The eXate Data Protection Solution User Guide

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Overview

eXate

eXate streamlines, automates & simplifies the processes of storing, interpreting and extracting value from data assets.

The Problem

Countries are demanding more privacy and protection on data and there is no standardised way to securely access and share sensitive data.

The Solution: eXate Technology

Providing a universal way to orchestrate data privacy. Accelerating access to data, automating enforcement of global data policies, and providing a secure platform for compliant international data delivery. eXate protects data in order to unlock its value. As a result, it allows data to be safely shared with third parties.

eXate's purpose-built platform changes the way data is accessed and democratised globally, accelerating innovation and optimising efficiency by providing a secure, centralised, and intuitive solution that offers full compliance while harmonising a business's current PET landscape

eXate Portal

The scope of the eXate platform is data protection. eXate's DataSecOps solution empowers Software Engineers, Data Scientists, Governance Risk and Control, Cyber Security and Operations teams to work together in a single application for safer and easier access, analysis, delivery and governance of data.

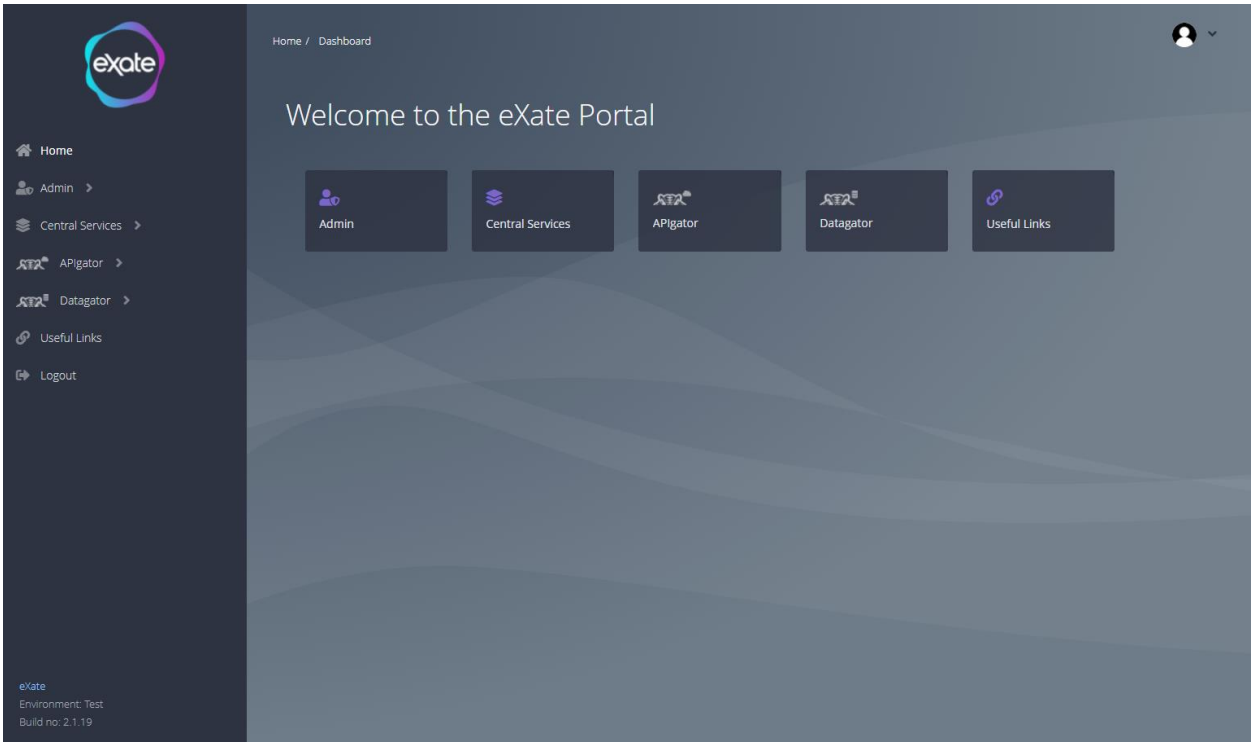


Figure 1 - eXate Portal

Figure 1 shows eXate's portal home page that allows you to access all sections of the platform from here.

Admin

Admin is a person who has the authority to make significant changes in an Application. Admin has the authority to add and update:

1. Users who can Access the eXate Application.
2. Different Roles that can be assigned to the Users.

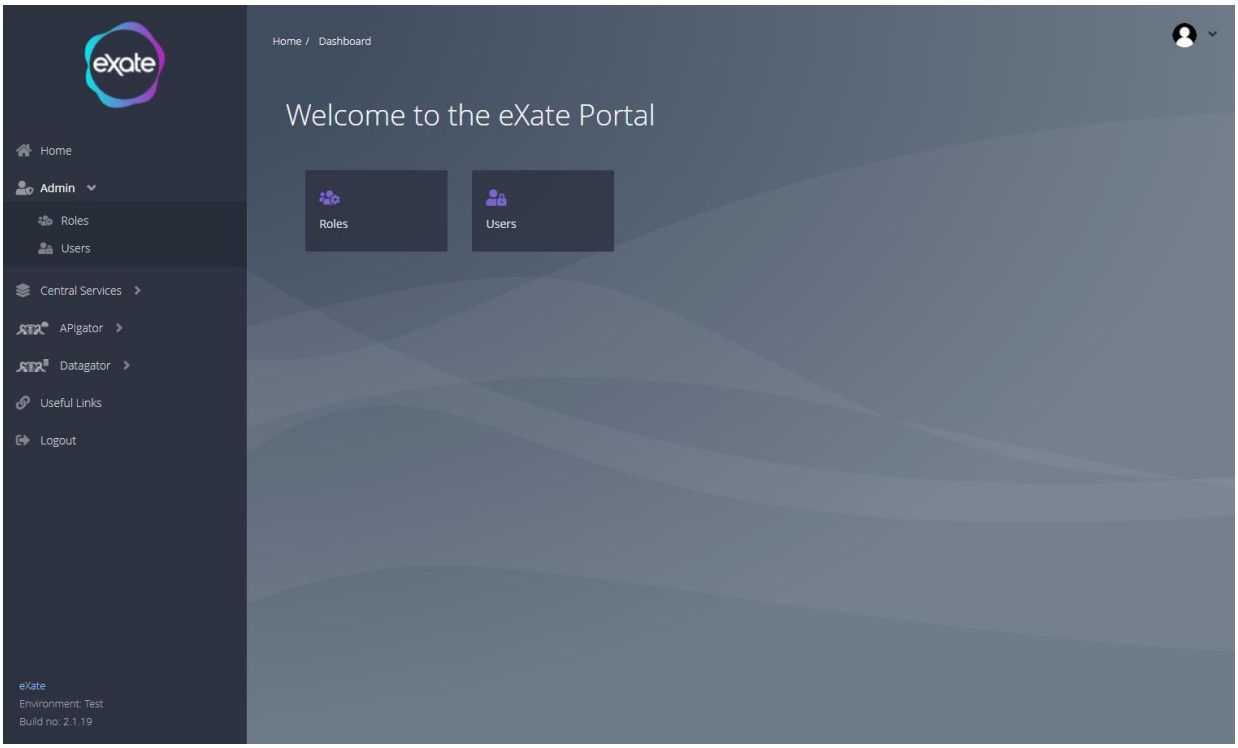


Figure 2 - Admin Page

Figure 2 shows the admin page in the eXate platform. To access admin, navigate to the left menu bar and click “Admin” from here you are able to access the roles and users.

Roles

The different Roles/Responsibilities of the Resources that are assigned to the Users. The primary functions and uses of the Resources within a Network.

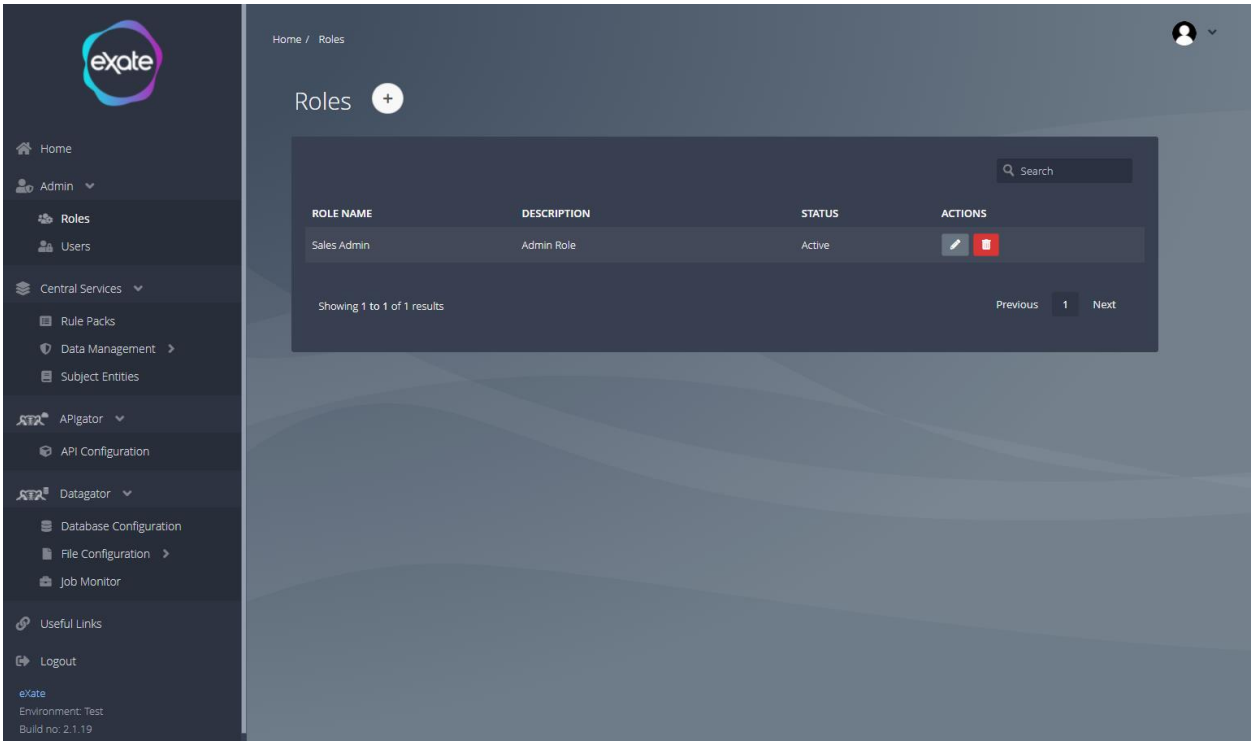


Figure 3 - Roles Page

Figure 3 shows the roles page in the eXate platform. To access roles, navigate to the left menu bar click “Admin” and then click “Roles''. In the roles page you are able to add, edit and delete roles

Adding a Role

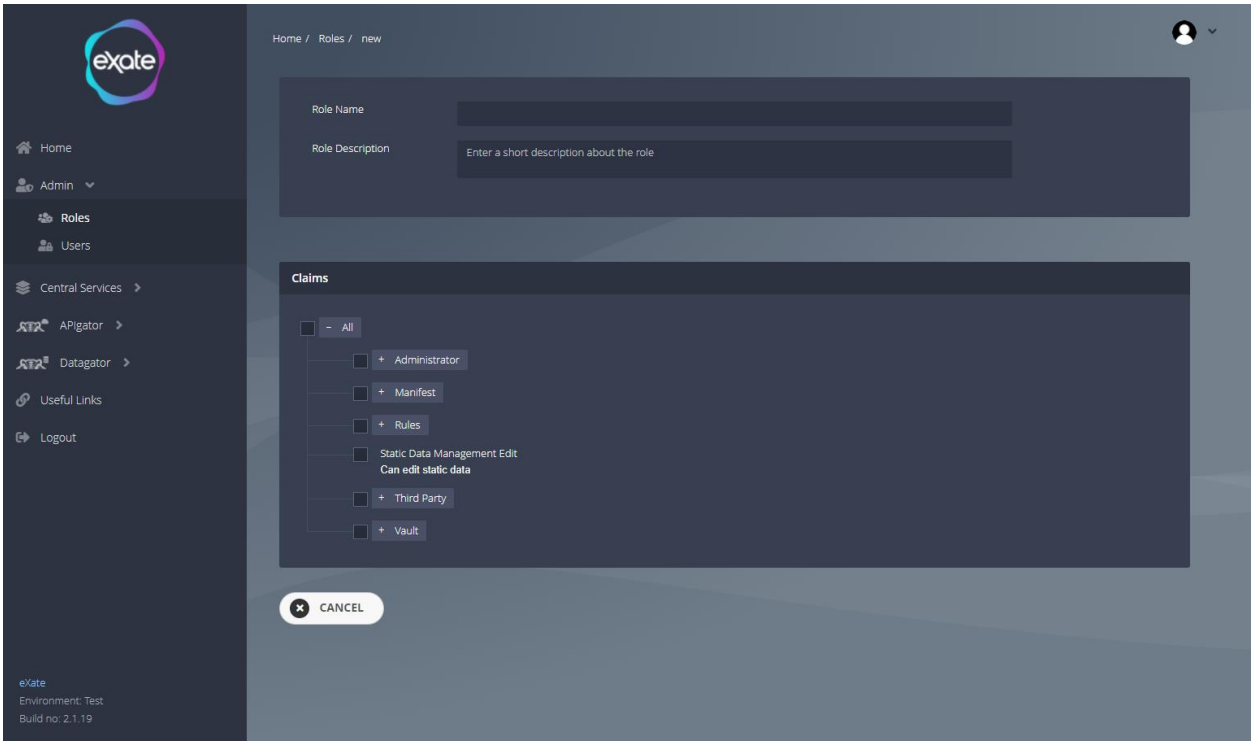


Figure 4 - Adding a Role

To add a role, navigate to the plus button on the role page, this will navigate you to the following page in Figure 4. Fill in the following fields to add a role:

Roll Name: The unique name which is assigned by the User.

Roll Description: The detailed description of the Role.

Claims: What can be defined inside the Role.

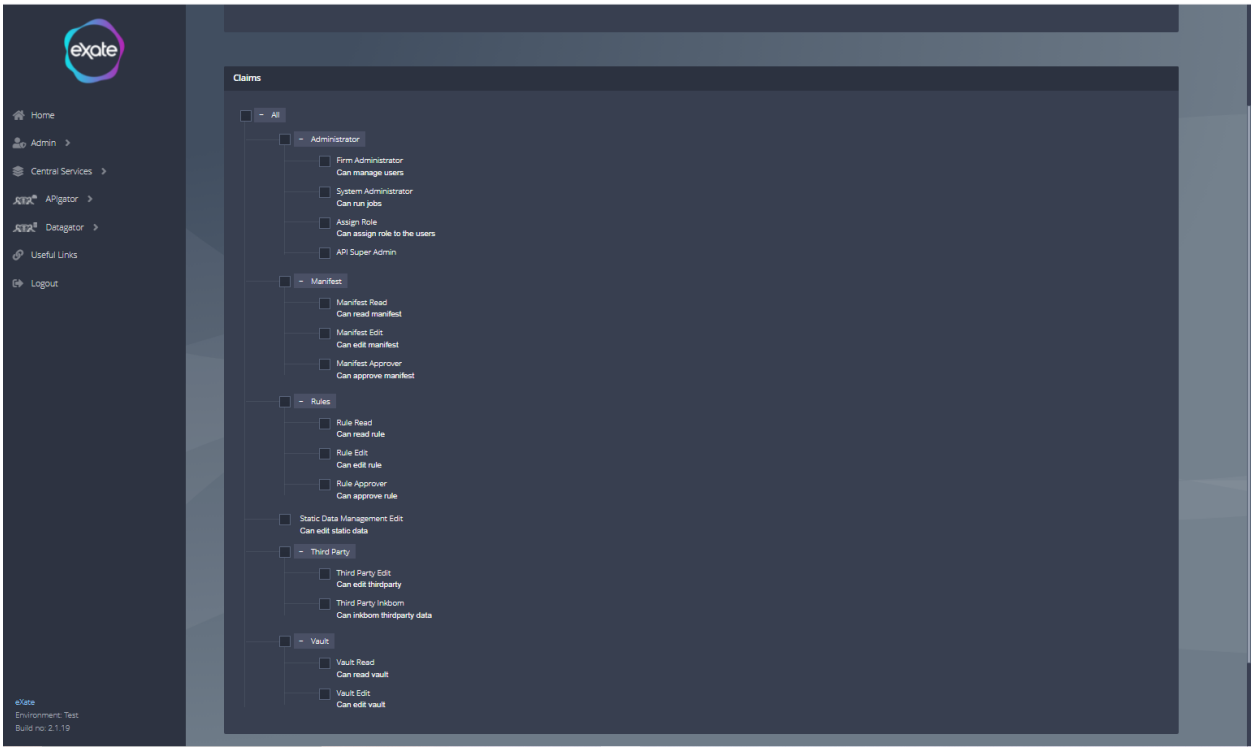


Figure 5 - Claims

Figure 5 shows the expanded claims and what can be defined for a role. To choose which claims a role has, check the following checkboxes wanted.

Users

The Users are those which can use the Resources of the eXate Application.

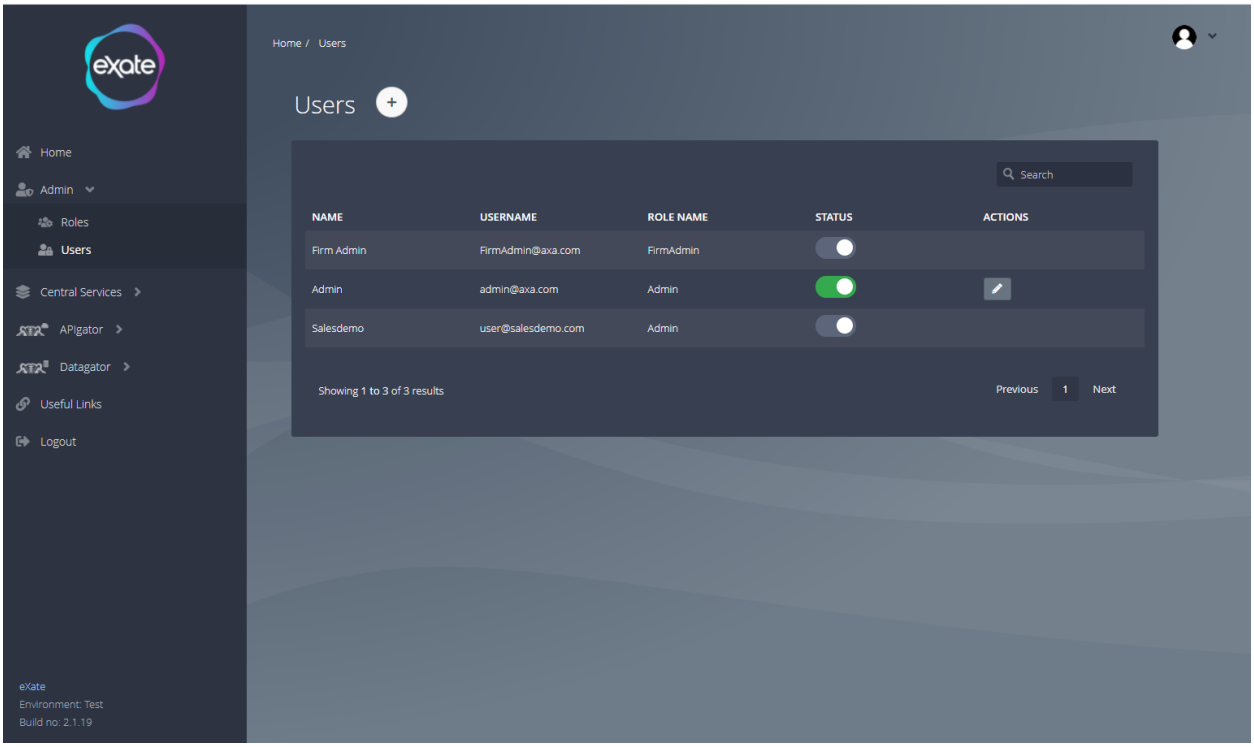


Figure 6 - User Page

Figure 6 shows the roles page in the eXate application. To access users, navigate to the left menu bar click “Admin” and then click “Users''. In the roles page you are able to add, edit and change status of users.

Adding a User

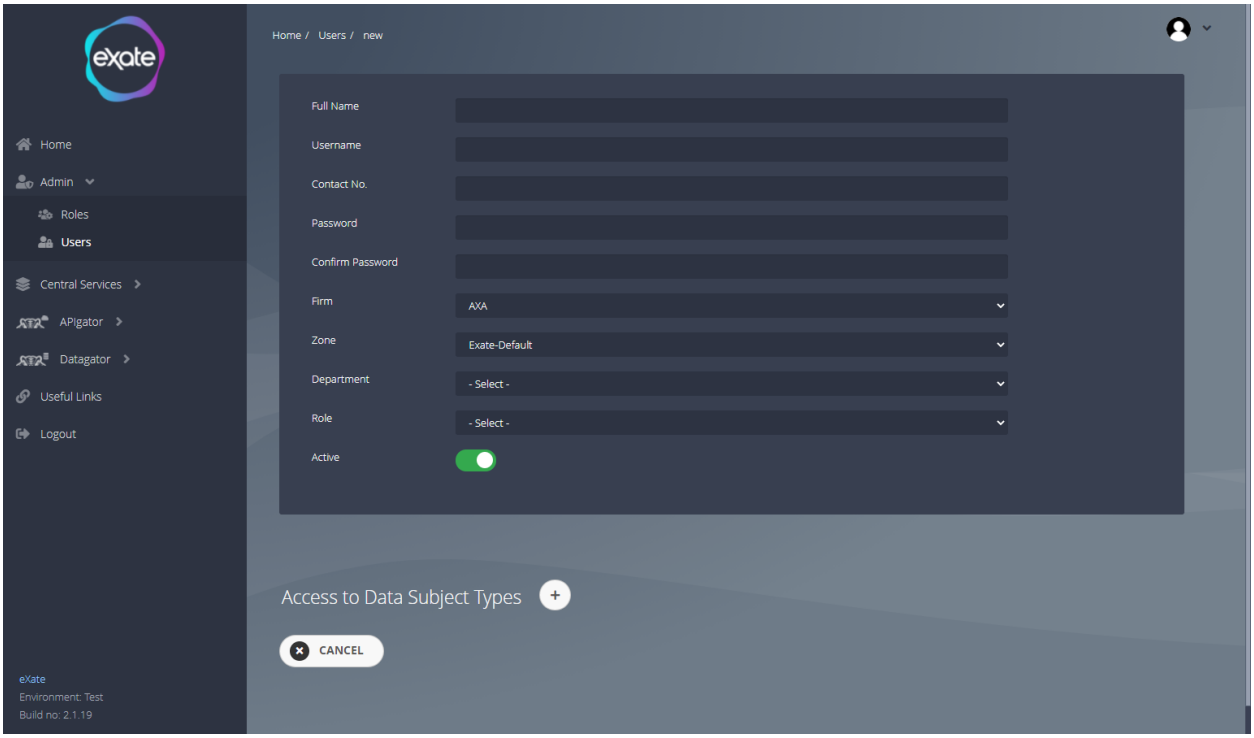


Figure 7 - Adding a User

To add a user, navigate to the plus button on the user page, this will navigate you to the following page in Figure 7. Fill in the following fields to add a role:

Full Name: The name of the user

Username: Username of the user

Contact No.: Number of the user. Note this is not a compulsory field.

Password: Password for the user

Confirm Password: Confirmation of password set

Firm: The Firm associated with the User.

Zone: Zone of the user

Department: The department to which the User belongs.

Role: The chosen role assigned to the user

Active: Toggle to show whether the user is active or inactive

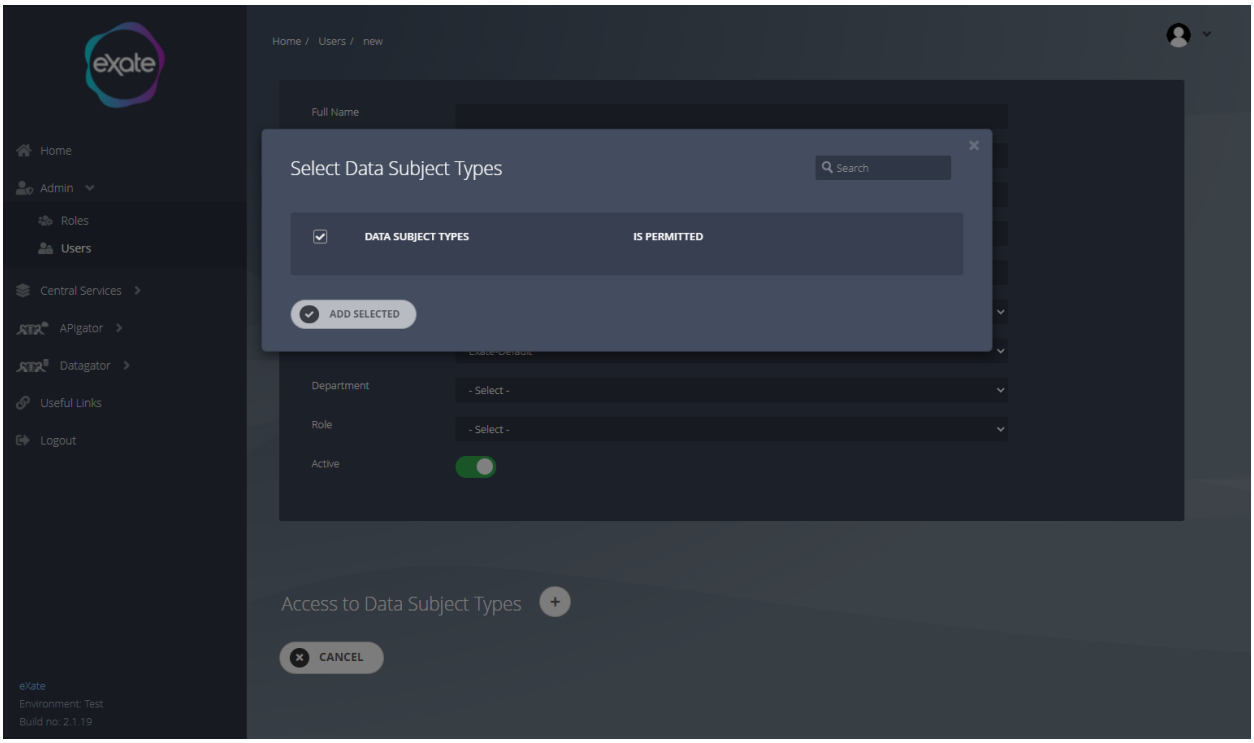


Figure 8 - Add Access to Data Subject Types

When adding a user you can also give access to data subject types, this is to add higher privilege to a user. To give access, navigate to the plus button in Figure 8, check the checkbox and confirm by clicking “Add Selected”. For more information on Data Subject Types refer to Subject Entities.

Central Services

This is the main module of the platform where you can access rule packs, data management and subject entities.

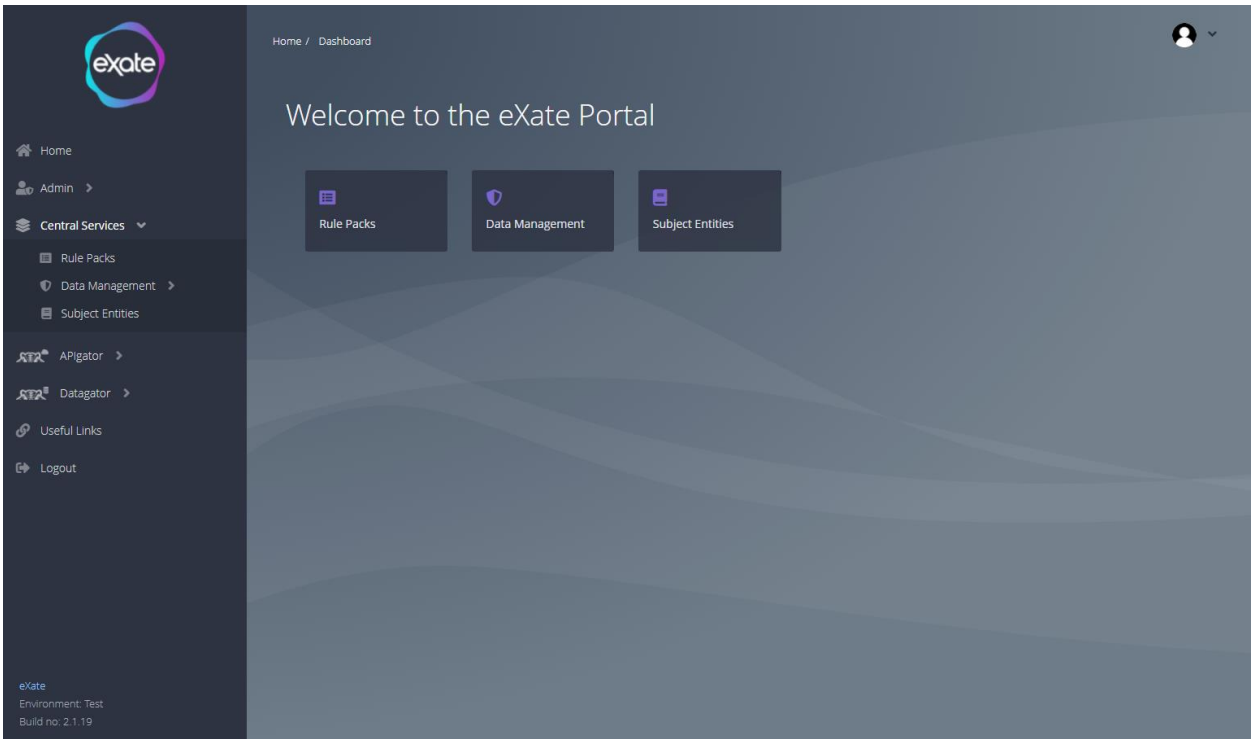


Figure 9 - Central Services Page

Figure 9 shows the central services page in the eXate platform. To access central services, navigate to the left menu bar and click "Central Services" from here you are able to access the rule packs, data management and subject entities.

Rule Packs

Collection of rules. They are a group of the customized Rules for sharing the data between different countries and departments.

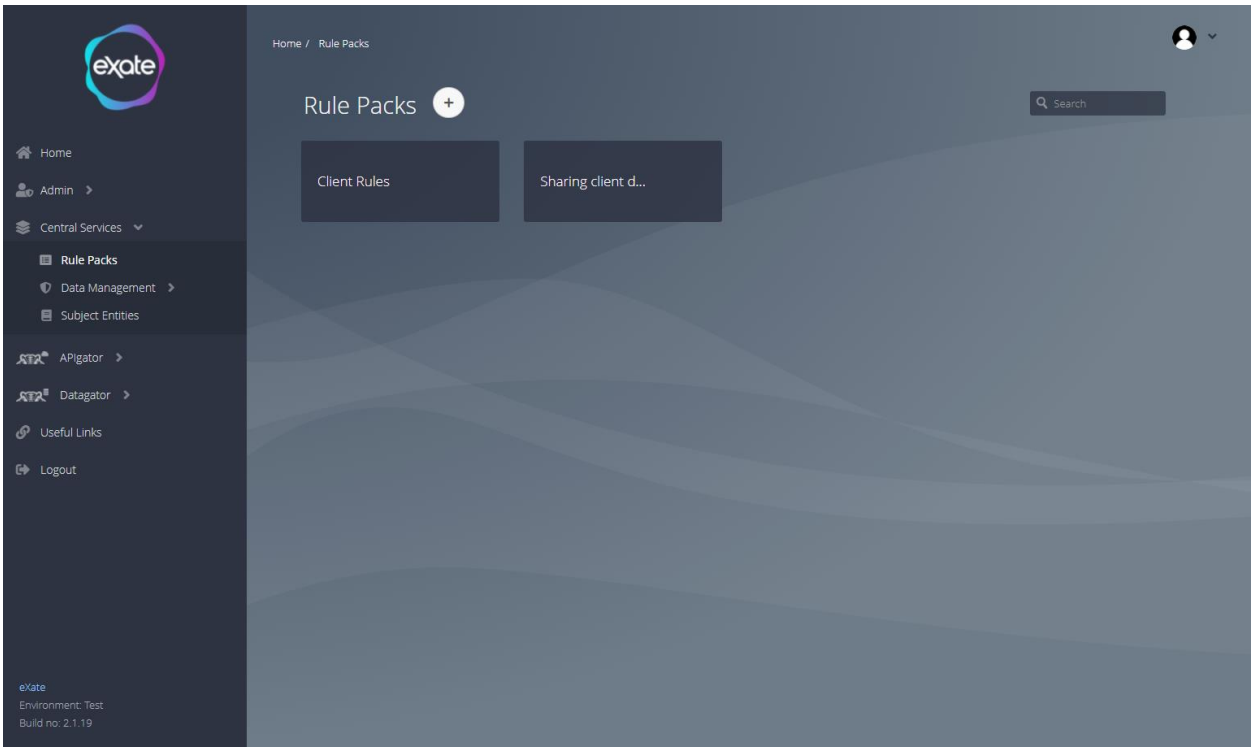


Figure 10 - Rule Packs Page

Figure 10 shows the rule pack page in the eXate application. To access rule packs, navigate to the left menu bar click “Central Services'' and then click “Rule Packs''.

Adding a Rule Pack

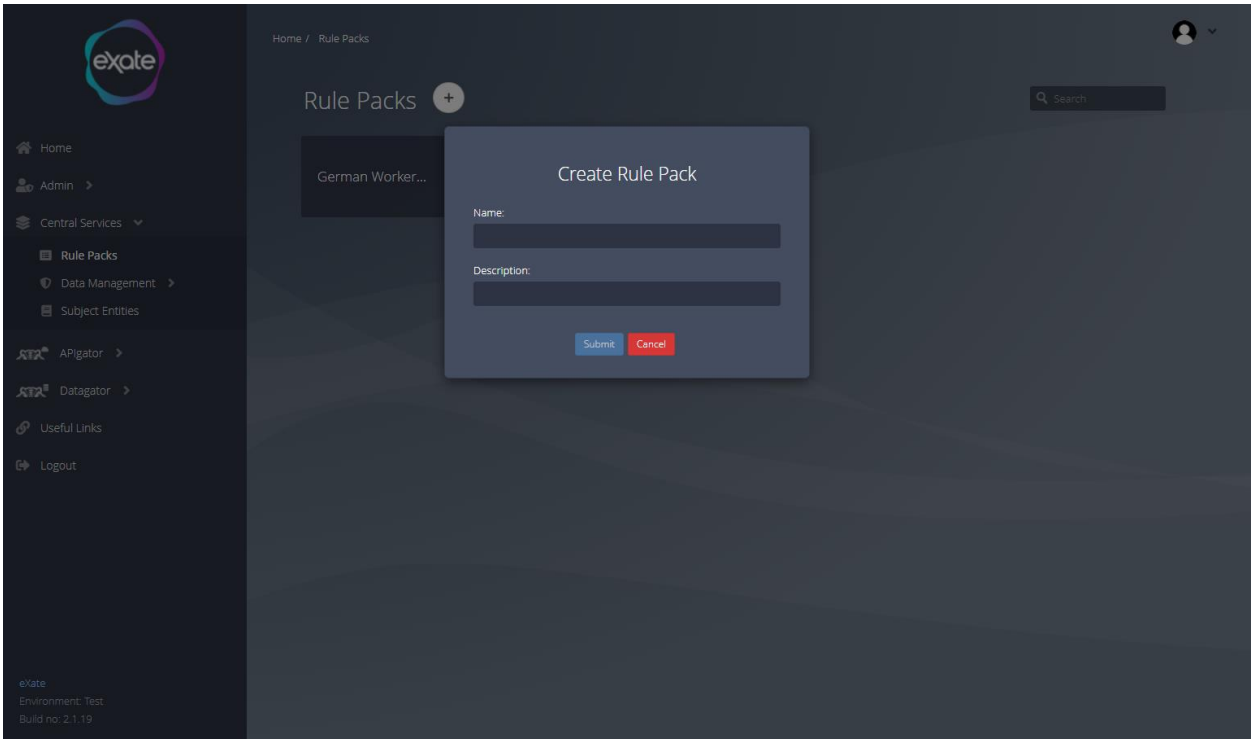


Figure 11 - Adding a Rule Pack

To create a new rule pack, navigate to the plus button on the rule pack page. This will provide a pop up shown in Figure 11. Fill in the following fields to create a new rule pack:

Name: The name of the rule

Description: Description of the rule pack

View an Existing Rule Pack

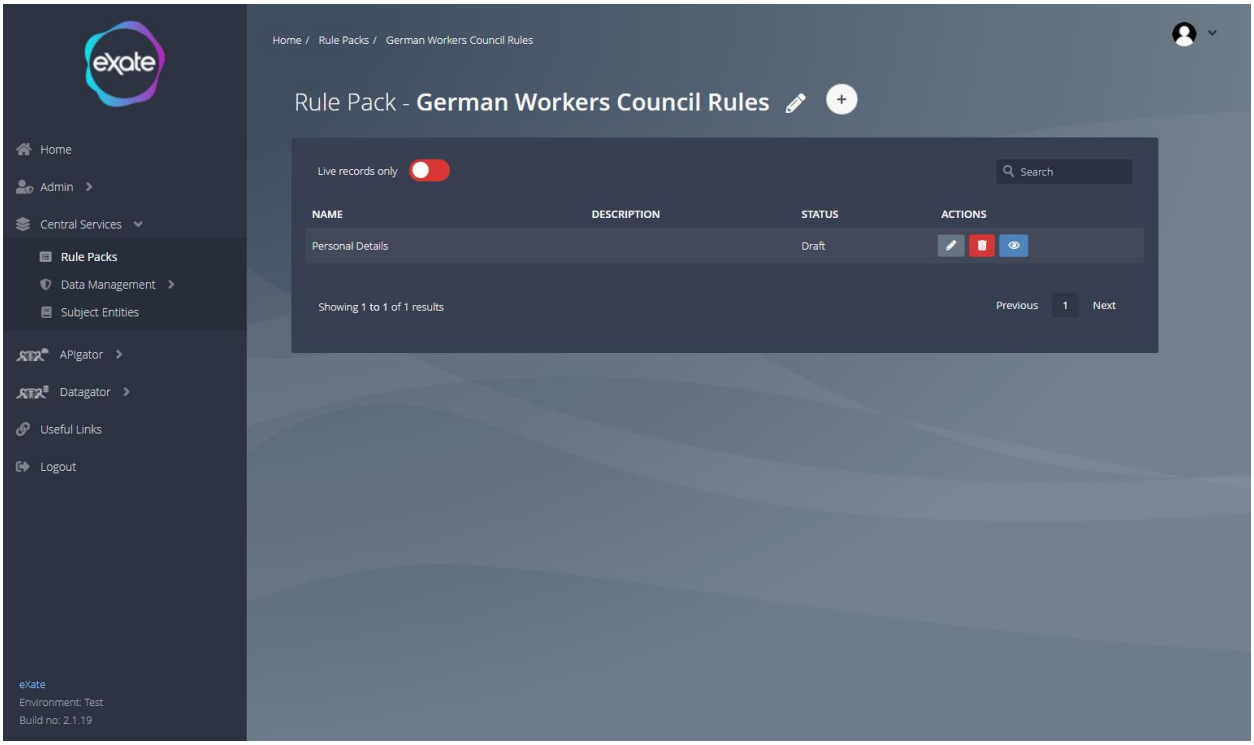


Figure 12 - View a Rule Pack

To view an existing rule pack navigate to the rule pack page and click an existing rule pack, this will then navigate you to the page in Figure 12. From here you can either edit, add, view and delete rules inside the rule pack and edit rule pack name and description.

