

1 Integrate for ArcGIS Installation Guide Server Edition

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Installation Overview

Note: Before proceeding with an installation, please see your Release Notes to ensure you have installed all pre-requisite software and meet all minimum system requirements.

The installation process consists of four main steps:

- 1. Extract your release package
- 2. Install core components using the Setup Wizard
- 3. Configure the ArcGIS Server Manager to enable 1Integrate for ArcGIS
- 4. Install any required Add-ins

Note: If any help is required during the installation process, please contact 1Spatial Support.

Release Package

Your release package consists of a zip file, which must be extracted to an accessible location.

The **1IFA_Server_Installer-[version].exe** file is the setup wizard that will <u>install your components</u>.

Other files include:

- ► **1IFA_Server-[version].soe** the server extension <u>deployed to</u> <u>ArcGIS Server during configuration</u>
- plugins for each desktop application (e.g. 1IFA_ArcMap_[version]_ Plugin-[version].esriaddin)

Licences

During the installation process you will be asked to specify the location of a licence folder.

Two directories will be created in this location, called hash and lic.

A file called **harware_hash.txt** will be created in the hash folder. This file will contain a string of characters unique to the machine on which 1Integrate for ArcGIS is being installed. This file will need to be sent to 1Spatial Support and will be used to generate your licence.

When received, the licence file generated by 1Spatial Support must be placed in the **lic** folder.

2 Installing Components

The following components are installed via the 1Integrate for ArcGIS Setup Wizard:

- Metadata Service stores all data related to 1Integrate for ArcGIS
- Rule Author web application to allow the creation and publication of rules
- > 1Integrate for ArcGIS Widget interface for running rules
- Rules Engine Client a service that manages all 1Integrate for ArcGIS processing

Running the Setup Wizard

The Setup Wizard is run via the **1IFA_Server_Installer-[version].exe** file provided in your <u>Release Package</u>.

Run the Setup Wizard:

1. Launch the wizard by double-clicking on **1IFA_Server_Installer**-[version].exe.

Name	Date modified	Туре	Size
1IFA_ArcGISPro_Plugin-1.5.0.1.esriAddInX	20/02/2017 15:46	ESRIADDINX File	710 KB
1IFA_ArcMap_10.3_Plugin-1.5.0.1.esriaddin	20/02/2017 15:46	ESRIADDIN File	6,131 KB
1IFA_ArcMap_10.4_Plugin-1.5.0.1.esriaddin	20/02/2017 15:46	ESRIADDIN File	4,075 KB
1IFA_Server_Installer-1.5.0.1.exe	20/02/2017 15:46	Application	49,749 KB
1IFA_Server-1.5.0.1.soe	20/02/2017 15:46	SOE File	18,194 KB

Figure 2-1: Example Release Package

The 1Integrate for ArcGIS Setup Wizard will open.

2. Click Install to proceed.



Figure 2-2: Setup Wizard Start Page

If prompted to trust the application, click **Accept**.

3. The Setup Wizard will now run through each component to be installed, starting with the Metadata Service.



Figure 2-3: Installing the Metadata Service

4. If you want to change the location in which to install the Metadata Service, click **Change**.

 Ispatial Metadata Service (1.5) Setup

 Destination Folder

 Click Next to install to the default folder or click Change to choose another.

 Install 1Spatial Metadata Service (1.5) to:

 C:\Program Files\1Spatial\Metadata Service\

 Change...

 Back
 Next

 Cancel

To accept the location and proceed, click Next.

Figure 2-4: Location for the Metadata Service

- 5. Select a database option:
 - **Generic database** a lightweight database option
 - MySQL database recommended for implementations requiring high usage or many users

Note: If MySQL database is selected, MySQL mus	st already
 be installed.	
🚰 1 Spatial Metadata Service (1.5) Setup	
Database selection Click Next after selecting required database setting.	
Please select a database option.	
 Generic database 	
C MySQL database	
Back Next Cancel	

Figure 2-5: Select a database option

Once selected, click **Next** to proceed.

