

# FUSION EDGE SERVER CONTENT

## FUSION REGISTRY VERSION 10

## FUSION EDGE SERVER CONTENT

This guide explains how to generate content for the Fusion Edge Server from the Fusion Registry

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# Version History

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Version #	Implemented By	Revision Date	Reason

# 1 Introduction

## 1.1 Overview

The purpose of this document is to explain how to generate content for a Fusion Edge Server from the Fusion Registry.

The output from the Fusion Registry is the node.zip file required by the Fusion Edge Server. Please refer to the Fusion Edge Server guides for information on how to use this file to populate the Fusion Edge Server metadata and data services. Generating Content

## 1.2 Fusion Edge Server Environments

To create content for an Edge Server requires Administration privileges to Fusion Registry. Log in to the Registry and then using the left-hand menu bar, navigate to Admin -> Edge Server. This will display a page enabling Fusion Edge Server 'environments' to be set up, and the generation of the node.zip file required by the Fusion Edge Server.

Edge Environment Id	Environment Description	Last Publication	Status	Embargo
edge1	Edge Server 1	2019-11-05T11:43:07Z	SUCCESSFUL	-

Buttons: Delete Environment, Edit Environment, Add Environment, Refresh Table

Environment Details

Buttons: Generate Edge Content, Download Edge Content

Id: edge1

Description: Edge Server 1

Include Data: Yes - All Dataflows

Include Reference Metadata: Yes

Include Provisions: No

Edge Server Organisation: Public User

Enforce Embargo: No

Figure 1 - Edge Server Environment page with a single environment shown

A Fusion Edge Server Environment is simply an alias to a configuration of an output. Environments can take any id, and description, and have no influence on the output file. The Environment is simply a convenient mechanism to store more than one output configuration.

Create a new environment by clicking on the "Add Environment" button. A pop up window is displayed the form which is used to add the new environment definition.

Figure 2 showing the add environment pop up window

Both Id and Description are required, the Id must be unique, and contain only alpha-numeric characters. The Id and description are not exported in the output node.zip file.

### 1.3 Environment Configuration

Environment Details	
Id	PUBLIC
Description	Public Data Dissemination
Include Data	Yes - All Dataflows ▼
Include Reference Metadata	Yes ▼
Include Provisions	No ▼
Edge Server Organisation	Public User ▼
Enforce Embargo	No ▼

Figure 3 showing the environment configuration options

Each environment can be configured to define what content is exported to the node.zip file. The options are described in the table below:

Option	Values	Description
Include Data	Yes– All Dataflows (default) Yes – Subset Dataflows No – Exclude Data	Whether to export only the structural metadata (No-Exclude Data) – or to include datasets. If datasets are included, options to export all datasets or a pre-defined list
Include Reference Metadata	Yes (default) No	For data and structures, if there is associated reference metadata, include it in the export
Include Provisions	Yes	If this is set to No, then no Provision

	No (default)	Agreements will be included in the export, or any associated structures (constraints, categorisations)
<b>Edge Organisation</b>	<b>Server</b> Public User List of Organisations in the Fusion registry (Agencies, Data Providers, Data Consumers)	When an Edge Server node.zip is built, security rules are applied (see Content Security), to ensure no structures or data are exported which are secured. An Edge Server environment defaults to 'Public User' which represents what an anonymous user can see when browsing the contents of the Fusion Registry.  If an Environment is associated with an Organisation then the export will use the security permissions granted to that Organisation when generating the content.
<b>Enforce Embargo</b>	Yes No (default)	If set to Yes, then the Generate Edge Content form will require an embargo time to be set before it can be applied

If Include Data is set to Subset Dataflows, then the subset must be defined by clicking on the View Dataflows button. All Dataflows are shown in the resulting form, but those shown in RED have no data stored against them, whilst Dataflows in GREEN have data.

Dataflows for Environment
✕

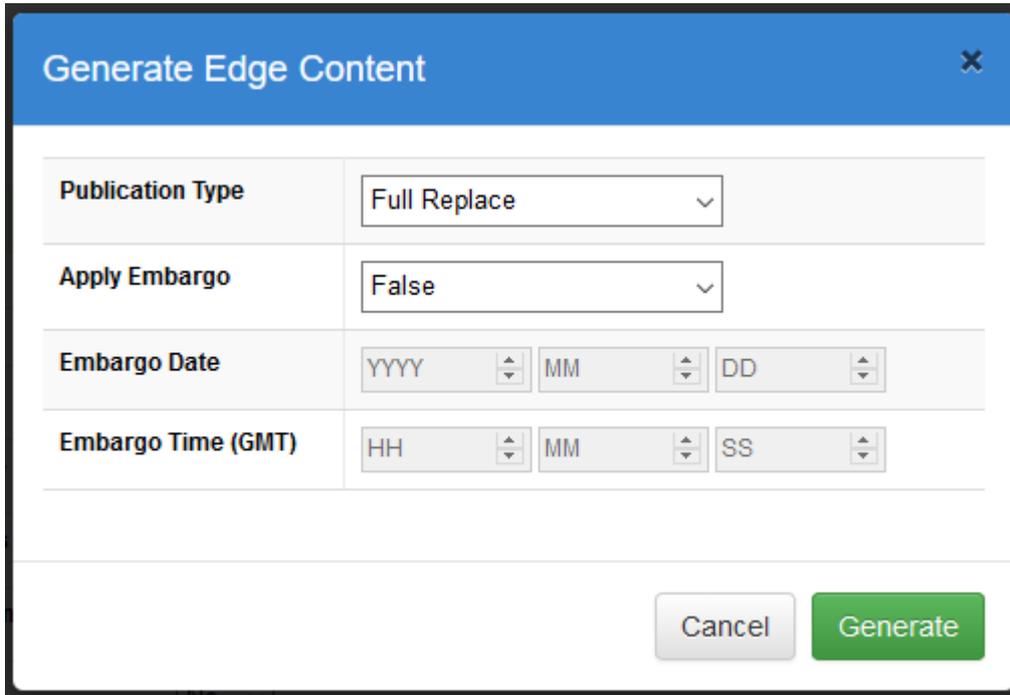
- HC52[2.0] HC52
- HC53[2.0] HC53
- HC54[2.0] HC54
- HC56[2.0] HC56
- HC57[2.0] HC57
- HC58[2.0] HC58
- HC59[2.0] HC59
- HC60[2.0] HC60
- ▼ OECD - Organisation for Economic Cooperation and Development
  - ▼ Dataflows with available data
    - AGRIC\_OUTLOOK\_2011\_2020[1.0] Agricultural Outlook 2011-2020
    - POPULATION[1.0] Population
  - ▼ Dataflows with no available data
    - IMMIGRATION[1.0] Immigration
- ▼ ONS - Office for National Statistics
  - ▼ Dataflows with available data
    - GDP[1.0] Gross Domestic Product
- ▼ UIS - UNESCO Institute of Statistics
  - ▼ Dataflows with no available data
    - EDUCATION\_MDG[1.0] Education Millenium Development Goals
- ▼ WB - World Bank
  - ▼ Dataflows with available data
    - PRIVATE\_SECTOR\_TRADE[1.0] Private Sector and Trade
    - WDI\_ECON\_POL\_DEBT[1.0] Economic Policy and Debt

