



1 Integrate for ArcGIS

Installation Guide

Server Edition

Product version: v 1.6

Document version: v 1.6

Document date: 06/11/2017



Copyright 2017 1Spatial plc and its affiliates.

All rights reserved. Other trademarks are registered trademarks and the properties of their respective owners.

US Patent Number 9542416 B2 (2017-01-10)

No part of this document or any information appertaining to its content may be used, stored, reproduced or transmitted in any form or by any means, including photocopying, recording, taping, information storage systems, without the prior permission of 1Spatial plc.

1Spatial
Tennyson House
Cambridge Business Park
Cambridge
CB4 0WZ
United Kingdom

Phone: +44 (0)1223 420414

Fax: +44 (0)1223 420044

Web: www.1spatial.com

Every effort has been made to ensure that the information contained in this document is accurate at the time of printing. However, the software described in this document is subject to continuous development and improvement. 1Spatial plc reserves the right to change the specification of the software. 1Spatial plc accepts no liability for any loss or damage arising from use of any information contained in this document.

Contents

1 Installation Overview	4
Release Package	4
Licences	4
2 Installing Components	6
Running the Setup Wizard	6
3 Configuring the ArcGIS Server	17
Adding the 1Integrate for ArcGIS Server Extension	17
Configuring a Data Service	19
Federated ArcGIS Server sites with Portal for ArcGIS	22
4 Installing Add-ins	23
5 Checking the Installation	24
6 Upgrading an Installation	25

1 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 [install your components](#).

Other files include:

- ▶ **1IFA_Server-[version].soe** - the server extension [deployed to ArcGIS Server during configuration](#)
- ▶ 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 **hardware_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 [Release Package](#).

Run the Setup Wizard:

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

Name	Date modified	Type	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.

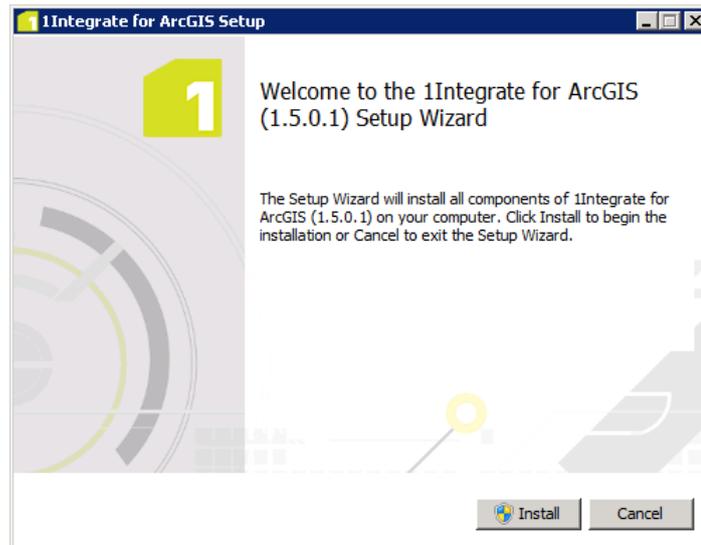


Figure 2-2: *Setup Wizard Start Page*

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.

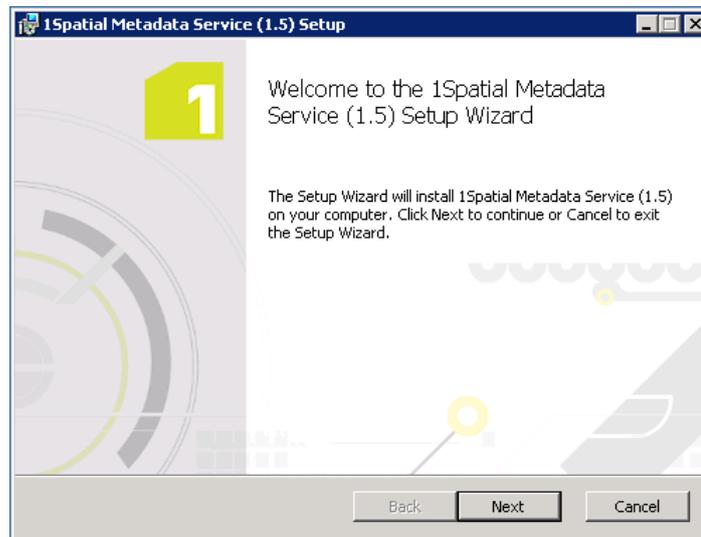


Figure 2-3: *Installing the Metadata Service*

Click **Next** to proceed.