Create a Rule Inside a Rule Pack

The Rules determine the sharing of data with every other Third Party or any other Country. Rule is created by the Combination of different elements of Static Data Management.

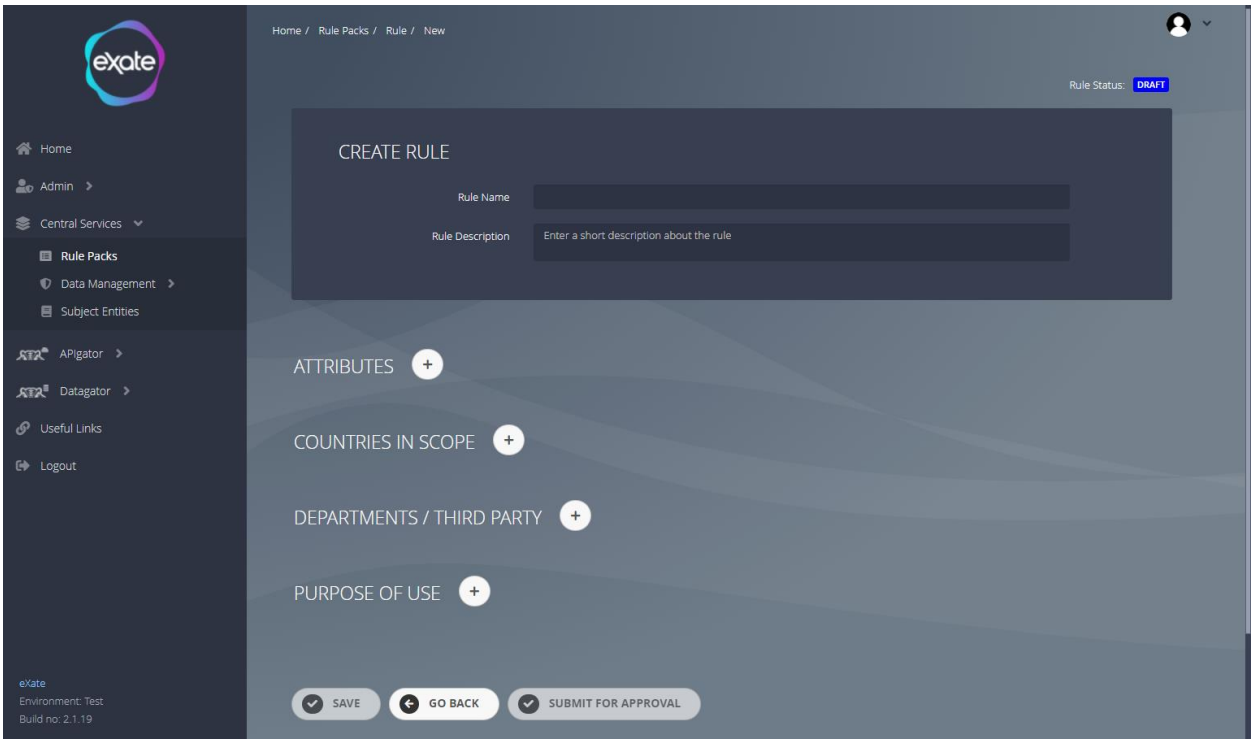


Figure 13 - Creating a New Rule Inside a Rule Pack

To create a new rule inside a rule pack navigate to the chosen rule pack page and click the plus button. This will take you to the page in Figure 13. Fill in the following fields:

Rule Name: Name of the rule

Rule Description: Short description of the rule

Once all options have been completed, the rule can be saved. It then can be "Submitted For Approval" and it will be sent to the concerned authority who has the Right to Approve newly created Rules.

Add an Attribute to a Rule

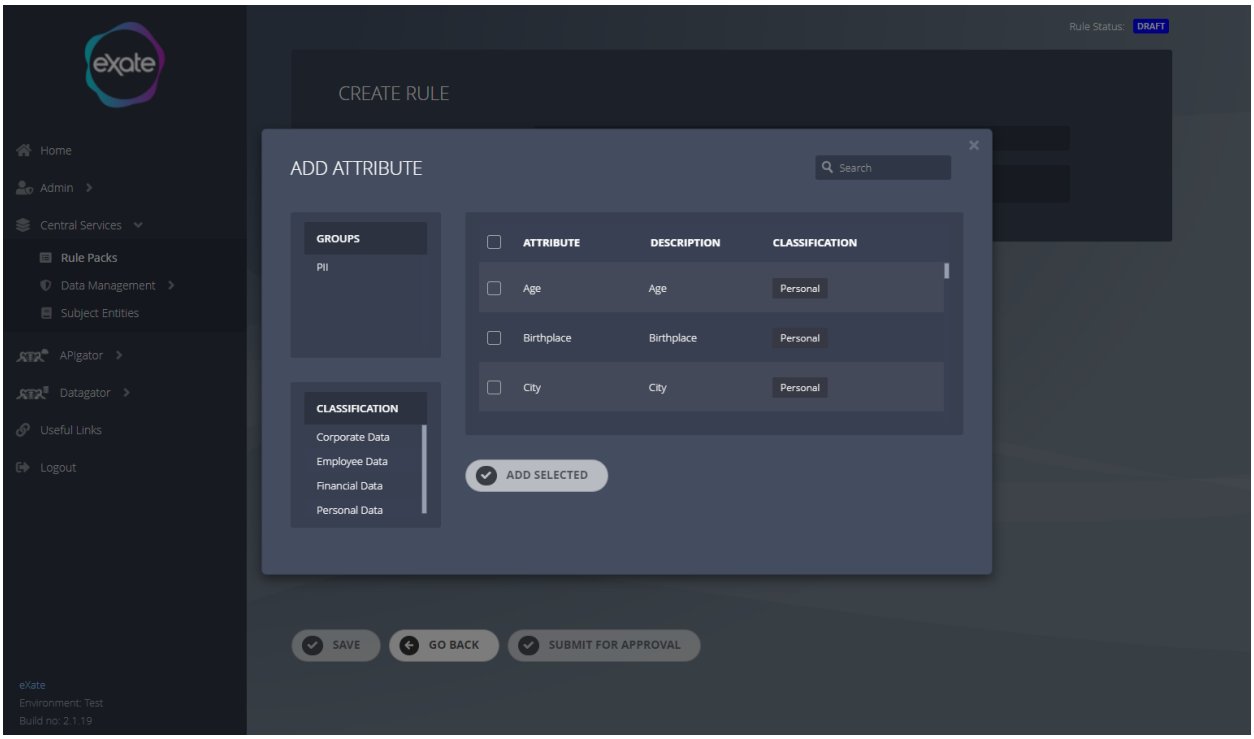


Figure 14 - Add Attribute

Figure 14 shows adding an attribute to a rule. The attribute group can be selected from the left hand menu as well as the classification. Once the group has been chosen the individual attribute can be checked using the checkbox. Once selected all attributes wanted, click the "Add Selected" button.

Add a country to a rule

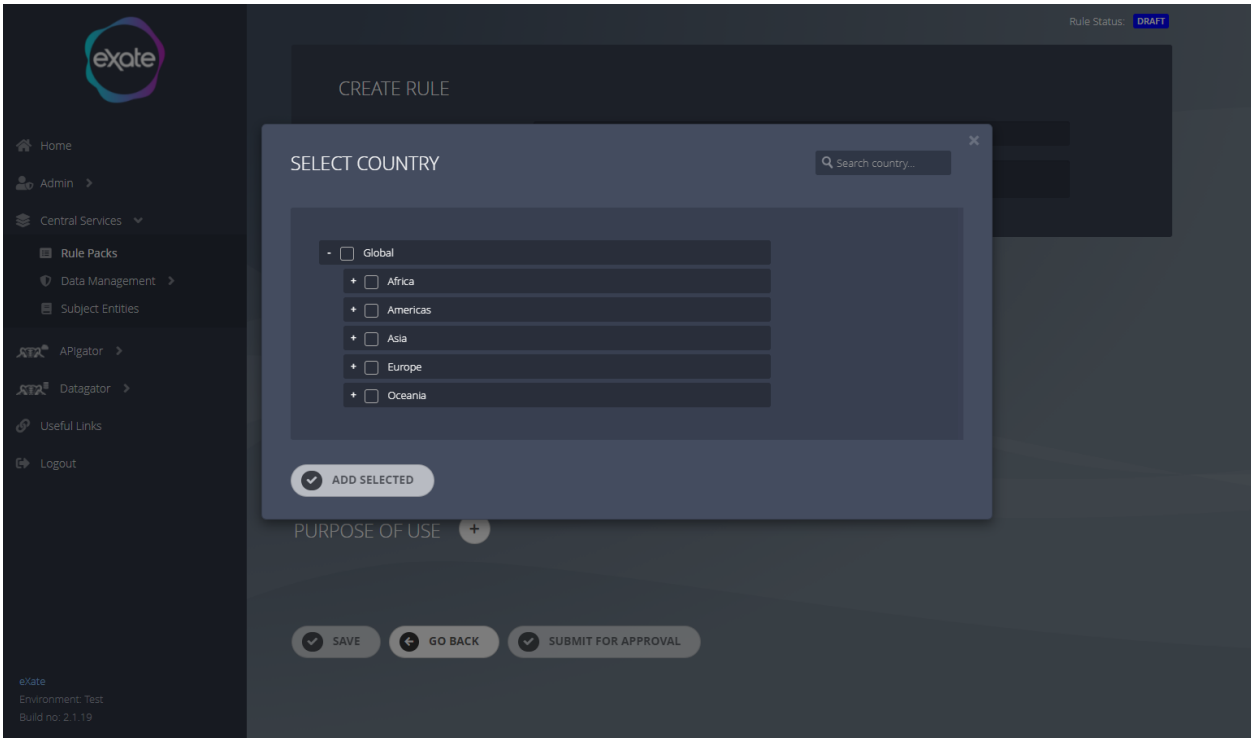


Figure 15- Select Country

Figure 15 shows adding a country to a rule. The country can be added by checking the country/countries using the checkbox. Once all countries wanted have been selected click "Add Selected".

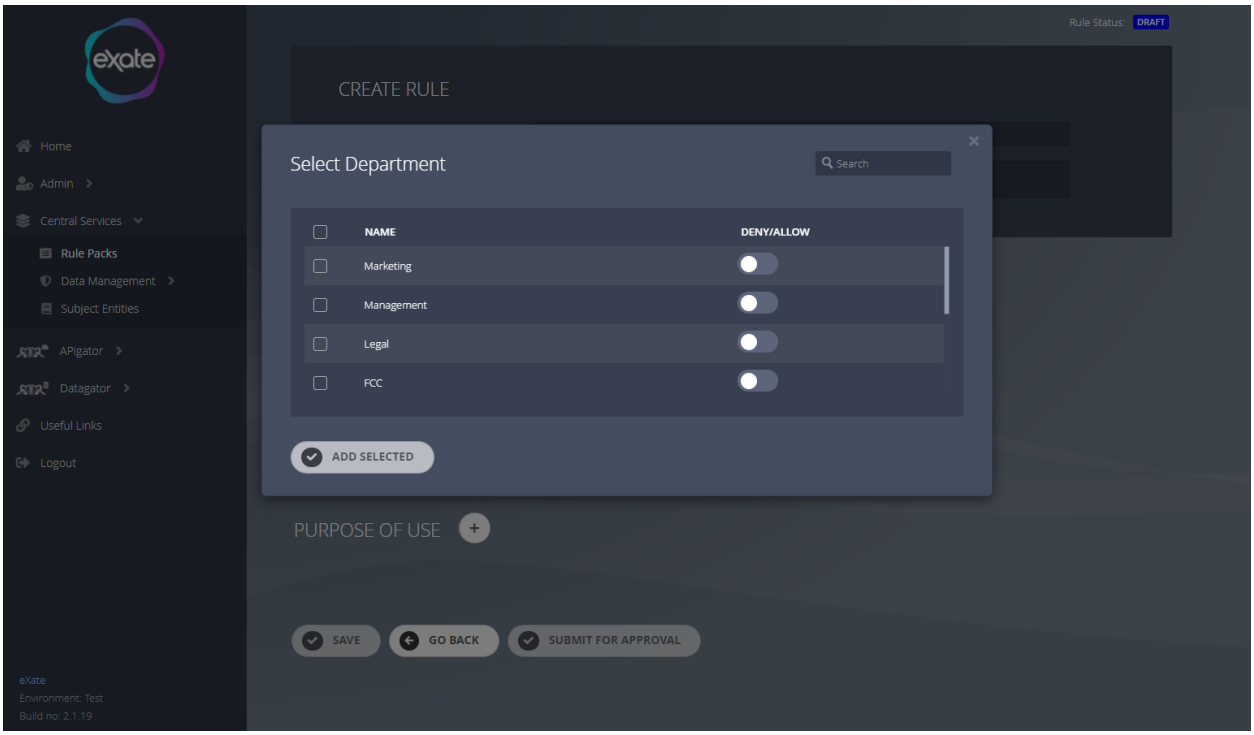


Figure 16 - Select Department

Figure 16 shows adding a department to a rule. The department/departments can be selected by checking the checkboxes, once departments have been selected, click the "Add Selected" button.

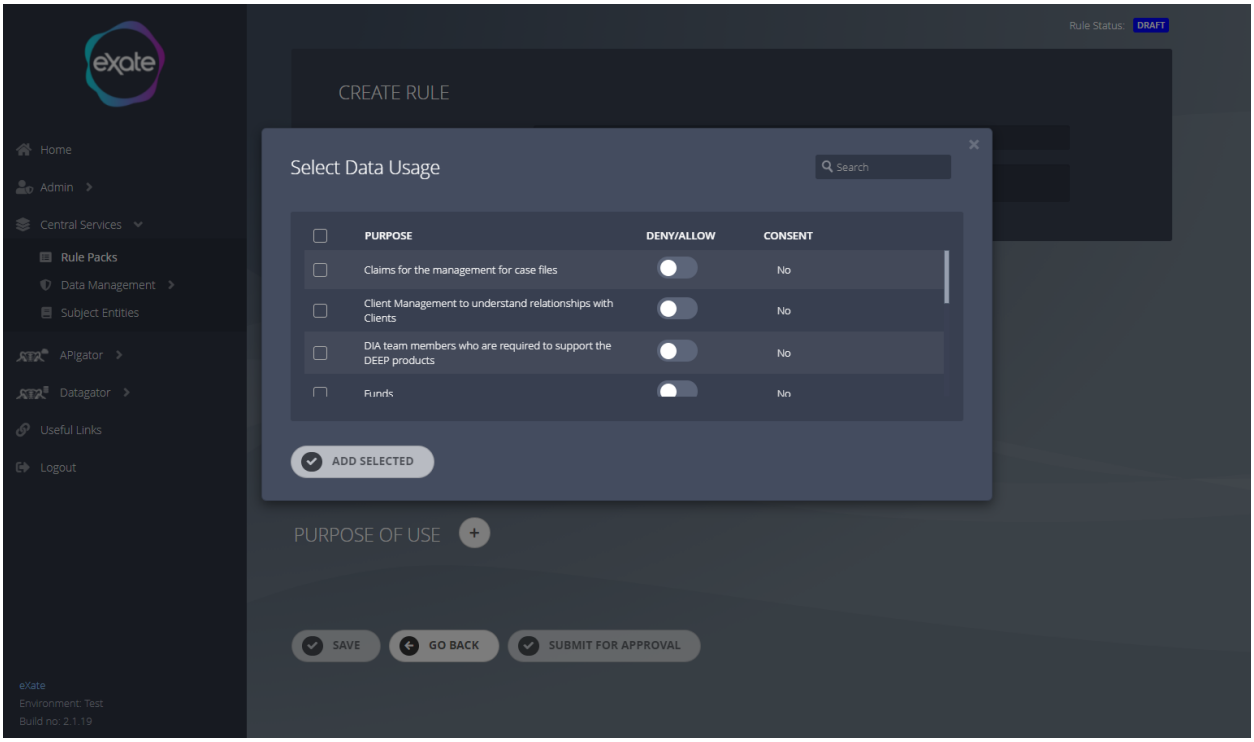


Figure 17 - Select Data Usage

Figure 17 shows adding data usage to a rule. The data usage/ data usages can be selected by checking the check boxes, once data usage has been selected, click the “Add Selected” Button.

Edit an Existing Rule in a Rule Pack

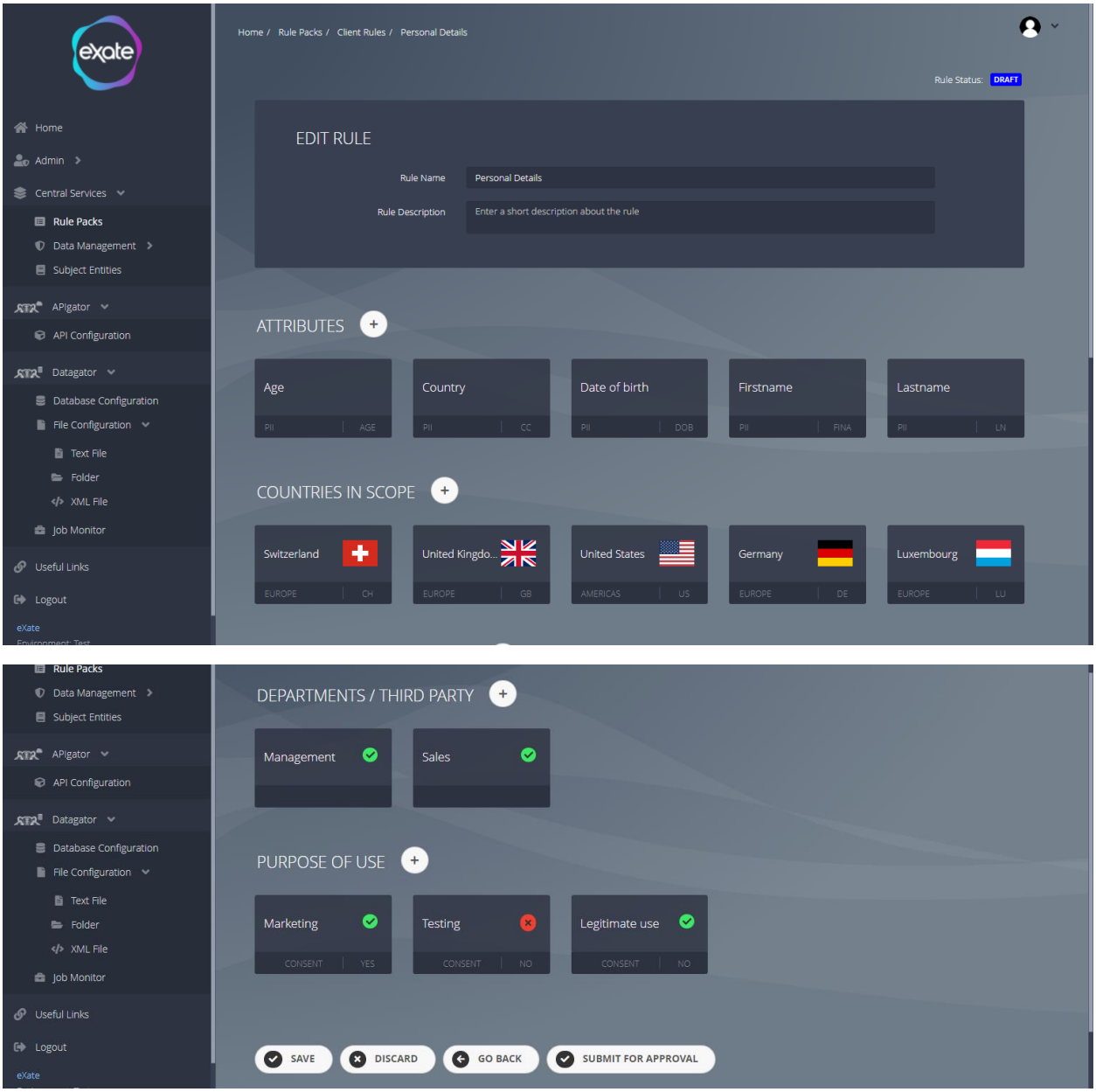


Figure 18 - Edit Existing Rule inside Rule Pack

Figure 18 shows editing a rule pack. From here you can edit the name, description and edit or add attributes, countries, departments/third party and purpose of use.

Data Management

Data management contains applications, attribute groups, countries, data usage, departments, subject entity type, substitute groups and third parties. These can be applied

in a rules based on which data can be shared with individuals, different countries or any Third Parties.

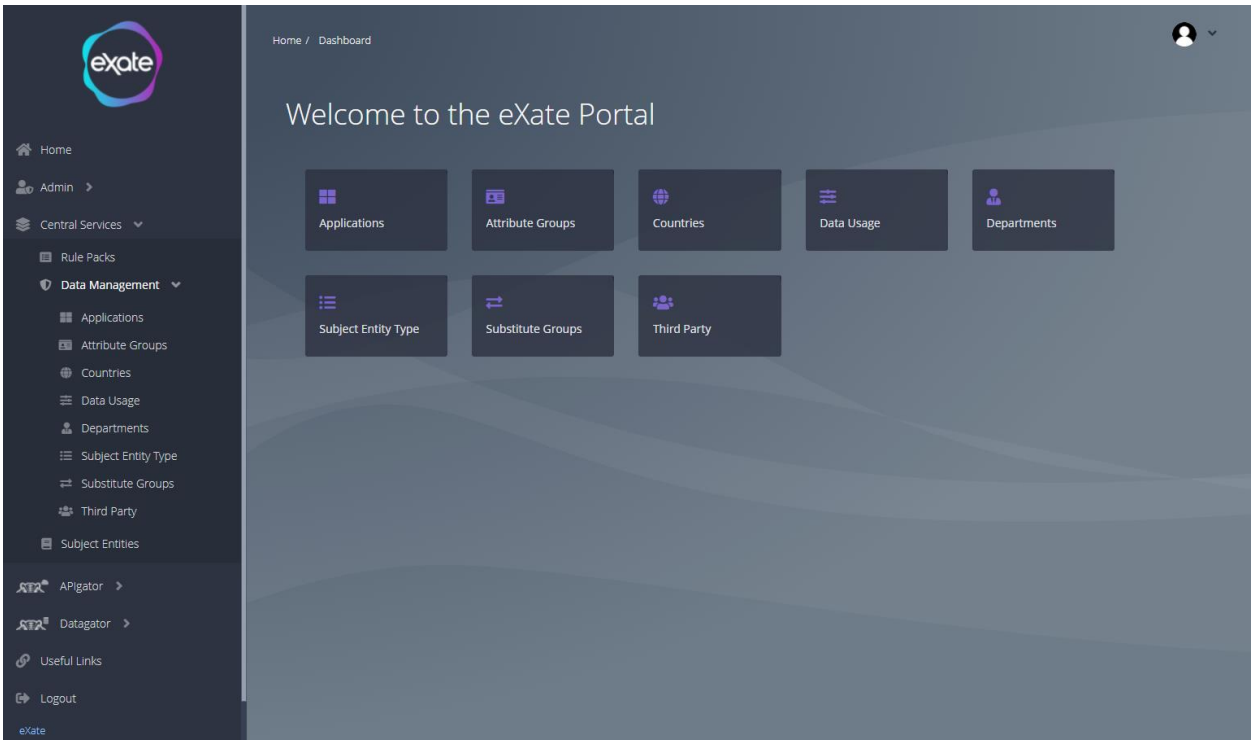


Figure 19 - Data Management

Figure 19 shows the data management page, this can be accessed by navigating to the left menu bar and clicking “Central Services” and then “Data Management”. From here you are able to access all features of the data management.

Applications

This section consists of all the Applications present inside the eXate product. It will show the name, URL, status and allow you to either edit or delete the application.

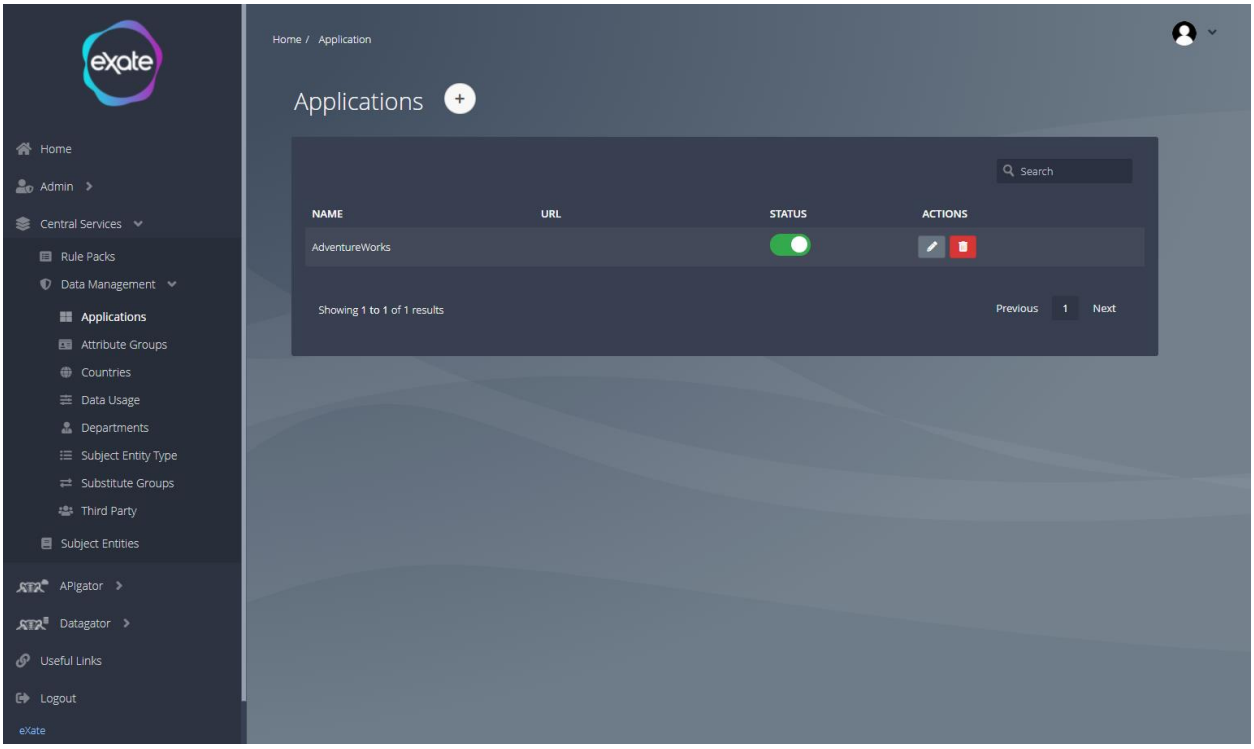


Figure 20 - Applications Page

Figure 20 shows the applications page. Applications can be accessed by navigating to the left menu bar and clicking on “Central Services’” then “Data Management” and then “Applications”.

Add an Application

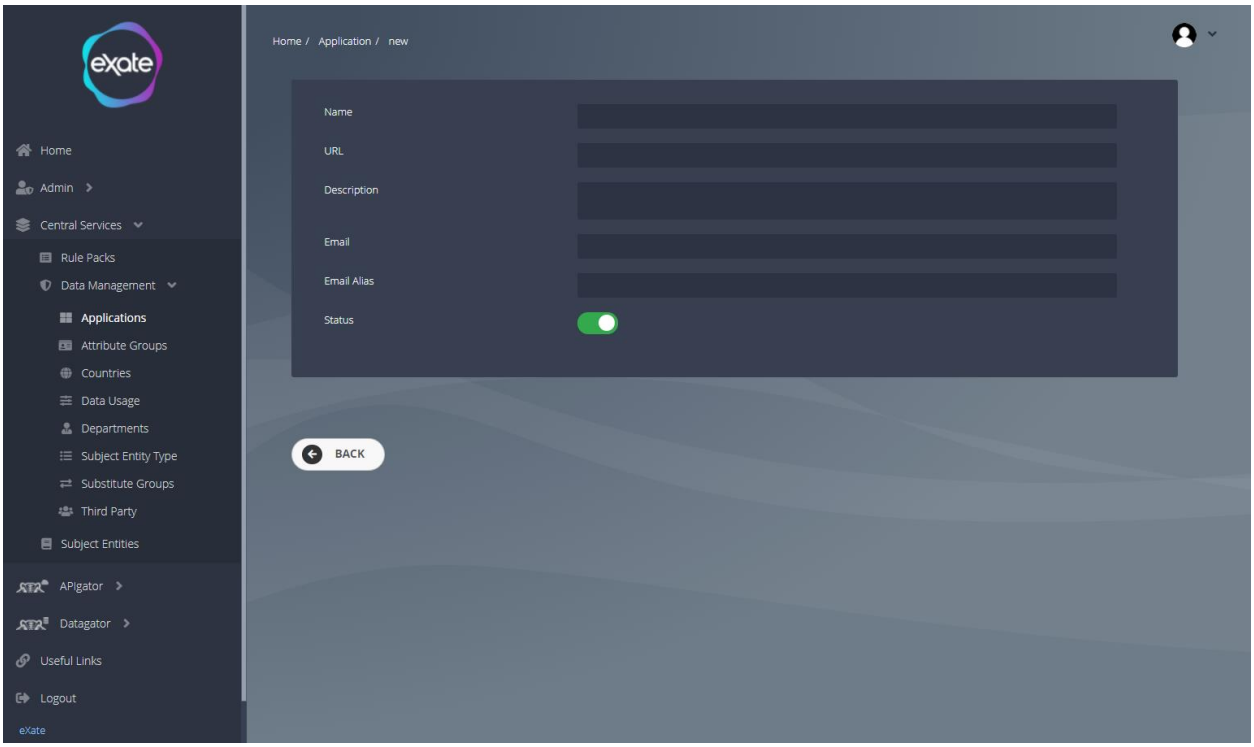


Figure 21 - Adding an Application

Figure 21 shows adding an application. To add an application, navigate to the plus button on the top of the application page. When clicking this it will take you to the page shown in Figure 21. To add an application fill in the following fields:

Name: Name of the application

URL: URL of the application

Description: Description of the application added

Email: Email Address

Status: Toggle box to indicate the status

Edit an Application

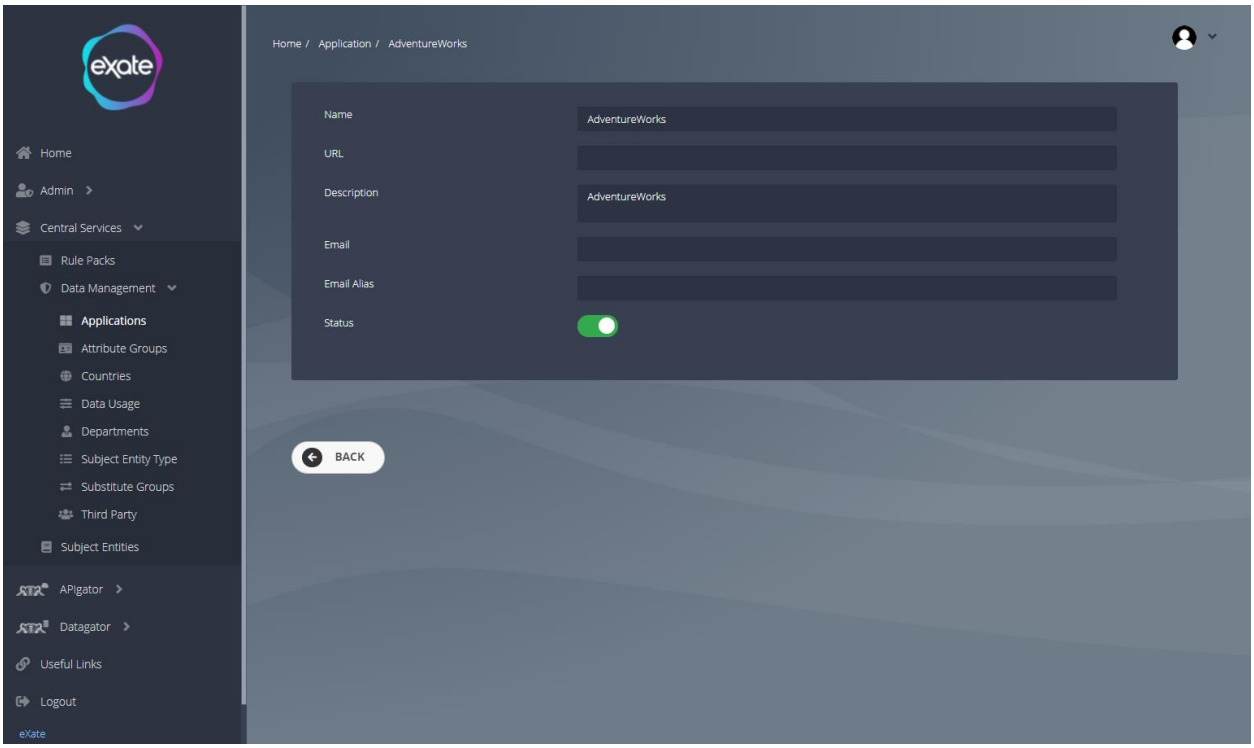


Figure 22 - Edit an Application

Figure 22 shows editing an application. To edit an application navigate to the pencil icon next to the chosen application on the application page. From here it will take you to the page where you can edit existing information given about the application.

Attribute Groups

The Attribute Group is a set/collection of many Attributes which can be applied to rules.

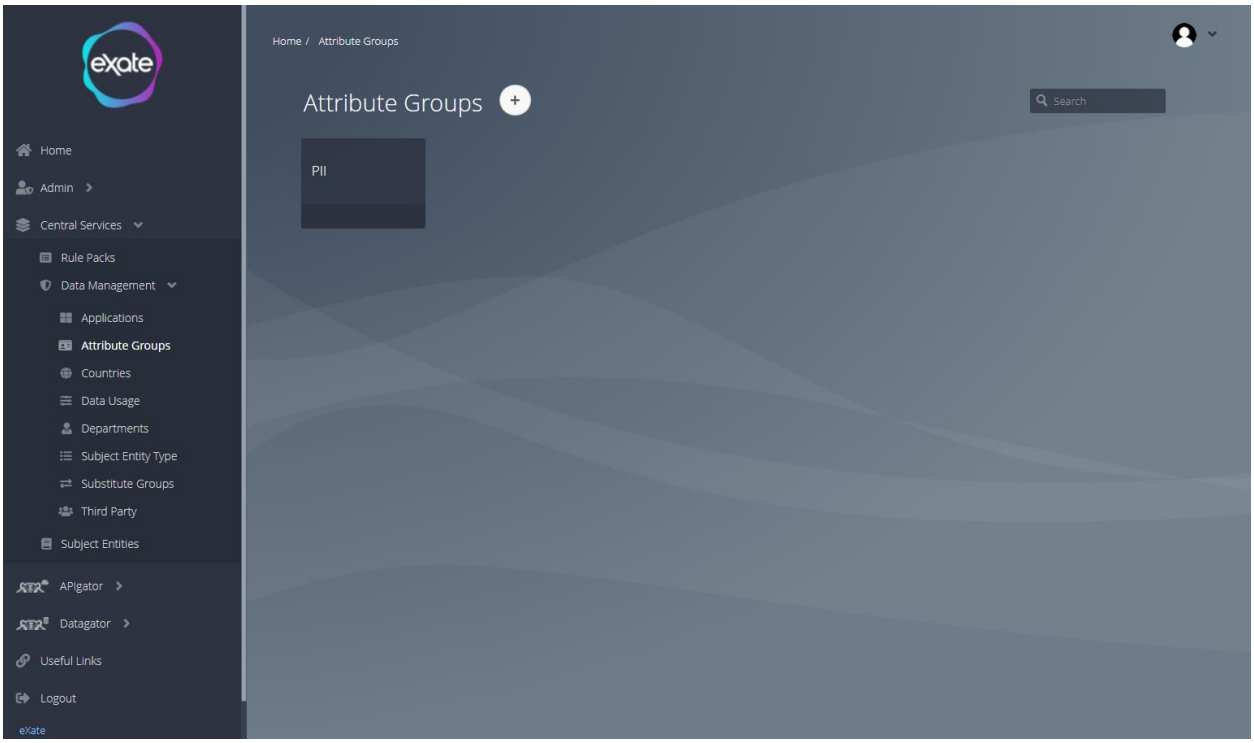


Figure 23 - Attribute Groups

Figure 23 shows Attribute groups page. To access the attribute groups navigate to the left menu bar click “Central Services” then “Data Management” and then “Attribute Group”. From here you can view all attribute groups created.