Cancel
Save Changes

Figure 4 showing the form used to define a subset of Dataflows, with the RED labels denoting Dataflows with no data currently stored against them

## 1.4 Generating Edge Content

Click the “Generate Edge Content” button to build content to export for the Fusion Edge Server



Generate Edge Content	
Publication Type	Full Replace
Apply Embargo	False
Embargo Date	YYYY MM DD
Embargo Time (GMT)	HH MM SS
Cancel Generate	

Figure 5 - Generate Edge Content modal

The form allows the following to be specified:

**Publication Type:** The default publication type is Full Replace. The exported node.zip file contains all the structures, data, and reference metadata described by the configuration of the environment and after applying any applicable security rules. On deploying to the Fusion Edge Server, the node.zip file will be processed and the Fusion Edge Server will replace the entire environment (structures, data, and reference metadata) with those contained in the node.zip file.

The alternative publication type is **Delta** which generates content which consists only of datasets. The datasets only contain data that has been added, or updated, since the previous time edge content was generated. On deploying the delta to the Fusion Edge Server, the database for that delta dataset is rebuilt.

**Apply Embargo:** If this is set to False, the generated node.zip file will be applied to the Fusion Edge Server as soon as the Fusion Edge Server has processed the file. If this is set to true, then an Embargo Date and Time must be provided. The Embargo timestamp is NOT embedded in the content of the zip file; instead it is simply part of the file name as an EPOCH timestamp, as described in the Fusion Edge Server user guides. The Fusion Edge Server will build the new environment as normal, but it will only swap the new environment in once the embargo time has passed.

When the “Generate” button is clicked, the status of the environment will change to WRITING\_DATA, and a progress bar will show the progress of the generation process, as shown below.

Fusion Edge Server			
Manage Environments and Generate Environment Content			
Edge Environment Id	Environment Description	Last Publication	Status
PUBLIC	Public Data Dissemination	-	WRITING_DATA

Writing Data: 1 out of 75 processed

Figure 6 showing the progress of an environment being built.

It is possible to navigate away from this page while the environment is being built. On completion of an environment build, the Last Publication time stamp will be added to the environment table.

Once an environment has been generated, it can be downloaded by clicking on the 'Download Edge Content' button. This will export either the node.zip file, or the delta.zip file – both node.zip and delta.zip may additionally have a timestamp if embargo was applied (node\_[timestamp].zip)

The downloaded zip file should be deployed to the Fusion Edge Server as documented in the Fusion Edge Server guide.

## 2 Automating the Process

It is possible to call web services to automate an environment being built and exported. The following web services must all be called with administrator privileges using either Certificate Authentication or Basic Authentication (Authorization Header in the HTTP Request).

To do so, POST a JSON configuration to the following web service

`http(s)://[Fusion Registry Server]/ws/secure/edge/buildEdgeServerPublication`

The content type should be set to `application/json`, and the JSON Object can contain the following properties

Property Name	Required	Description
Id	Yes	The Id of the Environment to create an export for
PublicationType	Yes	<b>FullReplace</b> <b>Replace</b> (delta)
EmbargoDate	No	Numerical filed representing the timestamp to apply an embargo for, measured in Epoch Time Milliseconds

Example:

```
{
  Id: "PUBLIC",
  PublicationType: "FullReplace"
}
```

When a request is made to build a publication file, the progress can be tracked by calling the following web service

`http(s)://[Fusion Registry Server]/ws/secure/edge/environment/status/[Environment Id]`

Example

`https://myserver.org/FusionRegistry/ws/secure/edge/environment/status/PUBLIC`

The response JSON contains a status field which will either be set to `WRITING_DATA`, `SUCCESSFUL` or `ERRORED`

When the status becomes `SUCCESSFUL` the zip file can be exported from the following URL

`http(s):// [Fusion Registry Server]/FusionRegistry/ws/secure/edge/export/[Environment Id]`

Example

`https://myserver.org/FusionRegistry/ws/secure/edge/export/PUBLIC`