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

To accept the location and proceed, click **Next**.

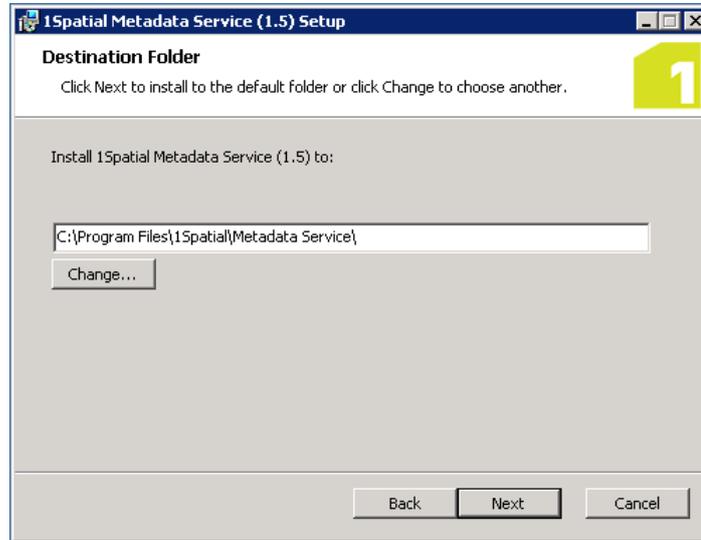


Figure 2-4: Location for the Metadata Service

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 must already be installed.

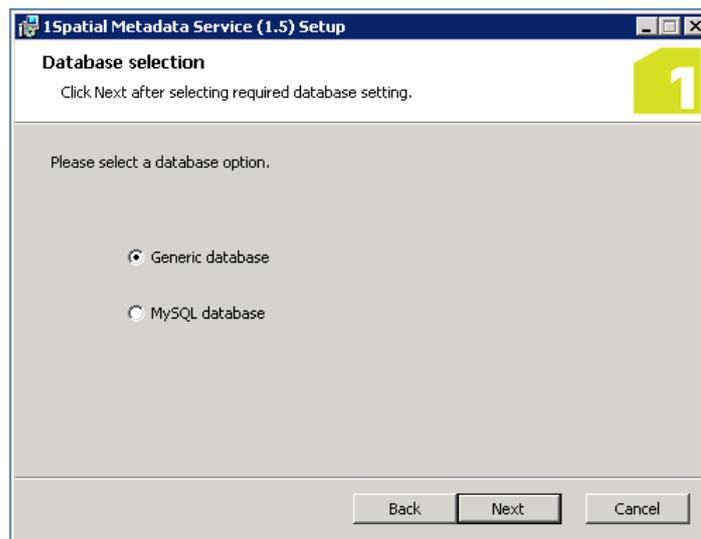


Figure 2-5: Select a database option

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

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

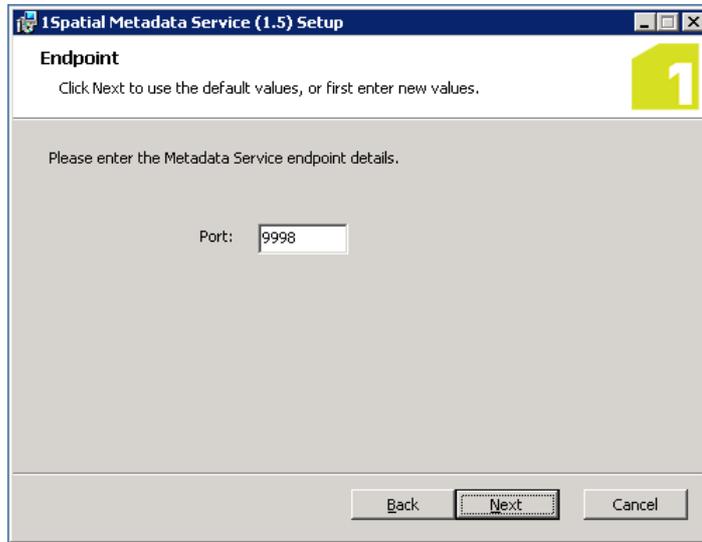


Figure 2-6: Set the Metadata Service endpoint

Click **Next** to proceed.