Adding an Attribute Group

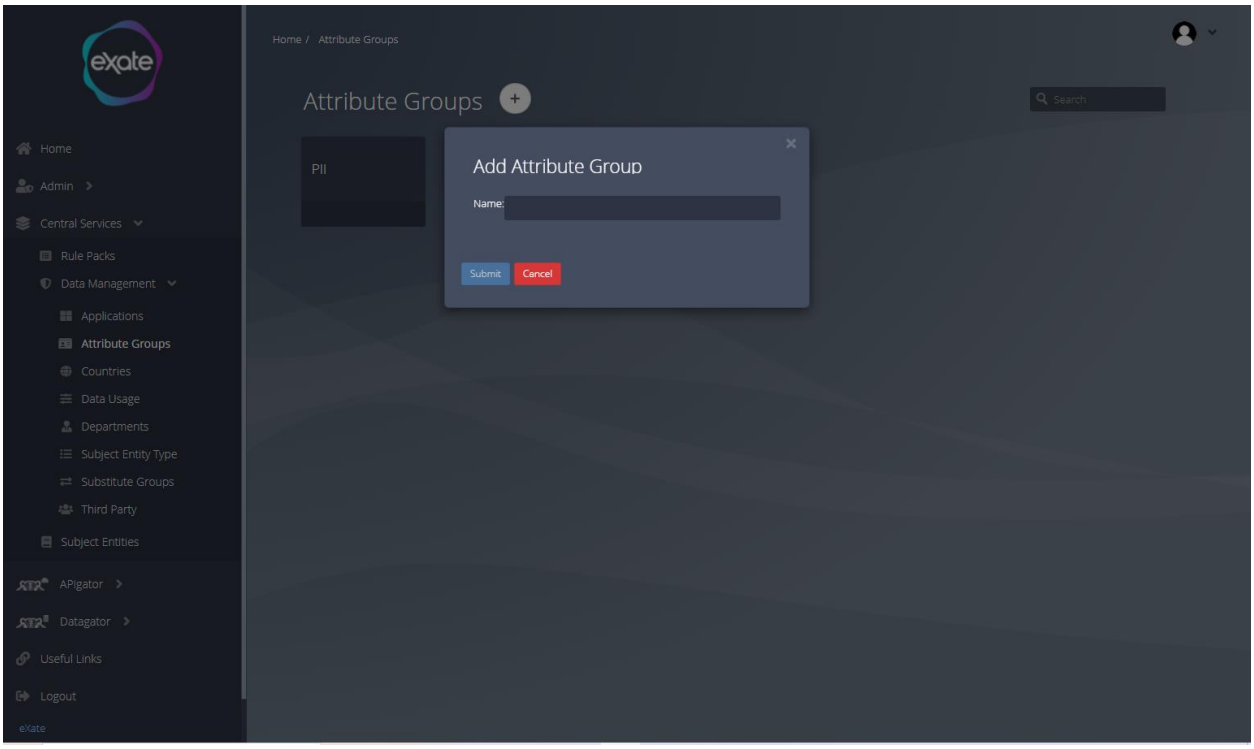


Figure 24 - Adding an Attribute Group

Figure 24 shows adding an attribute group. To add a new attribute group navigate to the plus button on the attribute group page which will take you to the page shown in Figure 24. Fill in the following information to add an attribute group:

Name: Name of the attribute

View Attribute Group

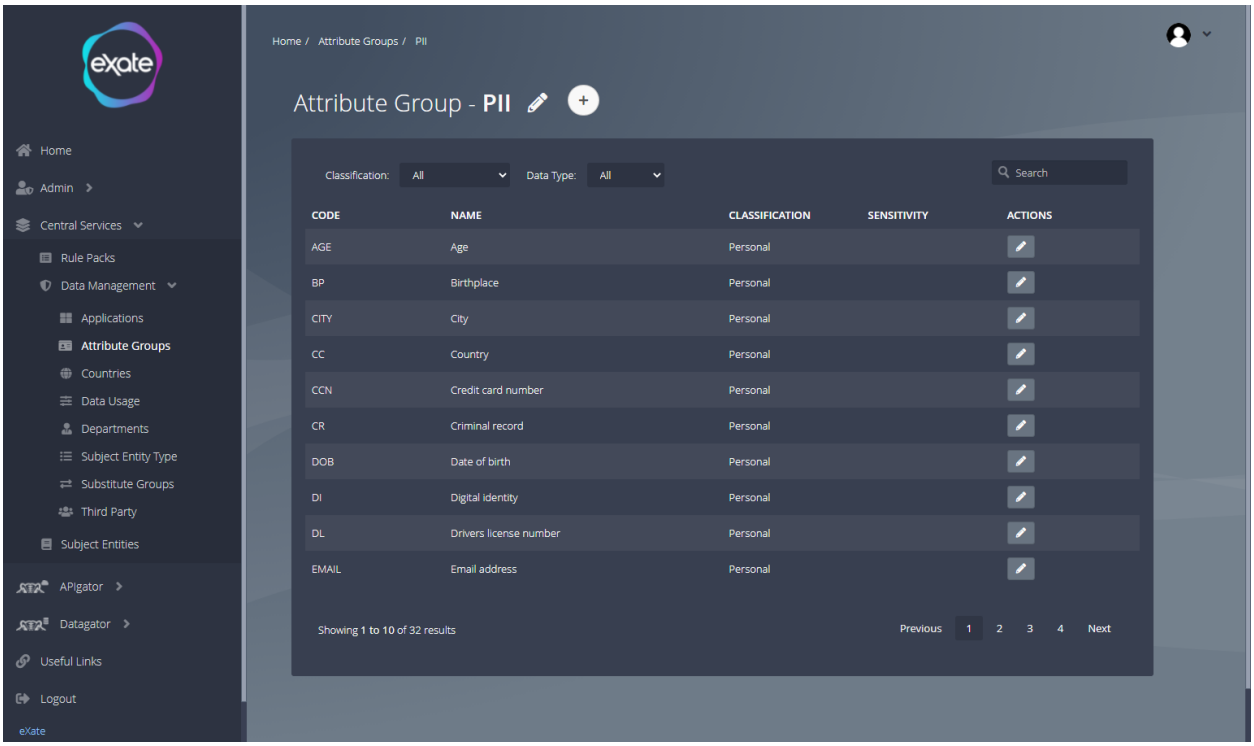


Figure 25 - View Attribute Group

When clicking on an attribute group from the attribute group page it will display a page similar to the page shown in Figure 25. An attribute group will have a collection of attributes that hold information about each attribute.

Edit Attribute Group

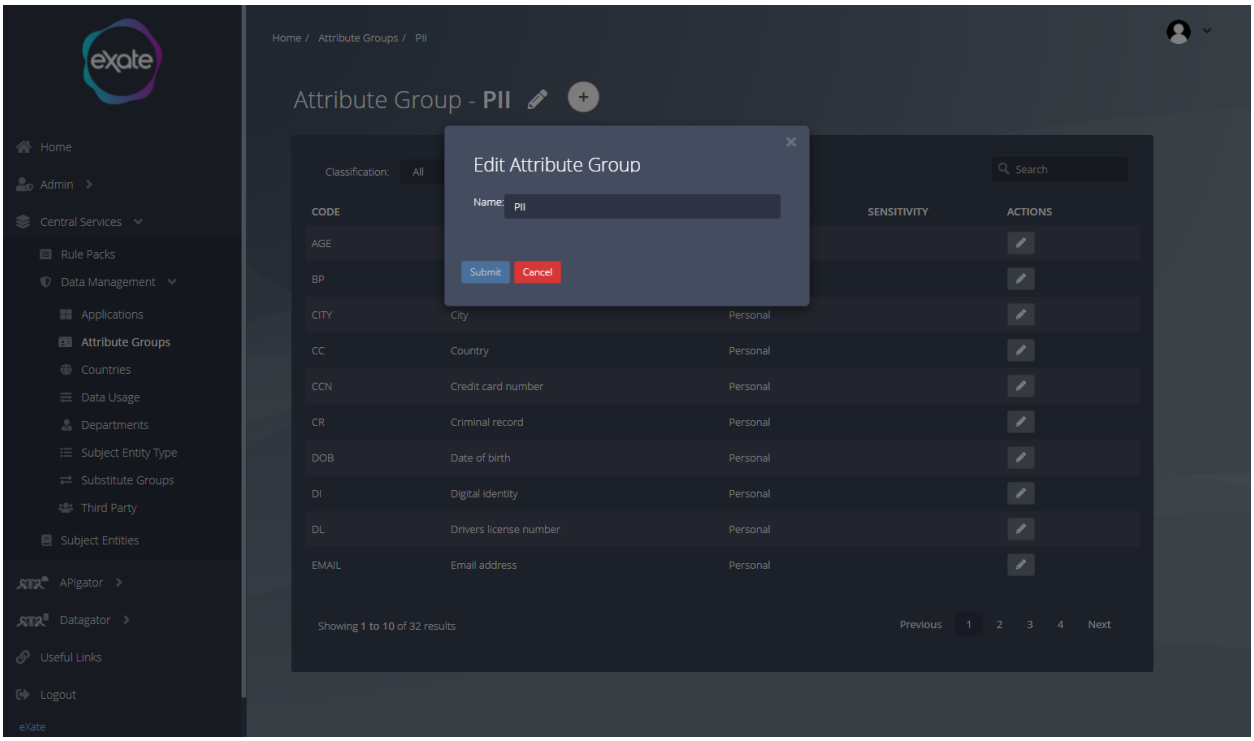


Figure 26 - Edit an Attribute Group

To edit an attribute group locate to the top of the chosen attribute group page and click the pencil icon. This will navigate you to the page shown in Figure 26. From here you can edit the name of the attribute group.

Add an Attribute

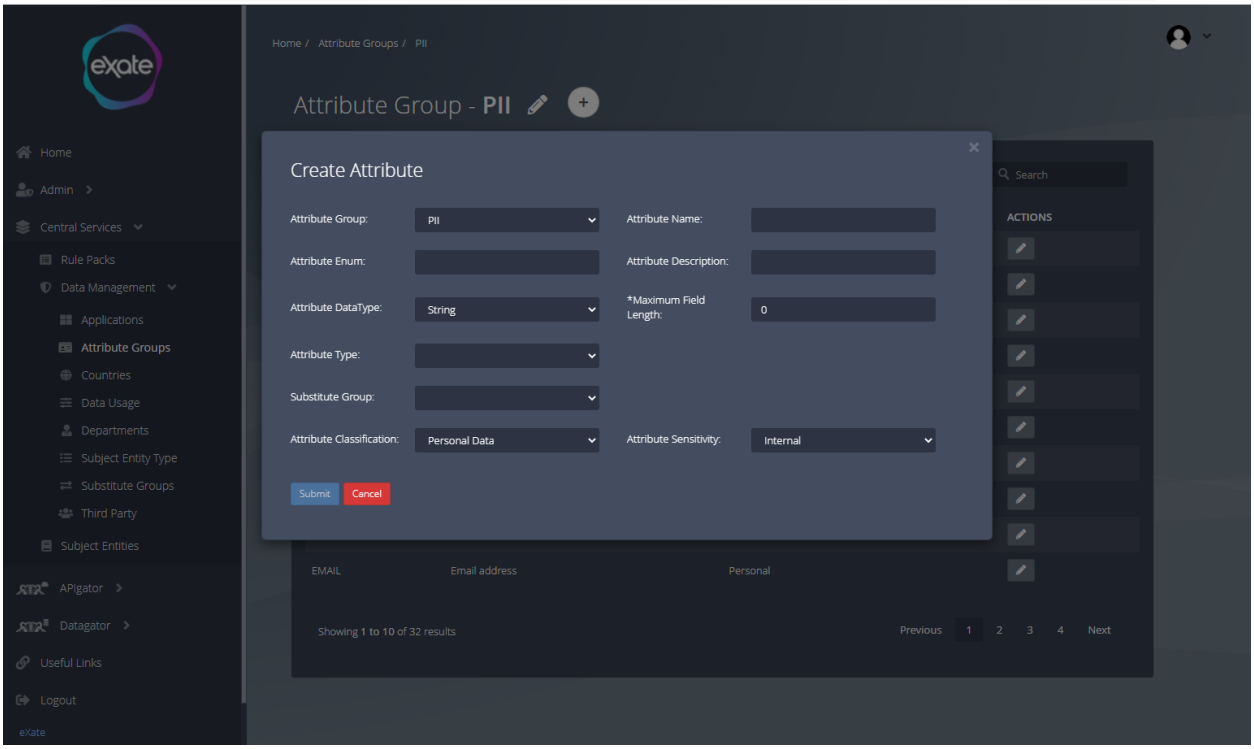


Figure 27 - Add an Attribute

To add an attribute to an attribute group, navigate to the plus button on the chosen attribute page, this will take you to the page shown in Figure 27. From here you can fill in the following fields to add an attribute:

Attribute Group: The group to which the attribute belongs.

Attribute Enum: The actual name of the attribute.

Attribute DataType: The data type to which the attribute belongs whether it is integer, string, Boolean, date.

Attribute Type: Drop down box of type of attribute

Substitute Group: A specific set from which a substitute name can be selected for the attribute.

Attribute Classification: Whether the data is Financial, Corporate, and Personal.

Attribute Name: The actual name of the attribute.

Attribute Description: A short description of what the attribute is all about.

Attribute Sensitivity: Restricted, Public, Highly Restricted.

Edit an Attribute

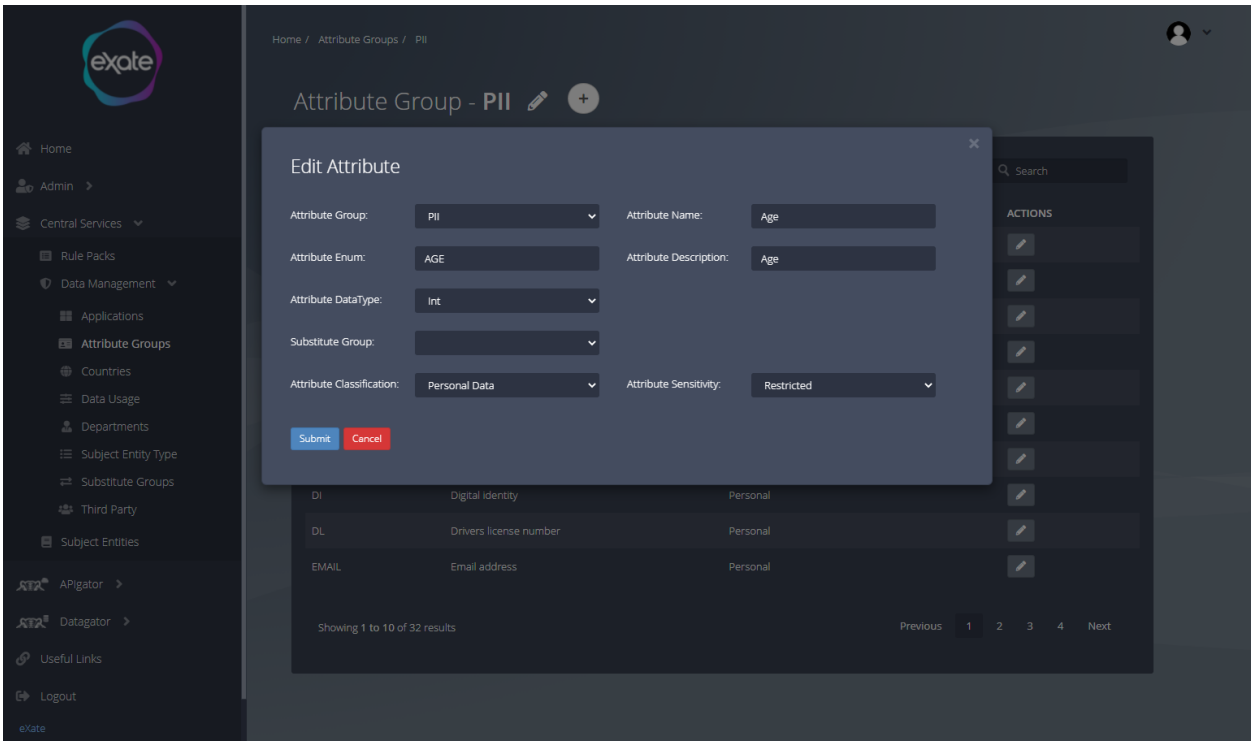


Figure 28 - Edit an Attribute

Figure 28 shows editing an attribute. To edit an attribute navigate to the top of the chosen attribute and click the pencil icon. From here you can edit any of the following fields shown in Figure 28.

Countries

The data can be shared with whichever country the user wants but it has to be essentially aligned with the rules, and rules are configured according to the GDPR requirements.

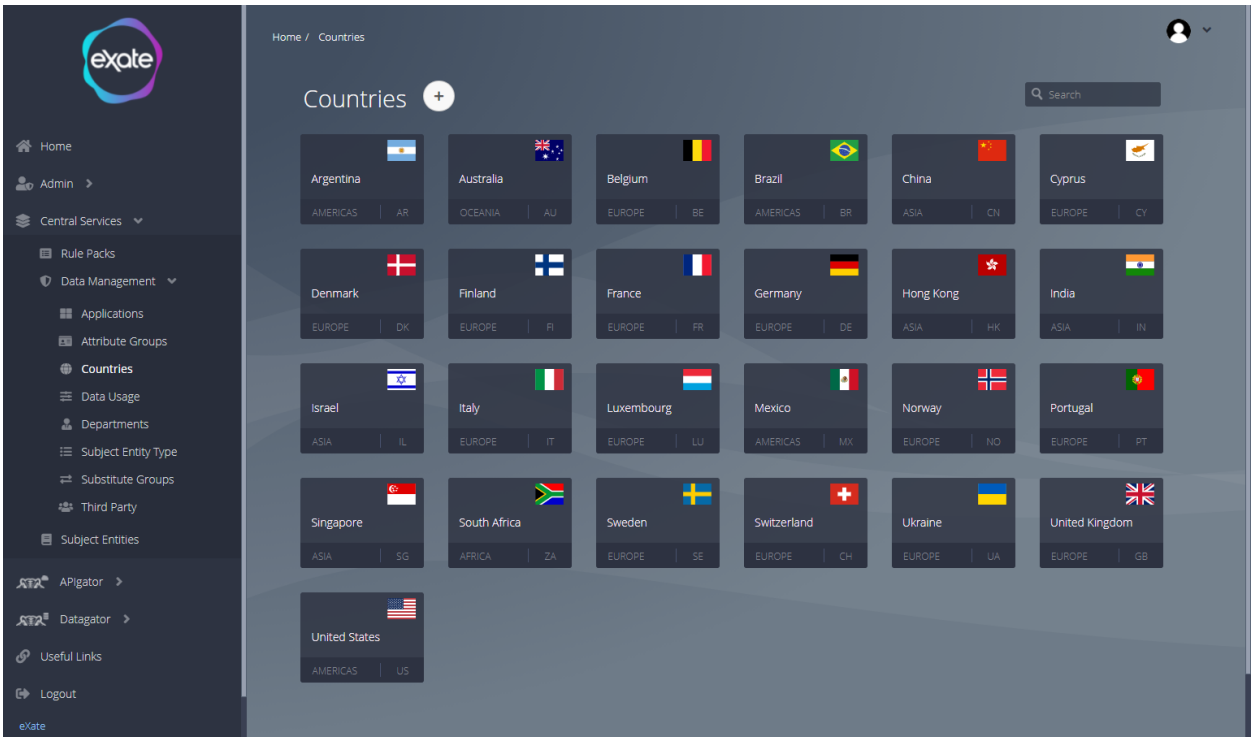


Figure 29 - Countries

Figure 29 shows the countries page. To access the countries navigate to the left menu bar click “Central Services” then “Data Management” and then “Countries”.

Add a Country

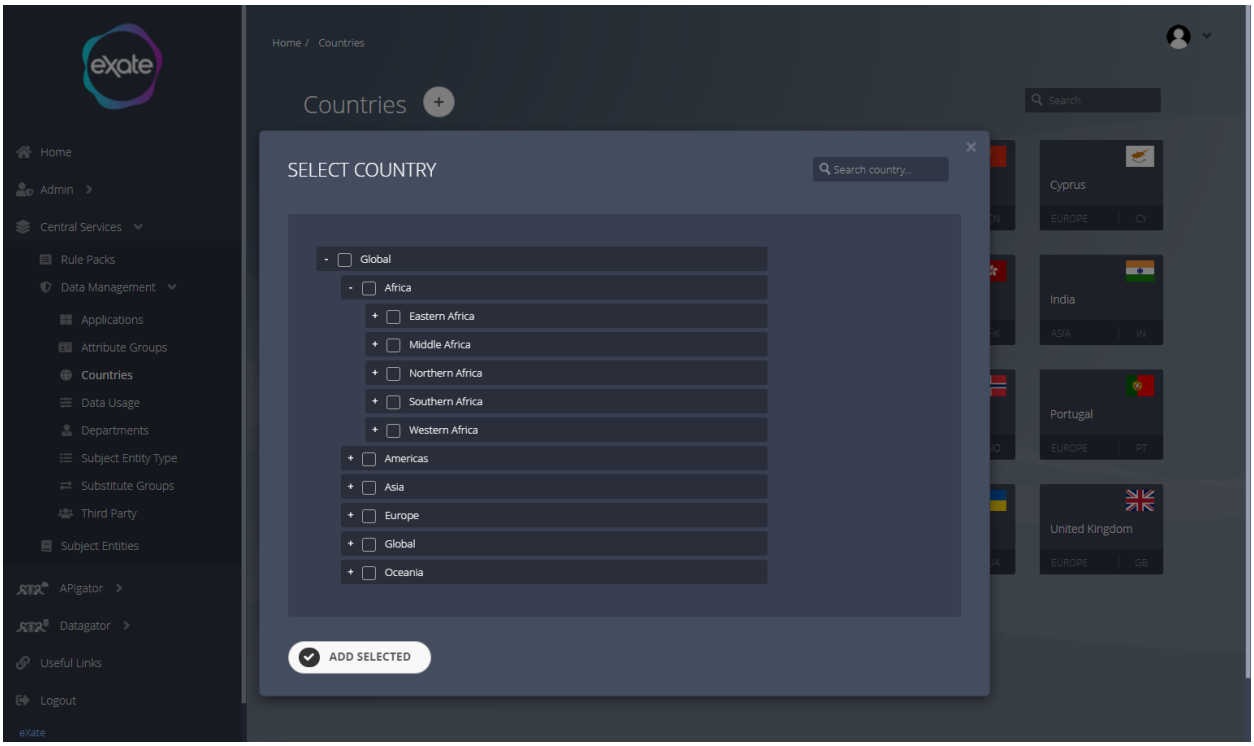


Figure 30 - Add a Country

Figure 30 shows adding a country, to add a country navigate to the plus button on top of the countries page. From here it will take you to the page shown in Figure 30. To choose what country, check the correct checkbox.

View/Update a Country

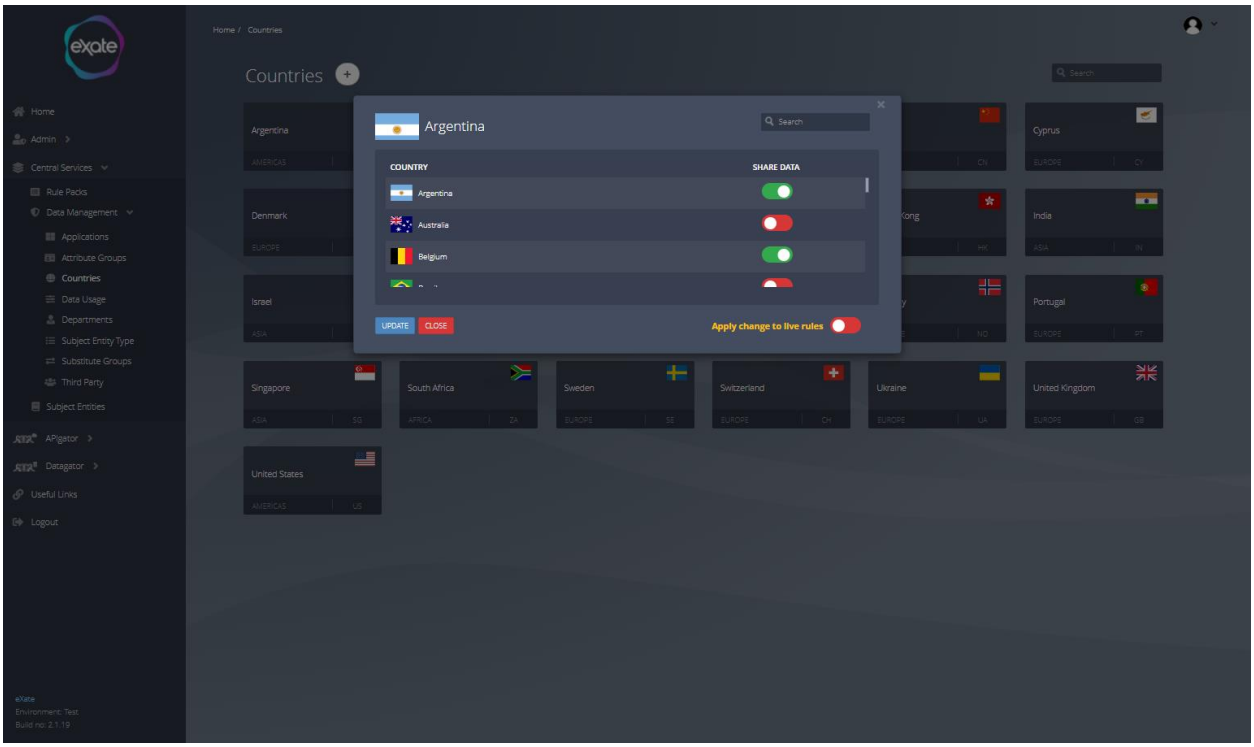


Figure 31 - View/Update a Country

Figure 31 shows viewing or updating a country. To view/update a country click on the chosen country on the country's page. From here you can see which Country a particular country can share its data with. This plays a very significant role in creating the Rule Packs which is the base of the entire eXate product.

Data Usage

Data Usage is where the purpose of the use of data is kept.

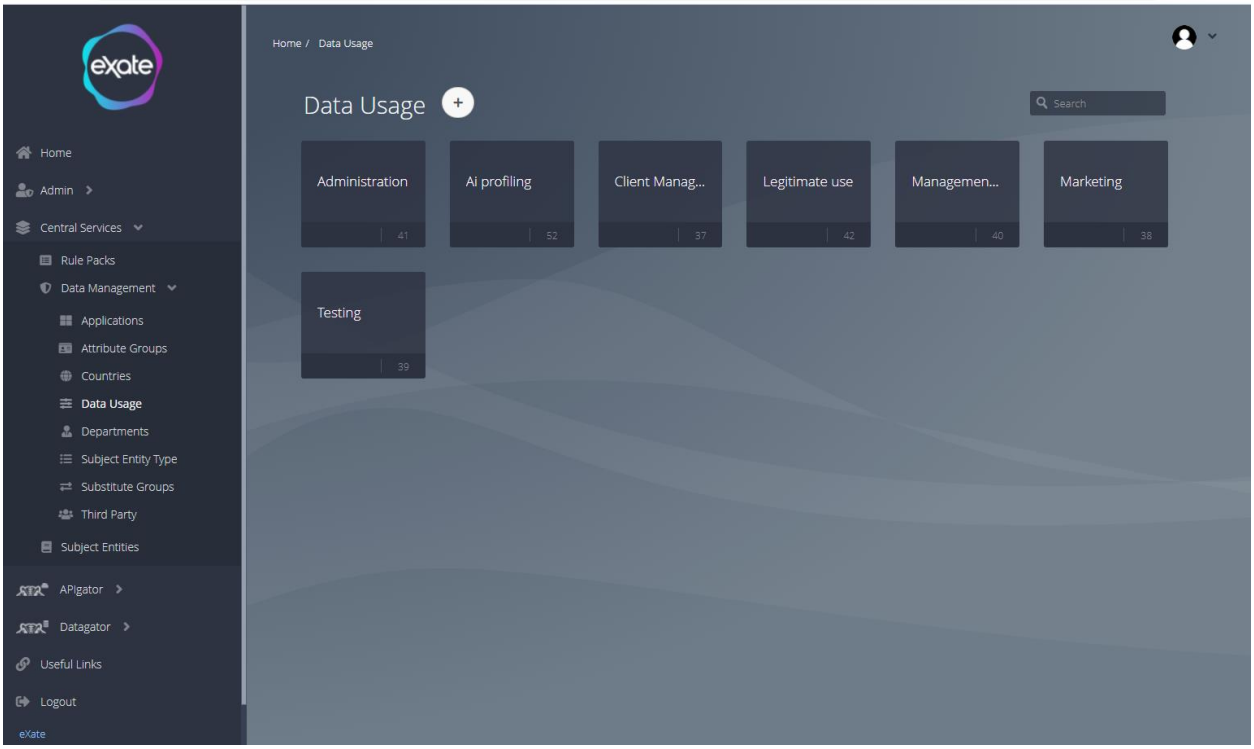


Figure 32 - Data Usage

Figure 32 shows the data usage page. To access the data usage page navigate to the left menu bar click “Central Services” then “Data Management” and then “Data Usage”.

Add Data Usage

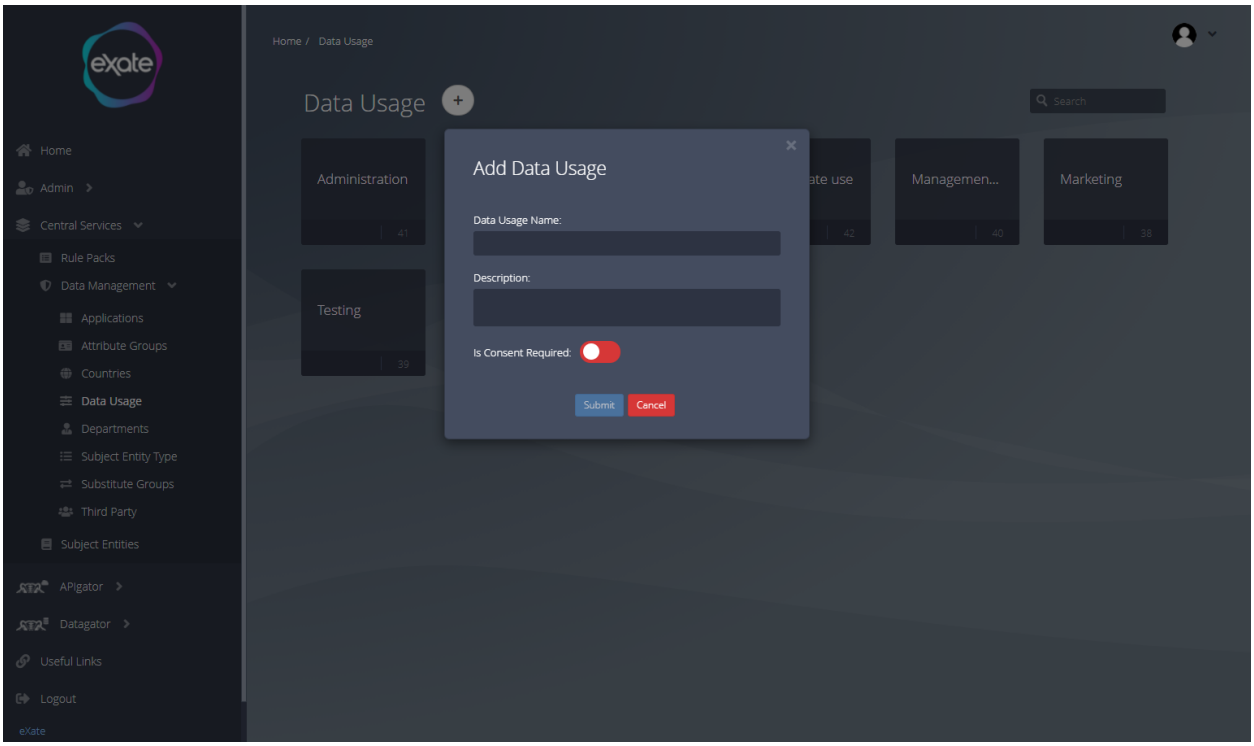


Figure 33 - Adding a Data Use

Figure 33 shows adding data use. To add a data use, navigate to the top of the data usage page and click the plus button, this will take you to the page shown in Figure 33. To add a data use fill in the following fields:

Data Usage Name: Name of the data usage

Description: Description of how the data will be used

Is consent required: Toggle box to indicate whether consent is required

View/Edit Existing Data Usage

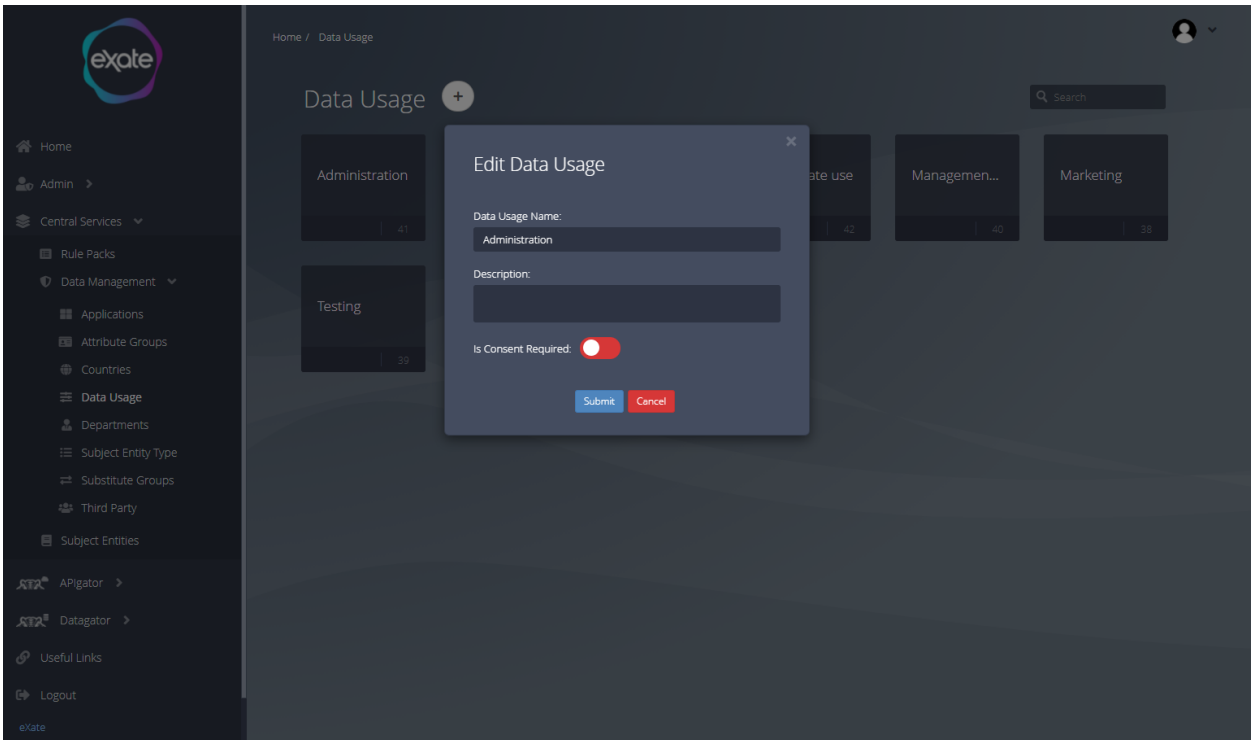


Figure 34 - View/Edit existing Data Usage

Figure 34 shows viewing/editing a data usage. To edit/view data usage navigate to the data usage page and click on the chosen data usage. From this you can edit the fields shown in Figure 34..

Departments

The Departments are classified into HR, Finance, Management, Legal, Sales and additional departments can be created by the User as per their needs.

Highly customizable rules can be configured as per the organizational needs and departments could be given access to the data.

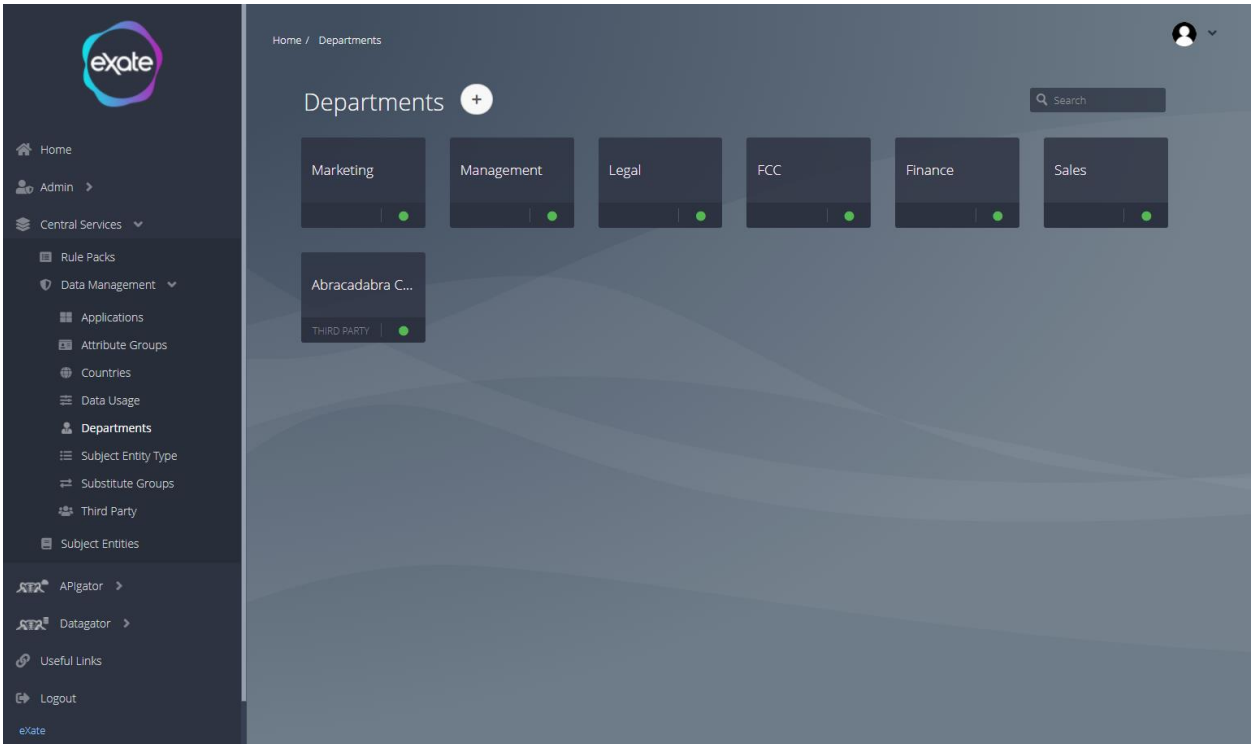


Figure 35 - Departments

Figure 35 shows the departments page. To access the departments navigate to the left menu bar click “Central Services” then “Data Management” and then “Data Usage”.

