure of • If the Web site does not have an S: • Verify the SSL Settings in IIS Mana • Verify the configuration/system.we Detailed Error Information: Module IIS Web Core Notification BeginRequest Handler ExtensionlessUrlHandler-	annel by using the "https:" prefi SL certificate or should not requir ger by connecting to the server, bserver/security/access@sslFlags Requested URL Physical Path Integrated Logon Method	<pre>k instead of "http:". e HTTPS, disable the setting. site, application or page and opening the SS attribute at the server, site, application, or http://localhost:80/ C:\inetpub\wwwroot Not yet determined</pre>	SL Settings feature. page level.
Things you can try: • Browse to the URL over a secure of • If the Web site does not have an S: • Verify the SSL Settings in IIS Mana • Verify the configuration/system.we Detailed Error Information: Module IIS Web Core Notification BeginRequest Handler ExtensionlessUrlHandler- -4.0 Error Code 0x80070005	annel by using the "https:" prefi SL certificate or should not requir ger by connecting to the server, bserver/security/access@sslFlags Requested URL Physical Path Integrated Logon Method Logon User	<pre>x instead of "http:". e HTTPS, disable the setting. site, application or page and opening the SS attribute at the server, site, application, or http://localhost:80/ C:\inetpub\wwwroot Not yet determined Not yet determined</pre>	iL Settings feature. page level.
Things you can try: • Browse to the URL over a secure of • If the Web site does not have an S: • Verify the SSL Settings in IIS Mana • Verify the configuration/system.we Detailed Error Information: Module IIS Web Core Notification BeginRequest Handler ExtensionlessUrlHandler- -4.0 Error Code 0x80070005 More Information:	annel by using the "https:" prefi SL certificate or should not requir ger by connecting to the server, bserver/security/access@sslFlags Requested URL Physical Path Integrated Logon Method Logon User	<pre>x instead of "http:". e HTTPS, disable the setting. site, application or page and opening the SS attribute at the server, site, application, or http://localhost:80/ C:\inetpub\wwwroot Not yet determined Not yet determined</pre>	L Settings feature. page level.

All applications accessing your site will now need to use https instead of http in the url to access your Fusion services. I.e. it would now use: <u>https://yourcity.gov/FusionServices</u> You may need to contact CentralSquare support to change the url for your Converge applications



PCI compliance

For IIS to meet PCI compliance you will need to take the following steps.

Run IIS Crypto

The latest PCI security standards requires SSL v3 and TLS 1.0 protocols to not be used. IIS should be using TLS 1.2.

Download <u>IIS Crypto</u> from <u>NarTac</u>. It's a free download, (but we cannot endorse or support it).

- 1. Select Best Practices
- 2. Disable DH
- 3. Disable all but TLS 1.2

E.	IIS Crypto	- 1.5 build 6	? ×
Protocols Enabled Multi-Protocol Unified Hello PCT 1.0 SSL 2.0 SSL 3.0 ▼ TLS 1.0 ▼ TLS 1.1 ▼ TLS 1.2	Ciphers Enabled □ NULL □ DES 56/56 □ RC2 40/128 □ RC2 56/128 □ RC2 128/128 □ RC4 128/128 □ RC4 40/128 □ RC4 56/128 □ RC4 64/128 □ RC4 128/128 □ RC4 128/128 ♥ Triple DES 168/168 ♥ AES 128/128 ♥ AES 256/256	Hashes Enabled ✓ MD5 ✓ SHA ✓ SHA 256 ✓ SHA 384 ✓ SHA 512	Key Exchanges Enabled ♥ Diffie-Hellman ♥ PRCS ♥ ECDH
SSL Cipher Suite Order TLS_ECDHE_RSA_WITH_AES_2 TLS_ECDHE_RSA_WITH_AES_2 TLS_ECDHE_RSA_WITH_AES_2 TLS_ECDHE_RSA_WITH_AES_2 TLS_ECDHE_RSA_WITH_AES_2 TLS_ECDHE_RSA_WITH_AES_1 TLS_ECDHE_RSA_WITH_AES_1 TLS_ECDHE_RSA_WITH_AES_1 TLS_ECDHE_RSA_WITH_AES_1 TLS_ECDHE_RSA_WITH_AES_1 TLS_ECDHE_RSA_WITH_AES_1 TLS_ECDHE_RSA_WITH_AES_1 TLS_ECDHE_RSA_WITH_AES_1 TLS_ECDHE_RSA_WITH_AES_1 TLS_ECDHE_RSA_WITH_AES_1 TLS_ECDHE_RSA_WITH_AES_1 TLS_ECDHE_RSA_WITH_AES_1 TLS_RSA_WITH_AES_126_GCM	56_CBC_SHA384_P521 56_CBC_SHA384_P384 56_CBC_SHA384_P256 56_CBC_SHA_P521 56_CBC_SHA_P521 56_CBC_SHA_P384 56_CBC_SHA256_P521 28_CBC_SHA256_P521 28_CBC_SHA256_P526 28_CBC_SHA_P521 28_CBC_SHA_P521 28_CBC_SHA_P526 _SHA384 _SHA256 ✓	Templates Click one of the buttons below to use a to save your changes. Best Practices	a preset template. Click the Apply button <u>EIPS 140-2</u> <u>D</u> efaults
			Scan
SOFTWARE C	opyright © 2011-2014 Nartac Software In	D	Apply

Add X-Frame-Options

The X-Frame-Options header can be used to prevent framesniffing techniques. See <u>https://support.microsoft.com/en-us/kb/2694329</u> for more information.



- 1. Open Internet Information Services (IIS) Manager.
- 2. In the **Connections** pane on the left side, expand the **Sites** folder and select **FusionServices**
- 3. Double-Click the **HTTP Response Headers** icon in the feature list in the middle.
- 4. In the **Actions** pane on the right side, click **Add**.
- 5. In the dialog box that appears, type **X-Frame-Options** in the Name field, and type **SAMEORIGIN** in the Value field.
- 6. Click **OK** to save your changes.





Firewall access

Clients will need to open the identified ports on their server. This is used by the applications to talk to the iSeries and to access the services over the internet.



Network Topology (Organized by Product Type or Category)						
Please confirm the below ports wi	Please confirm the below ports will be opened for <u>bi-directional</u> TCP communication between the					
devices specified.						
Description	<u>Port(s)</u>	<u>From</u>	<u>To</u>	Confirm?		
General:						
http/https Internet	80 and 443	Outside Internet	Fusion Web Serve	r Yes		
Communication						
Note: You can disable http after						
installing certificates for SSL.						
Payment-related functions:		•				
Payment Communication	81	Fusion Web Server	iSeries (AS/400)			
iSeries Data Communication (Navi	Line / Select):				
IBM Client Access	8470 – 8476, 9471	Fusion Web Server	iSeries (AS/400)	Yes		
Distributed Relational Data	446-449	Fusion Web Server	iSeries (AS/400)	Yes		
Manager / Distributed Data						
Management (DRDM / DDM)						
Communication						
SSL Communication with iSeries	443	Fusion Web Server	iSeries (AS / 400)	Yes		
File upload / download:						
NaviLine Server communication	80 and 443	Fusion Web Server	NaviLine Server	Yes		
Please perform a standard networ	k communic	ation test (PING, TR	RACERT, TELNET, e	tc., to confirm th	ne	
following devices can communicat	e with each	other successfully:				
FROM		то		SUCCESS?)	
iSeries Server(s)	Fusion Web S	erver		Yes		
Fusion Web Server	iSeries Server(s) Yes					



Microsoft.NET Framework 4.5

Microsoft .NET Framework 4.5 or higher is required. This is installed through **Server Manager > Add Roles and Features**. The instructions are included as part of the <u>Windows Server and IIS</u> <u>Manager</u> instructions for adding the roles and features for IIS.

Alternatively, you can also download Microsoft .NET Framework 4.5.1 from the Microsoft Download Center: <u>Microsoft .NET 4.5.1 Download</u>

You can verify what .NET version you have installed by checking the registry key:

HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\net Framework Setup\NDP\v4\Full\Version

₫ Ŭ			Registry Editor
File Edit View Favorites Help			
⊿ → NET Framework Setup ∧	Name	Туре	Data
⊿ 퉲 NDP	(Default)	REG_SZ	(value not set)
D 🚺 CDF	👪 CBS	REG_DWORD	0x00000001 (1)
⊳-]] v2.0.50727	🔢 Install	REG_DWORD	0x00000001 (1)
⊳ - v3.0	ab InstallPath	REG_SZ	C:\Windows\Microsoft.NET\Framework64\v4.0.30
⊳ - v3.5	🔢 Release	REG_DWORD	0x0005c733 (378675)
⊿ - u ∨4	🔣 Servicing	REG_DWORD	0x00000000 (0)
	ab TargetVersion	REG_SZ	4.0.0
	ab Version	REG_SZ	4.5.51641

Any 4.5 version or higher should be sufficient.

IBM I Access Client Solutions

The IBM I Access Client Solutions – Windows Application Package is required for access to NaviLine.

This software should come with your iSeries setup and installation package. See the IBM iAccess site or call the IBM Support Line at 1-800-IBM-SERV (1-800-426-7378) for more assistance.

http://www-03.ibm.com/systems/power/software/i/access/solutions.html

The Windows Application Package is an add-on package to the IBM I Access Client Solutions that includes the IBM.Data.DB2.iSeries.dll .NET Data Provider needed for .NET applications to connect to the iSeries.