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

 **Note:** This will become the password corresponding to the username "admin".

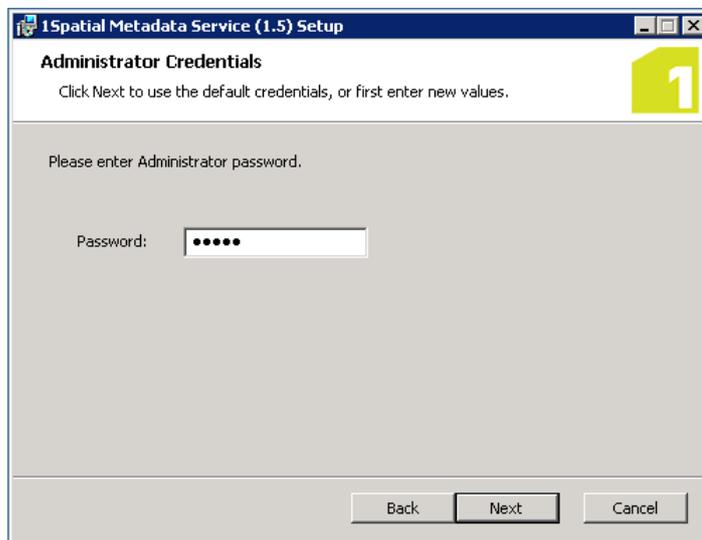


Figure 2-7: Set the Administrator password

 **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:** Select **Local Authenticator**, as other options are not yet supported.

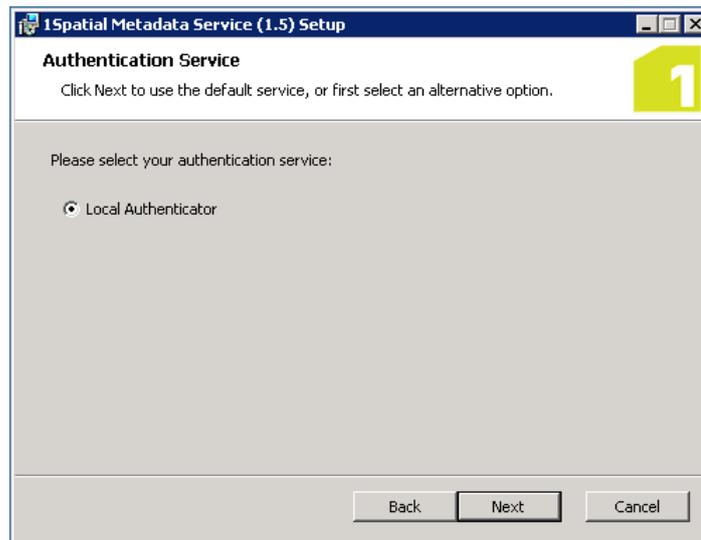


Figure 2-8: *Select Authentication Service*

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.

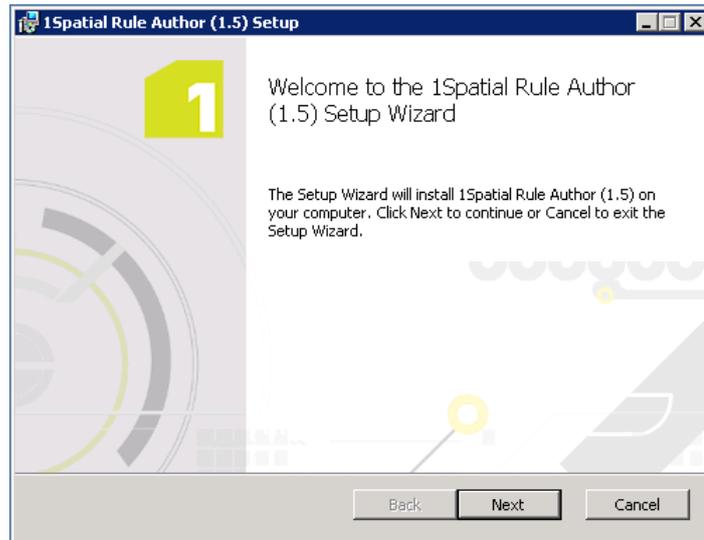


Figure 2-9: *Installing the Rule Author*

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**.