6. Enter the Metadata Service endpoint port (by default this is 9998).

🚏 15patial Metadata Service (1.5) Setup	
Endpoint Click Next to use the default values, or first enter new values.	1
Please enter the Metadata Service endpoint details.	
Port: 9998	
Back Next	Cancel

Figure 2-6: Set the Metadata Service endpoint

Click **Next** to proceed.

7. Enter an Administrator password, used to access the Metadata Service.

Note userr	This will become the password corresponding to the name "admin".
	Image: Section
	Please enter Administrator password.
	Password:
	Back Next Cancel

Figure 2-7: Set the Administrator password

Note: We recommend you overwrite the default value for security purposes.

Click **Next** to proceed.

8. Select an authentication service to be used by users accessing the Metadata Service:

Note: suppo	Select Local Authenticator , as other options are no orted.	ot yet
	Image: Provide the service of the	
	Click Next to use the default service, or first select an alternative option. Please select your authentication service:	
	 Local Authenticator 	
	Back Next Cancel	

Figure 2-8: Select Authentication Service

Once selected, click **Next** to proceed.

9. Click Install.

The Metadata Service is now installed. Click **Finish** to proceed.

10. The Setup Wizard will now install the next component, the Rule Author.



Figure 2-9: Installing the Rule Author

Click **Next** to proceed.

11. If you want to change the location in which to install the Rule Author, click **Change**.

To accept the location and proceed, click Next.

🕞 15patial Rule Author (1.5) Setup	
Destination Folder Click Next to install to the default folder or click Ch	hange to choose another.
Install 15patial Rule Author (1.5) to:	
C:\Program Files\1Spatial\Rule Author\	
Change	
В	ack Next Cancel

Figure 2-10: Location for the Rule Author

12. Enter the Rule Author endpoint port (by default this is 7878).

🙀 15patial Rule Author (1.5) Setup			_ 🗆 X
Rule Author Click Next to use the default values or enter ne	w values.		1
Please enter Rule Author endpoint details			
Rule Author port: 7878			
	<u>B</u> ack	lext	Cancel

Figure 2-11: Set the Rule Author port

Click Next to proceed.

- 13. Enter the Metadata Service endpoint details:
 - Metadata Service host the machine on which the Metadata Service is installed
 - Metadata Service port the port defined during installation (by default this was set to 9998)

👘 15patial Rule Author (1.5) Setup	
Metadata Service Click Next to use the defau	It values or enter new values.	1
Please enter Metadata Servi	ce endpoint details	
Metadata Service host:	localhost	
Metadata Service port:	9998]
	Back Next	Cancel

Figure 2-12: Enter details for the Metadata Service endpoint

14. Click Install.

The Rule Author is now installed. Click **Finish** to proceed.

Note: You can test that the Rule Author has installed correctly by navigating to <u>https://[host]:[port]/login.html</u>. The login screen should appear.

15. The Setup Wizard will now install the 1Integrate for ArcGIS Widget.

늻 1Integrate for ArcGIS Widg	et Setup
1	Welcome to the 1Integrate for ArcGIS Widget Setup Wizard
	The Setup Wizard will install 1Integrate for ArcGIS Widget on your computer. Click Next to continue or Cancel to exit the Setup Wizard.
	Back Next Cancel

Figure 2-13: Installing the 1Integrate for ArcGIS Widget

16. If you want to change the location in which to install the 1Integrate for ArcGIS Widget, click **Change**.

🔀 1Integrate for ArcGIS Widget Setup
Destination Folder Click Next to install to the default folder or click Change to choose another.
Install 1Integrate for ArcGIS Widget to:
C:\arcgis-web-appbuilder-2.1\ Change
Back Next Cancel

Figure 2-14: Location for the 1Integrate for ArcGIS Widget

To accept the location and proceed, click Next.

17. Click Install.

The 1Integrate for ArcGIS Widget is now installed. Click **Finish** to proceed.

18. The Setup Wizard will now install the final component, the Rules Engine Client.



Figure 2-15: Installing the Rules Engine

19. If you want to change the location in which to install the Rules Engine, click **Change**.

 Ispatial SOE Rules Engine Client (1.5) Setup

 Destination Folder

 Click Next to install to the default folder or click Change to choose another.