The install order for the required IBM components is:

- 1. Download and install latest Java Runtime from: https://www.java.com/en/
- 2. Install IBM i Access Client Solutions



3. Install the Windows Application Package

All versions of the IBM i Access Client Solutions are supported, as they should be installing version 7 of the .NET Data Provider. IBM Client Access V7R1, the predecessor to IBM i Access Client Solutions, will work but is no longer being supported by IBM. See



Appendix 2: IBMi Client Access if you are using the IBM Client Access version.



iSeries Server Settings

You will need information about the iSeries server in order for Fusion to connect to it. You can retrieve this information from the **System I Navigator**.

iSeries user / password

This is an iSeries account that the Fusion service will use to connect to iSeries. No special permissions are needed. It will use the same permissions as any NaviLine or Select user.

To create a profile from scratch for Fusion, use the following command and parameters:

CRTUSRPRF USRPRF(FUSION) PASSWORD() INLMNU(*SIGNOFF) LMTCPB(*YES) TEXT('Fusion Service Profile') SPCAUT(*NONE) PWDEXPITV(*NOMAX)

Explanation:

- 1. For the usrprf parameter, the user name is: FUSION
- 2. INLMNU is the Initial Menu: We use *SIGNOFF to prevent someone from successfully logging into the IBMi profile interactively.
- 3. LMTCPB stands for Limited Capabilities: This reduces the capabilities of the profile which is very important to also use SPCAUT (Special Authority of *NONE).
- 4. PWDEXPITV stands for Password Expiration Interval: Always use *NOMAX.

If this is an existing Click2Gov3 customer, you can copy the profile using the "WRKUSRPRF" IBMi command as illustrated below and change the appropriate parameters:

wrkusrprf spsegov

Hit enter

Use option 3 to Copy the existing profile, then change the parameters as indicated above, making sure you use PgDn for more parameters and change the Password Expiration Interval.



		Work with User P	rofiles					
Type 1= 12	Type options, press Enter. 1=Create 2=Change 3=Copy 4=Delete 5=Display 12=Work with objects by owner							
Opt	User Profile	Text						
3	SPSEGOV	Click2Gov3 Default Profile	**DO NOT DELETE**					

<u>User Profile</u>

The Fusion user profile must have QPGMR specified in the Group profile (GRPPRF) or Supplemental groups (SUPGRPPRF) parameter:

Change User Profile (CHGUSRPRF)

Type choices, press Enter.

Group profile						GRPPRF	QPGMR
Owner						OWNER	*USRPRF
Group authority						GRPAUT	*NONE
Group authority type						GRPAUTTYP	*PRIVATE
Supplemental groups						SUPGRPPRF	*NONE
		-	- f	Eoı	c r	nore values	
Accounting code						ACGCDE	*BLANK
Document password .						DOCPWD	*SAME
Message queue						MSGQ	FUSION
Library							QUSRSYS
Delivery						DLVRY	*NOTIFY
Severity code filter						SEV	0
Print device						PRTDEV	*WRKSTN
Output queue						OUTQ	*WRKSTN
Library							



Change User Profile (CHGUSRPRF)

Type choices, press Enter.

Group profile						GRPPRF	GRPALL
Owner						OWNER	*USRPRF
Group authority						GRPAUT	*ALL
Group authority type						GRPAUTTYP	*PRIVATE
Supplemental groups						SUPGRPPRF	GRPMOD
		+	· f	or	: n	nore values	QPGMR
Accounting code						ACGCDE	'GRPC2G'
Document password .						DOCPWD	*SAME
Message queue						MSGQ	FUSION
Library							QUSRSYS
Delivery						DLVRY	*BREAK
Severity code filter						SEV	0
Print device						PRTDEV	*WRKSTN
Output queue						OUTQ	QPRINT
Library							QGPL

iSeries server

This is the fully qualified domain name or the IP address of your iSeries server. This is the name of the server as it appears in **IBM I Access Client Solutions** under **System Configurations**.

	IBM i Access Client Solutions —								\times	
	IBN	/liAccess C	Client Solut	ions			1	IB	M.	
I	ile	System Con	nfigurations					Х		
	-	System Name	IP Address	Service Host Name	Description					
	Sys	htedev3	10.255.59.11		HTEDEV3				м	

iSeries database

This is the name of the database as it appears in **IBM I Access Client Solutions** under **Navigator for I > Database > Databases**



i

IBM

IBM i Access Client Solutions

File Edit Actions Tools Help



Navigator for i launches the default web browser to display the Navigator for i sign-on page for the selected system. Navigator for i is a full-featured system management console that is integrated into the IBM i operating system. Navigator for i is a web-based graphical interface for accessing and managing resources and jobs using a web browser.

The system management tasks in **Navigator for i** include System Tasks, Basic Operations, Work Management, Configuration and Service, Network, Integrated Server Administration, Security, Users and Groups, Databases, Journal Management, Performance, File Systems, Internet Configurations, and more.

This task requires a system configuration. To add or change a system configuration, select **System Configurations** from the **Management** tasks.





iSeries program libray

This is the name of the PGM library as it appears in **IBM I Access Client Solutions** under **Navigator for I > Database > Databases > [DatabaseName] > Schemas.** The default is HTEPGM, but may be different for a TEST environment.

IBM® Navigator for i		Welcome qcww2	Target system: htetst4	Help
Welcome Dashboard	Welcome 🛪 Htetst4 🛪	Schemas 🗶		
Search Task	Schemas - Htetst4			
🖂 IBM i Management		Actions 🔻		
Target Systems and Groups				
	No filter applied			
	Name		System Name	
Monitors	📃 🛅 HTEDTAV		HTEDTAV	
Basic Operations ■ Basic Operations ■	🖾 HTEPGMV		HTEPGMV	
Work Management			OGPL	
Configuration and Service			OTEMP	
	QTEMP		QTEMP	
Gecurity				
Database				
Databases				
Htetst4				
Schemas				
Database Maintenance				

iSeries data libray

This is the name of the DTA library as it appears in **IBM I Access Client Solutions** under **Navigator for I > Database > Databases > [DatabaseName] > Schemas.** The default is HTEDTA, but may be different for a TEST environment.

IBM [®] Navigator for i		Welcome qcww2	Target system:	htetst4	Help
 Welcome Dashboard 	Welcome 🗙 Htetst4 🗙	Schemas X			
Search Task	Schemas - Htetst4				
🗆 IBM i Management (🛓 🔻 🔜 🛛 Actions 💌			
	No filter applie	ed			
System	Name			System Name	
Monitors	🖾 HTEDTAV			HTEDTAV	
Basic Operations	📃 🛅 HTEPGMV			HTEPGMV	
Work Management	📃 💼 QGPL			QGPL	
Configuration and Service Network	📃 🛅 QTEMP			QTEMP	
Integrated Server Administration ■					
Security					
Users and Groups					
Database					
Databases					
Interst					
Database Maintenance					



iSeries environment

If you have multiple environments set up on iSeries, such as for LIVE and TEST, then you need to enter the environment name. If you sign in to either NaviLine or Select and get an environment screen, then this would be the environment you normally select on that screen. If you do not normally get the environment screen, then there isn't an environment and you can leave the environment blank. You can further check for environment names in either NaviLine or Select by using a **F9 command line > strsql > CALL HT005P**. This will bring up an environment list if there are any available.

উ Session A - [24 x 80]						
File Edit View Communication Actions Window Help						
HT005P01 Superion Menu Driver Library List Maintenance 1						
Position to Application	_					
Type options, press Enter. 2=Change 3=Copy 4=Delet	e 5=Display					
Opt App Additional	Suffix Environment	Description				
Library - HR - HT - KA - KA - KA - KA - XX - XX - XX	LIVE LIVE DTAS DTAV LIVE TEST DTAS LIVE	V9.0 PTF HTEDTAV V9.0 PTF HTEDTAV	<i>∽ ∽ ⊂ ∽ ⊂ ∞ ∞ ∞</i>			
F3=Exit F5=Refresh F6=Ad	d		Bottom			
			04/032			
1902 - Session successfully started						

NaviLine Server Name

You will need the fully qualified server name, i.e. NLServer.domain.com or IP address of the NaviLine server. This is used by methods that upload or retrieve file attachments. These methods require NaviLine 9.1.16.2 or higher.



Payments

Fusion payments require additional setup on the iSeries and Point of Sale (POS) servers for payments to be fully processed.

See the <u>Payment Setup</u> page for additional installation and setup guides.

NaviLine Web Enablement

The NaviLine Web Enablement package needs to be loaded on the NaviLine IBM iSeries server. Separate install instructions for installing the package on the iSeries should be sent to you when you order this package. Additional licensing and configuration instructions are on the <u>Payment</u> <u>Setup</u> page.

Cash Receipts

The Fusion payment methods require a Cash Receipt Batch to be configured on the IBM iSeries server for payment processing. See the <u>Cash Receipts Setup</u> instructions for how to setup and configure the batch.

Agnostic Payment Listener

This is required to be installed on any POS machine taking credit card payments. See the <u>Payment Setup</u> page for installation and setup guides.

Cloud Installs ONLY

For Cloud Installs that access a premise database, you will have to edit the web.config files (in both c:\inetpub\wwwroot and d:\inetpub\wwwroot if they exist there) to include the database server IP address in order for Web Service Payments via Fusion to work.