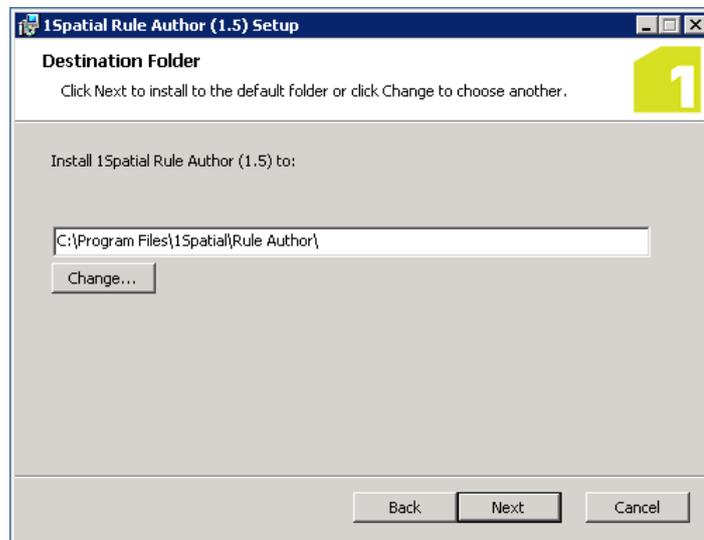


Figure 2-10: *Location for the Rule Author*

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

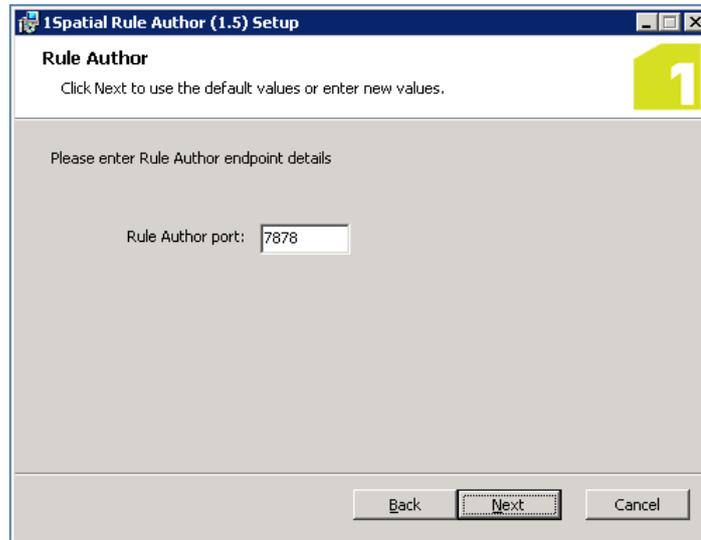


Figure 2-11: Set the Rule Author port

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)

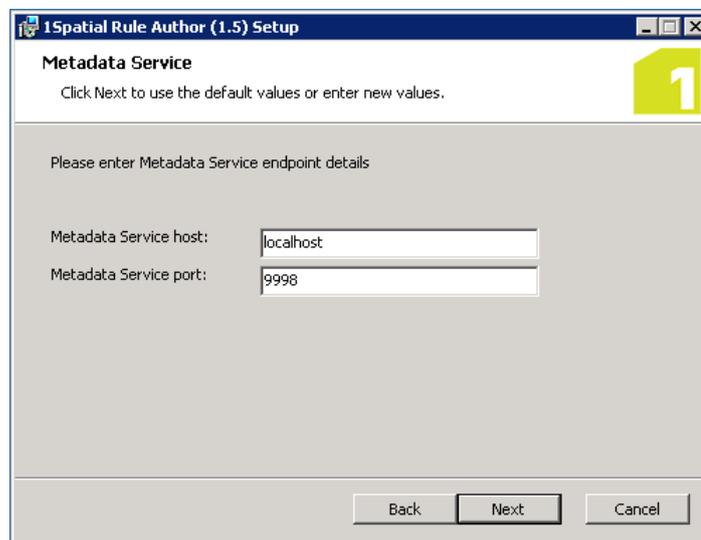


Figure 2-12: Enter details for the Metadata Service endpoint

Click **Next** to proceed.

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 [https://\[host\]:\[port\]/login.html](https://[host]:[port]/login.html). The login screen should appear.