Add Department

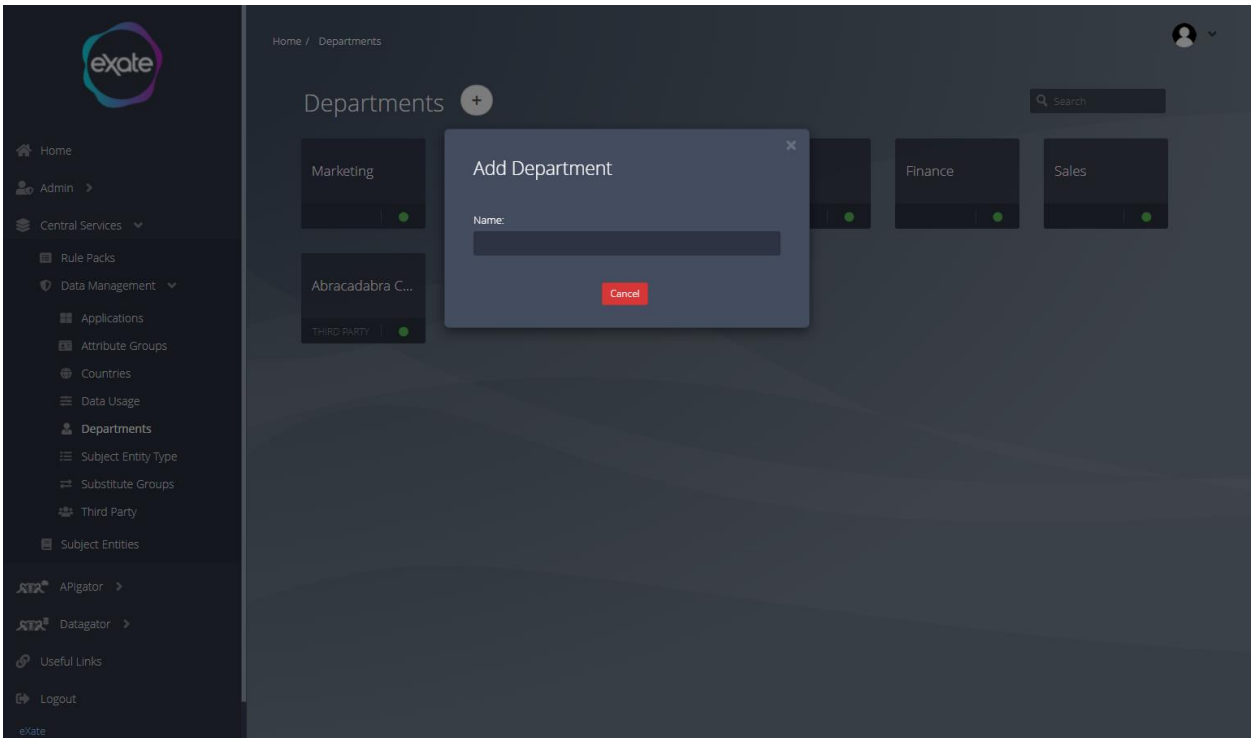


Figure 36 - Add Departments

Figure 36 shows adding a department. To add a department, navigate to the top of the departments page and click the plus button. From here it will take you to the page shown in Figure 36. Fill in the following field sto add a department:

Name: Name of the department

Edit/View Department

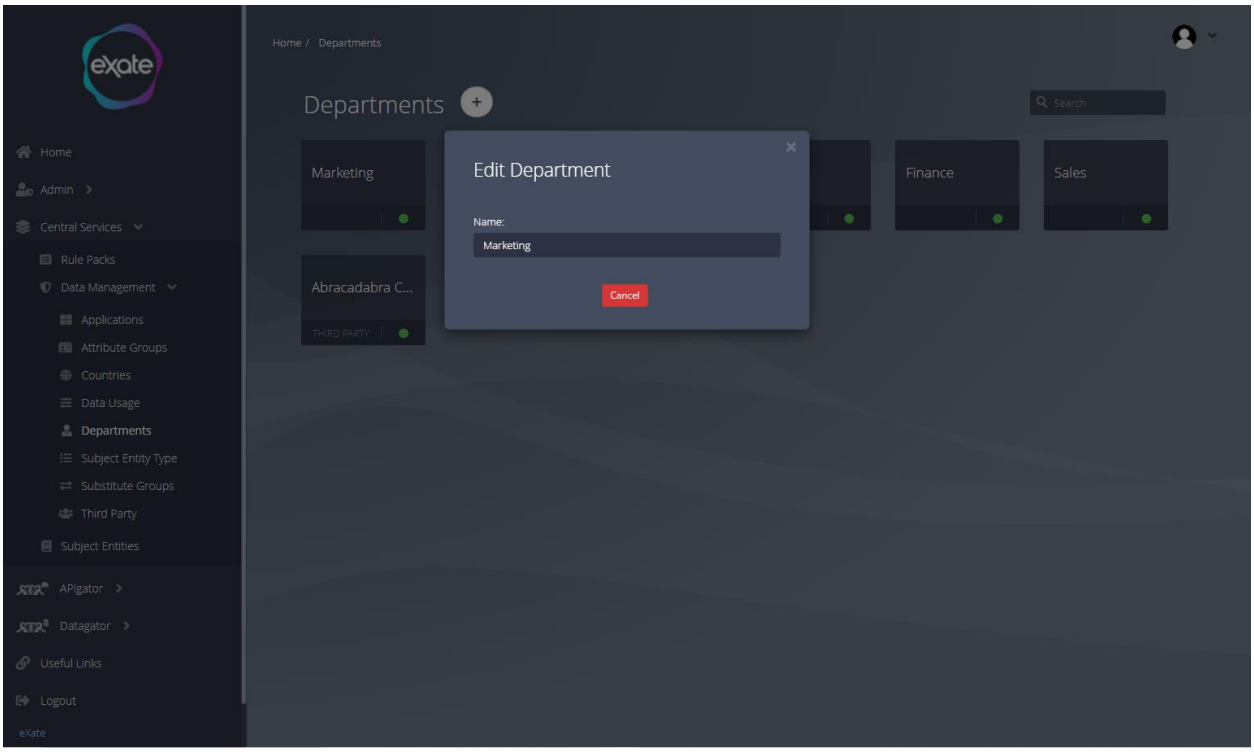


Figure 37 - Edit/View Department

Figure 37 shows editing/viewing a department. To edit/view a department navigate to the plus button at the top of the departments page. This will take you to the page shown in Figure 37, from here you can edit the name of the department.

Substitute Groups

They are the substitute names that can be given to the Attributes and are found by lookup values.

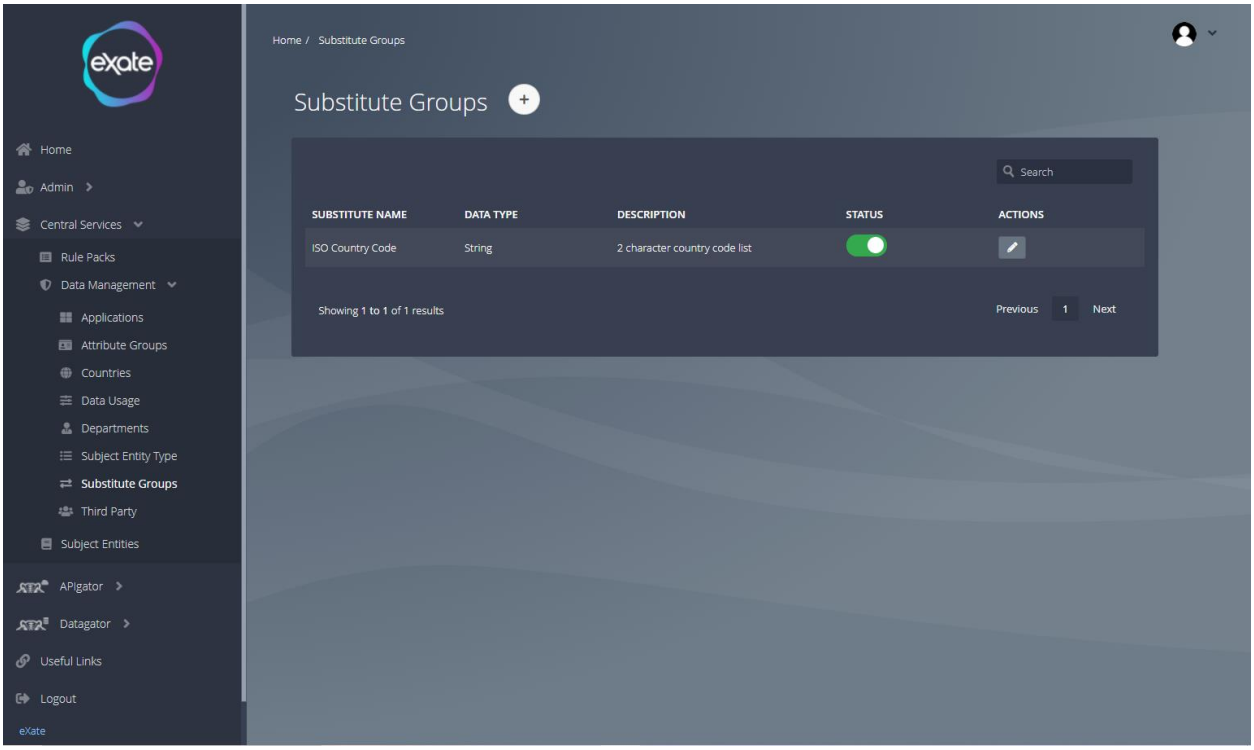


Figure 38 - Substitute Groups

Figure 38 shows the substitute group page. To access the substitute page navigate to the left menu bar click “Central Services” then “Data Management” and then “Substitute Groups”.

Add a Substitute Group

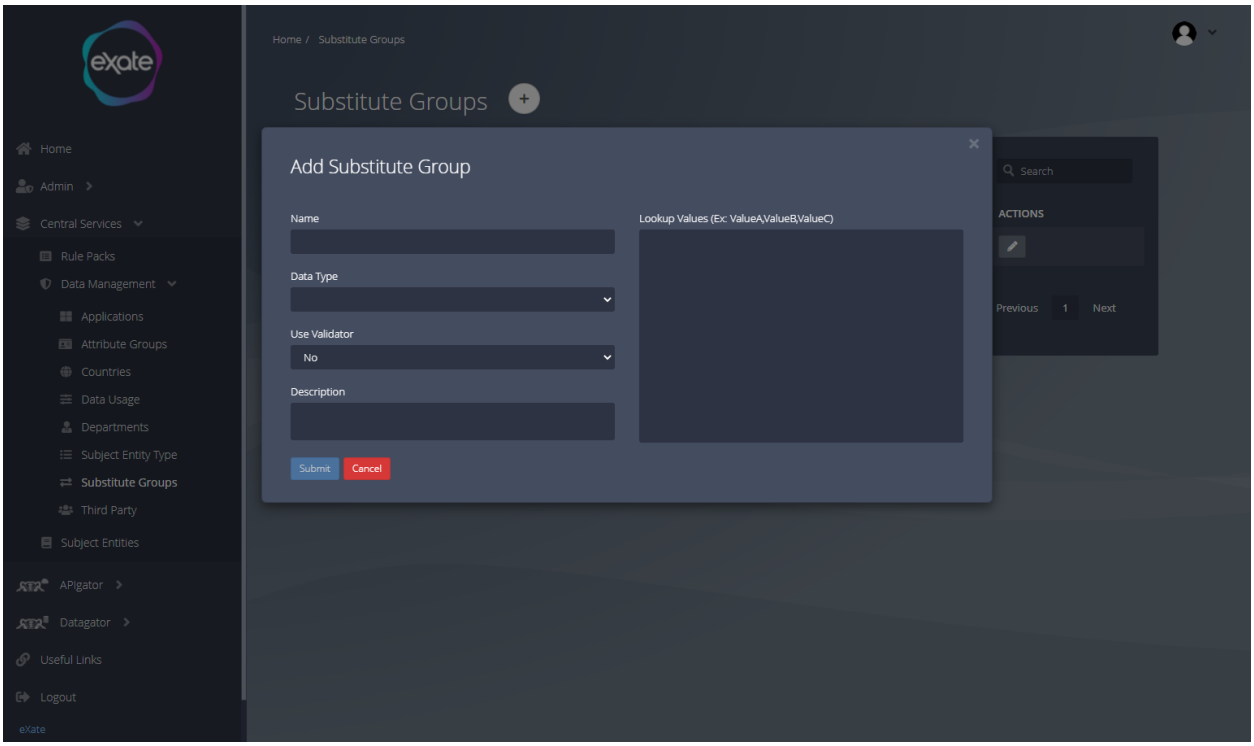


Figure 39 - Adding a Substitute Group

Figure 39 shows adding a substitute group. To add a substitute group, navigate to the plus button on the substitute group page. From here it will take you to the following page shown in Figure 39. To add a substitute group, fill in the following fields:

Name: Name of the substitute group

Data Type: Type of the Data

Description: Description of the substitute group

Edit Substitute Group

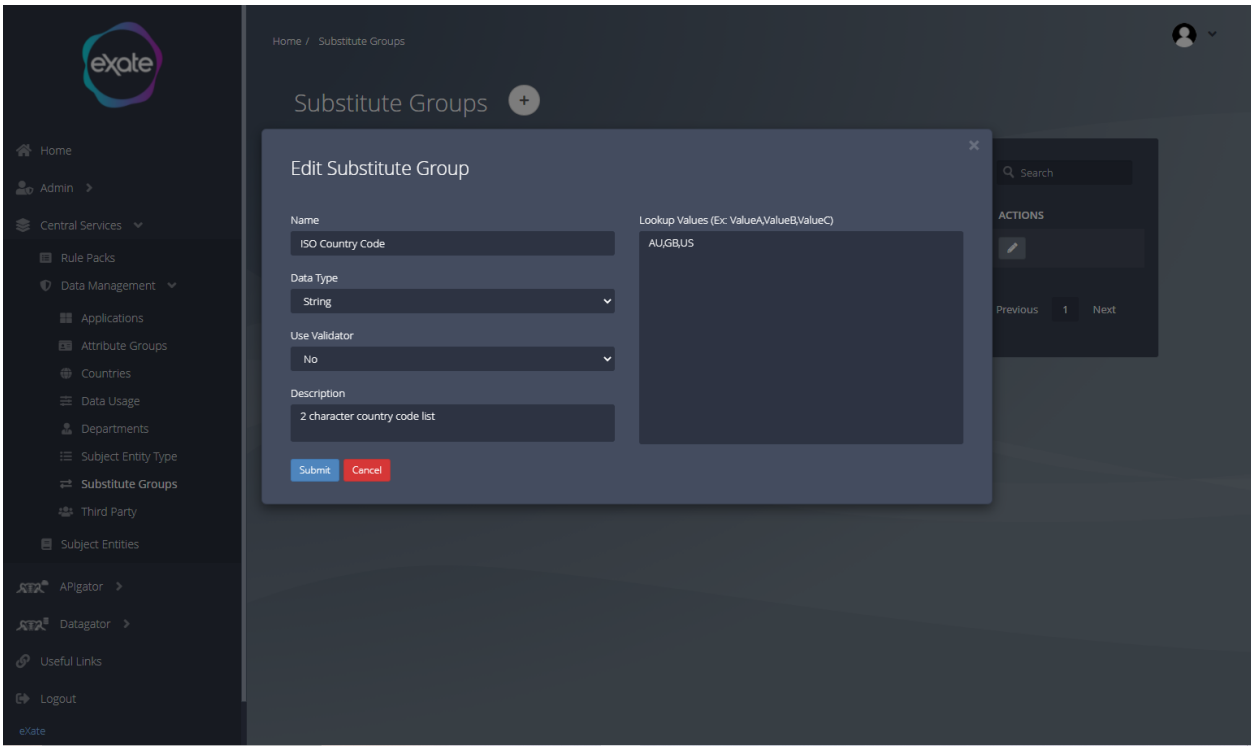


Figure 40 - Edit a Substitute Group

Figure 40 shows editing a substitute group. To edit a substitute group navigate to the chosen substitute group on the substitute group page click the pencil icon. From here you can edit the following fields shown in Figure 40.

Third Party

Third Party means that the client who would be using the data can also have third parties (clients who use their resources) and rules can be made for them as well.

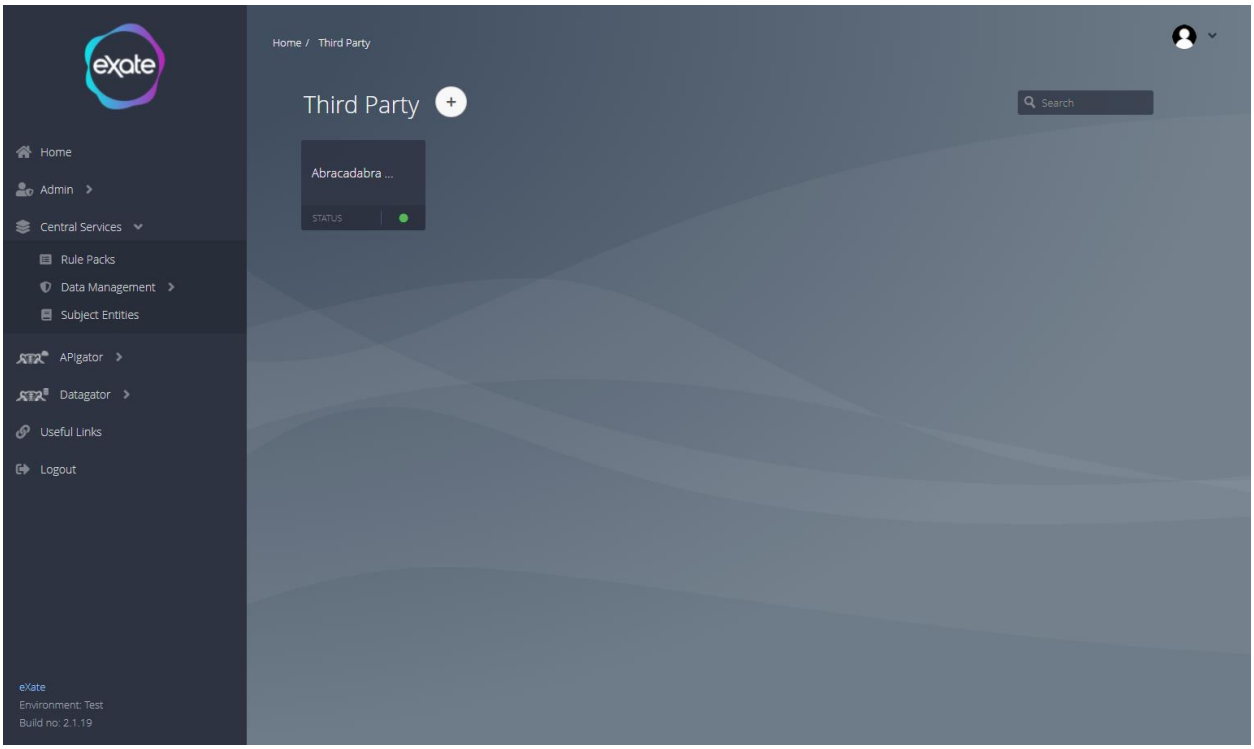


Figure 41 - Third Party

Figure 41 shows the third party page. To access the third party page navigate to the left menu bar click “Central Services” then “Data Management” and then “Third Party”.

Add a Third Party

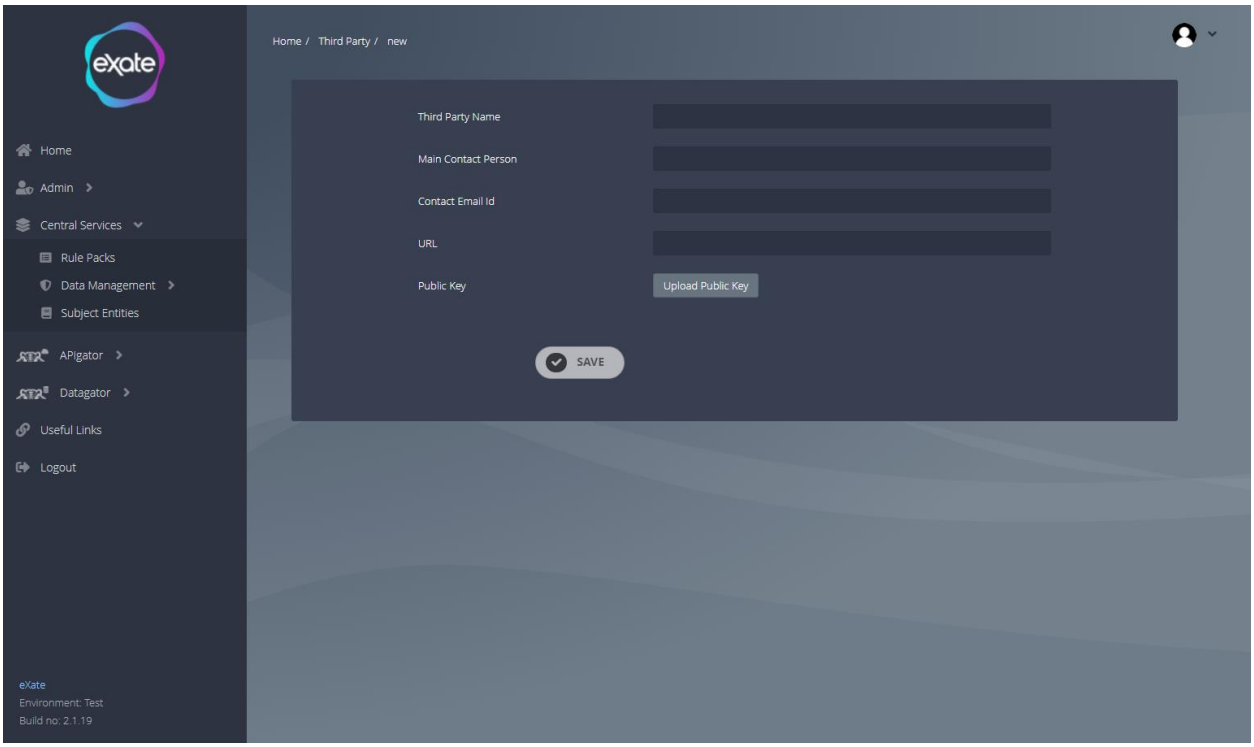


Figure 42 - Add a Third Party

Figure 42 shows adding a third party. To add a third party, locate the third party page and click the plus button. From here you can fill in the following fields shown in Figure 42:

Name: Name of Third Party

Main Contact Person: Main contact person of the third party

Contact Email Id: Email address of third party contact

URL: URL of third party

Public Key: Button to upload public key

View/Edit a Third Party

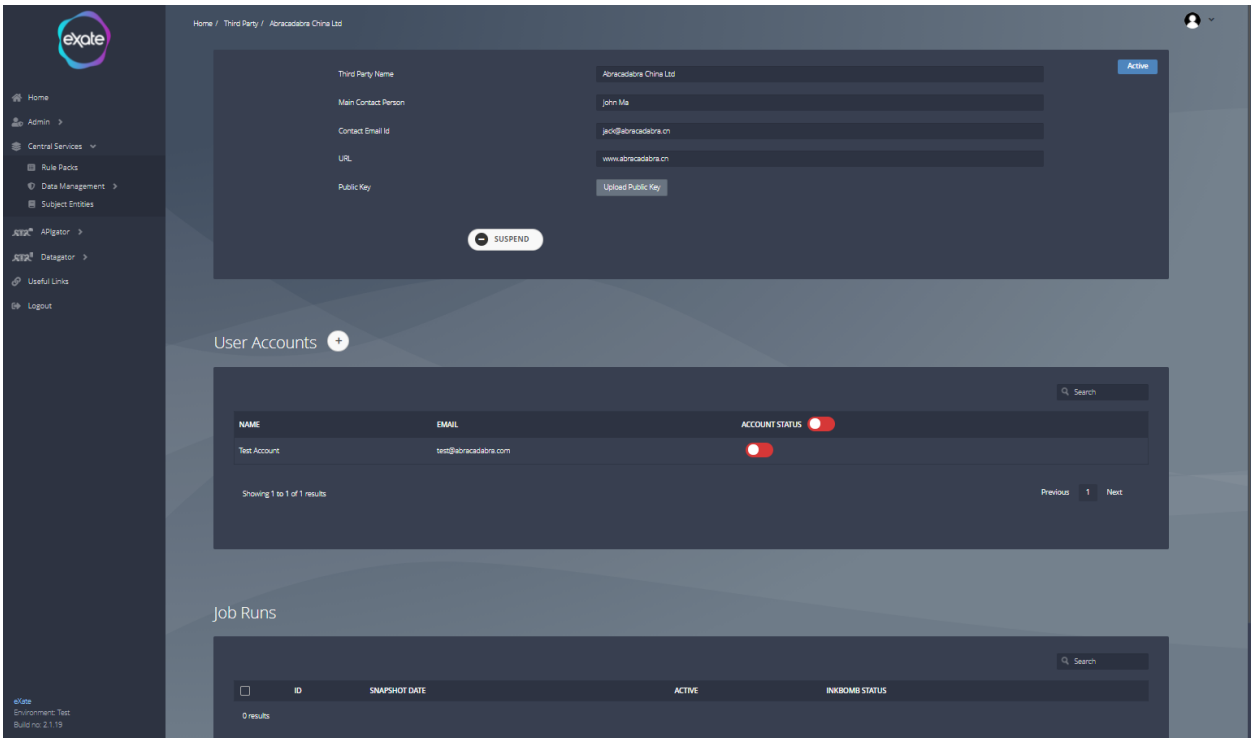


Figure 43 - View/Edit a Third Party

Figure 43 shows viewing/editing a third party, to view/edit a third party click on the chosen third party on the third party page. From here you can view/edit the following fields shown in Figure 43.

Subject Entities (Data Subjects)

Subject Entities are used to depict how the subject entities and the Applications are mapped together with their respective identifiers. Example of this is how master data management works. Where you have an overall unique identifier as the common identifier and the mapping is done to their local identifiers to be able to identify the master account.

We also here link back to the country of origin where this subject entity belongs and capture their consent. We also define what the Subject Entity Type is.

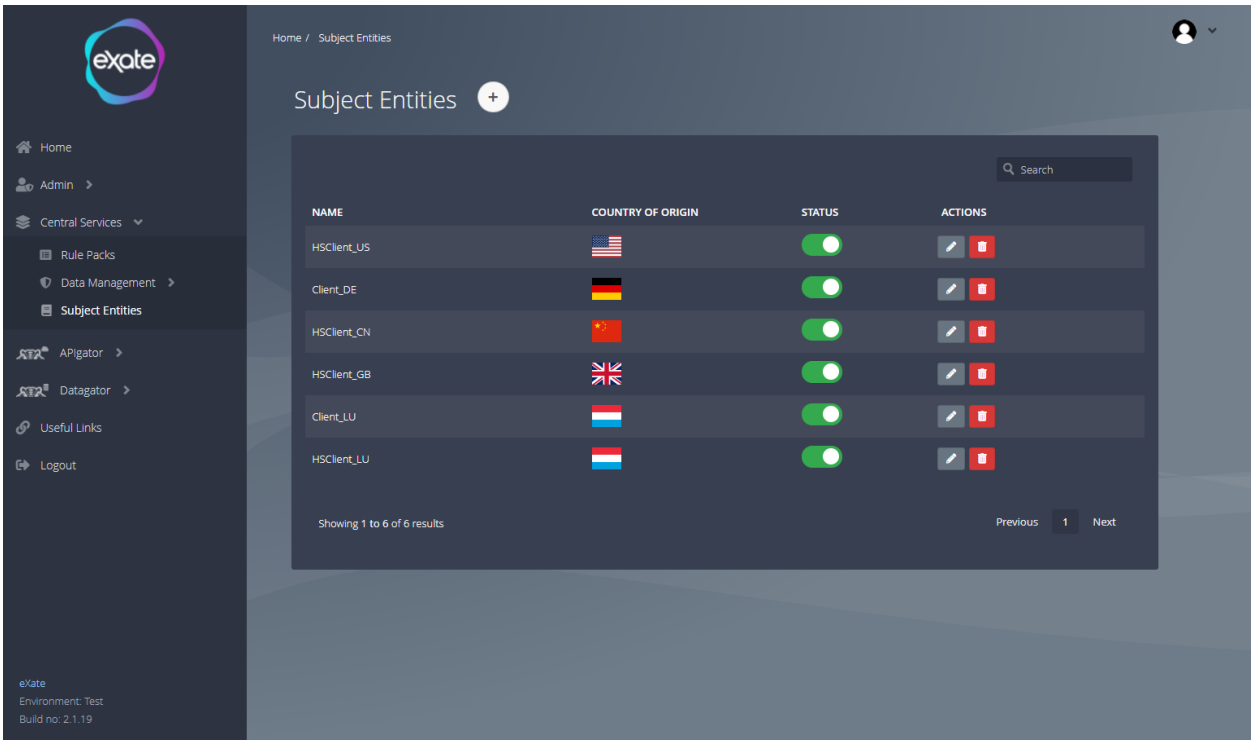


Figure 44 - Subject Entities

Figure 44 shows the subject entities. To access the subject entities navigate to the left menu bar click “Central Services” and then “Subject Entities”. You can view the country of origin and status of the subject entities.

Subject Entity Type

The Subject Entity Type is the subsection of the Subject Entities which has to be selected when adding a new Subject Entity.

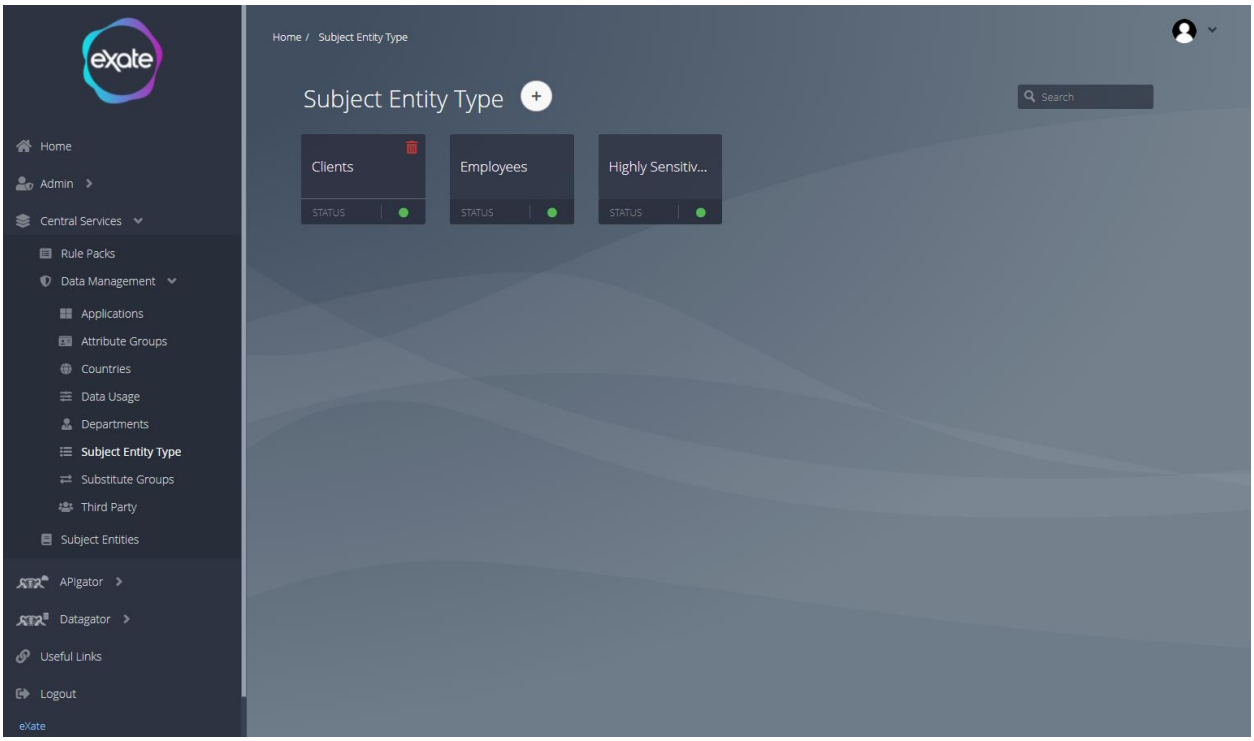


Figure 45 - Subject Entity Type

Figure 45 shows the Subject Entity Type page. To access the subject entity navigate to the left menu bar click “Central Services” then “Data Management” and then “Subject Entity Type”.

Add Subject Entity Type

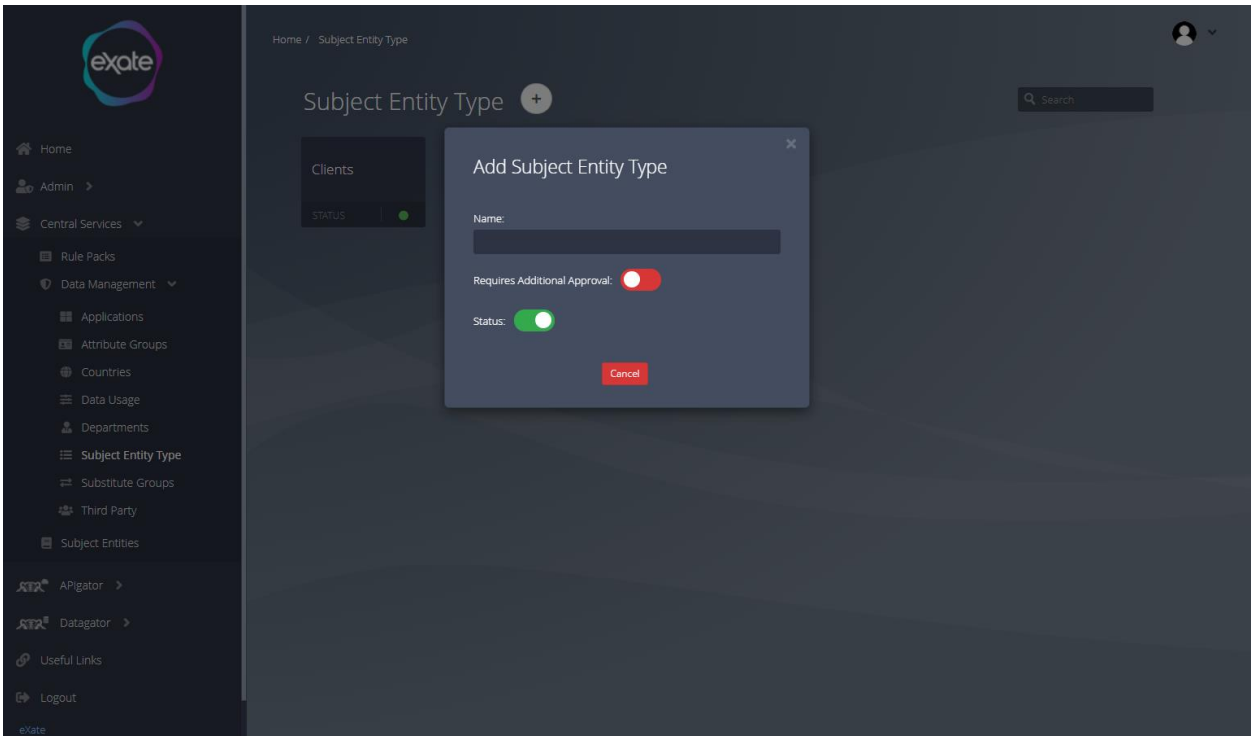


Figure 46 - Adding a Subject Entity Type

Figure 46 shows adding a Subject Entity Type. To add a subject entity type navigate to the top of the subject entity type page and click the plus button. From here it will take you to the page shown in Figure 46. Fill in the following fields to add a Subject Entity Type:

Name: Name of the subject entity type

Requires Additional Approval: Toggle box to indicate whether it needs to have additional approval.

Status: Toggle box to indicate status

Edit/View Subject Entity Type

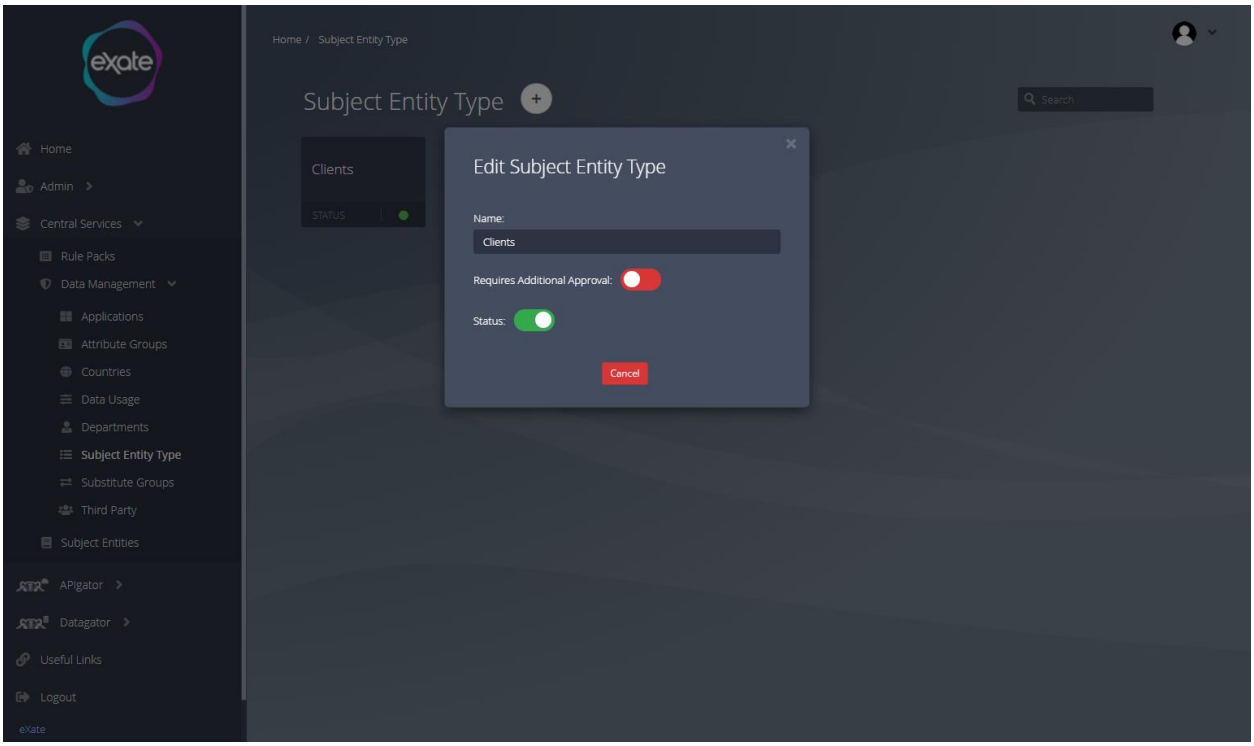


Figure 47 - Edit/View a Subject Entity Type

Figure 47 shows editing/viewing a subject entity type. To edit/view a subject entity type navigate to the subject entity type page and click the chosen subject entity type page. From here you can edit the fields shown in Figure 47.