The file contents look like this....

<?xml version="1.0" encoding="UTF-8"?>

<configuration>

<system.net>

<defaultProxy>

```
<proxy proxyaddress="http://172.30.20.55:8080" bypassonlocal="true" />
```

<bypasslist>

<add address="172.30.2.54" />

```
<add address="172.30.2.52" />
```



<add address="172.30.2.129" />

<add address="172.30.2.55" />

<add address="172.30.2.62" />

<add address="172.30.2.71" />

<add address="172.30.2.75" />

<add address="172.30.2.142" />

<add address="172.30.2.92" />

<add address="172.30.2.95" />

</bypasslist>

</defaultProxy>

</system.net>

<system.web>

<identity impersonate="true" />

</system.web>

</configuration>



Installation Options

Follow the guide link for your action. You may skip over sections for other actions you are not currently doing.

Click here: To install for the first time

Use this option if this is the first time you are installing Fusion on the server.

Click here: To upgrade to a new version

Use this option if you already have a version of Fusion installed, and you want to upgrade it to a new version.

Click here: *To change configuration information*

Use this option to change the configuration values after Fusion is already installed. I.e., changing the iSeries password or adding an AppID.

Click here: <u>To uninstall</u>

Use this option to uninstall and remove all Click2Gov applications. This removes all applications from WebLogic and deletes the files from your server.



To install for the first time

If you are installing Fusion for the first time on the server, this section guides you through the steps required.

Install questions

The installer displays screens prompting you for the information you gathered in your configuration checklist.

This section guides you through the screens and instructs you about how to provide the required information.

Welcome

This screen states general information and requirements about the installer. See the section



Prerequisites for information about installing the prerequisites. When you click Next, the installer verifies that the prerequisites are installed. Click the **Instructions** button to display the installation instructions where you will find a list of the prerequisites and instructions on how to install them.

Fusion NaviLine - InstallShield	usion NaviLine - InstallShield Wizard 🛛 🔀						
Welcome to the InstallShield	₩izard for Fusion NaviLine	FUSiON ®					
	Fusion NaviLine version 3.0.2001 will be installe To continue, click Next.	d on your computer.					
SERVICES GITURNOS NaviLine NaviLine NaviLine Mobile NaviLine Mobile	Prerequisites: - Windows Server with IIS Manager - Windows 2008 R2 Server with IIS 7 - Windows 2012 Server with IIS8 - WebDeploy tool must be installed NET Framework 4.0 must be installed. NET Framework 4.5 must be installed. - IBM Client Access v6R1 must be installed. Click the Instructions button below to view the in Instructions	nstallation guide.					
InstallShield	< <u>B</u> ack	t>]					



Destination Folder

Select the directory to install the Fusion services to. By default, this is your IIS folder. You can change it to install to a different location if you prefer by clicking the **Browse** button. The install will create a folder called FusionServices under the selected folder where the service files will be installed.





Site Information

Enter the **Site Name** to use as the name of the web service. This will determine the URL needed to access the fusion services. By default, this is FusionServices, and the resulting URL would be <u>http://localhost/FusionServices</u>

You can install the fusion services more than once on the same server. Each site requires you to enter a unique Site Name. This is used, for example, if you want to set up a second site going to your iSeries TEST server. You would enter FusionServicesTest as the Site Name to make it unique and to indicate it is going to the TEST server. Then you would access the Fusion services test site by using the URL: <u>http://localhost/FusionServicesTEST</u>

Enter the **Domain Name** used by your site's SSL certificate. This will determine the URL needed to externally access the fusion services. By default, this is Fusion.myCity.gov, and the resulting URL would be <u>https://Fusion.myCity.gov/FusionServices</u>. This needs to be changed to your domain name.

Under the domain name, is a message indicating if the SSL Domain certificate is available or not. It will re-check for a SSL certificate after you enter the domain name above. If the certificate is not found, see the section <u>Configure IIS with SSL</u> to add an SSL Certificate. If you do not have your domain name or Https enabled, you can leave the default domain name and change it after you receive your certificate. It is used for HTTPS security settings required for OWASP compliance. The Fusion diagnostic page will show a warning that Https security is not enabled, but you will still be able to use the Fusion services. To change the domain name and Https security settings after getting your certificate, see the section <u>To change configuration</u> <u>information</u>.



Application ID

An application ID and application key will be provided to you when you purchase Fusion through CentralSquare. This information is from item 1 in your configuration checklist. The **ID** and **Key** are required, enter your city name in the **Description.**

Fusion NaviLine - InstallShield Wizard				×
Application ID				CONR
Enter your customer key provided by SunGard.			FUS	
Application Application Description Your City	on ID: on Key: on: y			
InstallShield	< <u>B</u> ack	<u>N</u> ext >		Cancel



iSeries Configuration Settings

Enter the iSeries information from items 2a-2h in your configuration checklist. This information is used to configure the Fusion services to communicate with the iSeries. All fields are required except the environment label. If your iSeries requires an environment label, fill it in.





Configuration Settings

Enter the NaviLine server information from item 3a in your configuration checklist. This information is used to configure the Fusion services to communicate with the NaviLine server for file attachments. If you do not have a NaviLine server, just enter localhost to continue.

Fusion N	aviLine - Insta	IIShield Wizard
Configuration Information		CUC:ON®
Enter the required configuration information		FUSION®
NaviLine	Server:	Enter either the fully qualified name or IP address of the NaviLine server. This is used for methods that upload or retrieve files to/from the NaviLine server.
InstallShield	< <u>B</u> ack	Next > Cancel



Ready to Install



Click Install to start the installation.



Installation

The installer will deploy the latest Fusion service files to IIS, then set the configuration values. If this is an upgrade or maintenance, then it will back up the previous files before making any changes. The installer displays what it's doing above the status bar. This should only take a few minutes.



Complete

This screen displays once the installer has completed installation and configuration.



Click **Finish** to end the installation. Click here: <u>Verify the installation</u> to continue to the postinstall instructions.



To upgrade to a new version

If you are running the install in order to upgrade Fusion to the latest version, this section guides you through the steps required.

Install questions

The installer displays screens to indicate it is upgrading to a new version. It does not allow you to change any of the configuration during update mode.

Multi-Instance Screen

The installation will first display the instance selection dialog shown below.



Choose the **Maintain or update the instance of this application selected below** radio button. Then select the Fusion application with the Site Name you want to update.



Welcome

This screen simply states that it will update Fusion and show the version being upgraded to.





Site Information

Confirm that the **Site Name** is the correct one for the site you are trying to upgrade.

If you have not previously entered a **Domain name**, then you can enter it now, as this was not required in previous versions.

Fusion NaviLine - InstallShield Wizard							
Web Site Information Settings for configuring the web ser	vice in IIS	FUSiON [®]					
	Site Name: FusionServices	The Site Name must be unique to this server. Use a differnt name, such as FusionServicesTEST if you are installing more than once.					
HORIZON	Domain name: Fusion.myCity.gov	This is the domain used for the site. Example myCity.fusion.gov					
SERVICES Unleashing the Power of NaviLine NaviLine Mobile	** SSL Domain certificate not found **	If no certificate, see the install guide section 'Configure IIS with SSL'. You can add the certificate after installing.					
InstallShield	< <u>B</u> ack <u>N</u> ext >	Cancel					

Click **Next** to start the installation.



Installation

The installer will deploy the latest Fusion service files to IIS, then set the configuration values. If this is an upgrade or maintenance, then it will back up the previous files before making any changes. The installer displays what it's doing above the status bar. This should only take a few minutes.



Complete

This screen displays once the installer has completed installation and configuration.



Click **Finish** to end the installation. Click here: <u>Verify the installation</u> to continue to the postinstall instructions.




To change configuration information

If you need to change any of the configuration values from the configuration checklist such as changing the iSeries password, this section guides you through the steps required. Examples where you would use this option:

- The iSeries password has expired, and you need to reset it.
- You have the latest version installed on your TEST environment and want to switch it over to PRODUCTION.
- You want to add an App ID.

Starting the installer

You do not need the Fusion install package available to change the applications. Simply go to the **Programs and Features** option in Windows Control Panel. On the Windows **Start** menu, select **Control Panel**. Then select **Programs and Features**.

In the Programs and Features window, select the Fusion application, then click **Change**. This starts the installer.





Install Questions

The installer displays screens prompting you for the information you gathered in your configuration checklist. This section guides you through the screens presented and instructs you about how to provide the required information.

Modify / Repair / Remove

The Modify / Repair / Remove screen displays first and asks you which of these options you want to do. Choose the first option, **Modify**, to change the configuration values for the currently installed applications.





Site Information

Confirm that the **Site Name** is the correct one for the site you are trying to change.

Enter the **Domain Name** used by your site's SSL certificate. This will determine the URL needed to externally access the fusion services. By default, this is myCity.Fusion.gov, and the resulting URL would be <u>https://myCity.fusion.gov/FusionServices</u>. This needs to be changed to your domain name.

The **SSL Domain Certificate** message wil indicate if it found the certificate in IIS or not. If the certificate is not found after you entered the domain name, see the section <u>Install an Internet</u> <u>Server Certificate</u> to enable it for Https security.



Click Next to continue.



Application ID

An application ID and application key will be provided to you when you purchase Fusion through CentralSquare. This information is from item 1 in your configuration checklist. Both fields are required.