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

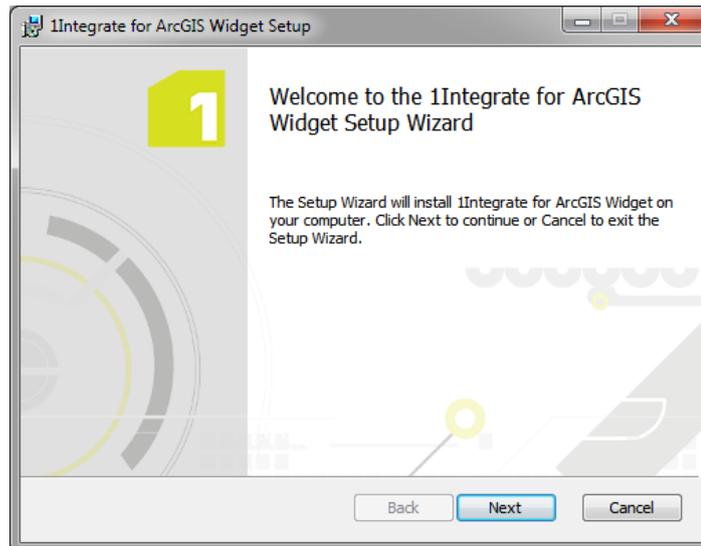


Figure 2-13: *Installing the 1Integrate for ArcGIS Widget*

Click **Next** to proceed.

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

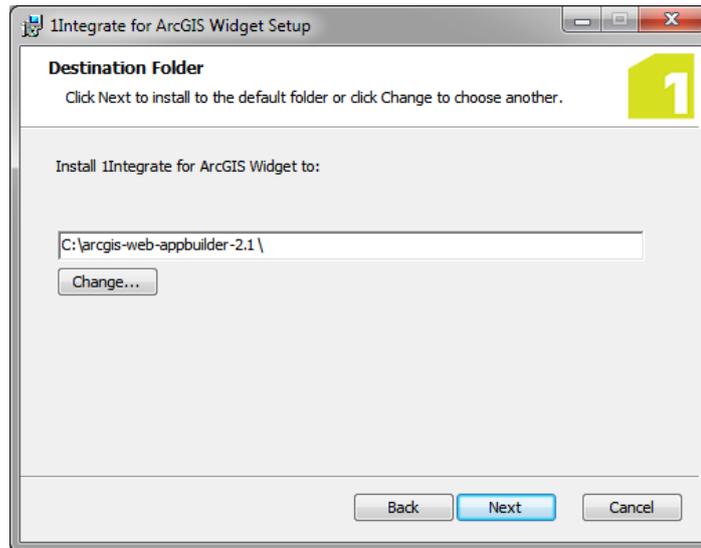


Figure 2-14: Location for the 1Integrate for ArcGIS Widget

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.

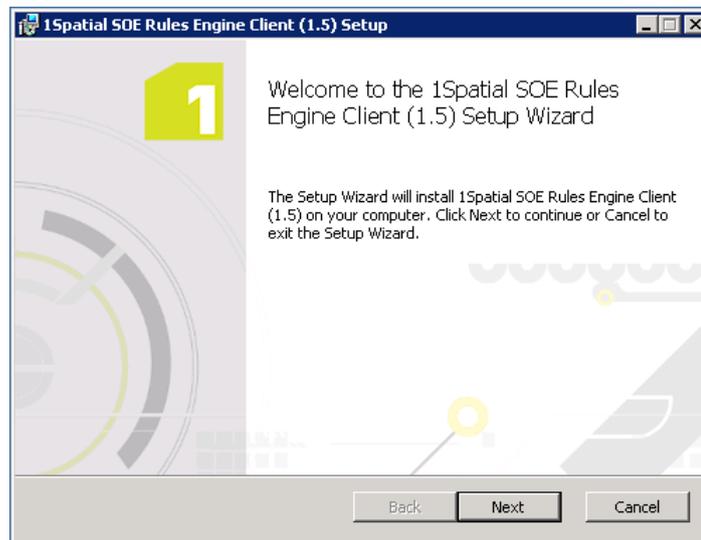


Figure 2-15: Installing the Rules Engine

Click **Next** to proceed.

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

To accept the location and proceed, click **Next**.