Add a Subject Entity

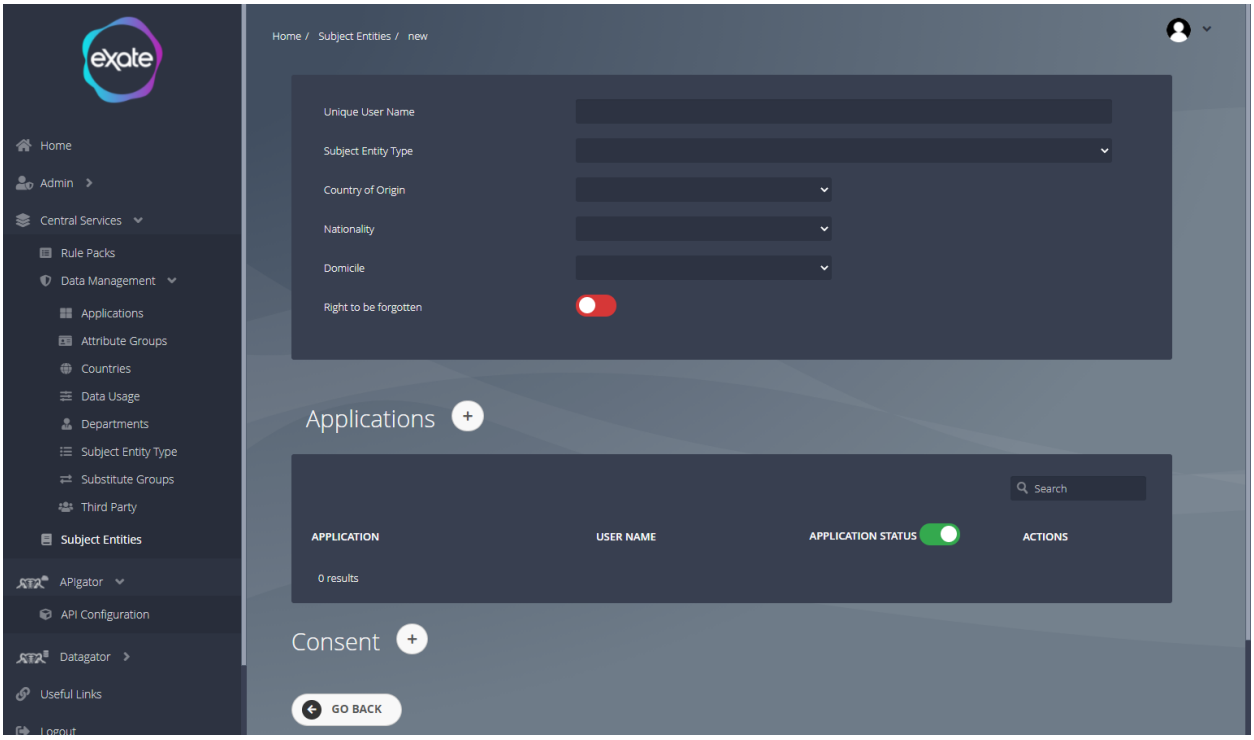


Figure 48 - Adding a subject entity

Figure 48 shows adding a subject entity. To add a subject entity, navigate to the plus button on the subject entity page. From here it will take you to the following page shown in Figure 48. To add a subject entity add the following fields:

Unique Username: Unique Username of Subject Entity

Subject Entity Type: Type of Subject Entity

Country of Origin: The Country where the User belongs.

Nationality: The Nationality used by the User.

Domicile: The permanent country of the User.

Right to be forgotten: The right to be forgotten is the right to have private information about a person be removed from Internet searches and other directories under some circumstances.

Add Application to a Subject Entity

Adding an application is to link an identifier in application to the master record.

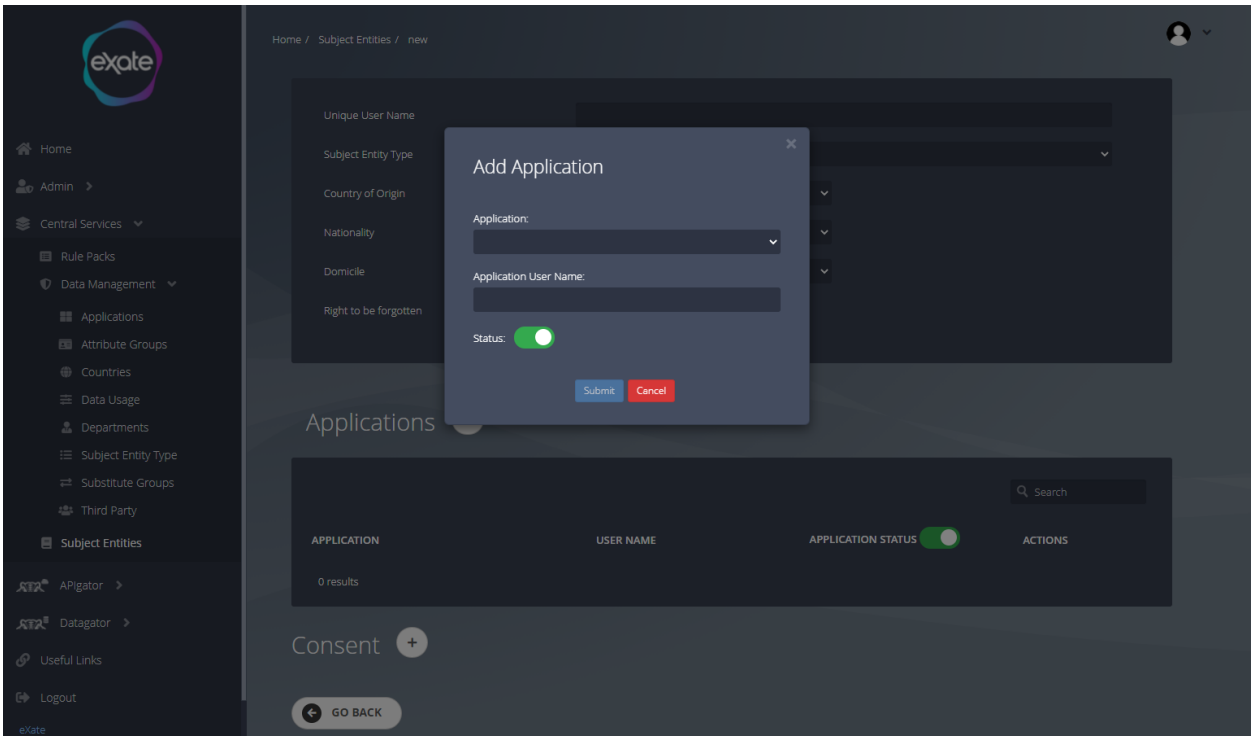


Figure 49 - Adding application to a Subject Entity

Figure 49 shows adding an application to a subject entity. To add an application click the plus button next to "Application" and fill in the following fields:

Name: Name of the application

Application Username: Username of the application

Status: Toggle box to indicate the status

Add Consent to a Subject Entity

Without the Consent a Subject Entity will not be shown/used anywhere i.e Until the approval is given by the concerned authority the Subject Entity will not be able to be viewed by anyone.

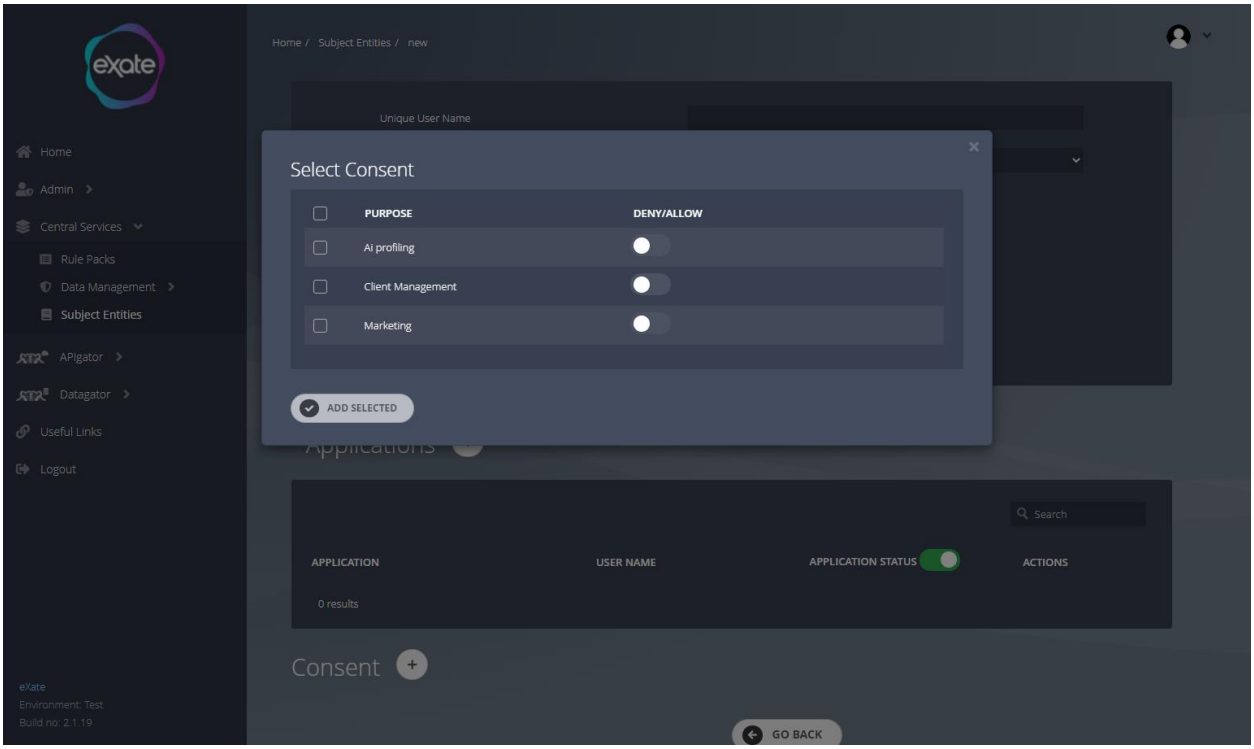


Figure 50 - Adding Consent to a Subject Entity

Figure 50 shows adding consent to a subject entity. To add consent click the plus button next to consent on the page shown in Figure 48. From here you can check the check boxes to add consent.

Edit a Subject Entity

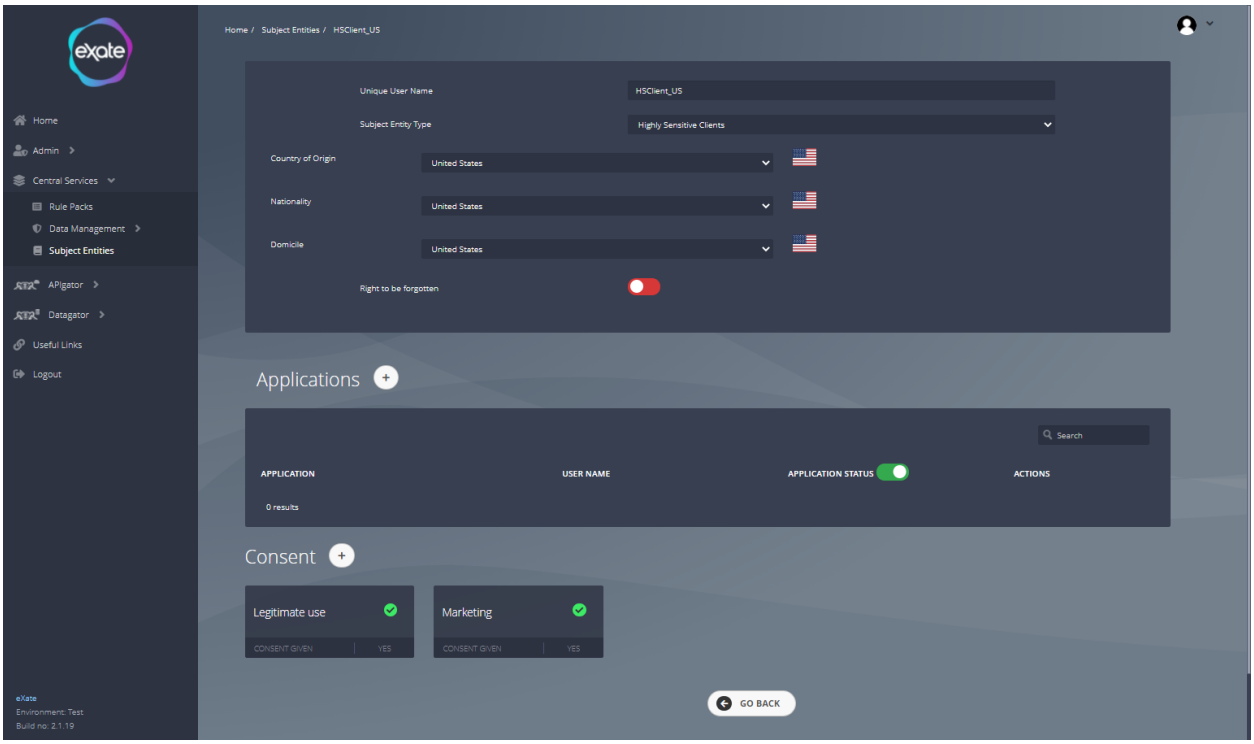


Figure 51 - Edit a Subject Entity

Figure 51 shows editing a subject entity, to access this, click the pencil icon next to the chosen subject entity on the subject entity page. From here you can edit and add all the fields shown in Figure 51.

Useful Links

Useful links connect the users to links that may be of use.

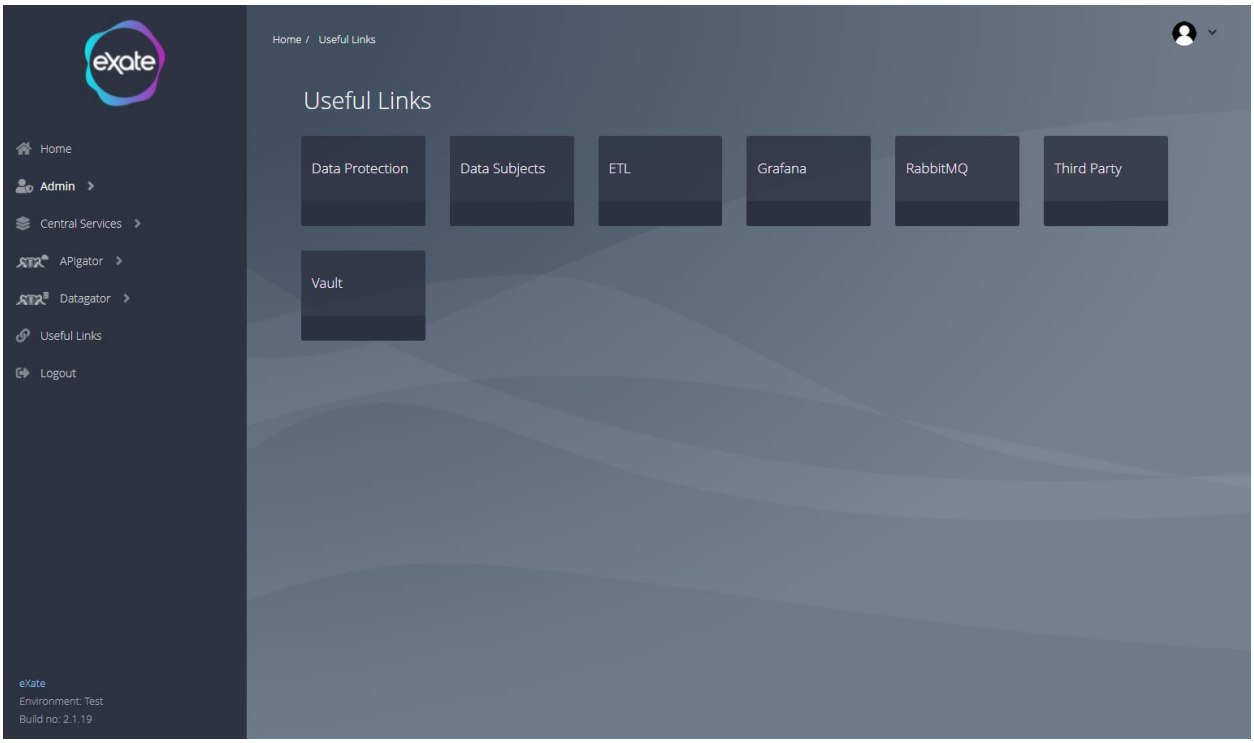


Figure 52- Useful Links Page

Figure shows the useful links page. To access this page, navigate to the left menu bar and click 'Useful Links'. This will direct you to the page shown in Figure 52.

List of useful links:

API Documentation:

- APIgator: The Data Protection API provides the relevant endpoints containing the ability to allow data to be protected at rest and the rules check for the request to reconstruct the data is done just in time immediately prior to processing. The service can also be used to restrict data at the point of the access request. The rules can be applied on existing payloads to verify that no restricted data is accidentally sent out via the API, without modifying the underlying data.
- ETL: The ETL API provides the relevant endpoints for asynchronous data protection and reconstruction, access logging data captured on protected data access and ETL based static data.
- Third Party: The Third-Party API is used to manage third party clients and third party jobs. Third Party means that the client who would be using the data can also have

third parties (clients who use their resources) and rules can be made for them as well. For example: If the eXate Product is used by a Company called "XYZ " then the subsidiaries of "XYZ " or their Business Associates can also use the eXate resources but that is decided by the Rule created for that purpose.

- Vault: The vault API is used for all internal key services and operations. Examples would be connection strings, default zones, we use sql server, default directories, ensure all the paths, usernames and pws for connecting purposes.
- Rules: The rules API is used for all the major operations in our portal application. Examples would be the creation of Rules to be applied on sensitive data when being shared to other countries.
- Static Data: Static data is used throughout our application in rules, manifest, subject entity and more. The API contains endpoints which allows users to insert, update attributes, countries, data usages, departments, subject entity type and third-party modules.
- Discovery: Static data is used throughout our application in rules, manifest, subject entity and more. The API contains endpoints which allows users to insert, update attributes, countries, data usages, departments, subject entity type and third-party modules.
- Administration: This API contains endpoints which are used by admins. An example would be getting, inserting, updating, tenant and user (firm admin) details.

Grafana:

- The Grafana button will take you to Grafana. Grafana is open source analytics and monitoring solution for every database

RabbitMQ:

- The RabbitMQ button will take you to the RabbitMQ login page. RabbitMQ is a message-queuing software.

Vault:

- The vault button will take you to the eXate vault (reference to the vault)
- Refer to the Vault section for a complete guide on how to use the eXate vault.

APIgator

APIgator has been designed to protect sensitive data and ensure only the correct, relevant information is provided to the right people. APIgator eliminates the risk of over-distributing data and allows data policies to be applied centrally.

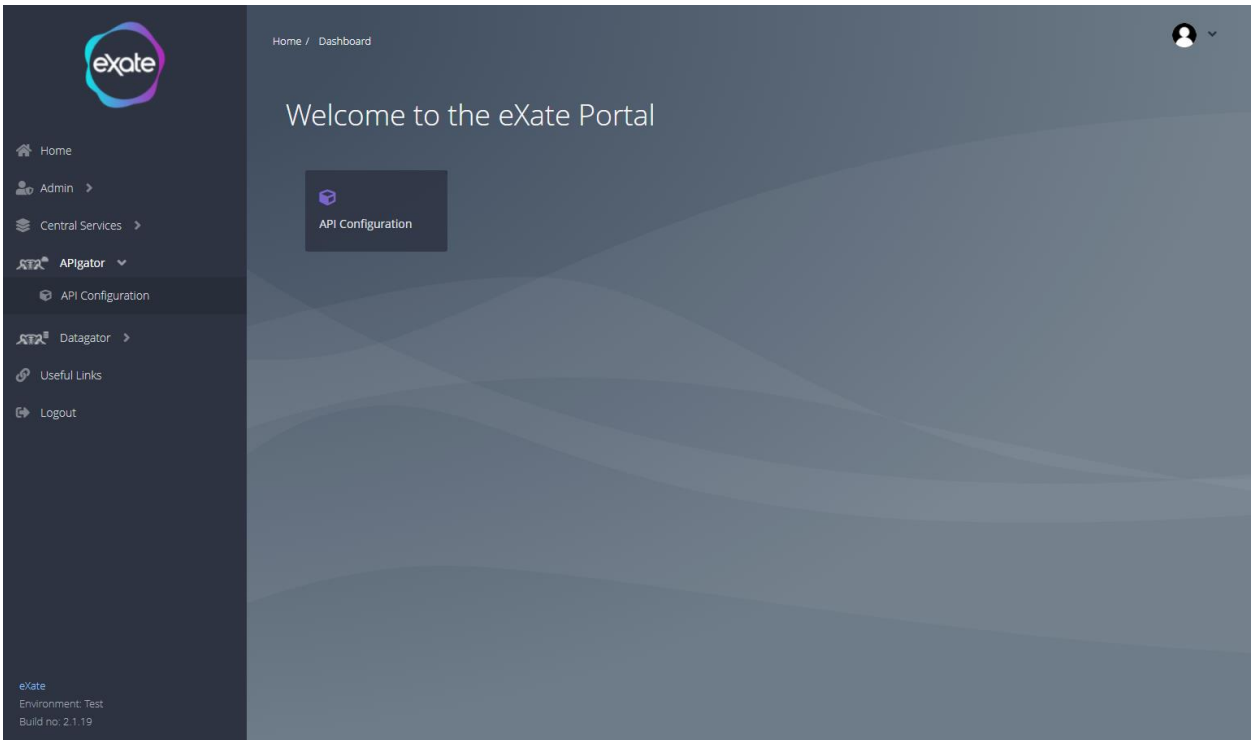


Figure 53- APIgator Page

Figure 53 shows the APIgator page in the eXate platform. To access APIgator, navigate to the left menu bar and click “APIgator”' from here you are able to access the API configuration.

API Configuration

They are XML and JSON payloads through which you test and see the result of the data that the user wants to protect.

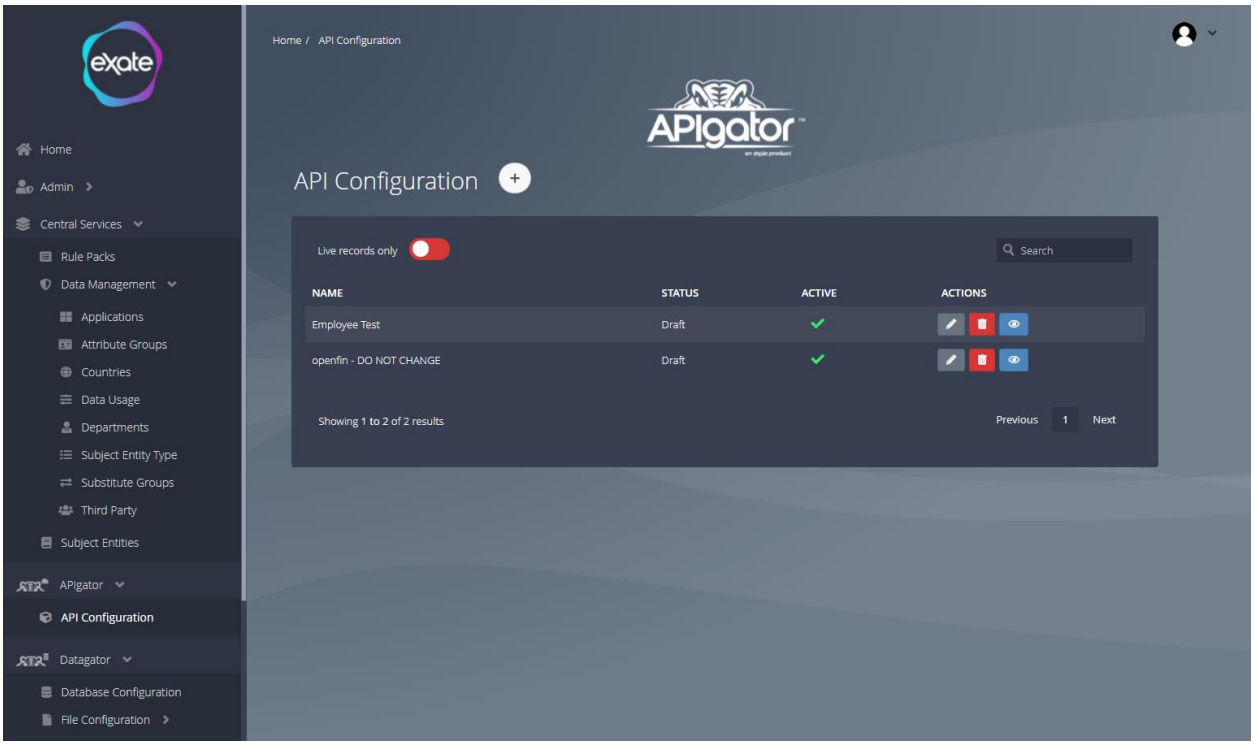


Figure 54 - API Configuration

Figure 54 shows the API configuration page. To access APIgator, navigate to the left menu bar and click “APIgator”' and then “API Configuration” from here you are able to add, edit and delete API configurations.

Add API Configuration

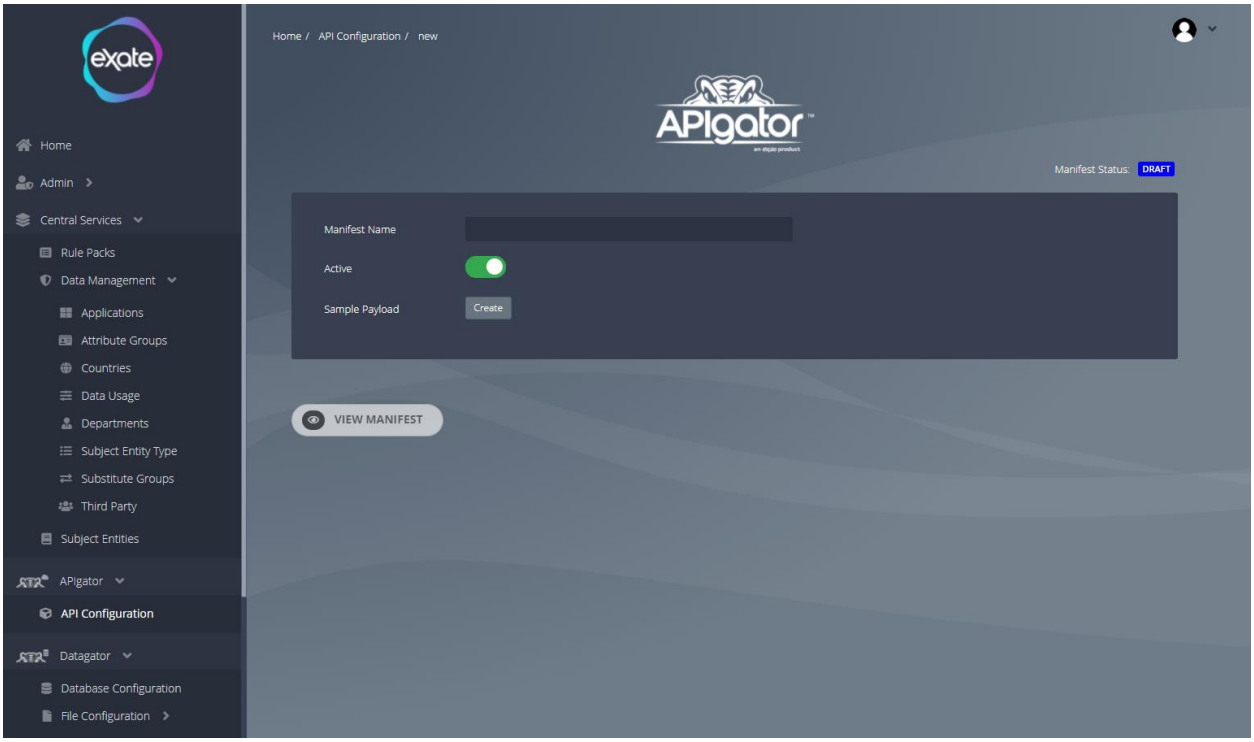


Figure 55 - Add API Configuration

Figure 55 shows adding an API configuration. To add an API navigate to the plus button at the top of the API configuration page. From here it will take you to the page shown in Figure 55. To add an API fill in the following fields:

Manifest Name: Name of manifest

Active: Toggle box to indicate whether or not it is active

Sample Payload: Button to create Sample Payload

Create Sample Payload

When a sample payload is created. You can click the checkboxes of the attribute to protect. This will set the attribute to be anonymised going forward. A modal will appear to determine what type of attribute the data is and if it is linked to a data asset map it to the subject entity identifier. This tags the data with what the data is (like a data dictionary) and who it belongs to.

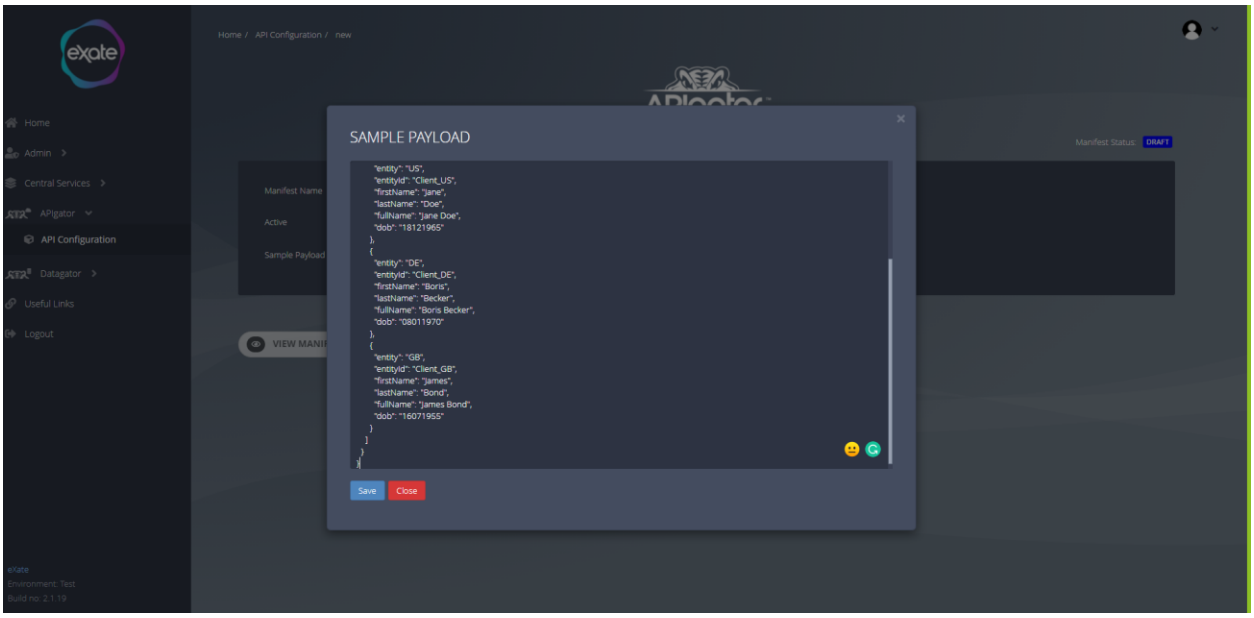


Figure 56 - Creating a Sample Payload

Figure 56 shows creating a sample payload. To create a sample payload click create when adding an API.

HTML Tree

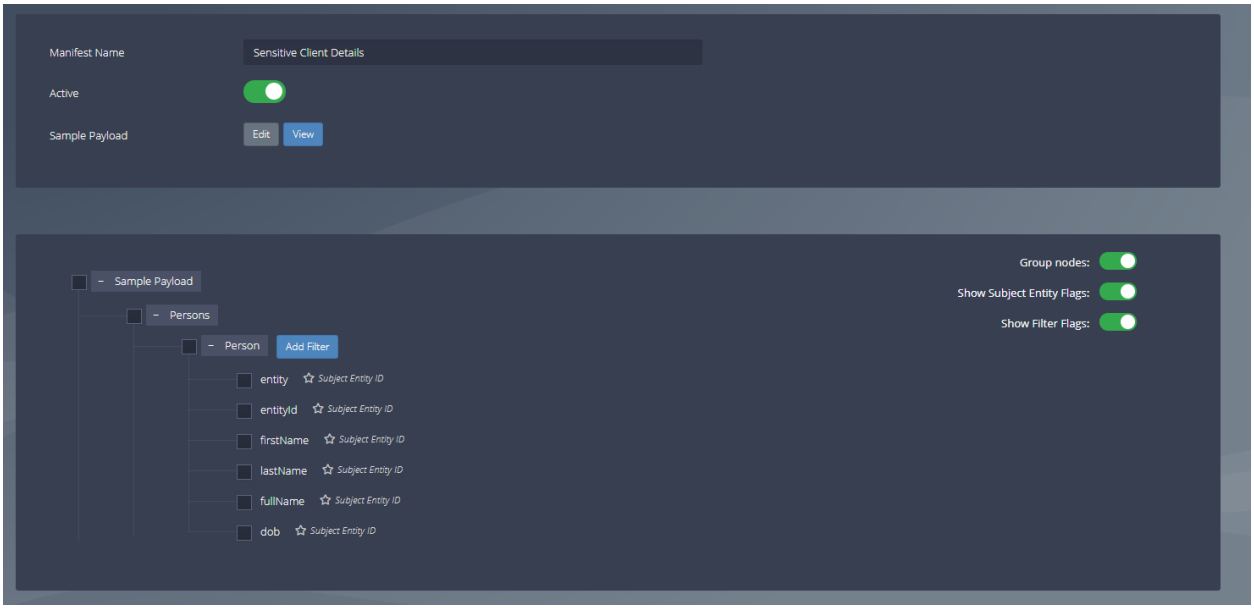


Figure 57 - HTML Tree

Figure 57 shows a HTML tree that matches the sample payload. When a sample payload has been added, edited and saved it will render a HTML that matches the structure of the sample payload that has been added. The tree has nodes which can be selected, when a

node is selected it is reflected below in a table called selected attributes, shown in Figure 58

Selected Attributes Table

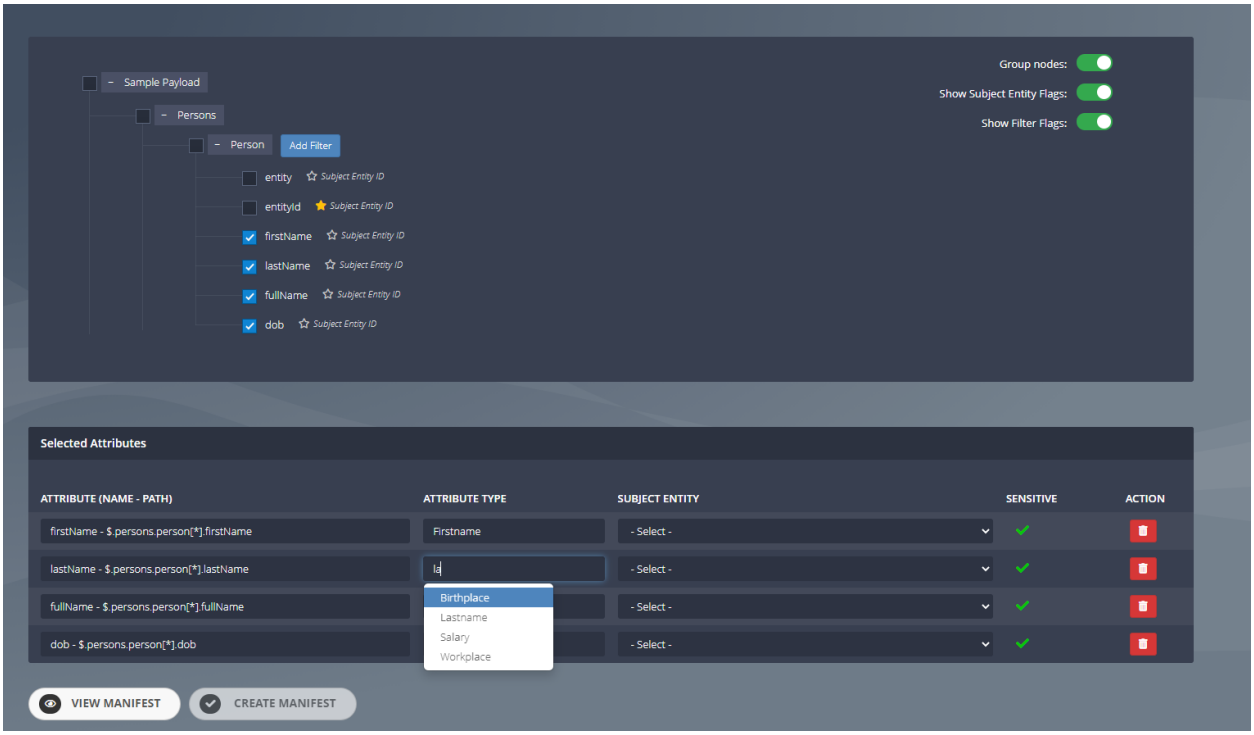


Figure 58 - Selected Attributes Table

Figure 58 shows the selected attributes table reflecting the nodes that have been selected in the HTML tree. This selected attribute table shows another way to display the attributes selected for ease of use.