Fusion NaviLine - InstallShield	Wizard				×
Application ID				CLIC	
Enter your customer key provid	ded by SunGard.			FUS	
	Applicatio	n ID:			
	a1b2c3d	4			
	Applicatio	n Key:			
	q1w2e3r4	4t5y6u7i8o9p0a1	s2d3f4g5h6		
	Descriptio	n:			
	Your City				
HORIZON					
SERVICES FUSION					
Unleashing the Power of					
NaviLine Mobile					
una sua a la					
NaviLine					
					_
InstallShield		< <u>B</u> ack	<u>N</u> ext >		Cancel



iSeries Configuration Settings

The iSeries Configuration Settings dialog displays the iSeries information that is read from the currently installed applications. This should match the iSeries information from items 2a-2h in your configuration checklist.

If the information is not correct, change it so that the applications will be set to the correct iSeries settings. To change the password, uncheck the **Keep current password** checkbox and the password field will appear instead. This information is used to configure the Fusion services to communicate with the iSeries. All fields are required except the environment label. If your iSeries requires an environment label, fill it in.





Configuration Settings

Enter the NaviLine server information from item 3a in your configuration checklist. This information is used to configure the Fusion services to communicate with the NaviLine server for file attachments. If you do not have a NaviLine server, enter localhost to continue.

Fusion NaviLine - InstallShield Wizard			
Configuration Information Enter the required configuration information		FUSiON ®	
	NaviLine Server:	Enter either the fully qualified name or IP address of the NaviLine server. This is used for methods that upload or retrieve files to/from the NaviLine server.	
SERVICES OFFLORES Unleashing the Power of NaviLine NaviLine NaviLine Mobile			
InstallShield	< <u>B</u> ack	Next > Cancel	



Installation

The installer will deploy the latest Fusion service files to IIS, then set the configuration values. If this is an upgrade or maintenance, then it will back up the previous files before making any changes. The installer displays what it's doing above the status bar. This should only take a few minutes.



Complete

This screen displays once the installer has completed installation and configuration.



Click **Finish** to end the installation. Click here: <u>Verify the installation</u> to continue to the postinstall instructions.



To uninstall

If you want to uninstall the Fusion services, this section guides you through the steps required.

Starting the installer

You do not need the Fusion install package to change the applications. Simply go to the **Programs and Features** option in Windows Control Panel. On the Windows **Start** menu, select **Control Panel**. Then select **Programs and Features**.

In the Programs and Features window, select the Fusion application, then click **Uninstall**. This starts the installer.

	Programs and Features			
	Control Panel - Pr	rograms and Features	👻 🚱 Search	
File	e Edit View Tools Help			
	Tasks View installed updates Get new programs online at	Uninstall or change a program To uninstall a program, select it from the list and t	hen click "Uninstall", "Chang	e", or "Repair".
	Windows Marketplace	🕒 Organize 👻 🏢 Views 👻 🍢 Uninstall 🗧	Change	0
	Install a program from the network	Name Fusion NaviLine FusionServices Notepad++ Microsoft Visual C++ 2012 Redistributable (x64) Acrobat.com Adobe AIR Adobe Reader 9	Install V Size 6/11/2015 6/10/2015 6/5/2015 6/4/2015 6/4/2015 6/4/2015	Version ▼ 22.3 MB 3.00.2028 12.0 MB 6.7.8.2 452 KB 11.0.61030.0 1.67 MB 1.1.377 1.0.4990 202 MB 9.0.0

Click **Yes** to confirm that you want to uninstall Fusion.





Install Questions

Site Information

Confirm that the **Site Name** is the correct one for the site you are trying to remove.

Fusion NaviLine - InstallShield Wizard			
Web Site Information		CUSION®	
Settings for configuring the web servic	e in IIS	FUSION	
SERVICES OFFICE Nuclease Nuclease Naviline Naviline Naviline Naviline	Site Name: FusionServices Domain name: Fusion.myCity.gov ** SSL Domain certificate not found **	The Site Name must be unique to this server. Use a differnt name, such as FusionServicesTEST if you are installing more than once. This is the domain used for the site. Example myCity.fusion.gov If no certificate, see the install guide section 'Configure IIS with SSL'. You can add the certificate after installing.	
InstallShield	< <u>B</u> ack <u>N</u> ext>	Cancel	

Click Next to continue.

The installer will immediately begin the uninstalling after you click **Next** to confirm. It will show the progress as it is uninstalling the files.



Installation

The installer will deploy the latest Fusion service files to IIS, then set the configuration values. If this is an upgrade or maintenance, then it will back up the previous files before making any changes. The installer displays what it's doing above the status bar. This should only take a few minutes.



Complete

This screen displays once the installer has completed uninstallation.



Click **Finish** to end the installation.



Verify the installation

Verify the Fusion service

You can test that the Fusion service is installed by browsing it through IIS.

In IIS, select **FusionServices** under **Default Web Site**, and click **Browse** to browse the application using either http or https.



This should bring up the Fusion Web Services page.





Under the logo, there is a Service Status section. This page runs some basic test to verify that the pre-requisites are installed, and the configuration information is correct. If any of these show an error, review the configuration information you entered during the install, or see the



Prerequisites section for how to install missing prerequisites.





Verify https and the SSL certificate

You can test that the Fusion service is able to respond through the https URL by entering the URL below into an IE browser. This should bring up the diagnostics page shown above.

https://servername:443/FusionServices

Once you have your SSL certificate installed, you can test that the Fusion service is able to respond through the https URL by entering the URL below into an IE browser. This should bring up the diagnostics page shown above.

https://domainname.com/FusionServices

HTTPS Security

The Fusion service page will test for the HTTPS Security status. This checks if https and the SSL certificates are setup in IIS, along with other <u>OWASP</u> security standards.

HTTPS Security:

🧹 🛛 Https Binding

Https binding exists in IIS for the web site.

The web site will accept https calls

SSL Certificate

SSL Certificate not found for domain: localhost

Either a SSL Certificate for the domain has not been set up yet, or the domain name is incorrect in the Fusion configuration. If you call Fusion using https, it will block Fusion functionality, because it is unable to verify the certificate. Only http connections will work.

A Https Content Security

HTTPS Content Security not enforced. After adding a valid certificate, rerun the Fusion install to enable.

This will not affect Fusion functionality, but is recommended by OWASP security audits.

👃 🛛 IIS URL Rewrite

URL Rewrite module not available in IIS. See install guide section: 'Add URL Rewrite to IIS'

IIS Rewrite rules to automatically redirect http calls to https will not be available. This will not affect Fusion functionality, but is recommended by OWASP security audits.

Http -> Https Redirect

Http -> Https redirect rule is not set. After the URL Rewrite module is added to IIS, rerun the Fusion install to enable.

This will not affect Fusion functionality, but is recommended by OWASP security audits.

Https Binding

On the Default Web Site in IIS, you have to add a Binding for https. It will not respond to https calls without the binding. Only http calls will work. See <u>Add Https Binding</u>.

SSL Certificate

In IIS, you have to add the SSL certificate for your domain. Without the SSL certificate, if you call Fusion using https it will block Fusion functionality because it is unable to verify the



certificate. Only http connections will work. See <u>Domain name</u> and <u>Install an Internet Server</u> <u>Certificate</u>.

Https Content Security

Https Content Security prevents external malicious scripts from being displayed on the Fusion service page. This is an <u>OWASP</u> security standard. It will not affect Fusion functionality.

To remove the warning, once you have added the SSL certificate for your domain, rerun the Fusion install *To change configuration information*. Make sure the **Domain name** is entered, and that it finds the SSL Certificate. Continuing with the install will add the Https Content Security settings.

IIS URL Rewrite

URL Rewrite is a plug-in to IIS. You have to download and install it. See <u>Add URL Rewrite to IIS.</u> This is used to redirect http calls to https for OWASP security. This will not affect Fusion functionality.

Http -> Https Redirect

This automatically redirects any Http calls to use Https security. It requires the URL Rewrite plug-in above. This is an <u>OWASP</u> security standard. It will not affect Fusion functionality.

To remove the warning, once you have added the SSL certificate for your domain and installed the URL Rewrite plug-in, rerun the Fusion install <u>*To change configuration information*</u>. Make sure the **Domain name** is entered, and that it finds the SSL Certificate. Continuing with the install will add the Https Content Security settings.

Verify the services are responding

To verify and test that the Fusion services are responding, see the <u>**REST Console Extension</u>** instructions in the next section.</u>

You will NOT be able to browse any of the method URLs directly. I.e. entering: <u>http://localhost/FusionServices/v2/Naviline/Utilities/NotificationSettings</u>

into a browser will give you a page not found error. This is by design. Since this is a web service, and not a viewable application, it does not have viewable pages for each URL. As a service, it handles and processes the URL calls internally, which is why you need either the REST Console or your code sample to call the method.



REST Console Extension

This is a free web application available in Google Chrome that you can <u>Download</u> and use to test sending the service calls and see the JSON output that the services return.

The application presents a page that allows you to enter information that would normally be sent as part of the JSON request. The sections you will need to fill in values for are explained below.

Target

In the target section, you will fill in the URI for the service, and selecting either GET or POST as the Request method. The URL for each service is found in the Example section for the method on the Fusion documentation site <u>http://fusion.CentralSquare.com/Fusion/</u>. It also indicates if it is a GET or POST method.