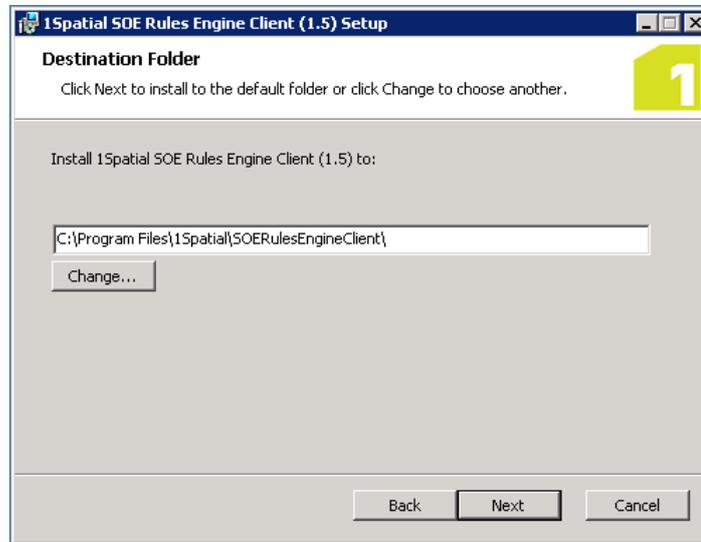
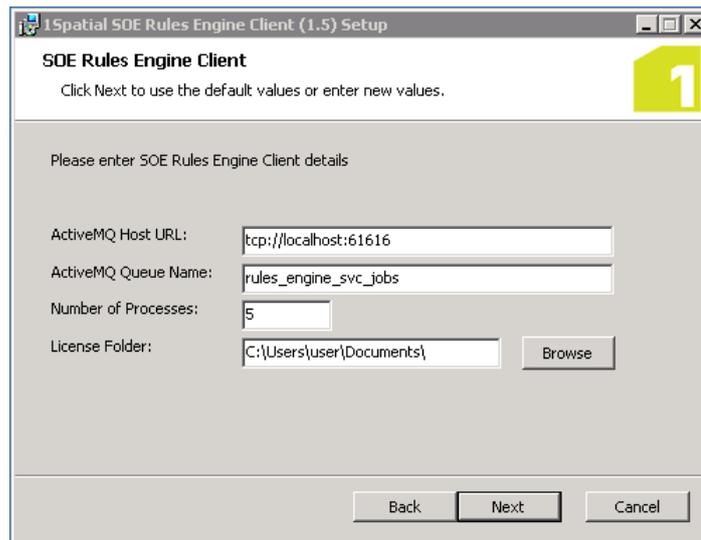


Figure 2-16: *Location for the Rules Engine*

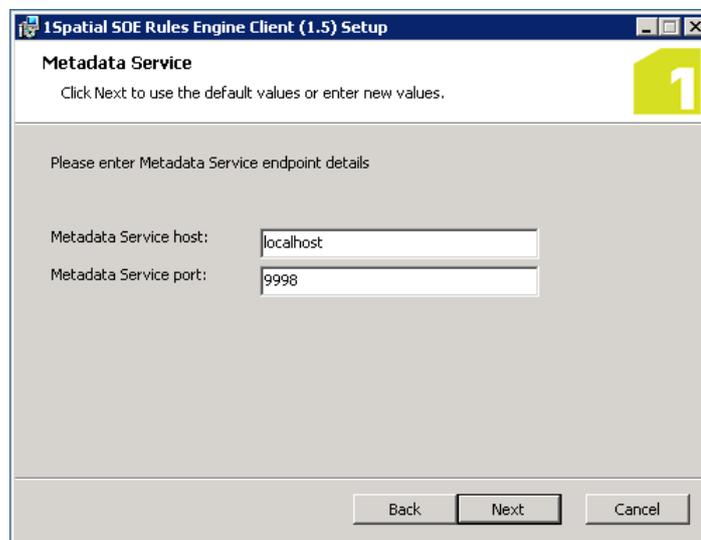
20. Enter the SOE Rules Engine Client details:
- ▶ **ActiveMQ Host URL** - the machine and port on which Active MQ is already installed and running (see your Release Notes for system requirements).
 - ▶ **ActiveMQ Queue Name** - the name of the Rules Engine Queue that will be used with Active MQ. We 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).

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)

Figure 2-18: *Enter details for the Metadata Service endpoint*

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 1Integrate 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**.