The first column 'Attribute Name' also shows the JSON path expression to identify that particular attribute. It is a unique path to be able to protect the information. The second column 'Attribute Type' allows you to name the attribute with lookup from the available attribute types.

Add Filter

Adding an additional filter to an attribute is to add any additional conditional expressions. With adding a filter you are able to select the element name, then choose the condition and the value.

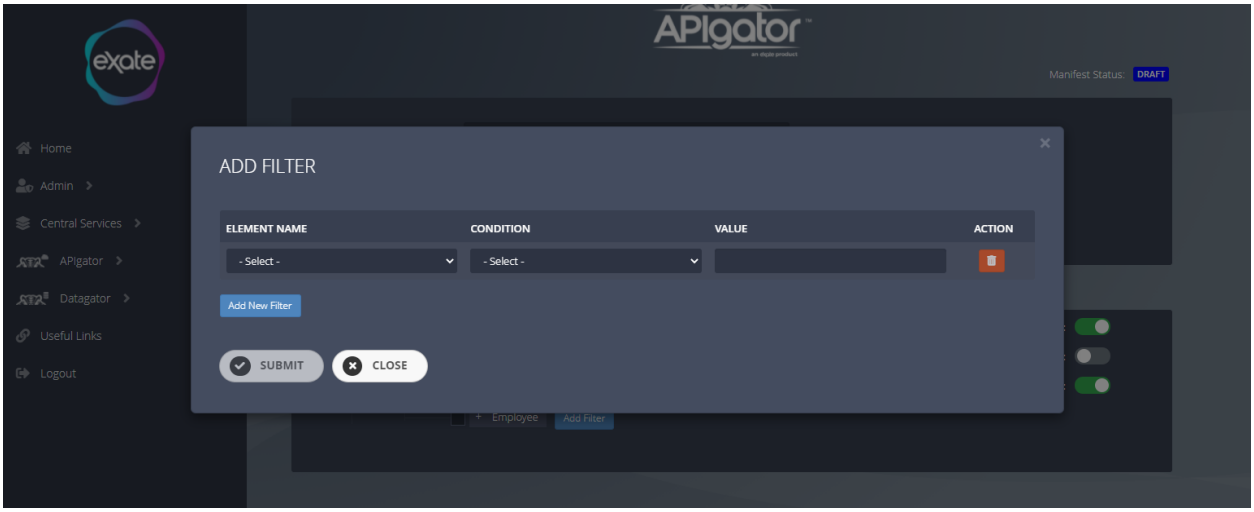


Figure 59- Adding a Filter to an Attribute

Figure 59 shows how to add and add a filter. To navigate to the page click the add filter next to the attribute you want to add conditional expressions to. When adding a filter you are able to add more than one by clicking the 'Add New Filter'. Once you have created the filter to submit click the 'Submit' button below.

Subject Entity ID

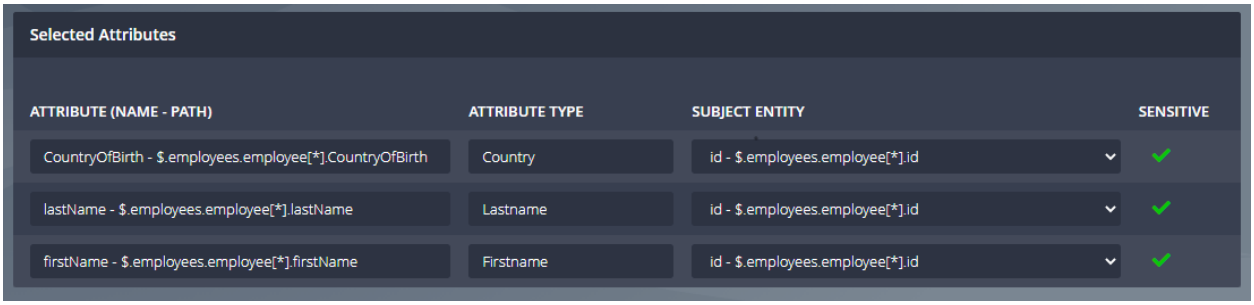


Figure 60 - Subject Entity ID

Figure 60 shows the third column 'Subject Entities'. Which displays a drop down menu when an attribute has been starred as a 'Subject Entity ID'. In Figure 57 it shows a toggle box with the name 'Show Subject Entity Flags' when this toggle box is turned on, next to the attributes a star option will appear. From here you can select what attributes you want to star as Subject Entity ID. As shown in Figure 57 the starred attributes will appear in the drop down menu in Subject Entity. This is to show if there are any unique identifiers associated with the payload. For example, if someone exercises the right to be forgotten we can uniquely identify that record we can support that use case.

Once all of the steps have been completed, you can then create the manifest, by clicking the 'Create Manifest' button at the bottom.

Submit for Approval

Once you have created the manifest, you can then submit the manifest for approval.

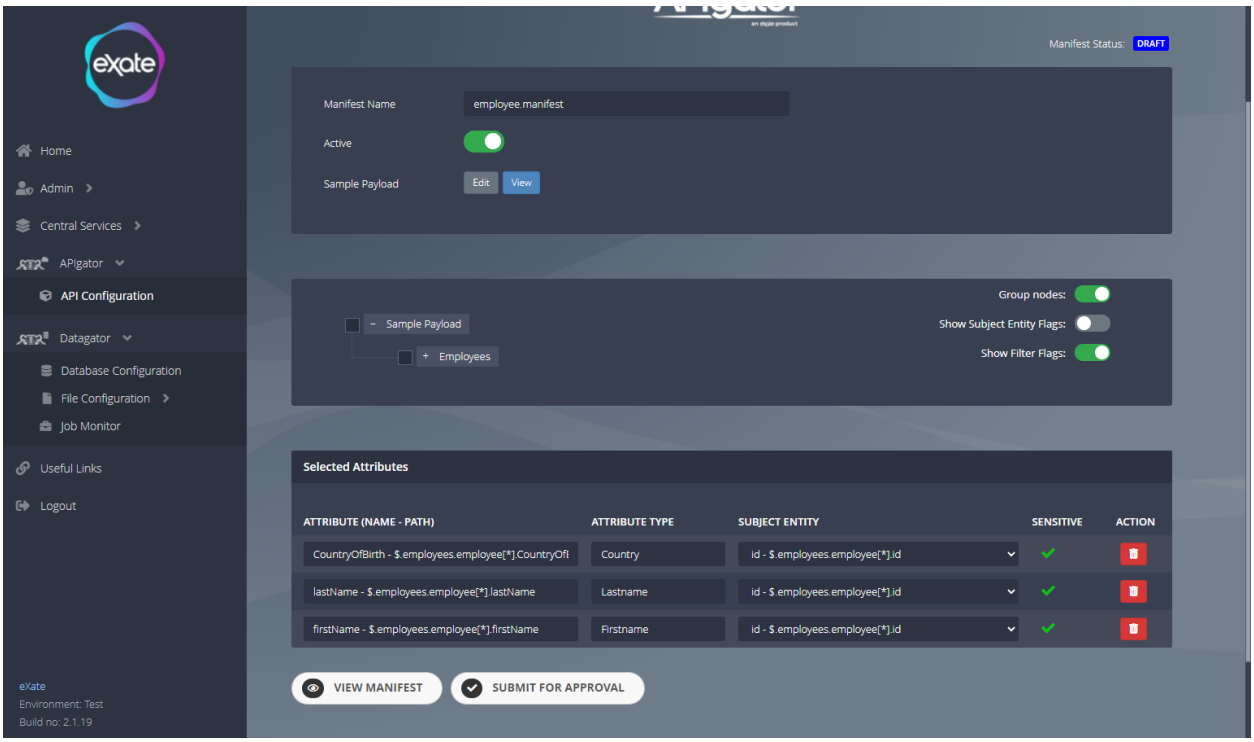


Figure 61 - Submit for Approval

To submit the manifest for approval, navigate to the chosen manifest and click the 'Submit for Approval Button' seen in Figure 61, once this has been clicked the manifest can either be approved or rejected.

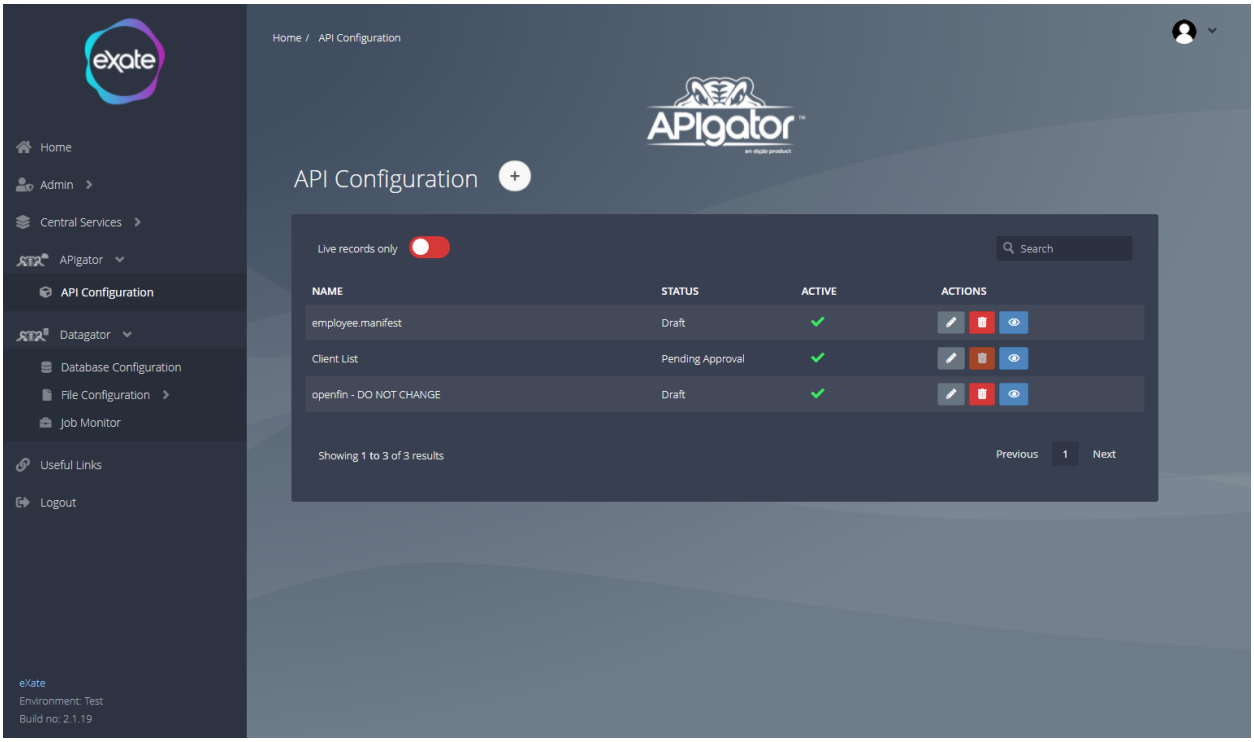


Figure 62 - Status Field

As you can see in Figure 62 when a manifest has been submitted for approval the status field will change to 'Pending Approval'.

Approving/Rejecting a Manifest

Once a manifest has been submitted for approval it will either need to be approved or rejected.

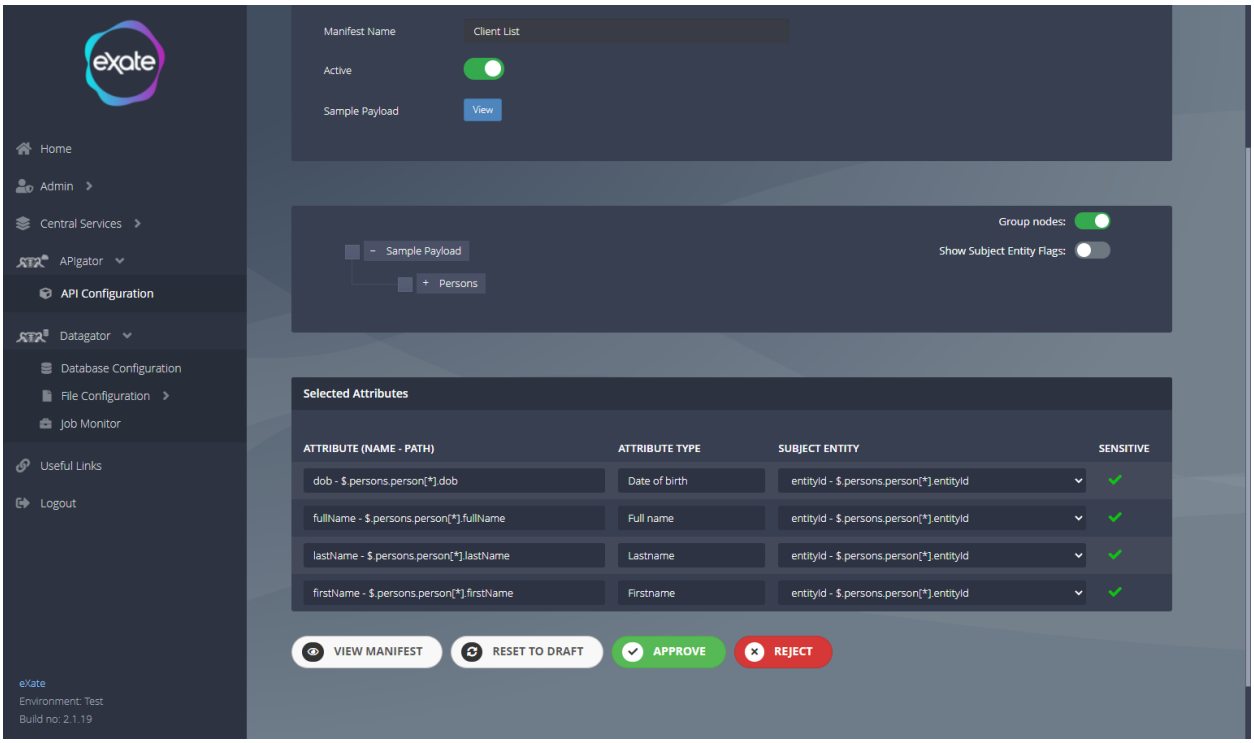


Figure 63 - Approving/Rejecting a Manifest

Figure 63 shows that when you click on a Manifest that is pending approval, two buttons will appear below - 'Approve' and 'Reject'. Once the manifest has been reviewed to either approve or reject click the matching button.

View Existing API Configuration

Once a manifest has been created you can then view the manifest with all the details available to see.

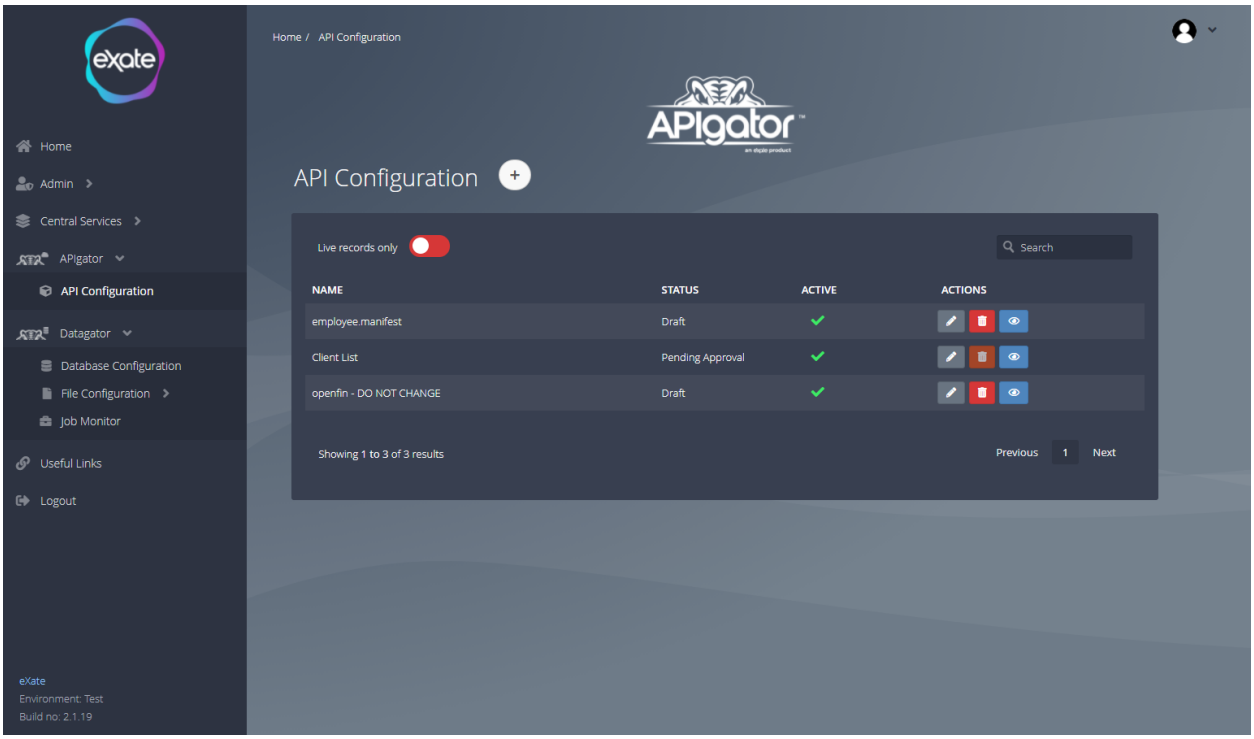


Figure 64 - View an Existing API Configuration

To view an API configuration, navigate to the eye icon next to the chosen API configuration shown in Figure 64. This will then navigate you to the page shown in Figure 65.

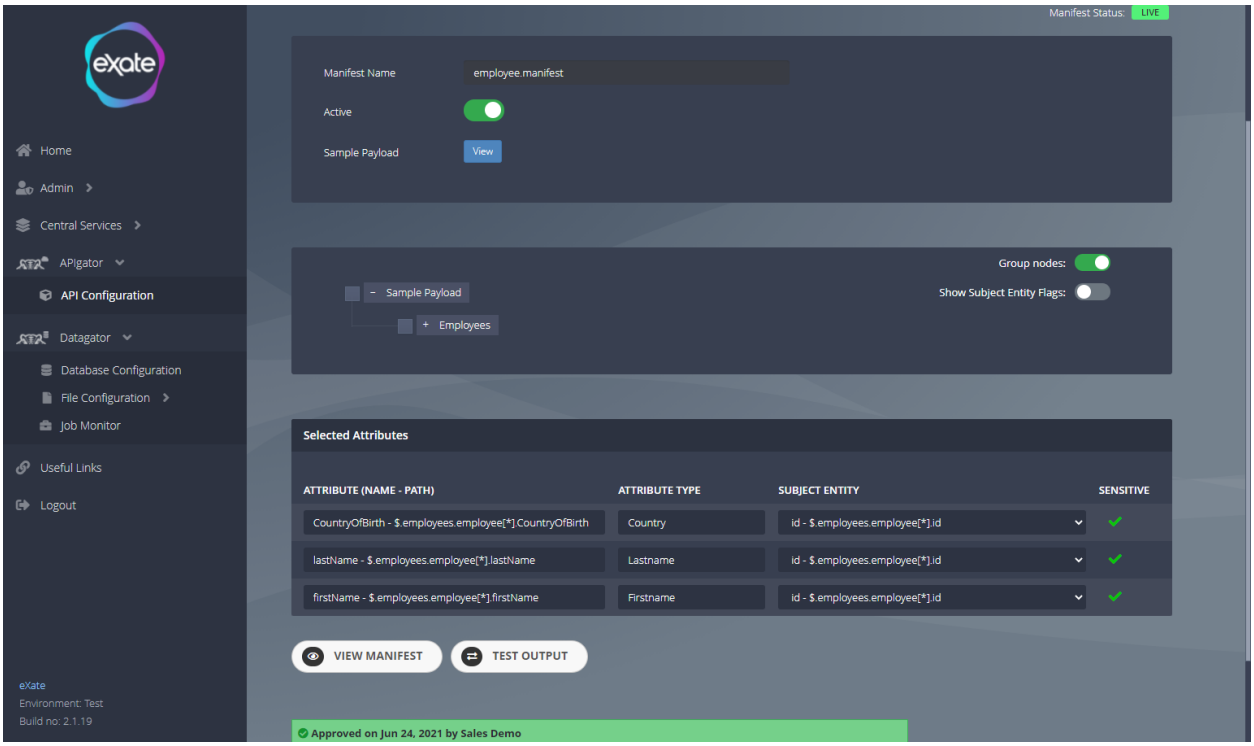


Figure 65 - An API Configuration

Figure 65 shows the existing configuration that was chosen to view. From here you can view the manifest by clicking the 'View Manifest' button. You are also able to see the HTML tree from the sample payload and the selected attributes from that HTML tree.

Test Output

To test a manifest to define how we are going to execute this job. Test harness to see if you can access the information within the manifest.

Test Manifest

Run as User

What would you like to do with the data?

- ( ) Protect the data
- (•) Access the data

Internal or external sharing? Internal

How do you want to access the data? Restrict

Purpose of Use: Administration

Apply Localisation

Owning Country: United Kingdom

Requesting Country: United Kingdom

Protect NULL values

Use Restricted Text

Restricted Text: Restricted Access

Payload


```
{
 "employees": {
  "employee": [
   {
    "id": "Employee1",
    "firstName": "Orlando",
    "lastName": "Gee",
    "fullName": "Orlando Gee",
    "CountryOfBirth": "US",
    "DOB": "18121965",
    "photo": "https://pbs.twimg.com/profile_images/735509975649378305/B81JwLT7.jpg"
   },
   {
    "id": "4",
    "firstName": "Robert ",
    "lastName": "Mugabe",
    "fullName": "Robert Mugabe",
    "CountryOfBirth": "ZW",
    "DOB": "18121965",
    "photo": "https://pbs.twimg.com/profile_images/735509975649378305/B81JwLT7.jpg"
   },
   {
    "id": "2",
    "firstName": "Maria",
    "lastName": "Sharapova",
```


TEST | RESET | RESET PAYLOAD | CLOSE

Figure 66 - Test Manifest

To navigate to the page shown in Figure 73, click the 'Test Output' button in Figure 65. From here you can complete the following fields to test the output of the Manifest.

Test Output - Fields shown for both protect and access the data radio buttons

Run as User: Toggle box to indicate whether to run as user

What would you like to do with the data? Radio button to choose whether to ***Access the Data*** or ***Protect the Data***

Internal or External sharing? Drop down box to indicate whether this is for external or internal sharing

Apply Localisation: Toggle box to indicate whether to apply localisation or not

Protect NULL Values: Toggle box to indicated whether or not to protect NULL values

Protect the Data - Fields shown when clicking protect the data radio button

How do you want to protect the data? Drop down box to indicate how you want to protect the data

Should the data be consistent? Drop down menu to indicate whether the data should be consistent.

Snapshot Date : Date of snapshot

How do you want to access the data? Drop down box on how you want to access the data

Purpose of Use: Drop down box to indicate the purpose of use

Country Code: Country Code

Preserve String Length: Toggle box to indicate to preserve string length or not

Access the Data - Fields shown when clicking access the data radio button

Owning Country: Text box to enter the country owning the maifest

Requesting Country: The country requesting the data

Use Restricted Text: Toggle box to indicate whether or not to have restricted text

Restricted Text: The restricted text used to show what is restricted

Sample Payload: XML or JSON payload added to the API Configuration updated when the test has been run.

Once you have completed the following fields you can either test, reset, reset payload or close. To do any one of these click the matching button.

- When you click the 'Test' button the sample payload section will update matching the test that has been run.
- When you click the 'Reset' button
- When you click the 'Reset Payload' button the payload will reset to its original values.

Edit Existing API Configuration

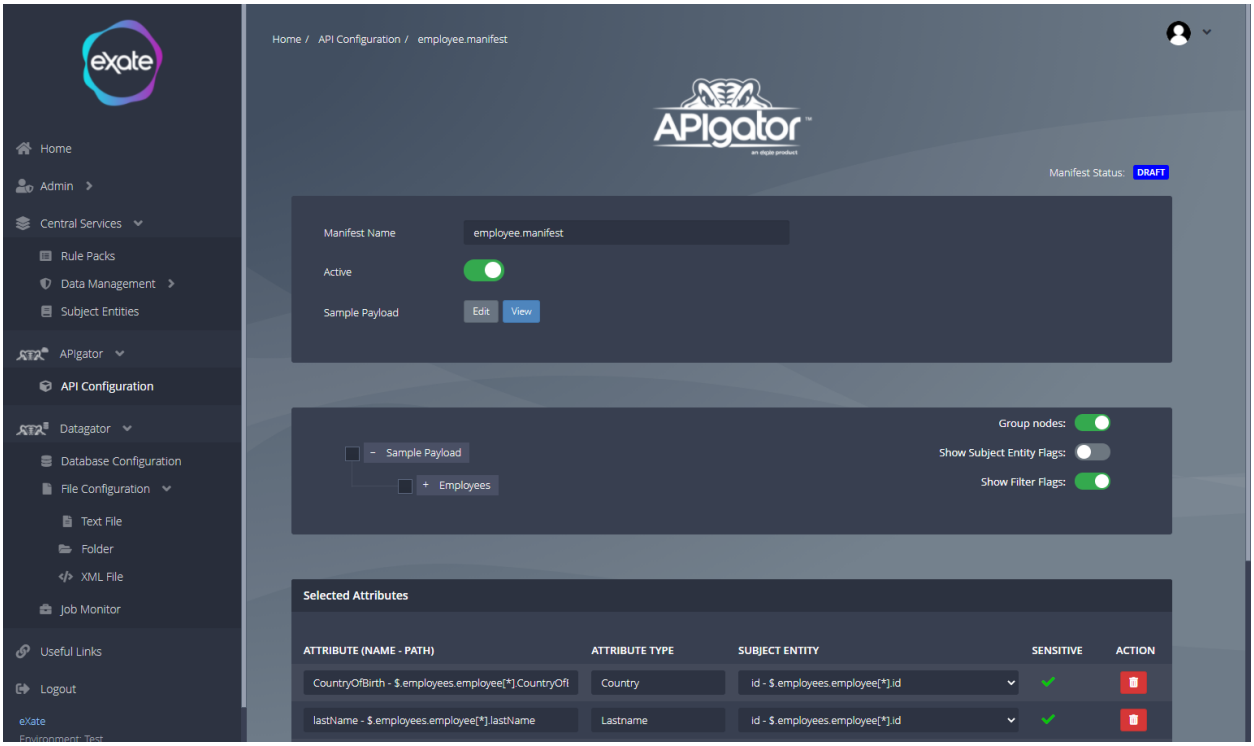


Figure 67 - Edit Existing API Configuration

Figure 67 shows editing an API configuration. To edit an API navigate to the pencil icon next to the chosen API on the API configuration page. From here you can edit the following fields shown in Figure 67.

Datagator

The Datagator contains database and folder/file configurations on which the user can apply the relevant data protection techniques via eXate ETL tooling.

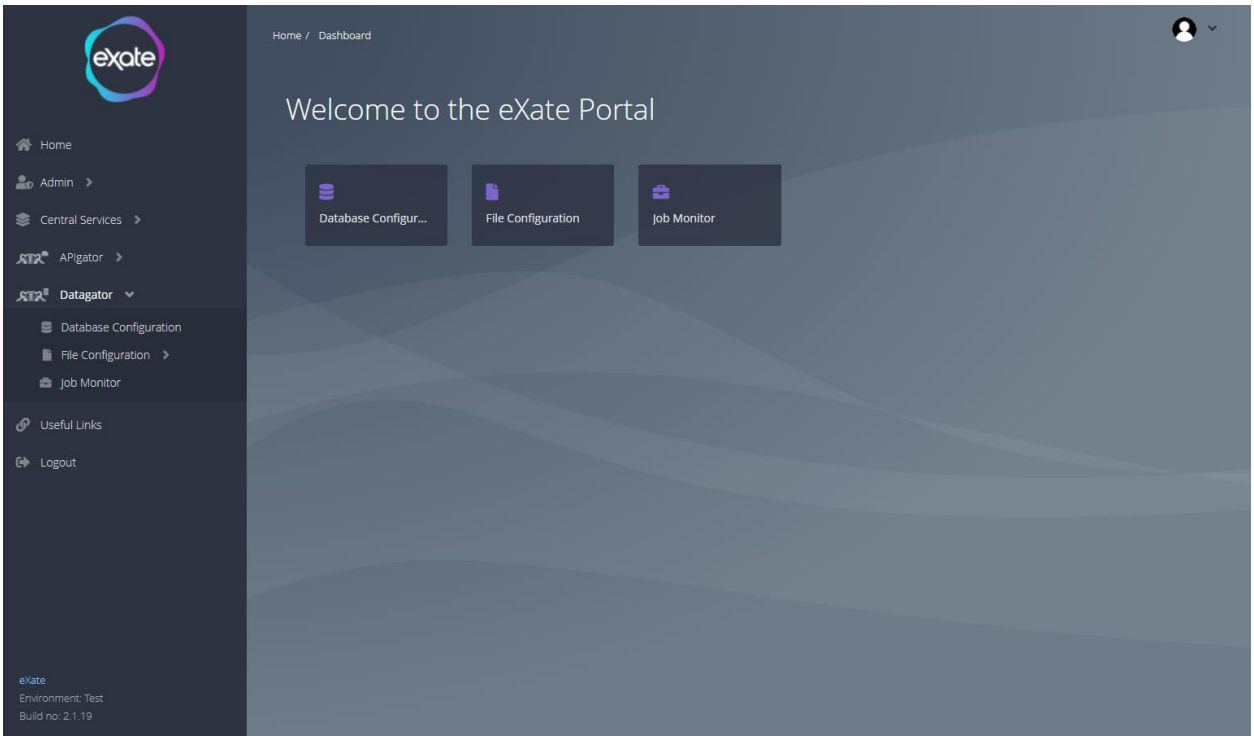


Figure 68 - Datagator

Figure 68 shows the Datagator page. To access the Datagator page navigate to the left menu bar and click “Datagator"' from here you are able to access the Database Configuration, File Configuration and Job Monitor.

Database Configuration

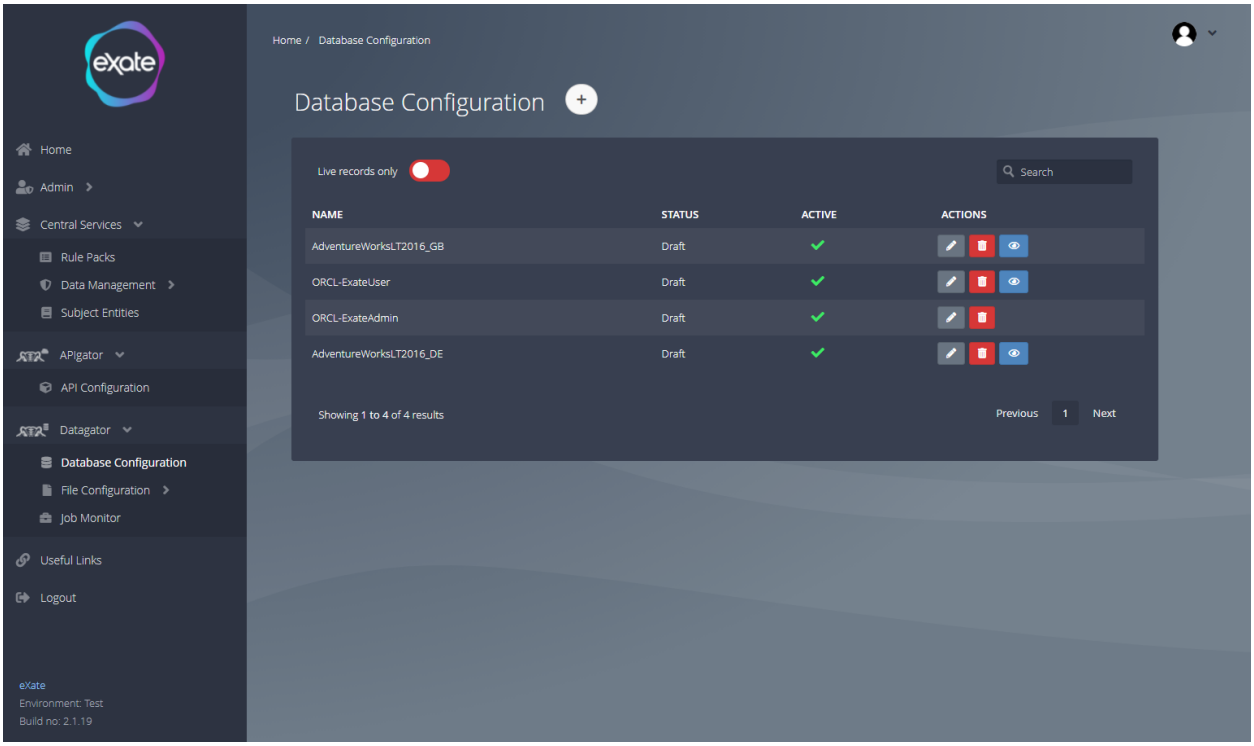


Figure 69 - Database Configuration

Figure 69 shows the database configuration page. To access the database configuration navigate to the left menu bar and click “Datagator”' and then “Database Configuration” from here you are able to add, edit and delete database configuration.

View an Existing Database Configuration

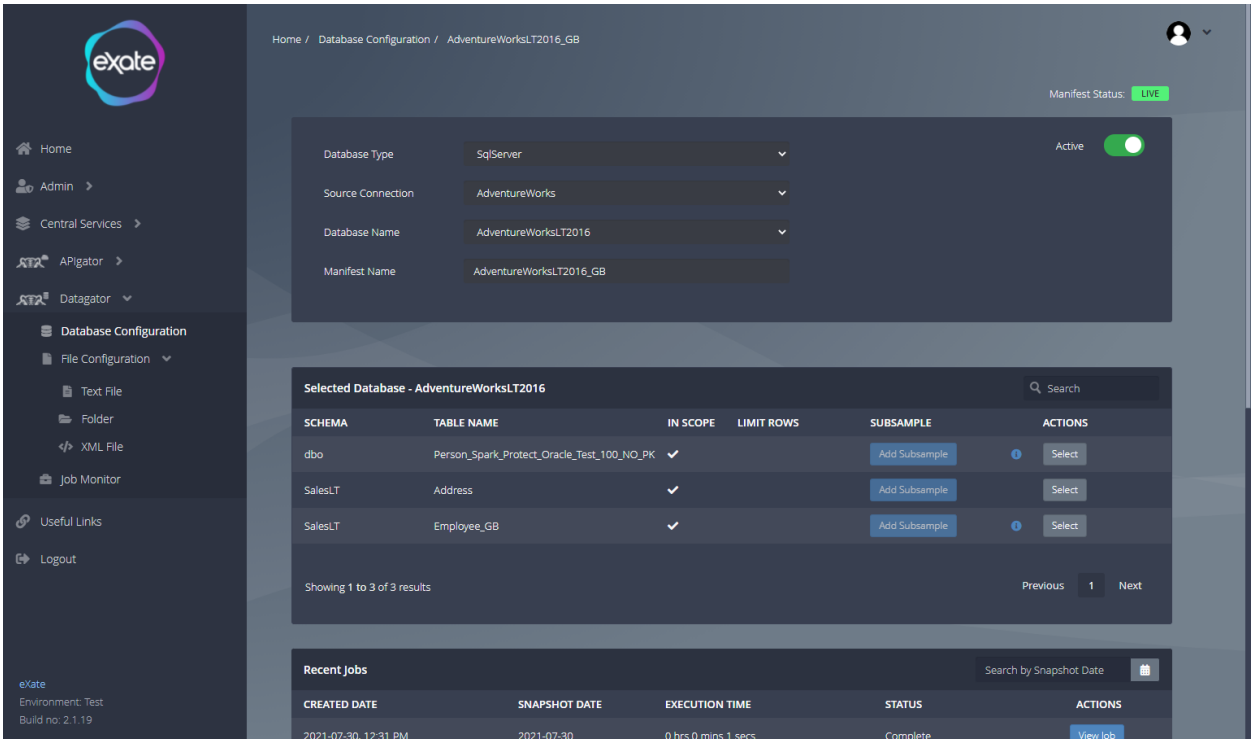


Figure 70 - Viewing an Existing Database Configuration

Figure 70 shows an existing database configuration. From here you can view the fields when creating the database configuration. From here you can see the selected databases and recent jobs.

Selected Databases

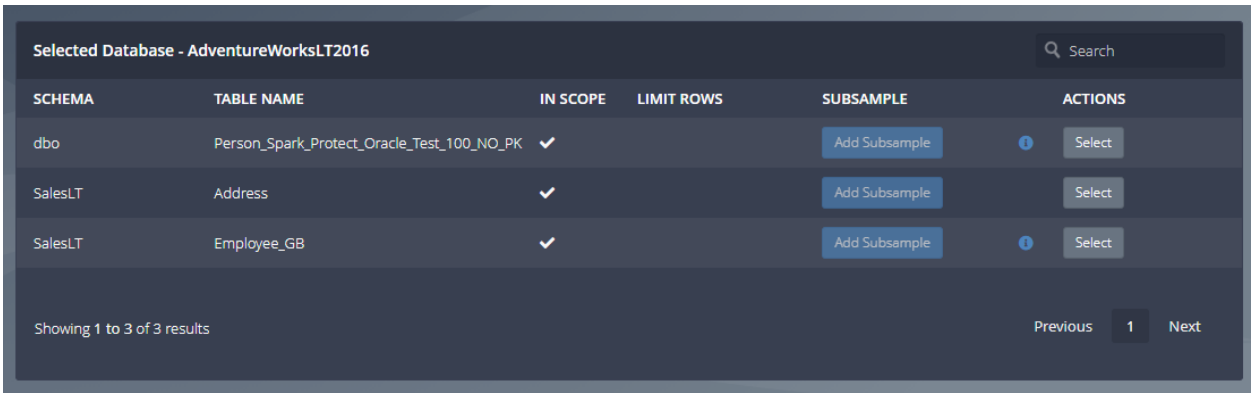


Figure 71 - Selected Databases

Figure 71 shows the selected databases when viewing an existing database configuration. You are able to see the Schema, Table Name, In Scope, Limit Rows, Subsample and Actions.

Recent Jobs

Figure 72 - Recent Jobs

Figure 72 shows the recent jobs of the selected database configurations. From her you can see the creation date, snapshot date, execution time and status. You can also view each job shown.