From Fusion documentation:

Example

GET http://localhost/FusionServices/v2/Naviline/Utilities/NotificationSettings



Request URI

In the **Target** section, enter the URL into the **Request URI** field. Some of the service methods require values, such as account numbers, to be entered as part of the URL. If so, make sure the values are valid for your database, and that they are entered in the proper order.



Request Method

Select either **GET** or **POST**. The example in the Fusion documentation will indicate if it is a GET or POST method.

Body

In the body section, you will fill in your APP ID and APP KEY, along with any other data to be passed to the method.

Custom Headers

You will need to enter your APP ID and APP KEY into the header information. The services

require this to validate your license. Click the to button to add a new field to the Custom Headers section.

Enter X-APPID as the header name, and enter your APP-ID (short code) to the right. Enter X-APPKEY as the header name, and enter your APP-KEY (long code) to the right. You can enter these in any order.

Custom Headers

Request Parameters		
X-APPID		_
X-APPKEY		_
example: header	example: value	+

body and treat the params above as query string params only.

Send

Click on the **Send** button to submit the request. The response will be returned at the bottom of the page.



Response				
Respons	e Body RAW Body Response Headers	Response Preview	Request Body	Request Headers
Color Then Bootstrap	re Force Syntax Highlighting ▼ ○ Auto ● JSON ○ XML ○ HTML	© CSS		
1. {				
2.	"ServerElapsedTime": "00:00:00.1424634",			
э.	"Rows": null,			
4.	"OutputParms": {			
5.	"Active": "2",			
6.	"NoticeType": "1",			
σ.	"BillNumber": "03",			
з.	"ErrorCode": "0000",			
9.	"ErrorMessage": ""			
10.	1			

Passing input paramaters

Services that use a **POST** request require paramaters to be sent to the service. These are listed as **Input Paramaters** in the method's documentation page. Some of the fields will be marked as **[Required]** and must be sent. The rest are optional.

Method PostSearchByAddress

Summary

Searches open permits by Street Number and Street Name

Remarks

This searches for open building permits by the street address. It will match any address that contains the street name.

Input Parameters

Name	Туре	Description
StreetName	System.String	[Required] Match street names beginning with this name.
StreetNumber	numeric	House or building number to search for.
StreetDirection	System.String	2 digit code indicating street direction: N, S, E, W, NE, NW, SE, SW
StreetSuffix	System.String	4 character street suffix. I.e. Bay, Dr, Lane, Rd, Way

To send the input parameters in the REST Console, you will need to enter the following fields:

Content Type

Set the Content-Type to application/x-www-form-urlencoded



🖻 Body

Content Headers

Con	tent-Type	
	application/x-www-form-urlencoded	▼
The m	ime type of the body of the request (used with POST and PUT requests)	

Request Parameters

Under **Request Payload** > **Request Paramaters**, click on the add button to add parameters.

Enter the name of the **Input Parameter** on the left, and the value on the right. The parameter name is not case sensitive, and the order the parameters are entered does not matter. The parameter value may be case sensitive depending on the method.

Click the add button to add more. Use the subtract button to remove any unused parameters.

Request Payload		
Request Parameters		
StreetName	FAIR -	
StreetNumber	1305	
example: key	example: value +	

body and treat the params above as query string params only.

Send

Click on the **Send** button to submit the request. The response will be returned at the bottom of the page.





Response				
Response Body RAW Body Response Headers	Response Preview	Request Body	Request Headers	
Color Theme Force Syntax Highlighting Default 	L OCSS			
{				
"ServerElapsedTime": "00:00:00.2328517",				
KUWS : [{ "BDDVFD"• "10"				
5. "BPPCNB": "10",				
"ABABTX": "1305",				
"ABCHCD": "",				
"ABACCD": "FAIR",				
"ABAECD": "ST",				
.0. "BPNAME": "CARTER TRAVIS II",				
"BPNMTP": "OW",				
"ACAJCD": "61308",				
"ACAKCD": "5280",				
"ALALLU": "384",				
"ACAMED: 029, "ACAMED": "004"				
Honwer , 004 /				



Appendix 1: IIS installation for Windows 2012

This appendix guides you through setting up the IIS, Web Deploy, and Microsoft .NET 4.5 prerequisites. These are installed by adding Roles and Features through Server Manager, or the the Web Platform Installer in IIS.

IIS Manager Roles and Features

Use the **Server Manager > Manage > Add Roles and Features** to enable the following roles and features. If IIS was previously installed, some options may be already checked. Please step through the roles and features to make sure all the items below are set.

Server Manager		_ D X
	- 🕝 🚩 м	nage Tools View Help
		Add Roles and Features Remove Roles and Features
l: 1		Add Servers
IIS 1	Local Server	Server Manager Properties

Select the Web Server role.

 Roles: Web Se 	rver	
2	Add Roles and Features Wizard	_ _ X
Select server roles Before You Begin Installation Type Server Selection Server Roles Features Confirmation Results	Add Roles and Features Wizard Select one or more roles to install on the selected server. Roles Application Server DHCP Server DHCP Server Fax Server Fax Server Fax Server Fax Server Remote Access Services Remote Access Remote Desktop Services Volume Activation Services	DESTINATION SERVER GN-Fus-QAtest.lkm.Sungardps.lcl Description Web Server (IIS) provides a reliable, manageable, and scalable Web application infrastructure.
	Web Server (IIS) (29 of 43 installed) Windows Deployment Services Windows Server Essentials Experience Windows Server Update Services	▼
	< Previous	Next > Install Cancel





Set the Server Role options under Web Server.

Note: If this is the first time you are installing IIS, these options may not be available until after the Features dialog, which comes next. After selecting the features, it will prompt you to select the Web Server settings that are displayed here.

- Roles: Web Server (IIS) > Web Server > Common HTTP Features
 - Default Document
 - o Directory Browsing
 - o HTTP Errors
 - Static Content
 - HTTP Redirection

Select server role	S	DESTINATION SERVER GN-Fus-QAtest.lkm.Sungardps.lcl
Before You Begin	Select one or more roles to install on the selected server.	
Installation Type	Roles	Description
Server Selection Server Roles Features Confirmation Results	 ✓ Volume Activation Services ✓ Web Server (IIS) (29 of 43 installed) ✓ Web Server (21 of 34 installed) ✓ Oefault Document (Installed) ✓ Directory Browsing (Installed) ✓ Directory Browsing (Installed) ✓ HTTP Errors (Installed) ✓ Static Content (Installed) ✓ HTTP Redirection (Installed) ✓ WebDAV Publishing ▷ Health and Diagnostics (4 of 6 installed) ▷ Performance (Installed) ▷ Performance (Installed) △ I Application Development (7 of 11 installed) 	Common HTTP Features supports basic HTTP functionality, such as delivering standard file formats and configuring custom server properties. Use Common HTTP Features to create custom error messages, to configure how the server responds to requests that do not specify a document, or to automatically redirect some requests to a different location.



- Roles: Web Server (IIS) > Web Server > Health and Diagnostics
 - HTTP Logging
 - Logging Tools
 - o Request Monitor
 - Tracing





• Roles: Web Server (IIS) > Web Server > Performance

- Static Content Compression
- Dynamic Content Compression

A	Add Roles and Features Wizard	
E Select server roles Before You Begin Installation Type Server Selection Server Roles Features Confirmation Results	Add Roles and Features Wizard Select one or more roles to install on the selected server. Roles Volume Activation Services Web Server (IIS) (29 of 43 installed) Web Server (21 of 34 installed) Example Common HTTP Features (5 of 6 installed) Health and Diagnostics (4 of 6 installed) Static Content Compression (Installed) Static Content Compression (Installed) Security (3 of 9 installed) Amount Content Compression (Installed) NET Extensibility 3.5 (Installed)	DESTINATION SERVER GN-Fus-QAtest.lkm.Sungardps.lcl Description Performance provides infrastructure for output caching by integrating the dynamic output-caching capabilities of ASP.NET with the static output-caching capabilities that were present in IIS 6.0. IIS also lets you use bandwidth more effectively and efficiently by using common compression mechanisms such as Gzip and Deflate.
	ASP v	
	< Previous Next :	> Install Cancel



- Roles: Web Server (IIS) > Web Server > Security
 - Request Filtering
 - Basic Authentication
 - Windows Authentication

a	Add Roles and Features Wizard	_ D X
Select server roles	Select one or more roles to install on the selected server.	DESTINATION SERVER GN-Fus-QAtest.lkm.Sungardps.lcl
Installation Type	Roles	Description
Server Selection	Health and Diagnostics (4 of 6 installed) Performance (Installed)	Security provides infrastructure for securing the Web server from users and requests. IIS supports multiple
Features Confirmation	✓ Security (3 of 9 installed) ✓ Request Filtering (Installed)	authentication methods. Pick an appropriate authentication scheme
Results	✓ Basic Authentication (Installed) ○ Centralized SSL Certificate Support ○ Client Certificate Mapping Authenticatic ○ Digest Authentication ○ IIS Client Certificate Mapping Authentication ○ IP and Domain Restrictions ○ URL Authorization ✓ Windows Authentication (Installed) ▲ ■ Application Development (7 of 11 installed) ✓ .NET Extensibility 3.5 (Installed) ✓ NET Extensibility 4.5 (Installed)	based upon the role of the server. Filter all incoming requests, rejecting without processing requests that match user defined values, or restrict requests based on originating address space.
	< Previous Next :	> Install Cancel