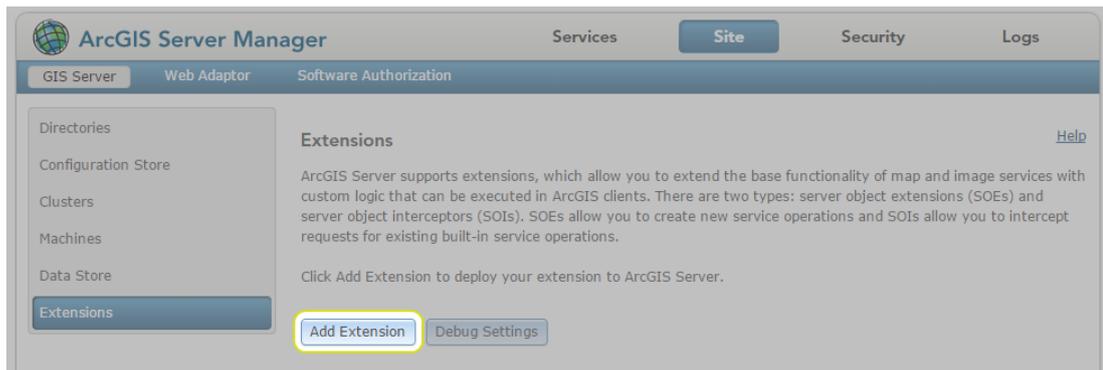


Figure 3-2: Add Extension

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

Name	Date modified	Type	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 3-3: Example Release Package

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

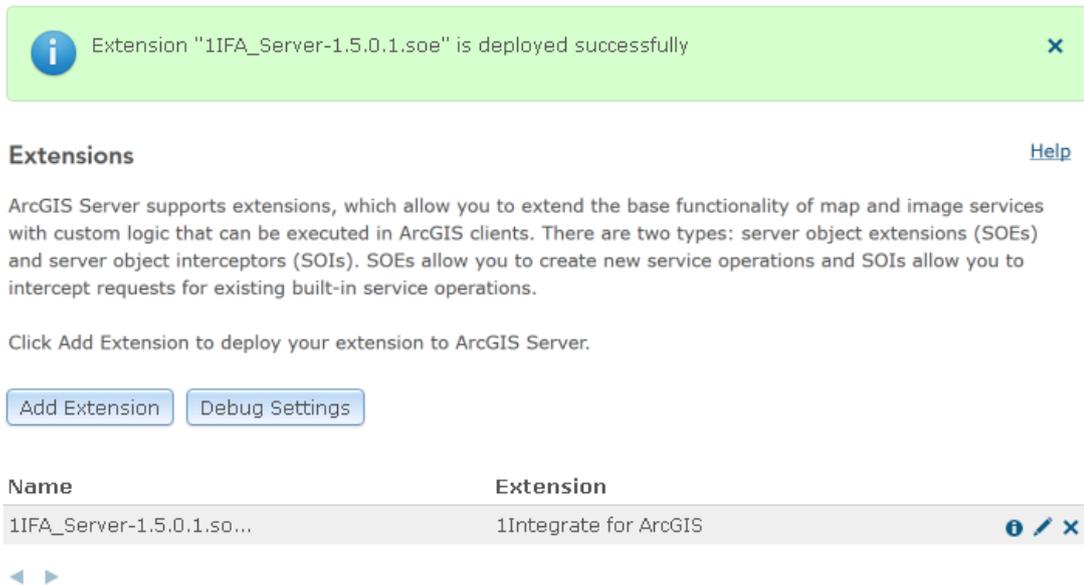


Figure 3-4: 1Integrate for ArcGIS Extension added

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**.

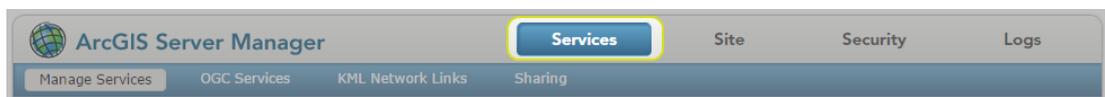


Figure 3-5: Services tab

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.