 Install 1Spatial SOE Rules Engine Client (1.5) to:

 [C:\Program Files\1Spatial\SOERulesEngineClient\

 Change...

 Back
 Next

 Cancel

To accept the location and proceed, click Next.

Figure 2-16: Location for the Rules Engine

- 20. Enter the SOE Rules Engine Client details:
 - ActiveMQ Host URL the machine and port on which Active MQ is already installed and running (see your Release Notes for system requirements).
 - ActiveMQ Queue Name the name of the Rules Engine Queue that will be used with Active MQ. We recommend you keep the default setting.
 - Number of Workers the number of concurrent 1Integrate for ArcGIS processes allowed. We recommend you keep the default setting.
 - License Directory the location where the licence folder should be created (see "Licences" on page 4).

🔁 15patial SOE Rules Engin	e Client (1.5) Setup	_ 🗆 X
SOE Rules Engine Clien Click Next to use the defa	It ult values or enter new values.	1
Please enter SOE Rules Eng	jine Client details	
ActiveMQ Host URL:	tcp://localhost:61616	
ActiveMQ Queue Name:	rules_engine_svc_jobs	
Number of Processes:	5	
License Folder:	C:\Users\user\Documents\ Browse	
	Back Next	Cancel

Figure 2-17: SOE Rules Engine Client details

Click **Next** to proceed.

- 21. Enter the Metadata Service endpoint details:
 - Metadata Service host the machine on which the Metadata Service is installed
 - Metadata Service port the port defined during installation (by default this was set to 9998)

🚏 1 Spatial SOE Rules Engine Client (1.5) Setup			
Metadata Service Click Next to use the default values or enter new values.			
Please enter Metadata Serv	vice endpoint details		
Metadata Service host: Metadata Service port:	localhost 9998		
	Back Next	Cancel	



Click **Next** to proceed.

22. Click Install.

The Rule Engine is now installed. Click **Finish** to exit the Setup Wizard.

3 Configuring the ArcGIS Server

In order to enable 1 Integrate for ArcGIS to be used for your data services, it must first be configured through the ArcGIS Server Manager.

The server extension must first be added, and then each data service must be configured to use the extension.

Adding the 1Integrate for ArcGIS Server Extension

The 1Integrate for ArcGIS Server Extension must be added to ArcGIS server before any data services can use it.

Add the Server Extension:

- 1. Log in to your ArcGIS Server Manager.
- 2. Within ArcGIS Server Manager, navigate to **Site** > **Extensions**.



Figure 3-1: Extensions page

3. Click Add Extension.

ArcGIS Server Man	ager	Services	Site	Security	Logs
GIS Server Web Adaptor	Software Authorization				
Directories	Extensions				Helr
Configuration Store	ArcGIS Server supports ext	ensions, which allow you t	o extend the base fu	Inctionality of map and	image services with
Clusters	custom logic that can be ex	ecuted in ArcGIS clients. T	There are two types: reate new service of	server object extension	ns (SOEs) and
Machines	requests for existing built-in	n service operations.			in you to intercept
Data Store	Click Add Extension to depl	oy your extension to ArcGi	(S Server.		
Extensions	Add Extension Debug	Settings			

Figure 3-2: Add Extension

 Click Browse to locate and open the 1Integrate for ArcGIS SOE package provided in your release package (1IFA_Server-[version].soe).

Name	Date modified	Туре	Size
11FA_ArcGISPro_Plugin-1.5.0.1.esriAddInX	20/02/2017 15:46	ESRIADDINX File	710 KB
1IFA_ArcMap_10.3_Plugin-1.5.0.1.esriaddin	20/02/2017 15:46	ESRIADDIN File	6,131 KB
1IFA_ArcMap_10.4_Plugin-1.5.0.1.esriaddin	20/02/2017 15:46	ESRIADDIN File	4,075 KB
1IFA_Server_Installer-1.5.0.1.exe	20/02/2017 15:46	Application	49,749 KB
1IFA_Server-1.5.0.1.soe	20/02/2017 15:46	SOE File	18,194 KB