• Roles: Web Server (IIS) > Web Server > Application Development

- o .NET Extensibility 4.5
- ASP.NET (Windows Server 2008)
- ASP.NET 4.5 (Windows Server 2012)
- Checking ASP.NET 4.5 will prompt to include the following pre-requisites
 - .NET Extensibility 4.5
 - ISAPI Extensions
 - ISAPI Filters
- o CGI
- o ISAPI Extensions
- o ISAPI Filters

A	Add Roles and Features Wizard	_ □ X
Select server role	S	DESTINATION SERVER GN-Fus-QAtest.lkm.Sungardps.lcl
Before You Begin	Select one or more roles to install on the selected server.	
Installation Type	Roles	Description
Server Selection	Security (3 of 9 installed)	Application Development provides
Server Roles	Application Development (7 of 11 installed)	infrastructure for developing and
Features	✓ .NET Extensibility 3.5 (Installed)	features to create Web content or
Confirmation	✓ .NET Extensibility 4.5 (Installed)	extend the functionality of IIS. These
Results	Application Initialization	to perform dynamic operations that
	ASP	result in the creation of HTML
	ASP.NET 3.5 (Installed)	client requests.
	CGI (Installed)	
	✓ ISAPI Extensions (Installed)	
	✓ ISAPI Filters (Installed) ≡	
	Server Side Includes	
	WebSocket Protocol	
	FTP Server (1 of 2 installed)	
	Ivi Management Tools (Installed) V	
	< Previous Next	> Install Cancel

.NET Extensibility 3.5 and ASP.NET 3.5 are not required.



- Roles: Web Server (IIS) > Management Tools
 - IIS Management Console
 - IIS Management Scripts and Tools
 - Management Service

IIS 6 Management Compatibility is NOT requrired

Ē.	Add Roles and Features Wizard	×
Select server role Before You Begin Installation Type	DESTINATION SERVER GN-Fus-QAtest.lkm.Sungardps.lcl Select one or more roles to install on the selected server. Roles Description	
Server Selection Server Roles Features Confirmation Results	○ Volume Activation Services ● Web Server (IIS) (29 of 43 installed) ● Web Server (21 of 34 installed) ● Web Server (21 of 34 installed) ● Web Server (1 of 2 installed) ● Wanagement Tools (Installed) ● IIS Management Console (Installed) ● IIS 6 Management Scripts and Tools (Installed) ● IIS 6 WMI Compatibility (Installed) ● IIS 6 Management Scripts and Tools (Installed) ● IIS 6 Management Scripts and Tools (Installed) ● IIS Management Service (Installed) ● IIS 6 Management Service (Installed) ● Windows Deployment Services	
	< Previous Next > Install Cancel]



Set the Features options under Web Server.

• Features: .NET Framework 4.5 Features > WCF Services > HTTP Activation

A	Add Roles and Features Wizard	_ D X
Select features		DESTINATION SERVER GN-Fus-QAtest.lkm.Sungardps.lcl
Before You Begin	Select one or more features to install on the selected server.	Description
Server Selection Server Roles	INET Framework 3.5 Features (Installed)	Windows Communication Foundation (WCF) Activation uses
Features Confirmation	✓ .NET Framework 4.5 (Installed) ✓ ASP.NET 4.5 (Installed)	to invoke applications remotely over the network by using protocols such as HTTP, Message Queuing, TCP,
Results	Image: Services (2: of prinstance), Image: HTTP Activation (Installed) Image: Message Queuing (MSMQ) Activation Image: Message Queuing (MSMQ) Activation	and named pipes. Consequently, applications can start and stop dynamically in response to incoming work items, resulting in application hosting that is more robust, manageable, and efficient.
	Ordecate Hermonic Onlock BranchCache V C III Previous Next :	> Install Cancel



Web Deploy

Web Deploy (msdeploy.exe) is used to deploy web applications to IIS. It is an IIS extension that is downloaded and installed separately. It should be located in one of the folders below if it is installed on your machine.

For Windows Server 2012

C:\Program Files\IIS\Microsoft Web Deploy V3\msdeploy.exe C:\Program Files (x86)\IIS\Microsoft Web Deploy V3\ msdeploy.exe

Use Web Platform Installer to install Web Deploy along with its dependencies like the Web Management Service (WMSvc)

1. Click on the link below to go to the IIS Web Deploy download page.

http://www.iis.net/downloads/microsoft/web-deploy

- 2. Click on the Install this extension button.
- 3. At the bottom of the browser, it will prompt you asking if you want to run or save the WDeploy.exe. Click **Run**.

Do you want to run or save WDeploy.exe (113 KB) from www.microsoft.com ?	×
🕐 This type of file could harm your computer.	Run Save 💌 Cancel

4. The Web Platform Installer will come up.

🖲 web Platform Installer 5.0	
N/A	The Web Deployment Tool provides deployment and migration support for application packages and IIS 6.0, 7.0, 7.5 and 8.0 Web servers. The Web Deployment Tool incorporates many features that enable Web server administrators to deploy, sync, publish and migrate sites, including configuration, content, SSL certificates, databases and other types of data associated with a Web server. Web Deploy also supports both admin and non-admin deployment scenarios. The non-admin scenarios enable administrators to configure Web Deploy on a server, and then delegate a subset of deployment capabilities to developers who do not have admin accounts on the production server. For developers, the Web Deployment to on provides a framework for adding manifest files to ZIP packages that simplify local and remote Web application deployment.
	Publisher: Microsoft
	Version: 9.0.1762.0
	Release date: Monday, June 10, 2013
1 Items to be installed	Options Install Exit

- 5. Click on Install.
- 6. Click on I Accept to agree to the license agreements.



DREBEOLUCITES	INICTALL		FINIC
PREREQUISITES	INSTALL	CONFIGURE	FINISE
Review the following list of thi software identified below to be products are provided by the tl responsible for and must separ	d party application software, installed and Windows comp nird parties listed here. Micros ately locate, read and accept t	Vicrosoft products and component onents to be turned on. Third party oft grants you no rights for third pa hese third party license terms.	s, and any additional applications and rty software. You are
🗙 Web Deploy 3.5			
.			21.83 MB
l otal file download size:			21.05 MD
I otal file download size: Click here to see additional sof By clicking "I Accept", you agr software identified above. If yo	tware to be installed and revie se to the license terms for the ou do not agree to all of the lic	w the associated Microsoft license t third party and Microsoft software, a ense terms, click "I Decline".	erms and any additional
Click here to see additional sof By clicking "I Accept", you agn software identified above. If yo Some Microsoft software : usage info. By checking the below. <u>Privacy Statements</u>	tware to be installed and revie se to the license terms for the bu do not agree to all of the lic above use the Customer Exper nis box, you agree to send this	w the associated Microsoft license t third party and Microsoft software, a ense terms, click "I Decline". ience Improvement Program, to sen info. To learn which do, read the Pi	erms and any additional d us basic setup and rivacy Statements
Click here to see additional sof By clicking "I Accept", you agn software identified above. If yo Some Microsoft software i usage info. By checking the below. <u>Privacy Statements</u>	tware to be installed and revie ee to the license terms for the bu do not agree to all of the lic above use the Customer Exper his box, you agree to send this	w the associated Microsoft license to third party and Microsoft software, a ense terms, click "I Decline". ience Improvement Program, to sen info. To learn which do, read the Pi I Decline	erms and any additional d us basic setup and rivacy Statements IAccept

URL Rewrite

URL Rewrite is an IIS module that first needs to be downloaded and installed in IIS.



2) On the Features View tab, select Web Platform Installer



a) If you do not have the Web Platform Installer shown, you can download it here: <u>https://www.microsoft.com/web/downloads/platform.aspx</u>



3) Search on URL Rewrite in the upper right corner

0j		Internet Information Services (IIS) Manager		_ 🗆 🗙
EGDEV-BUILD2	▶ Sites ▶ Default	Web Site 🔸		😰 🔤 🟠 🔞 -
File View Help				
Connections	🌒 Web F	Platform Installer		
EGDEV-BUILD2 (DEVOPS\craig.wildin	Spotlight Pr	oducts Applications	URL Rewrite	×
Application Pools		Name	Released	stall
Default Web Site	M	Visual Studio Community 2015 with Microsoft Azure SDK - 2.9.6	11/16/2016	Add
DQS DQSDQS_BACKUP_11-17-2016	×	Microsoft Azure SDK for .NET for Visual Studio 2017 RC - double click to learn more	11/16/2016	Add
DQS_BACKUP_11-17-2016 DQS_BACKUP_11-21-2016	M	Microsoft Azure SDK for .NET (VS 2015) - 2.9.6	11/16/2016	Add
DQS_BACKUP_11-21-2016 DQS_BACKUP_11-21-2016	M	Visual Studio Community 2013 with Microsoft Azure SDK - 2.9.6	11/16/2016	Add

4) Select **URL Rewrite** and click **Add**

2]	Internet Information Services (IIS) Manager		_ □ ×
€ BGDEV-BUILD2	→ Sites → Default Web Site →		😐 🗠 🟠 i 🕡 -
File View Help			
Connections			
😪 - 🔒 🖄 😣	Web Platform Installer		
Start Page ^ EGDEV-BUILD2 (DEVOPS\craig.wil	Search results for URL Rewrite		م
Application Pools			
Jointes	Name	Released	Install
▷-□ aspnet_client	URL Rewrite 2.0	5/27/2015	Add
Þ ⊕ DQS ≡			
▷			
DOS_BACKUP_11-17-2			
DOS BACKUP 11-21-2			
DOS BACKUP 11-21-2			
DOS BACKUP 11-22-2			
DQSInstall			
⊳- ²² FusionInstall			
FusionServices_BACKU	0 Items to be installed	Options Install	Exit
FusionServices_BACKU			
▶ 💮 FusionServicesTEST 🗠	Features View 💦 Content View		
Ready			6 3
			18.::

5) It will now show **1 items to be installed**. Click **Install**.