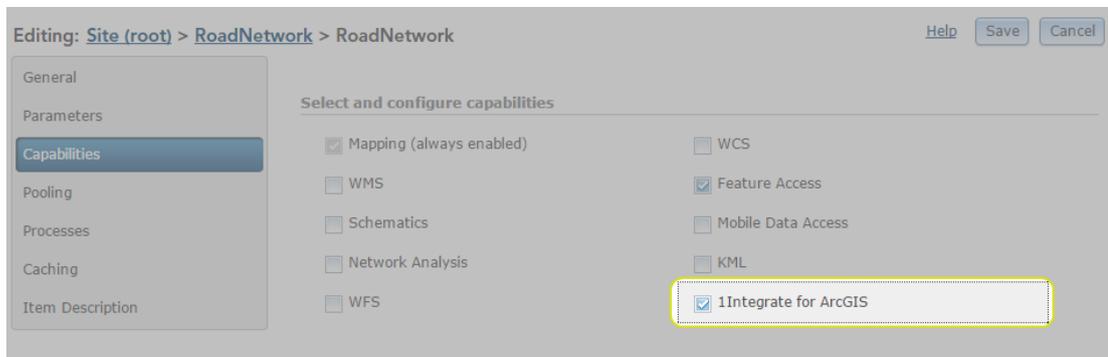


Figure 3-7: 1Integrate for ArcGIS capability enabled

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 Configuration

URLs
 REST <http://caml051:6080/arcgis/rest/services/RoadNetwork/RoadNetwork/MapServer>
 URL: </exts/RulesEngineSOE>

Operations Allowed
 No capabilities defined.

Properties

Queue Host URL:
 Queue Name:

Configuration Service

URL:
 Mode: Single User ArcGIS Online/Portal
 Username:
 Password:
 Rule Set ID:

Figure 3-8: *1Integrate for ArcGIS Configuration Properties*

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

Editing: [Site \(root\)](#) > [RoadNetwork](#) > RoadNetwork Help Save Cancel

General
 Parameters
Capabilities
 Pooling
 Processes
 Caching
 Item Description

Select and configure capabilities

Mapping (always enabled) WCS
 WMS **Feature Access**
 Schematics Mobile Data Access
 Network Analysis KML
 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**.

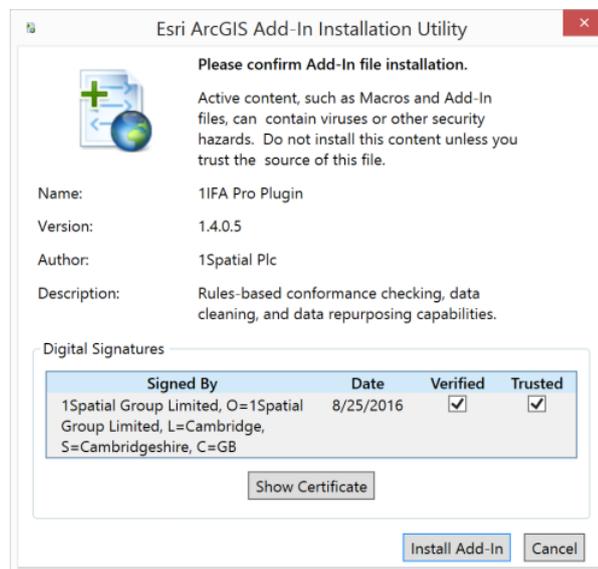


Figure 4-1: *Install Add-In*

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.

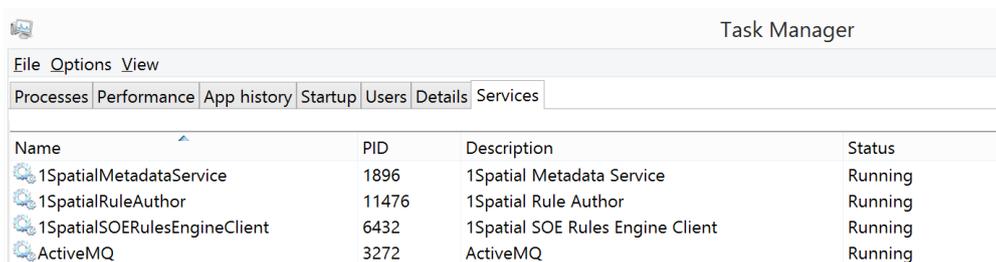


Figure 5-1: Windows Task Manager > Services

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.
7. 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.