Figure 3-3: Example Release Package

5. Click Add.

A confirmation message will display, and 1Integrate for ArcGIS is now listed as an extension.

i Extension "1IFA_Server-1.5.0.1.soe" is (deployed successfully	×
Extensions		Help
ArcGIS Server supports extensions, which allow you with custom logic that can be executed in ArcGIS cl and server object interceptors (SOIs). SOEs allow y intercept requests for existing built-in service opera Click Add Extension to deploy your extension to Arc Add Extension Debug Settings	u to extend the base functionality of map and image ser lients. There are two types: server object extensions (S rou to create new service operations and SOIs allow you ations. CGIS Server.	rvices iOEs) u to
Name	Extension	
1IFA_Server-1.5.0.1.so	1Integrate for ArcGIS	0 ∕ ×
< >		

Figure 3-4: 1Integrate for ArcGIS Extension added

Configuring a Data Service

In order for data services to be able to use the 1Integrate for ArcGIS Extension (via an Add-in or widget), they must first be configured.

Additionally, each data service must be configured to be associated with a ruleset, to determine the rules that will be available.

Note: A data service can only be associated with one ruleset, but a ruleset can be associated with many data services.

Configure a Data Service:

1. Within your ArcGIS Server Manager, navigate to Services.



Figure 3-5: Services tab

2. Select the data package you wish to configure using the left hand menu.

Open it for editing by clicking the pen icon 🖊 next to the title in your data package.



Figure 3-6: Example data package

- 3. Navigate to Capabilities.
- 4. Under "Select and configure capabilities", check the box next to **1Integrate for ArcGIS** to enable it.

Editing: <u>Site (root)</u> > <u>RoadN</u>	<u>etwork</u> > RoadNetwork	Help Save Cancel
General		
Parameters	Select and configure capabilities	
Capabilities	Mapping (always enabled)	WCS
Pooling	WMS	Feature Access
Processes	Schematics	Mobile Data Access
Caching	Network Analysis	KML
Item Description	WFS	☑ 1Integrate for ArcGIS

Figure 3-7: 1Integrate for ArcGIS capability enabled

- 5. Upon selecting the box next to **1Integrate for ArcGIS**, the following configuration properties will be displayed:
 - **Queue Host URL** Location and port of the Active MQ service.
 - Queue Name Name of the Active MQ queue that was specified during the Rules Engine Client installation (the default name is recommended).
 - URL URL for the metadata service (including the port as defined during installation).
 - **Mode** Select "Single User".
 - **Username** Enter "admin".
 - Password The password for the admin user (as defined during installation).
 - Rule Set ID The name of the Rule Set to be used with this Map Service.

1Integrate for ArcGIS Co	onfiguration		
URLs			
REST <u>http://caml05</u>	51:6080/arcgis/rest/services/RoadNetwork/RoadNetwork/MapServer		
URL: /exts/RulesEn	igineSOE		
Operations Allowed			
No capabilities defined.			
Properties			
Queue Host URL	tcp://localhost:61616		
Queue Name	me rules_engine_svc_jobs		
Configuration Service			
URL	https://localhost:9998/		
Mode	Single User OrcGIS Online/Portal		
Username	admin		
Password	•••••		
Rule Set ID	MapRoad		

Figure 3-8: 1Integrate for ArcGIS Configuration Properties

6. Ensure that the box next to **Feature Access** is checked.

Editing: <u>Site (root)</u> > <u>RoadNe</u>	twork > RoadNetwork	Help Save Cancel
General		
Parameters	Select and configure capabilities	
Capabilities	Mapping (always enabled)	WCS
Pooling	WMS	Feature Access
Processes	Schematics	Mobile Data Access
Caching	Network Analysis	KML
Item Description	WFS	☑ 1Integrate for ArcGIS

Figure 3-9: Feature Access capability enabled

7. Click Save.

Federated ArcGIS Server sites with Portal for ArcGIS

Federating an ArcGIS Server site with your portal is an advanced configuration for integrating the security and sharing models of your portal with one or more ArcGIS Server sites. If your site has a federated server with portal, then please set up the security of the map services to be used by 1Integrate for ArcGIS so that users authorised by portal can access them.