V	Internet Inform	nation Services (IIS) Manager		_ □ ×
EGDEV-BUILD2	► Sites ► Default Web Site ►			🔯 🖄 🚯 •
File View Help				
Connections	Web Platform Installer			م
⊿ 🙆 Sites	Name		Released I	nstall
	URL Rewrite 2.0		5/27/2015	Remove
 P - PusionInstall P - FusionServices P - FusionServices P - FusionServices P - FusionServices 	1 Items to be installed	Opti	ions Install	Exit
Keady				• 1.:



6) This brings up a Web Platform Installer dialog. Click I Accept.

Web Platform Installer			
PREREQUISITES	INSTALL	CONFIGURE	FINISH
Review the following list of th software identified below to b products are provided by the t responsible for and must sepa	ird party application software, e installed and Windows com third parties listed here. Micro rately locate, read and accept	Microsoft products and components, a sonents to be turned on. Third party ap soft grants you no rights for third party these third party license terms.	and any additional oplications and software. You are
X URL Rewrite 2.0 View license terms Total file download size		Dire	ect Download Link 5.98 MB
Click here to see additional so By clicking "I Accept", you ag software identified above. If y	ftware to be installed and revie ree to the license terms for the rou do not agree to all of the li	ew the associated Microsoft license terr third party and Microsoft software, and cense terms, click "I Decline".	<u>ns</u> I any additional
		I Decline	l Accept

7) This will start the install of the URL Rewrite module.

Web Platform Installer			
PREREQUISITES	INSTALL	CONFIGURE	FINISH
Finished downloading		Microsoft Azure Microsoft Azure is an open and flexi platform that enables you to quickly deploy and manage applications acr network of Microsoft-managed data Easily create web sites, virtual machi databases in a few clicks. <u>Try it free now!</u>	ble cloud v build, ross a global acenters. ines or
Install progress: Installing URL	Rewrite 2.0 [1 out of 1]		
		[Cancel



8) Click Finish.

Web Platform Installer			x
PREREQUISITES	INSTALL	CONFIGURE	FINISH
✓ The following produ URL Rewrite 2.0	icts were successfully	installed.	
			Finish



Appendix 2: IBMi Client Access

IBM Client Access has been replaced with IBM Access Client Solutions. However, Fusion will still run with IBM Client Access V7R1. This section has instructions for installing IBM Client Access v7, and for obtaining the user, server, database, and library names from System Navigator.

IBM Client Access V7R1

IBM Client Access is required for access to NaviLine. V7R1 is preferred as it resolves an error with the machine.config file noted below. If you use V6R1 be sure to install the latest v6 service patch. Fusion will not work with just the base v6 version.

This software should come with your iSeries setup and installation package. You can download the latest service pack from:

http://www-03.ibm.com/systems/power/software/i/access/windows_sp.html

Call the IBM Support Line at 1-800-IBM-SERV (1-800-426-7378) for more assistance.

During the IBM Client Access installation, the **.NET Data Provider** feature must be selected. This is selected by default if you select the 'Complete' option.

🔡 IBM System i Access for Windows V6R1M0 - InstallShield Wizard		
Custom Setup Select the program features you want installed.		
Click on an icon in the list below to change how a feature is inst	alled.	
System i Navigator Data Access Data Transfer Base Support (Licer ODBC OLE DB Provider UCL DB Provider Lotus 123 File Format Support AFP Workbench Viewer	Feature Description Provides access to DB2 for i5/OS for .NET development. This feature requires 0KB on your hard drive.	
InstallShield	Next > Cancel	

NOTE: If the IBM Client Access V6R1 is installed after IIS is installed, it may remove the permissions to the machine.config files. See the section <u>Troubleshooting: HTTP Error 503. The</u> <u>service is unavailable</u>


iSeries Server Settings

You will need information about the iSeries server in order for Fusion to connect to it. You can retrieve this information from the **System I Navigator**.

iSeries user / password

This is an iSeries account that the Fusion service will use to connect to iSeries. No special permissions are needed. It will use the same permissions as any NaviLine or Select user.

To create a profile from scratch for Fusion, use the following command and parameters:

CRTUSRPRF USRPRF(FUSION) PASSWORD() INLMNU(*SIGNOFF) LMTCPB(*YES) TEXT('Fusion Service Profile') SPCAUT(*NONE) PWDEXPITV(*NOMAX)

Explanation:

- 5. For the usrprf parameter, the user name is: FUSION
- 6. INLMNU is the Initial Menu: We use *SIGNOFF to prevent someone from successfully logging into the IBMi profile interactively.
- 7. LMTCPB stands for Limited Capabilities: This reduces the capabilities of the profile which is very important to also use SPCAUT (Special Authority of *NONE).
- 8. PWDEXPITV stands for Password Expiration Interval: Always use *NOMAX.

If this is an existing Click2Gov3 customer, you can copy the profile using the "WRKUSRPRF" IBMi command as illustrated below and change the appropriate parameters:

wrkusrprf spseqov

Hit enter

Use option 3 to Copy the existing profile, then change the parameters as indicated above, making sure you use PgDn for more parameters and change the Password Expiration Interval.



		Work with User Profiles	
Type 1=0 12	options, pr Create 2=C =Work with o	ess Enter. Hange 3=Copy 4=Delete 5=Disp bjects by owner	lay
Opt	User Profile	Text	
3	SPSEGOV	Click2Gov3 Default Profile **D0 NG	DT DELETE**

<u>User Profile</u>

The Fusion user profile must have QPGMR specified in the Group profile (GRPPRF) or Supplemental groups (SUPGRPPRF) parameter:

Change User Profile (CHGUSRPRF)

Type choices, press Enter.

Group profile						GRPPRF	QPGMR
Owner						OWNER	*USRPRF
Group authority						GRPAUT	*NONE
Group authority type						GRPAUTTYP	*PRIVATE
Supplemental groups						SUPGRPPRF	*NONE
		+	- f	01	r n	nore values	
Accounting code						ACGCDE	*BLANK
Document password .						DOCPWD	*SAME
Message queue						MSGQ	FUSION
Library							QUSRSYS
Delivery						DLVRY	*NOTIFY
Severity code filter						SEV	0
Print device						PRTDEV	*WRKSTN
Output queue						OUTQ	*WRKSTN
Library							



Change User Profile (CHGUSRPRF)

Type choices, press Enter.

Group profile						GRPPRF	GRPALL
Owner						OWNER	*USRPRF
Group authority						GRPAUT	*ALL
Group authority type						GRPAUTTYP	*PRIVATE
Supplemental groups						SUPGRPPRF	GRPMOD
		+	f	or	r	nore values	QPGMR
Accounting code						ACGCDE	'GRPC2G'
Document password .						DOCPWD	*SAME
Message queue						MSGQ	FUSION
Library							QUSRSYS
Delivery						DLVRY	*BREAK
Severity code filter						SEV	0
Print device						PRTDEV	*WRKSTN
Output queue						OUTQ	QPRINT
Library							QGPL

iSeries server

This is the fully qualified domain name or the IP address of your iSeries server. This is the name of the server as it appears in **System I Navigator** under **My Connections**.

Ø		System i Navigator	- 🗆 🗙
File Edit View Help			
x 🖻 🖻 🗙 🗗 🥩 🖪 🛇			7 minutes old
Environment: My Connections		Htedemo3:	
🖳 🖫 🐻 Management Central (Hte400)	^	Name	Description
b - an My Connections a - an -		ତ Basic Operations	Manage messages, printer output, printers, and jobs. DB2 for i. Work with file systems. Work with application development tools.
Constant Sector Se	~	¢	>



iSeries database

This is the name of the database as it appears in **System I Navigator** under [Server] > Databases



iSeries program libray

This is the name of the PGM library as it appears in **System I Navigator** under [Server] > **Databases > [DatabaseName] > Schemas**

D System i Navigator – 🗆 🗙								
file Edit View Help								
炎 階 C × 1 ⊗ II ◎								
Environment: My Connections	Htedemo3: Schemas Database: H	Htedemo3						
Management Central (Hte400) My Connections	∧ Name	System Name	Owner	Created By	Text			
Horizand Control of Control	CXCOMLIB CDCXPGMLIB CHTEDTA CHTEDTAT CHTEPGM CHTSDTA CHTSDTA CHTSPGM CHTSPGM CHTSPGMT CHTSPGMT CHTSPGMT CHTSPGMT CHTSPGMT	DCXCOMLIB DCXPGMLIB HTEDTA HTEDTAT HTEPGM HTEPGMT HTSDTA HTSPGM HTSPGMT QGPL	QOTHPRDOWN QOTHPRDOWN QSECOFR QSECOFR QSECOFR QSECOFR QPGMR QPGMR QPGMR QSYS	OJDO OJDO QHXT2 OHXT2 OSECOFR OSECOFR QSECOFR QSECOFR QSECOFR SECOFR MBM	LANSA SHARED LIBRARY LANSA PROGRAM LIBRARY HTE 2.0 Base Prod Naviline data lib HTE 2.0 Base Prod Naviline data lib HTE Base Program library 2.0 HTE Base Program library 2.0 Naviline Select Base FA Data Library 2.0 Naviline Select Program Library 2.0 Naviline Select Program Library 2.0 General Purpose Library			



iSeries data libray

This is the name of the DTA library as it appears in **System I Navigator** under [Server] > **Databases > [DatabaseName] > Schemas**