View Recent Job

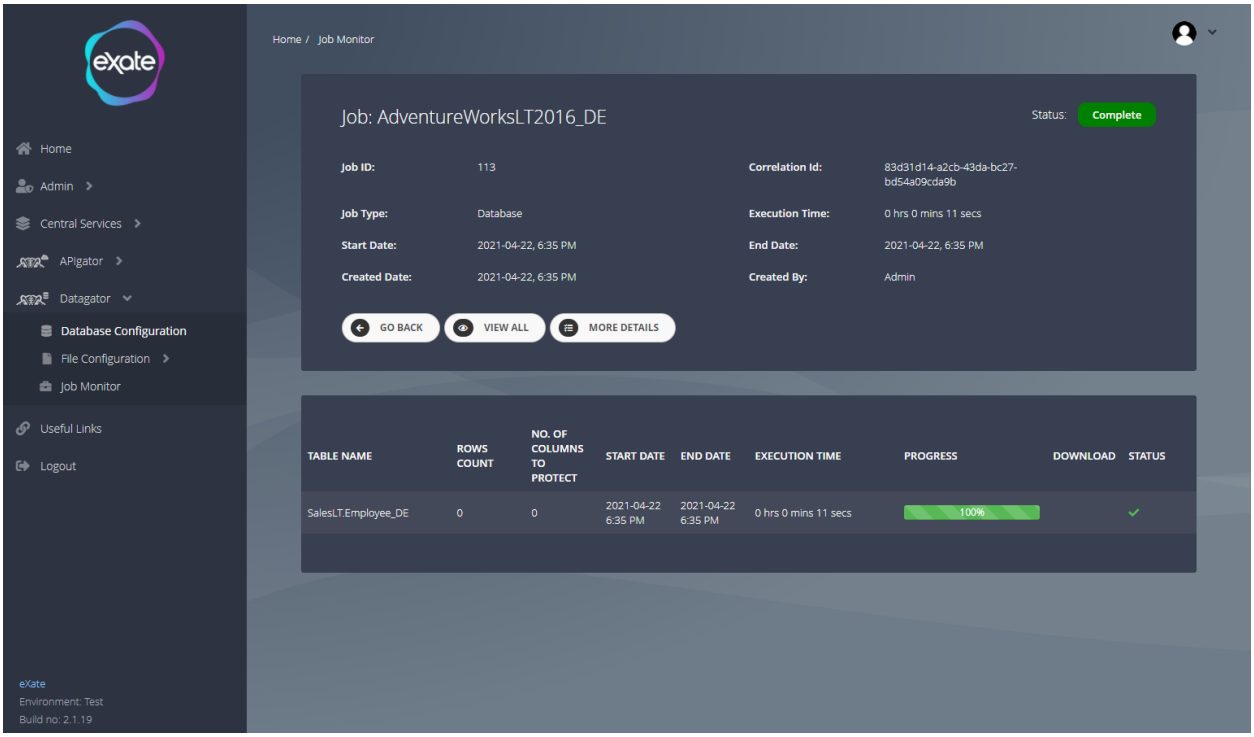


Figure 73 - View Recent Job

Figure 73 shows the job chosen. To view a recent job navigate to the database configuration and click the view job button next to the chosen job. Viewing a job allows you to see all the necessary information associated such as job type, execution time and who the job was created by.

Add Database Configuration

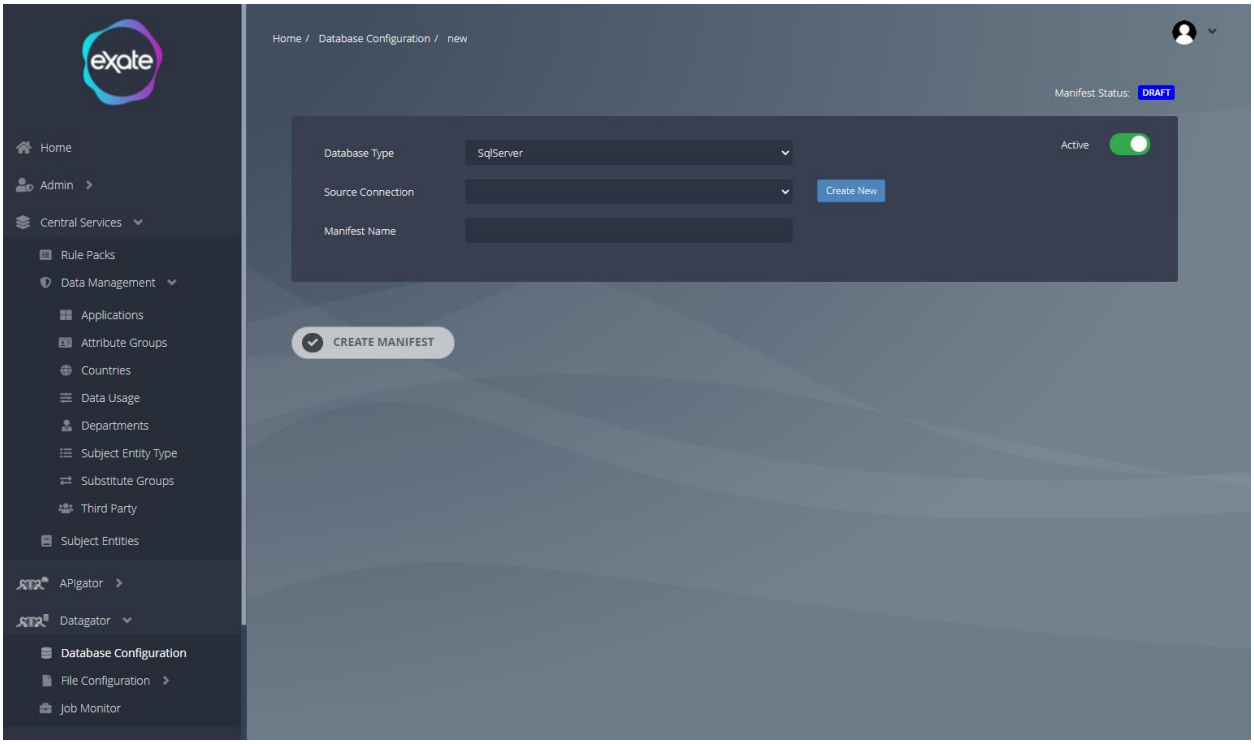


Figure 74 - Add Database

Figure 74 shows adding a database configuration. To add a database, click the plus button at the top of the Database Configuration page, from here it will take you to the page shown in Figure 74. To add a database fill in the following fields:

Database Type: Type of database

Active: Toggle box to indicate whether active or not

Source Connection: Connection Source

Manifest Name: Name of the manifest

Create New Source Connection

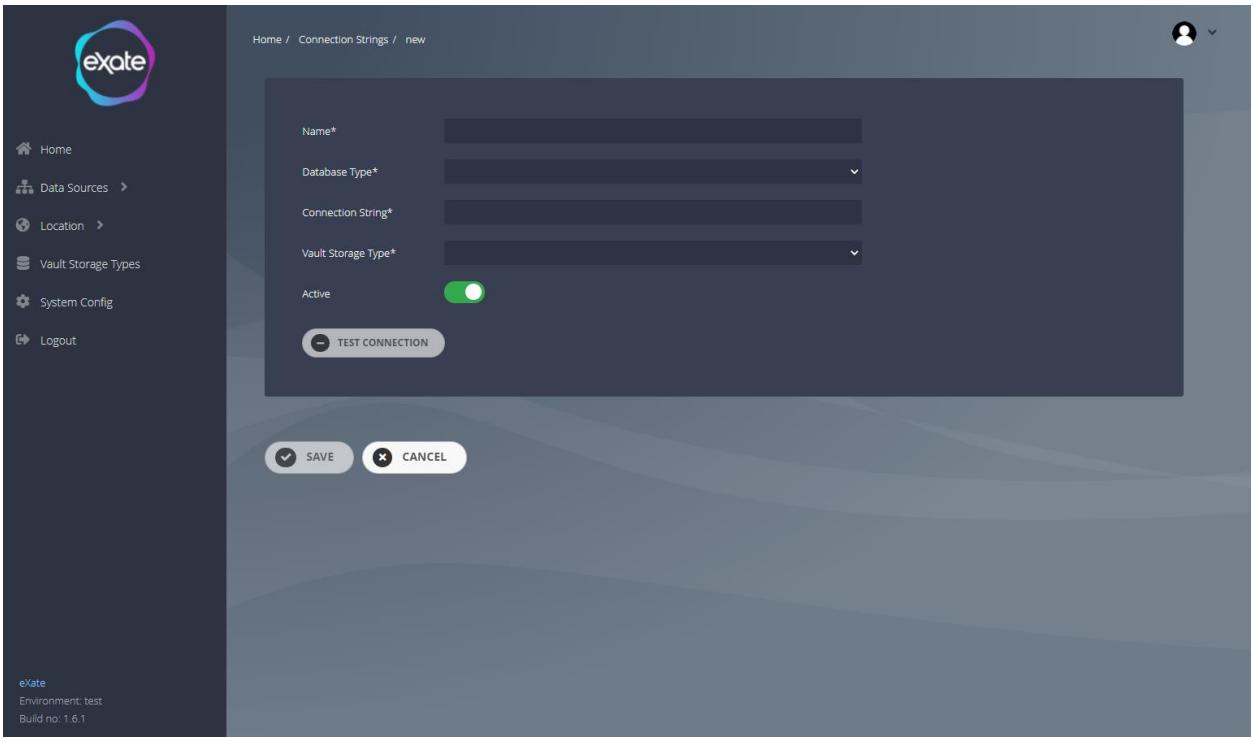


Figure 75 - Creating a New Source Connection

Figure 75 shows creating a new source connection. To navigate to this page create a database configuration and click the button 'Create New' next to the source connection field. When clicking this button it will take you to the eXate vault shown in Figure 75. To create a new source connection. Fill in the following fields:

Name: Name of the connection string

Database Type: Type of the database

Connection String: String that specifies information about a data source and the means of connecting to it.

Vault Storage Type: Type of Vault Storage

Active: Toggle box to indicate whether the connection string is active or inactive

Edit Database Configuration

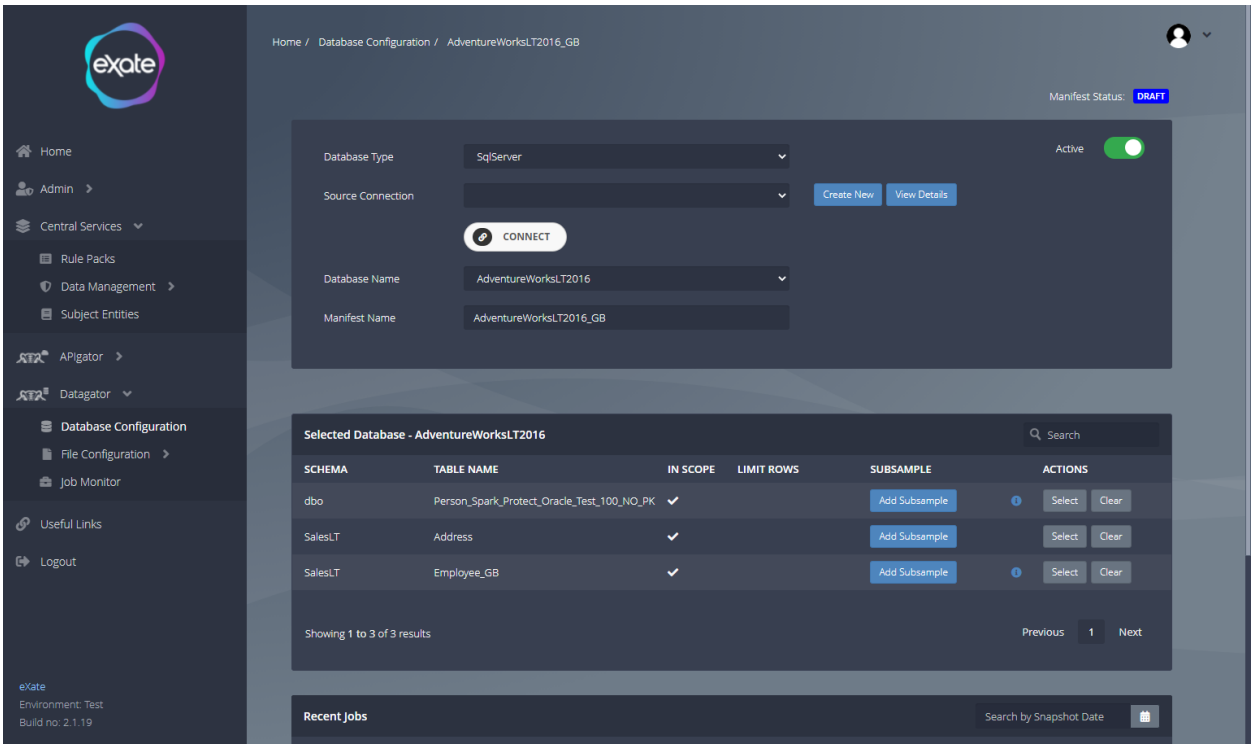


Figure 76 - Edit Database Configuration

Figure 76 shows editing a database configuration. To edit, locate the pencil icon next to the chosen database on the Database Configuration page. From here you can edit the following fields shown in Figure 76.

The select button allows you to decide which database you want to share.

Create New Source Connection

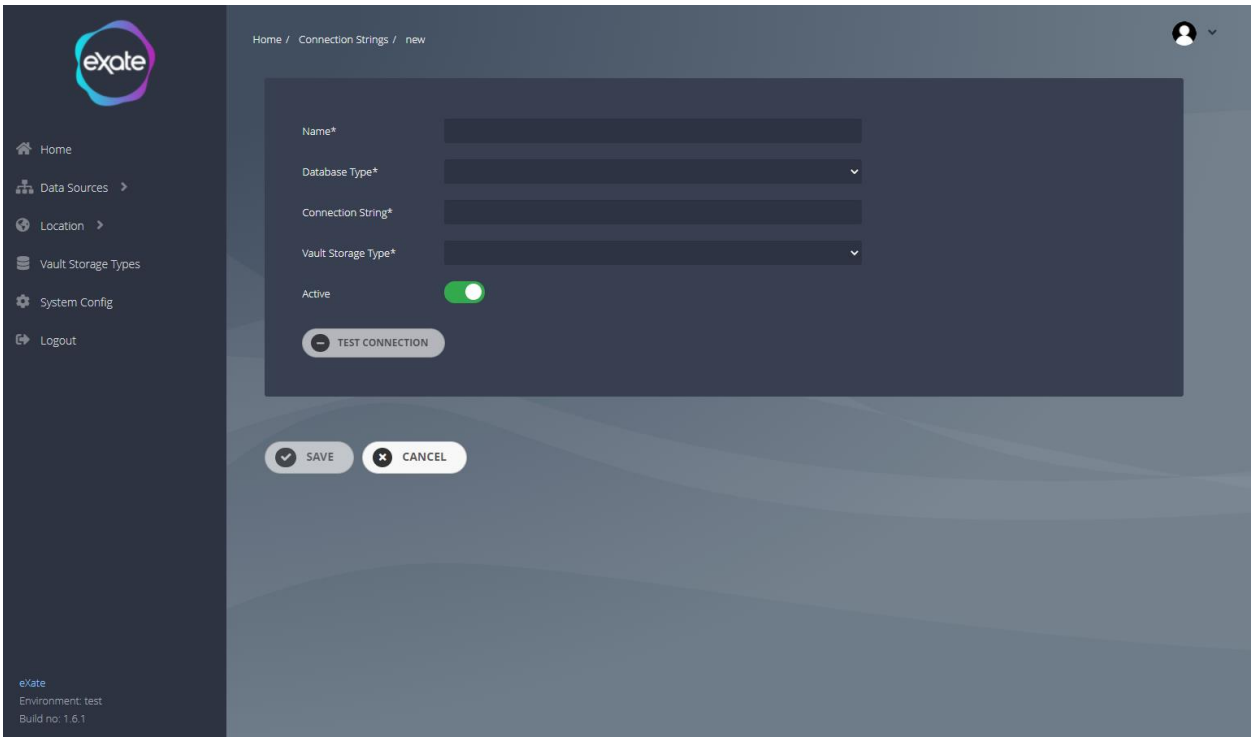


Figure 77 - Create New Source Connection

Figure 77 shows creating a new source connection for an existing database connection string. To navigate to this page shown in Figure 77, click the create new next to the source field under the existing database configuration.

View Details

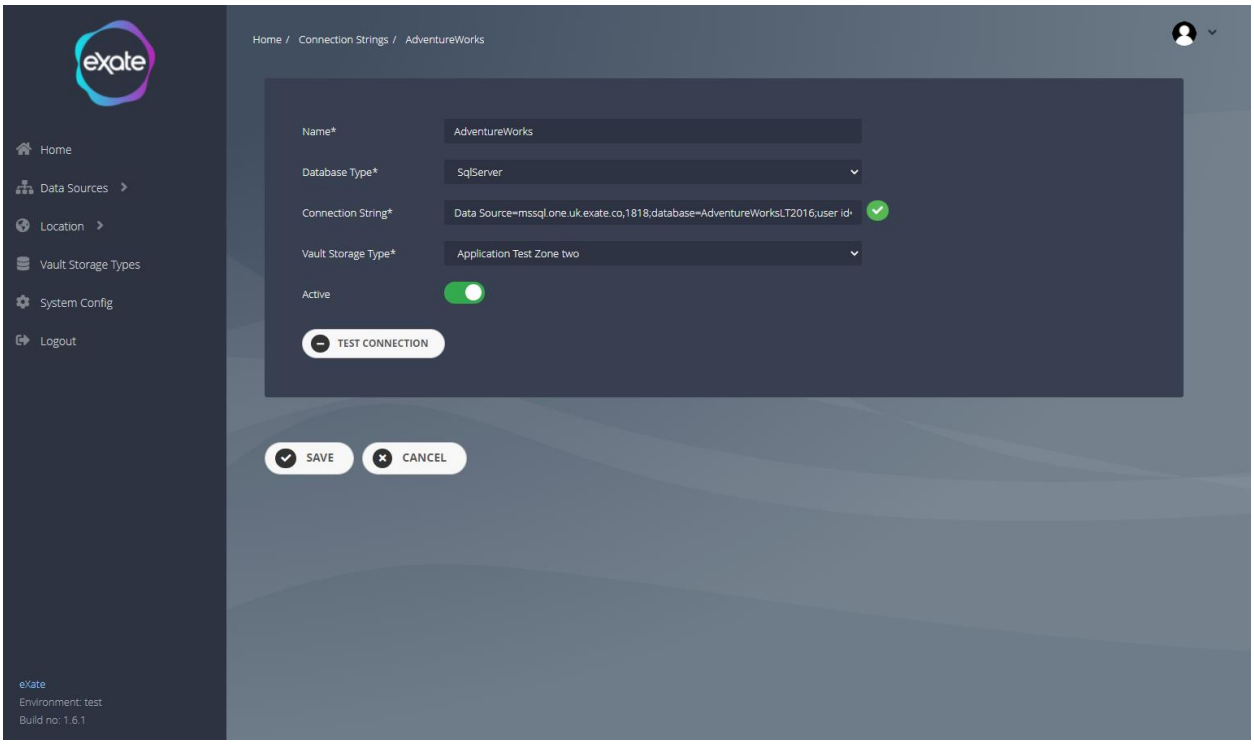


Figure 78 - View Details of Existing Database Configuration

Figure 78 shows the details of the chosen database configuration. This is within the eXate vault. To navigate to this page click the view details button next to the source field on the database configuration page shown in Figure 69.

Selected Database

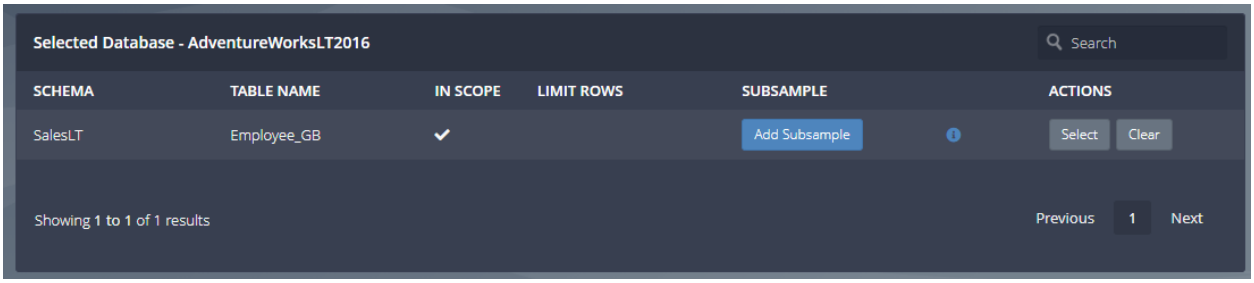


Figure 79 - Selected Database

Figure 79 shows the selected database in the existing database configuration. From here you can also add a subsample to the selected schema.

Actions:

- Select - select your chosen schema
- Clear - clear the chosen schema

Recent Jobs

Figure 80 - Recent Jobs

Figure 80 shows the recent jobs the existing database configuration has. Here you are able to see the information of the job such as created date, snapshot date, execution time, status and actions that you can perform on the recent job.

File Configuration

File configuration contains the specific files or folders on which the process of protection can be applied.

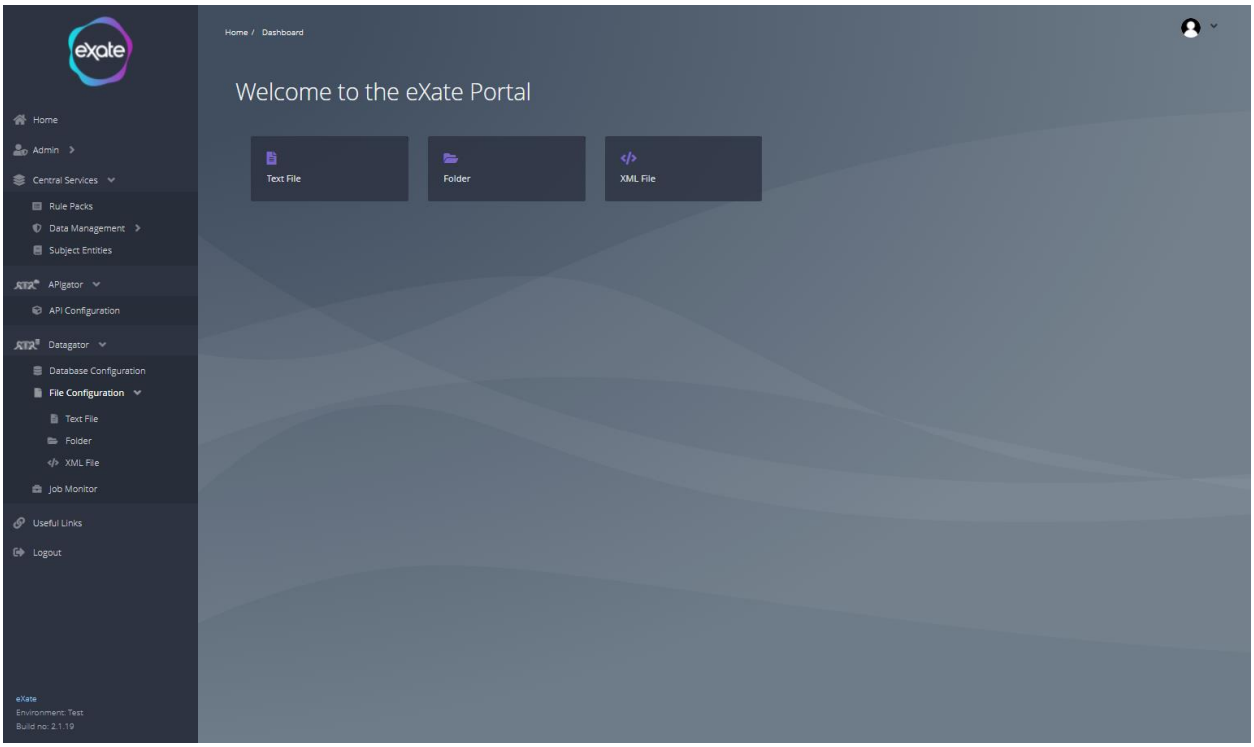


Figure 81 - File Configuration

Figure 81 shows the file configuration page. To access the page, navigate to the left menu bar and click “Datagator”' and then “File Configuration Configuration” from here you can access Text File, Folder, XML File.

Text File

It contains a specific text file only which can be used for Encryption.

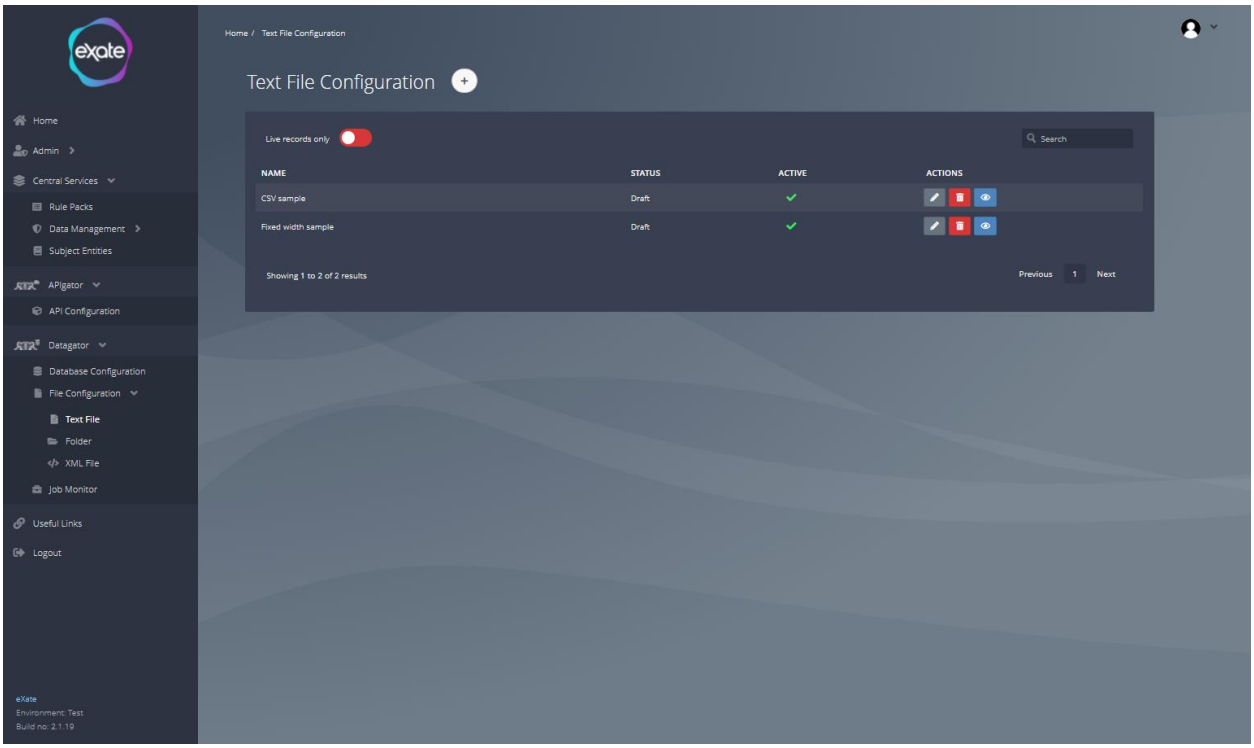


Figure 82 - Text File Configuration

Figure 82 shows the text file configuration page. To access the text file configuration, navigate to the left menu bar and click “Datagator”' and “File Configuration” and then “Text File” from here you are able to add, edit and delete Text File configurations.

View a Text File

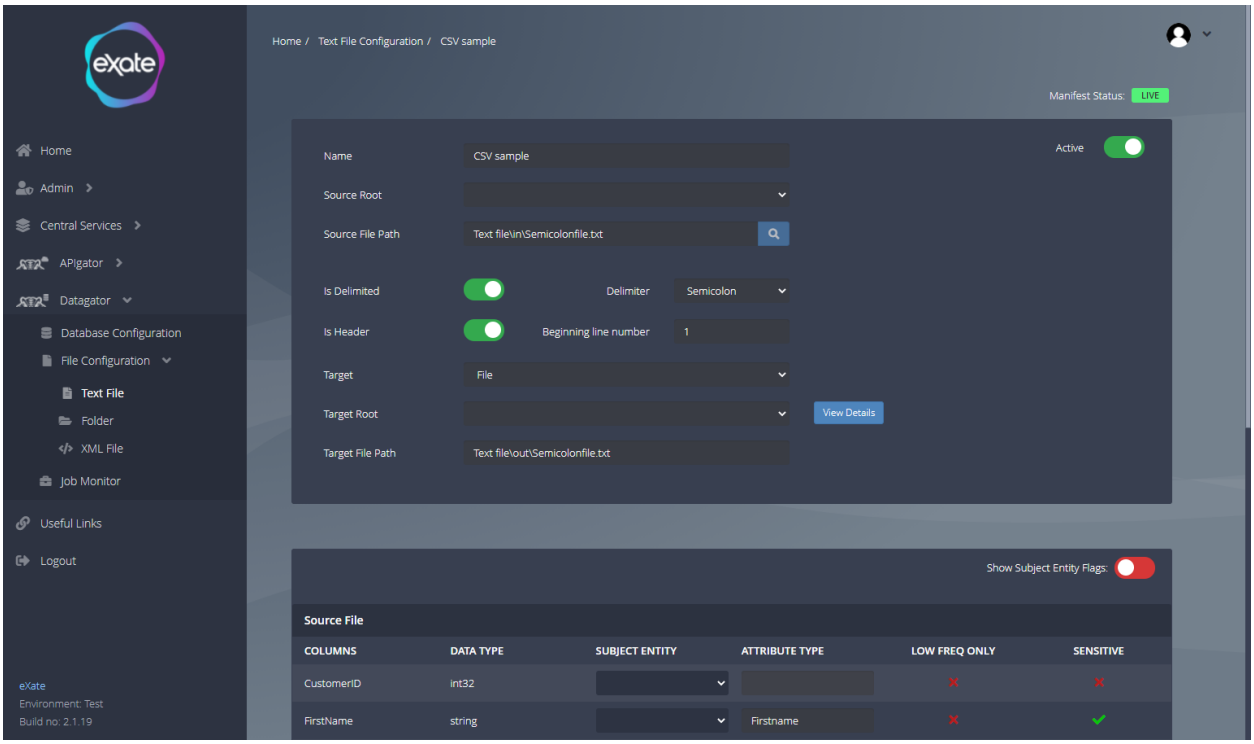


Figure 83 - Viewing a text file

Figure 83 shows viewing a text file. To view a text file navigate to the eye icon next to the text file you want to view shown in Figure 82. From here you are then taken to the page shown in Figure 83.

Add a Text File

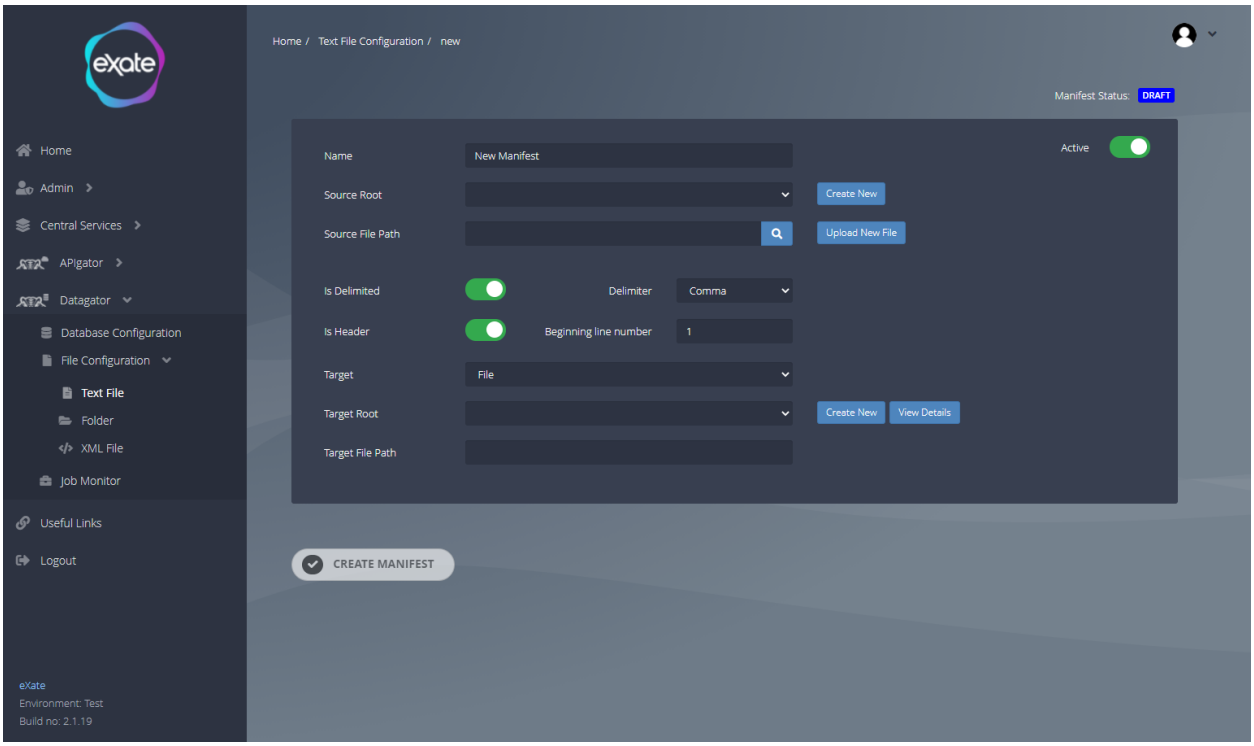


Figure 84 - Add a Text File

Figure 84 shows adding a text file. To add a text file, navigate to the plus button at the top of the Text File page. From here it will take you to the page shown in Figure 84. To add a text file, fill in the following fields:

Name: Name of text file

Active: Toggle box to indicate whether active or not

Source Root: This is the UNC Path where your file is present.

Source File Path: It is the combination of the unique address of the directory where File is located and the name of file which we want to protect.

Is Delimited: Whether the file is fixed width or delimited..

Delimiter: It can be comma, pipe, semicolon, and colon.

Is Header: Whether the columns have the headings or not..

Beginning line number: Beginning of the line.

Target: The destination where we want to copy the Protected data whether a database or file.

Target Root: The root directory of the target directory.

Target File Path: The directory and file name.

The Columns will be returned according to the Delimiter selected by the User where we can select the sensitive column to be protected by selecting the Attribute type corresponding to the column.

When adding a text file you can create a new source root, when clicking this button it will take you to the eXate vault to add all the details. Refer to the vault section.

Upload New File

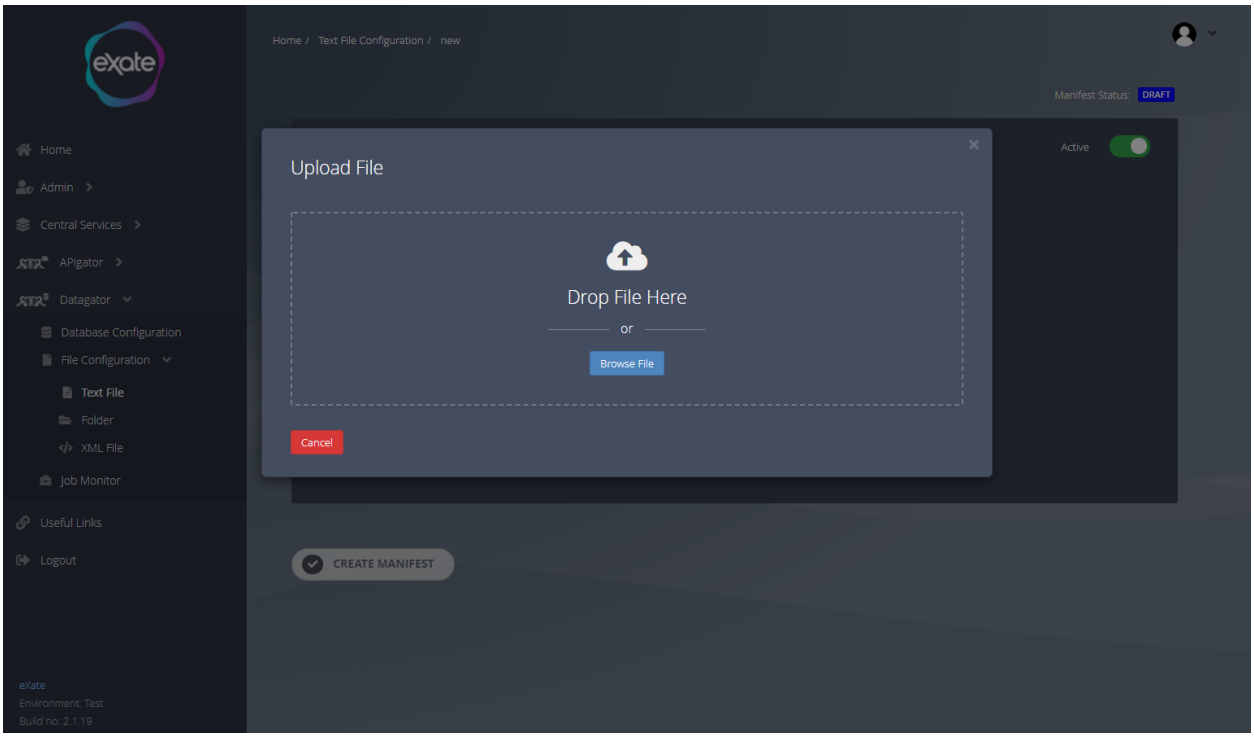


Figure 85 - Upload a New File

Figure 85 shows uploading a new file when adding a text file here you can browse the folder to add the text file you want.