Note: Currently if using the 1Integrate for ArcGIS add-ins in ArcGIS Pro or ArcMap to access map services in a federated ArcGIS Server, it is necessary to make the map service available to "Everyone". This is a known limitation and will be fixed in a future release.

The 1Integrate for ArcGIS web widget (for web apps) and 1Integrate for ArcGIS Mobile users (Collector) are unaffected by this, and map services used by these applications can be made available to Portal for ArcGIS users and groups within the federated ArcGIS Server.

4 Installing Add-ins

Note: The Web App Builder widget is installed during the normal installation procedure for 1Integrate for ArcGIS Server Edition.

There are a number of Add-ins available, depending on the application you are using:

- ArcMap
- ArcGIS Pro

In order to install these Add-ins, you will require the plugin, supplied in your Release Package as an Esri AddIn File (e.g. **1IFA_ArcMap_[version]_ Plugin-[version].esriaddin**).

Install an Add-in:

- 1. Locate the Esri AddIn File within your Release Package.
- 2. Double-click on the file to activate it.
- 3. Click Install Add-In.

	Please confirm A	dd-In file insta	Illation.	
+	Active content, su files, can contain hazards. Do not trust the source	uch as Macros a viruses or othe install this cont of this file.	and Add-In er security ent unless y	/ou
Name:	1IFA Pro Plugin			
Version:	1.4.0.5			
Author:	1Spatial Plc			
Description:	Rules-based conf cleaning, and dat	Rules-based conformance checking, data cleaning, and data repurposing capabilities.		
Digital Signatures				
Sig	ned By	Date	Verified	Trusted
1Spatial Group I	Limited, O=1Spatial L=Cambridge,	8/25/2016	✓	\checkmark
S=Cambridgesh	ire, C=GB			

Figure 4-1: Install Add-In

The Esri ArcGis Add-In Installation Utility will confirm that the installation has succeeded.

5 Checking the Installation

To check the installation has completed successfully, open a browser and navigate to the interface(s), using the locations determined during installation.

Component	Location
Metadata Service	https://[host]:[port]/index.html
Rule Author	https://[host]:[port]/login.html

Log in to the Rule Author using the Administrator credentials determined during installation.

Check your required Add-Ins have installed within each application.

Check that the three 1Spatial services and Active MQ are running by looking at the Services tab in Windows Task Manager.

Task Manager			Vanager
<u>File</u> <u>Options</u> <u>V</u> iew			
Processes Performance App history Startu	p Users Deta	ils Services	
Name	PID	Description	Status
4 1SpatialMetadataService	1896	1Spatial Metadata Service	Running
SpatialRuleAuthor	11476	1Spatial Rule Author	Running
SpatialSOERulesEngineClient	6432	1Spatial SOE Rules Engine Client	Running
Sective MQ	3272	ActiveMQ	Running

Figure 5-1: Windows Task Manager > Services

6 Upgrading an Installation

It is possible to upgrade an existing installation of 1Integrate for ArcGIS from an older version to a newer version.

Upgrade an Installation:

1. Back up your existing Rules and Actions.

Access the folder where your current version of 1Integrate for ArcGIS is installed. Make a copy of the **1IFA_Server-[version].soe** file, and keep it in a safe place.

- 2. Uninstall the existing 1Integrate for ArcGIS installation using the Windows® Control Panel.
- 3. Remove the existing 1Integrate for ArcGIS SOE from within ArcGIS Server using ArcGIS Server Manager.
- 4. Remove the 1Integrate for ArcGIS Add-Ins for ArcMap and/or ArcGIS Pro.
- 5. Clear the browser cache of the web browser you will use to access ArcGIS Server Manager.

Note: If the cache is not cleared, problems will occur deploying the new SOE extension.

- 6. Install the latest version of 1Integrate for ArcGIS as per the installation guide, and deploy the new SOE extension.
- Any Web Apps that were being used with the previous version of 1Integrate for ArcGIS should be re-created using the new 1Integrate for ArcGIS web widget.