🖉 System i Navigator – 🗆 🗙								
File Edit View Help								
※ 🗈 💼 🗙 😭 🎯 圓 🛇								
Environment: My Connections	Htedemo3: Schemas Data	oase: Htedemo3						
Management Central (Hte400)	Name	System Name	Owner	Created By	Text			
E ∰ ∰ Drspt	CXCOMLIB	DCXCOMLIB DCXPGMLIB	QOTHPRDOWN QOTHPRDOWN	QIDO QIDO	LANSA SHARED LIBRARY LANSA PROGRAM LIBRARY			
→ → →	HTEDTA HTEDTAT HTEDTAT HTEDTAT HTEPGM HTEPGMT HTSDTA HTSDTA HTSPGMT HTSPGMT GHTSPGMT GQGPL	HTEDTA HTEDTAT HTEPGM HTEPGMT HTSDTA HTSPGM HTSPGMT QGPL	QSECOFR QSECOFR QSECOFR QPGMR QPGMR QPGMR QPGMR QSYS	QHXT2 QHXT2 QSECOFR QSECOFR QSECOFR QSECOFR QSECOFR TIBM	HTE 2.0 Base Prod Naviline data lib HTE 2.0 Base Prod Naviline data lib HTE Base Program library 2.0 HTE Base Program library 2.0 Naviline Select Base FA Data Library 2.0 Naviline Select Program Library 2.0 General Purpose Library			
H- C Application Development	<				>			

iSeries environment

If you have multiple environments set up on iSeries, such as for LIVE and TEST, then you need to enter the environment name. If you sign in to either NaviLine or Select and get an environment screen, then this would be the environment you normally select on that screen. If you do not normally get the environment screen, then there isn't an environment and you can leave the environment blank. You can further check for environment names in either NaviLine or Select by using a **F9 command line > strsql > CALL HT005P**. This will bring up an environment list if there are any available.

تو <mark>ل</mark> و	Session A - [24 x 80]		- 🗆 🗙			
File Edit View Communication Actions Window He	lp					
	●					
HT005P01 Superion Menu Driver Library List Maintenance						
Position to Application	۱					
Type options, press Enter. 2=Change 3=Copy 4=Dele	te 5=Display					
Opt App Additional	Suffix Environment	Description				
HR	LIVE	V9.0 PTE HTEDTAV	S			
	LIVE	V9.0 PTF HTEDTAV	S			
КА	DTAS	V9.0 PTF HTEDTAV	S			
KA	DTAV	V9.0 PTF HTEDTAV	U			
KA	LIVE	V9.0 PTF HTEDTAV	S			
_ <u>KA</u>	TEST	V9.0 PTF HTEDTAV	U			
– <u>××</u>	DTAS	V9.0 PTF HTEDTAV	S			
– ^{××}	LIVE	V9.0 PIF HIEDIAV	S			
F3=Exit F5=Refresh F6=A	dd		Bottom			
M <u>A</u> A			04/032			
1902 - Session successfully started			1.			



Troubleshooting: Manually setting configuration values

If the install gives errors that it cannot write or save values to one of the configuration files, then it can be edited manually after the install. The install log should indicate what file it was unable to write to. This section lists the files and values that need to be set. You can open the named and manually set the value if needed.

The tables below list the configuration checklist items to get your values from, and in the **Key/Value** column it gives the section of code for where to set that value in the file. Searching on the keyword highlighted in light blue will help you find the section in the file. Replace the value highlighted in yellow with the value from your configuration checklist.

Web.config

This is the configuration file for the Fusion web service. This file is located at:

C:\inetpub\wwwroot\FusionServices\Web.config

The key values highlighted in blue are the names to search for to find them in the web.config file. The values highlighted in yellow are what you would change to reconfigure it to your configuration values.

Configuration Item	Key/Value
iSeries URL	<add key="SPS:Server" value="iVendor.com"></add>
Configuration List: 2c	
iSeries Database	<add key="SPS:Database" value="iVendor"></add>
Configuration List: 2c	
iSeries Program Lib	<add key="SPS:ProgramLibrary" value="HTEPGM"></add>
Configuration List: 2d	
iSeries Data Lib	<add key="SPS:DataLibrary" value="HTEDTA"></add>
Configuration List: 2e	
iSeries Registered Lib	<add key="SPS:RegisteredLibrary" value="HTEPGM"></add>
Configuration List: 2g	
iSeries Environment	<add key="SPS:Environment" value="ENV"></add>
Configuration List: 2f	
NaviLine Server	<add key="SPS:NaviLineServerName" value="NLSErver.domain.com"></add>
Configuration List: 3a	
App ID	<add key="SPS:AppID1" value="yourAppID"></add>
Configuration List: 1a	
Арр Кеу	<add key="SPS:AppKey1" value="yourAppKey"></add>
Configuration List: 1a	
Key Desc	<add key="SPS:KeyDesc1" value="yourCityName"></add>
Configuration List: 1a	



Troubleshooting: HTTP Error 503. The service is unavailable

NOTE: If the IBM Client Access is installed after IIS is installed, it may remove the permissions to the machine.config files. You will get this error if you try to browse the FusionServices page, or even from browsing the Default Web Service page. This section tells you how to reset the file permission.

Machine.config

After installing the IBM Client Access, you may receive an error when you browse the FusionService page:

HTTP Error 503. The service is unavailable.

IIS requires read access to your machine.config file. Read permissions may have been removed when installing the IBM System I Access. You would see the following message in the Event Viewer if it does not have access:

8	Event Properties	- Event 2307, I	IS-W3SVC-WP	x
General Details The worker process configuration file of 'trying to read cor \.v4.0.30319\CONF Log Name: Source: Event ID: Level: User: OpCode: More Information:	s for application pool 'Defau due to insufficient permission figuration data from file '\\? IG\machine.config', line nun Application IIS-W3SVC-WP 2307 Error N/A Info <u>Event Log Online Help</u>	ItAppPool' encour ns ' <u>C:\Windows\Mic</u> nber '0'. The data Logged: Task Category: Keywords: Computer:	ntered an error 'Cannot read rosoft.NET\Framework64 field contains the error code. 3/18/2015 5:21:13 PM None Classic GN-Fus-QAtest.lkm.Sungardp	s.IcI
Сору				Close

To fix the error, grant Read access permission to the file: C:\Windows\Microsoft.NET\Framework64\v4.0.30319\Config\machine.config

Right click on the file and select **Properties > Security > Edit**



Select Users or Groups	×
Select this object type:	
Users, Groups, or Built-in security principals	Object Types
From this location:	
GN-FUS-QATEST	Locations
Enter the object names to select (<u>examples</u>):	
IIS_IUSRS	Check Names
Advanced Of	Cancel

Click on the **Locations** button to change it from your domain name to the local machine name. Enter **IIS_IUSRS** at the bottom and click **OK**.

Permissions for	machine.con	fig 🛛 🗙					
Security							
Object name: C:\Windows\Micr	rosoft.NET\Frame	work64\v4.0.30					
Group or user names:							
 SYSTEM Craig Wilding (SunGard-Lake Mary) (craig.wilding@sungard Administrators (GN-FUS-QATEST\Administrators) IIS_IUSRS (GN-FUS-QATEST\IIS_IUSRS) 							
Permissions for IIS_IUSBS	Add	Remove					
Full control							
Modify							
Read & execute	~						
Read	✓						
Write							
ОК	Cancel	Apply					

It should have the **Read & execute** and **Read** permissions selected. Make sure they are checked, and click **OK**.



If you have already installed Fusion, make sure the Fusion App Pool in IIS is started. This may have been stopped if you received the 503 error due to the machine.config files.

In IIS Manager, select **Application Pools** in the tree view on the left. Select **FusionAppPool** from the list, then click the **Start** button on the right side.



You should now be able to browse the Fusion Service site.

In IIS Manager, expand the **Sites** > **Default Web Site** in the tree view on the left. Select **FusionServices** from the list, then click the **Browse** button on the right side. There is one Browse button for using http, and one if you are using https.

€ ON-FUS-QATES File View Help	Internet Information Services (IIS) Manager	- • ×
Connections Start Page GN-FUS-QATEST (LKM\final.k Application Pools Construction P	Filter: • • • • • • • • • • • • • • • • • • •	Actions Actions Explore Edit Permissions Basic Settings View Virtual Directories Manage Application Browse Application Browse *:80 (http) Browse *:80 (http) Browse *:443 (https) Advanced Settings Pinstal Application From Gallery Deploy Install Application Import Application
< III > Ready	E Features View	W Help

The Fusion Web Services page should come up in your web browser.