Create new Target root

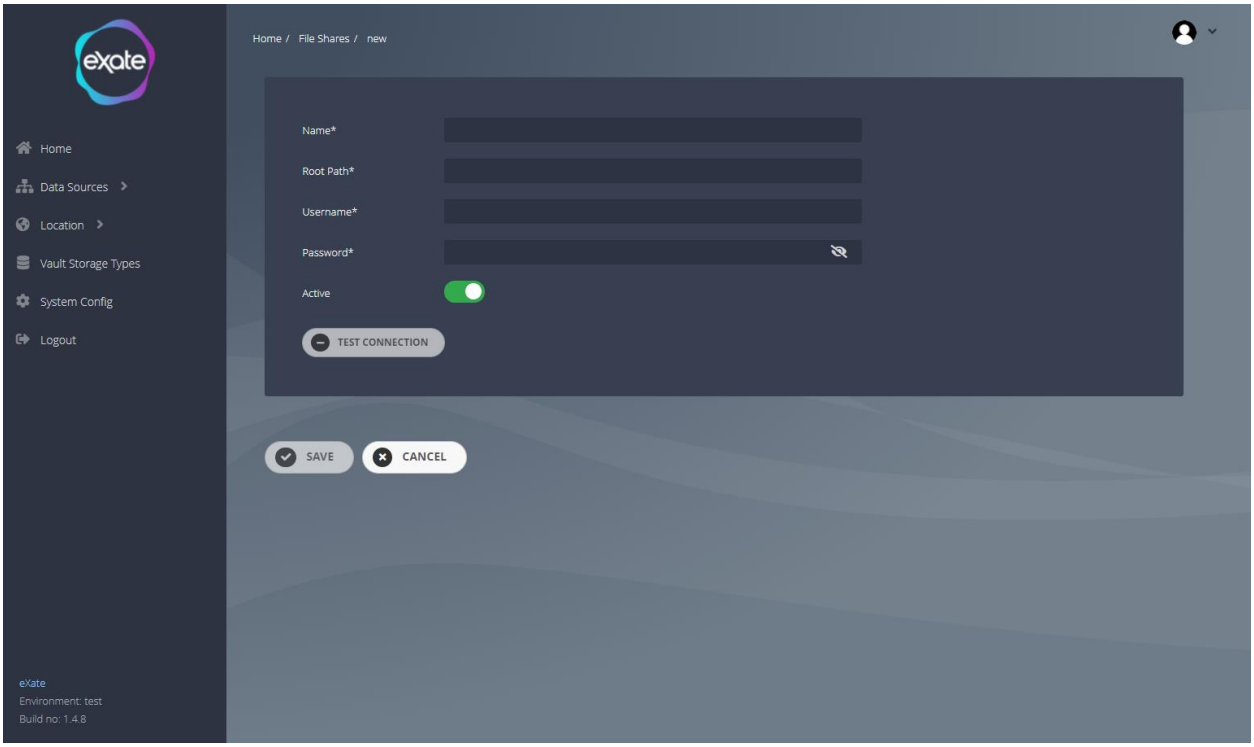


Figure 86 - Create new Target Root

Figure 86 shows when clicking create new target root it will take you to the eXate vault to fill in the following fields.

Name: Name of the target root

Root Path: Path of the target root

Username: Username of the root

Password: Password of the target root

Edit Text File

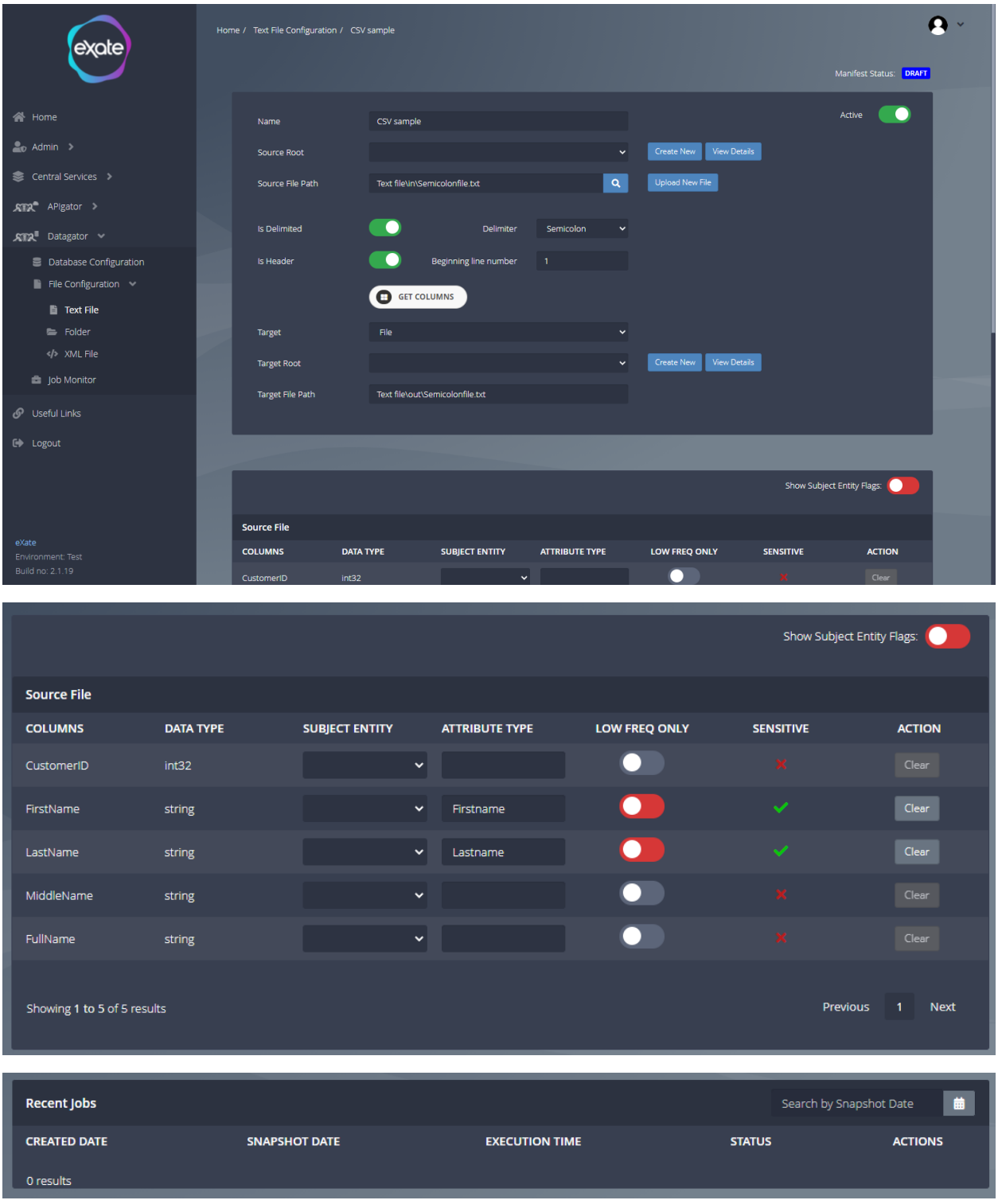


Figure 87 - Edit Text File

Figure 87 shows editing the text file. To edit a text file, locate the pencil icon next to the chosen text file. From her you will be navigated to the page shown in Figure 87, and can edit any of the following fields. You are also able to see the source files.

Folder

Folder is a collection of the same files on which the Encryption process can be applied.

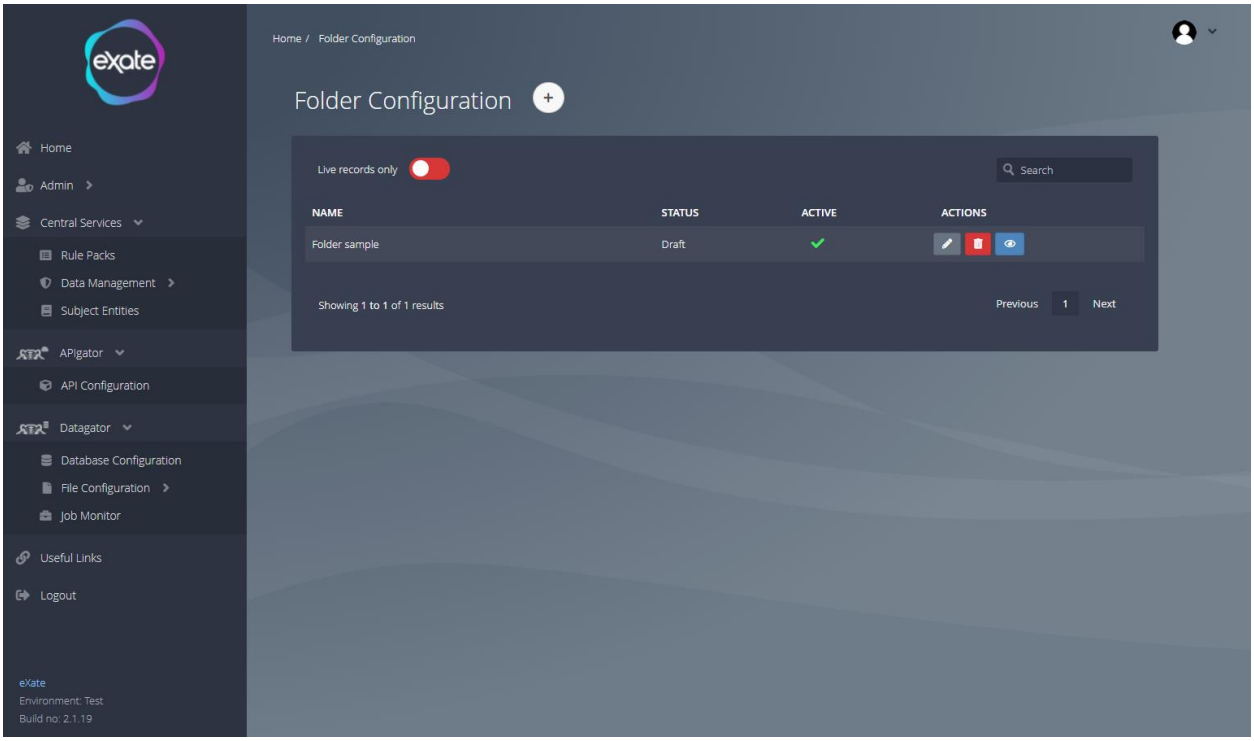


Figure 88 - Folder Configuration

Figure 88 shows the folder configuration page. To access this, navigate to the left menu bar and click “Datagator”' and “File Configuration” and then “Folder” from here you are able to add, edit and delete Folder configurations.

View a Folder

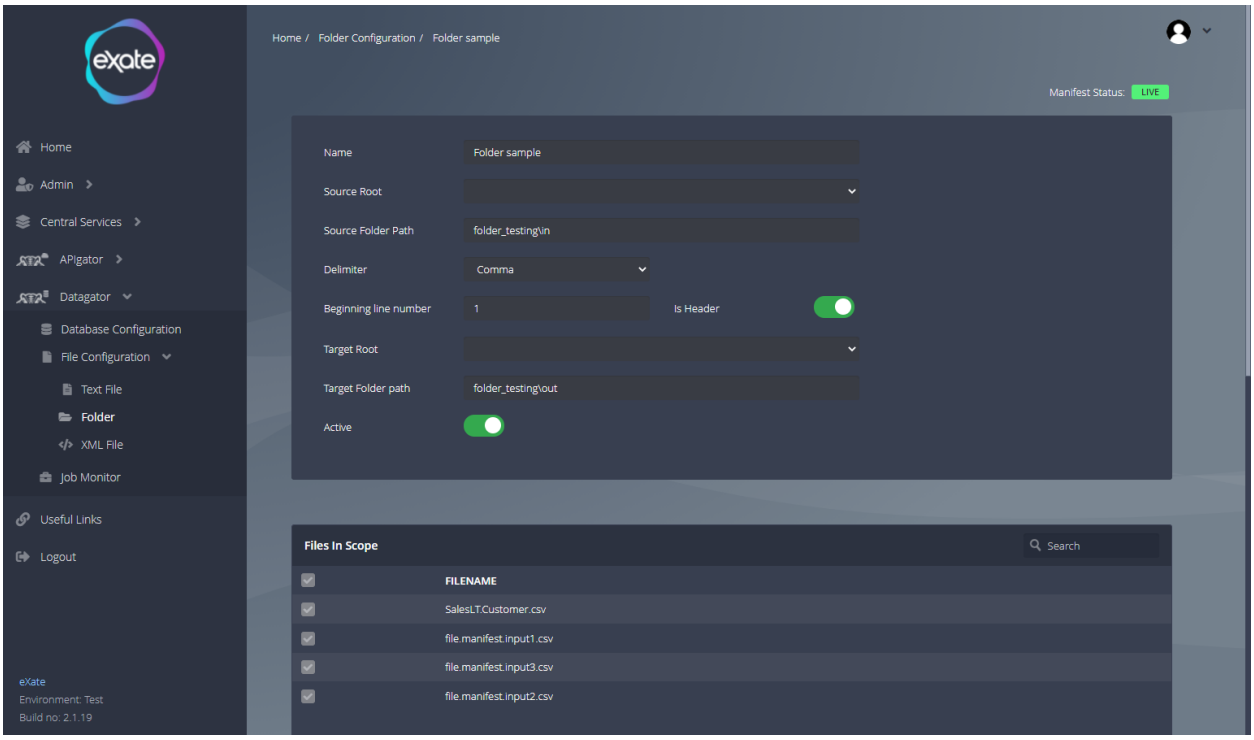


Figure 89 - View a folder

Figure 89 shows viewing a folder. To navigate to this click the eye icon next to the chosen folder shown in Figure 88. Here you can view all the details of the folder.

Discovering all files in a Folder

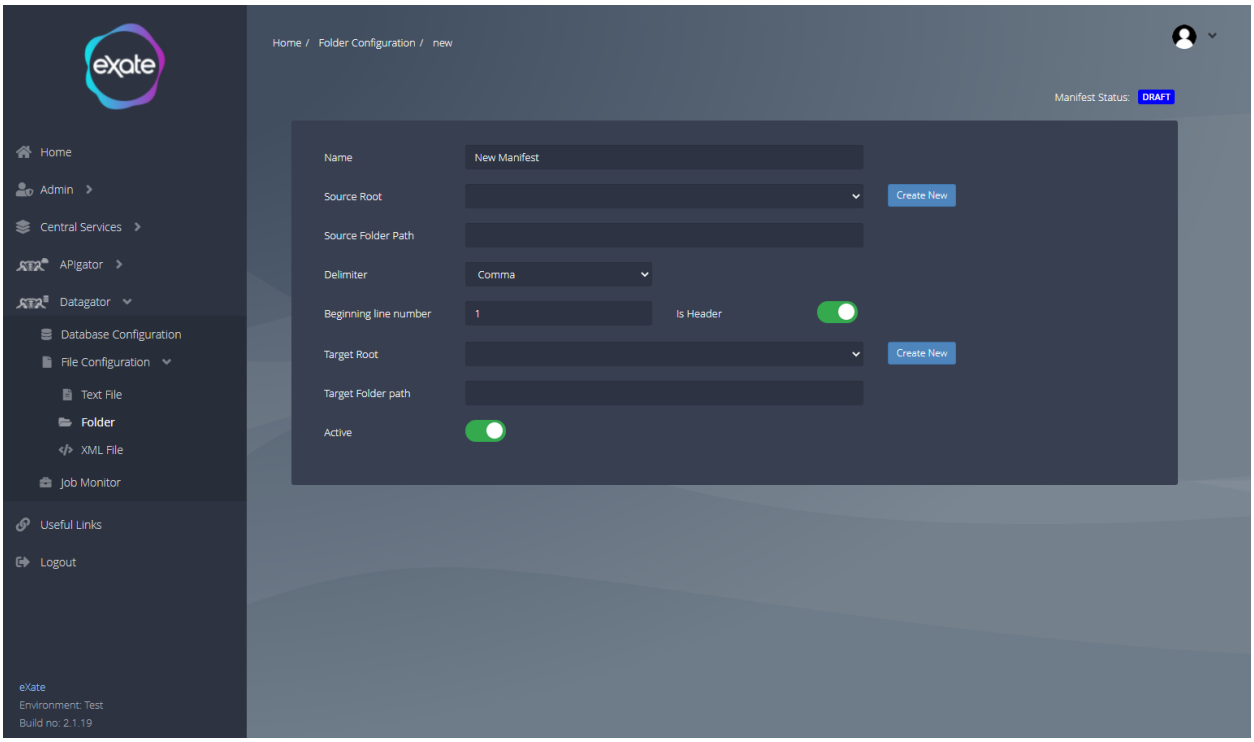


Figure 89 - Adding a Folder

Figure 89 shows adding a folder to scan. To add a folder, navigate to the plus button at the top of the folder configuration page. To add a folder, fill in the following fields.

Name: Name of the Folder Manifest.

Source Root: This is the Network Path in which your folder is present.

Source File Path: The unique address of the directory in which Folder is located.

Delimiter: Which type of Delimiter the programmers have used. It can be comma, pipe, semicolon, and colon.

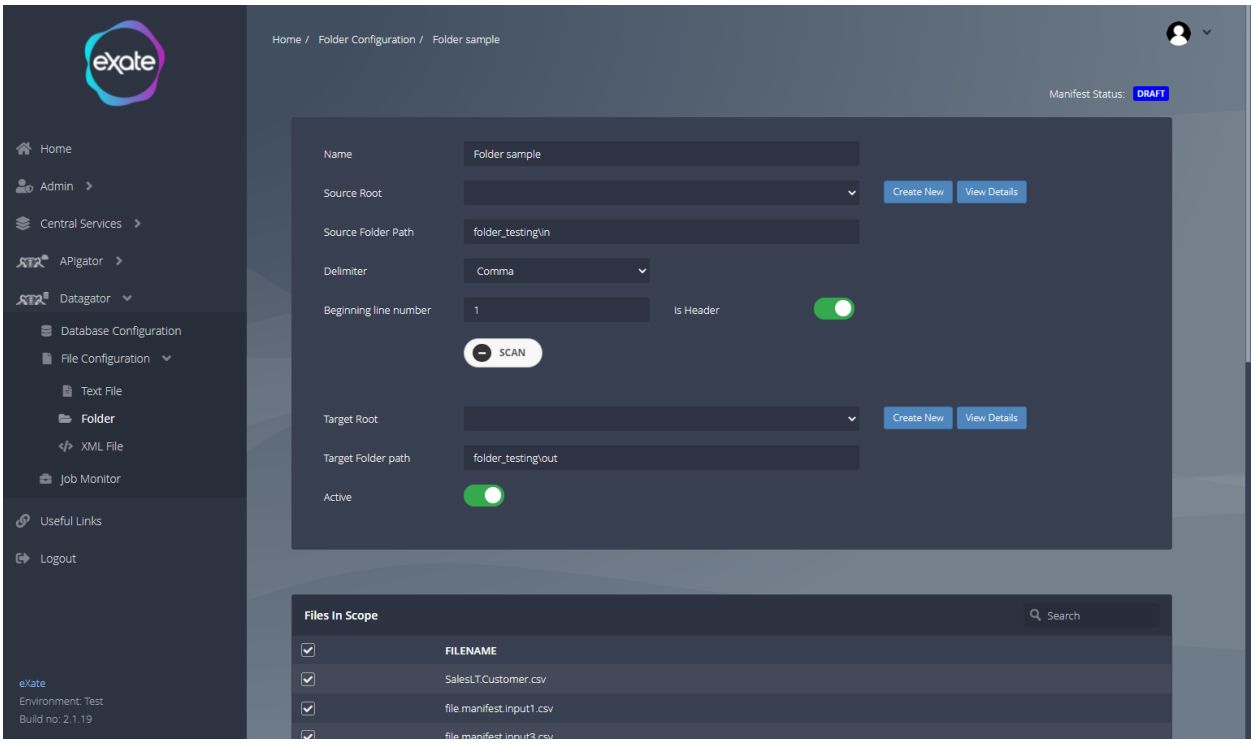
Beginning line number: Beginning of the line.

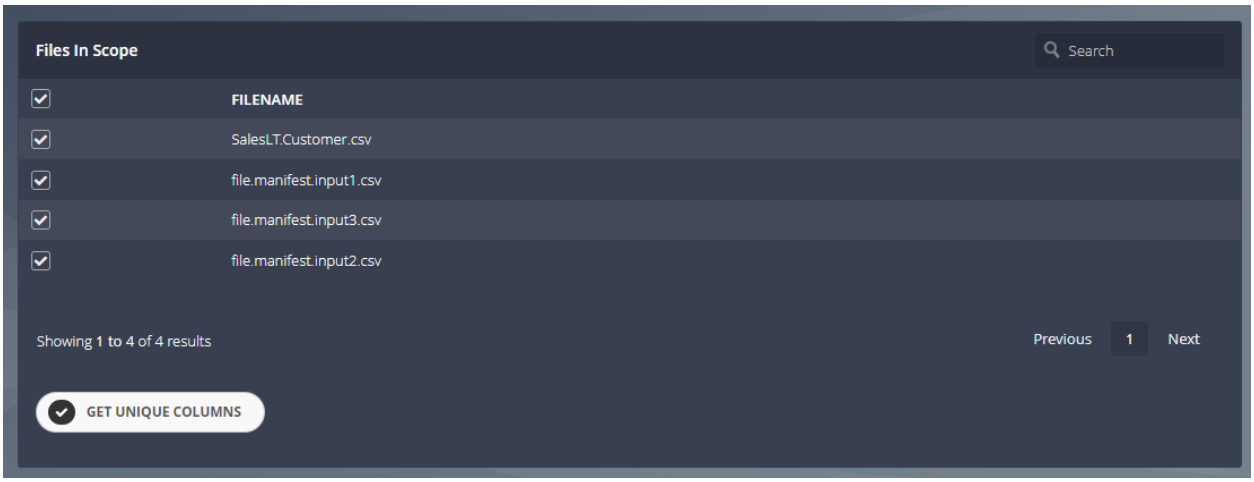
Target Root: The Network Path of the target directory.

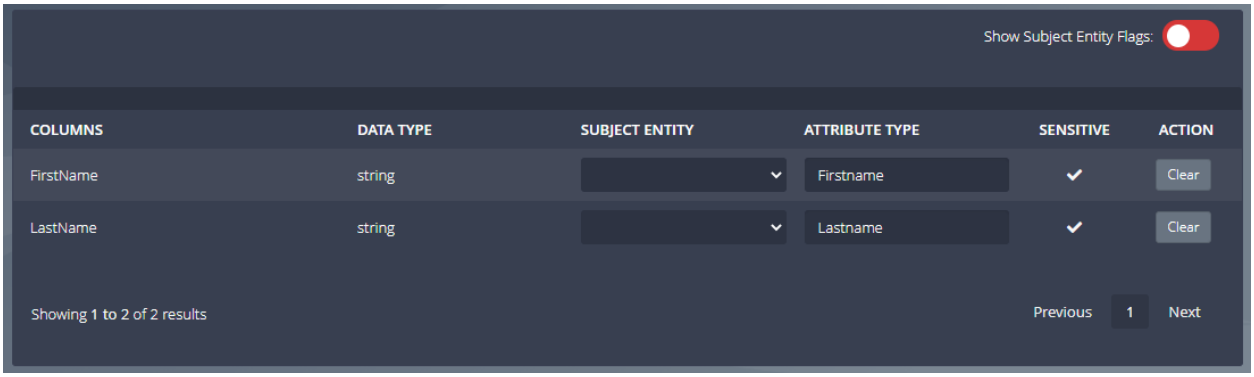
Target File path: The address of the target directory.

Active: Toggle box to indicate whether active or not

Edit Folder


Home / Folder Configuration / Folder sample
Manifest Status: DRAFT
Home
Admin
Central Services
APIgator
Datagator
Database Configuration
File Configuration
Text File
Folder
XML File
Job Monitor
Useful Links
Logout
eXate
Environment: Test
Build no: 2.1.19
Name
Folder sample
Source Root
Create New
View Details
Source Folder Path
folder_testing\in
Delimiter
Comma
Beginning line number
1
Is Header
SCAN
Target Root
Create New
View Details
Target Folder path
folder_testing\out
Active
Files In Scope
Search
FILENAME
SalesLT.Customer.csv
file.manifest.input1.csv


Files In Scope
Search
FILENAME
SalesLT.Customer.csv
file.manifest.input1.csv
file.manifest.input3.csv
file.manifest.input2.csv
Showing 1 to 4 of 4 results
Previous
1
Next
GET UNIQUE COLUMNS


Show Subject Entity Flags:
COLUMNS
DATA TYPE
SUBJECT ENTITY
ATTRIBUTE TYPE
SENSITIVE
ACTION
FirstName
string
Firstname
Clear
LastName
string
Lastname
Clear
Showing 1 to 2 of 2 results
Previous
1
Next

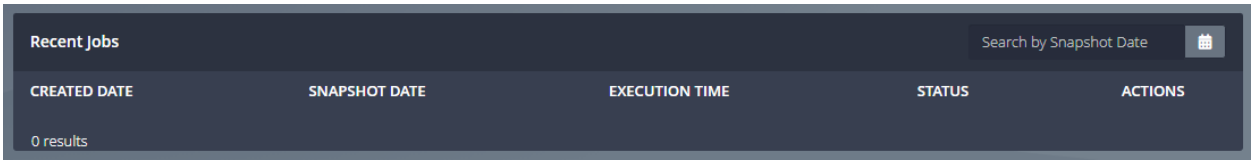


Figure 90 - Edit a Folder

Figure 90 shows editing a folder. To edit a folder, navigate to the pencil icon next to the chosen folder. From here you can edit the following fields:

Name: Name of the Folder Manifest.

Source Root: This is the Network Path in which your folder is present.

Source File Path: The unique address of the directory in which Folder is located.

Delimiter: Which type of Delimiter the programmers have used. It can be comma, pipe, semicolon, and colon.

Beginning line number: Beginning of the line.

Target Root: The Network Path of the target directory.

Target File path: The address of the target directory.

Active: Toggle box to indicate whether active or not

XML File

It is the template which contains the specific file in the XML format.

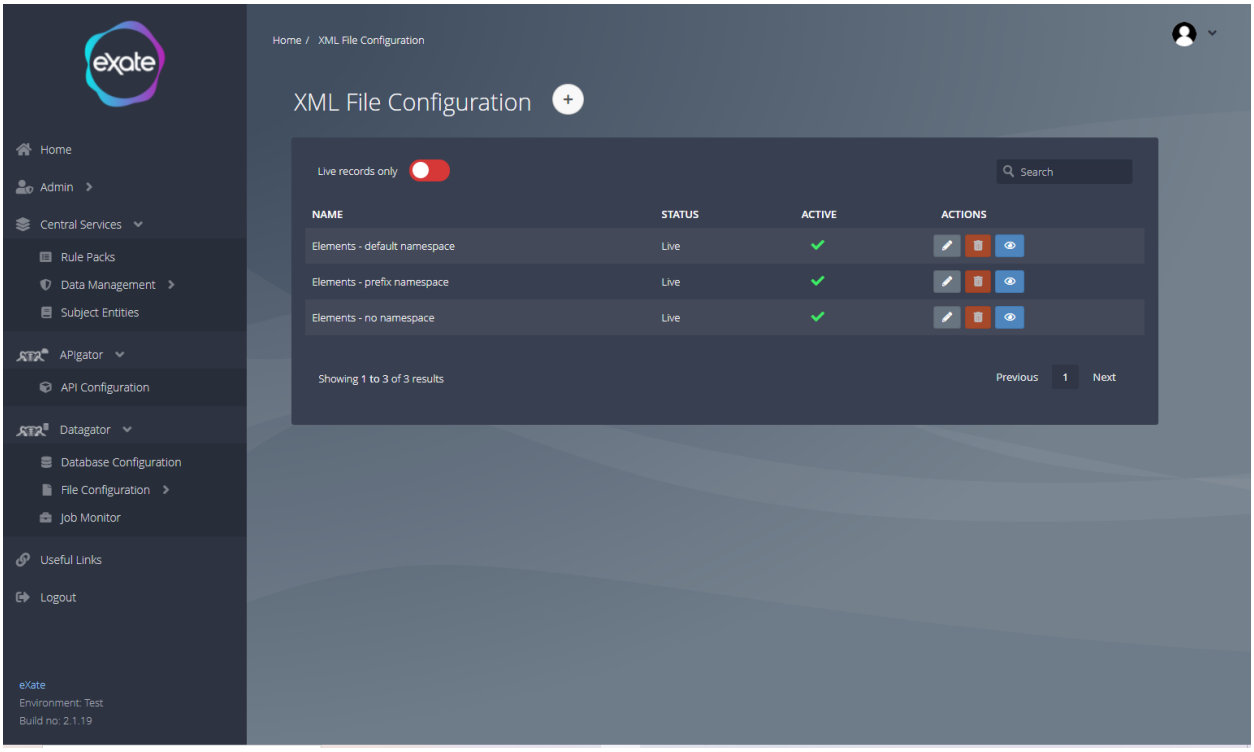


Figure 91 - XML File Configuration

Figure 91 shows XML file configuration. To access this, navigate to the left menu bar and click “Datagator”' and “File Configuration” and then “XML File” from here you are able to add, edit and delete Folder configurations.

View XML Configuration

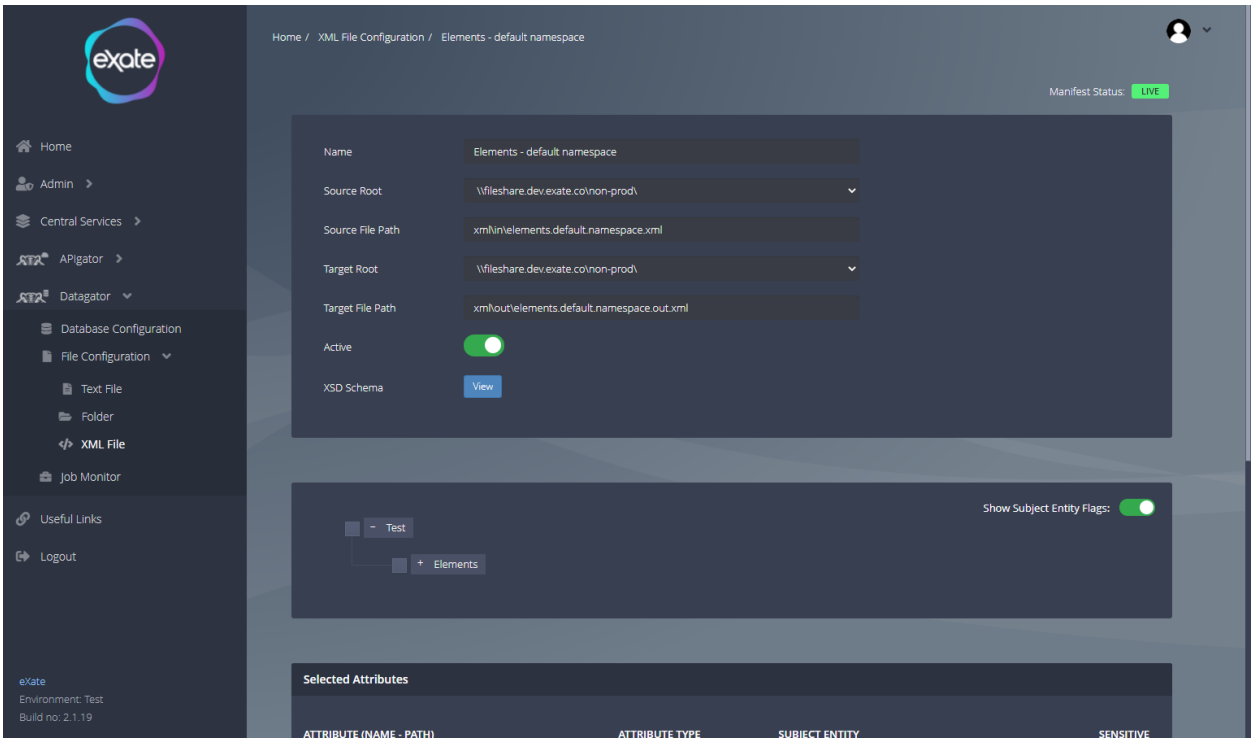


Figure 92 - View XML Configuration

Figure 92 shows viewing an XML Configuration that allows you to view the details of the XML configuration. You are able to view the selected attributes and recent jobs.

View XSD Schema

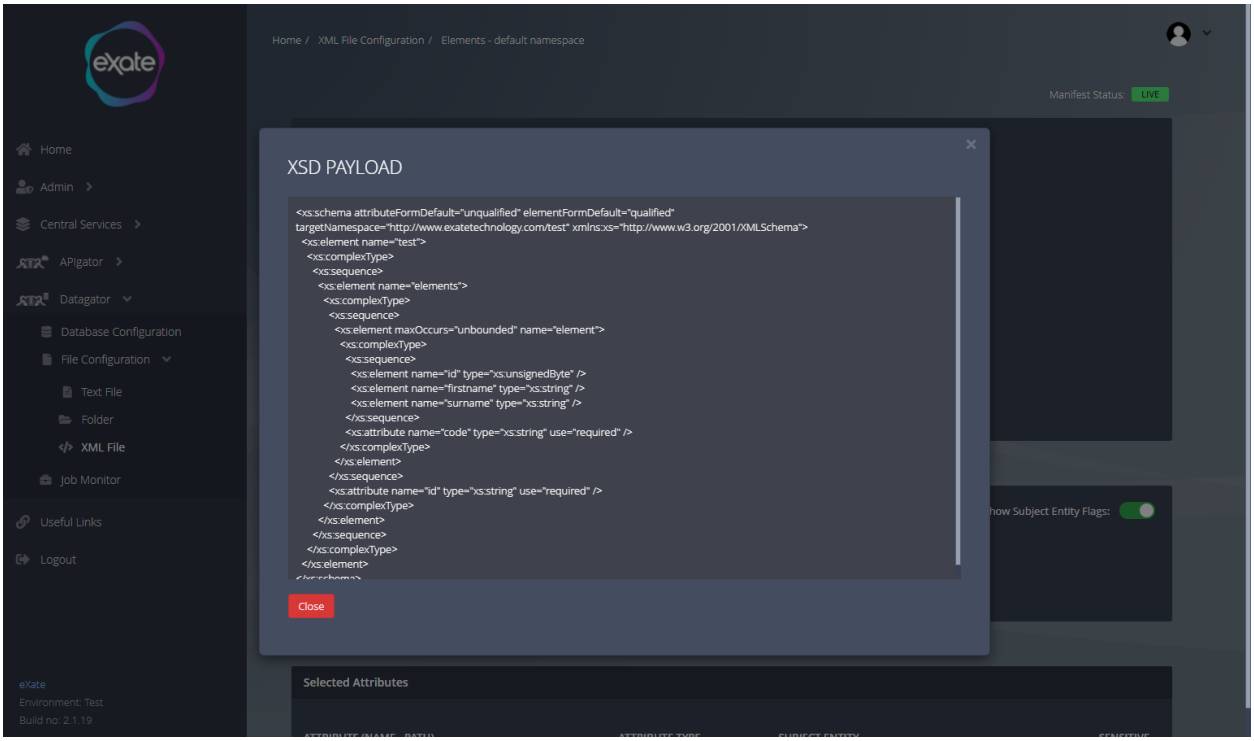


Figure 93 - View XSD Schema

Figure 93 shows viewing and XSD schema which can be accessed by clicking the 'View' button next to the XSD Schema field.

Add XML Manifest

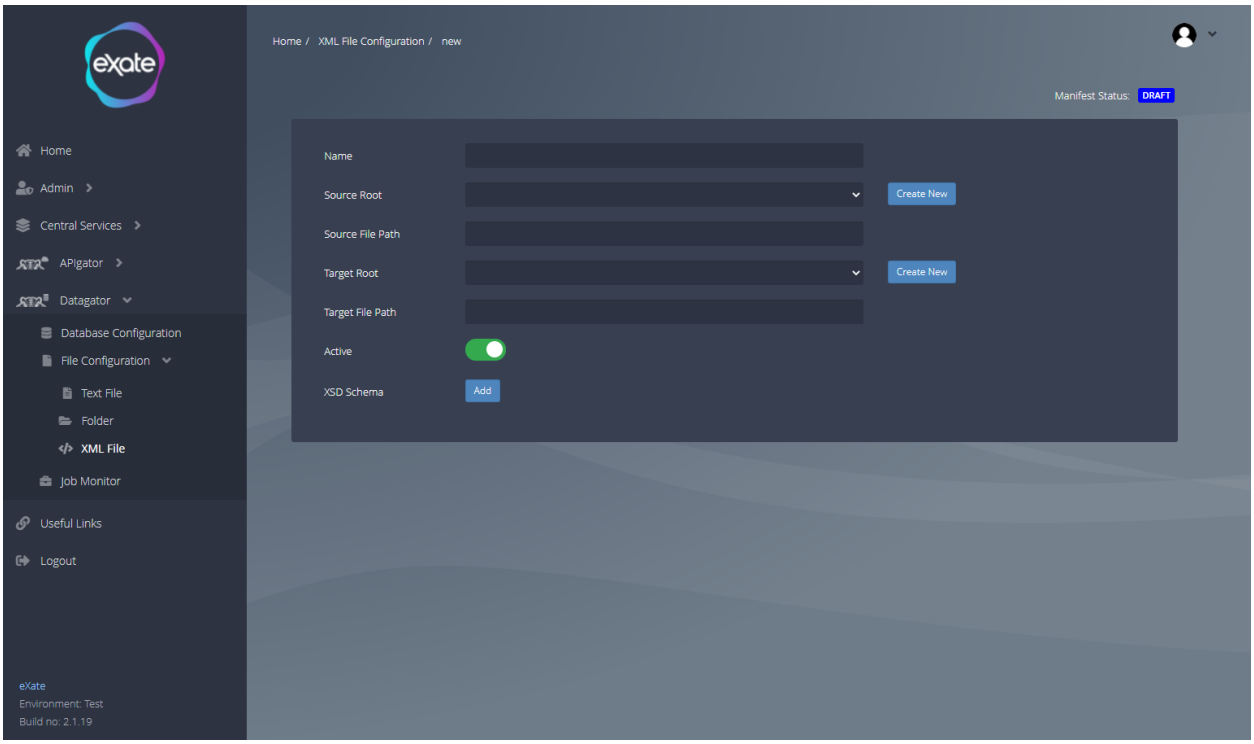


Figure 94 - Adding an XML File

Figure 94 shows adding an XML manifest. To add an XML Manifest navigate to the top of the XML File page and click the plus button. To add an XML Manifest, fill in the following fields:

Name: Name of the XML File.

Source Root: This is the Network Path in which your XML File is present.

Source File Path: The unique address along with the File name of the directory in which XML file is located.

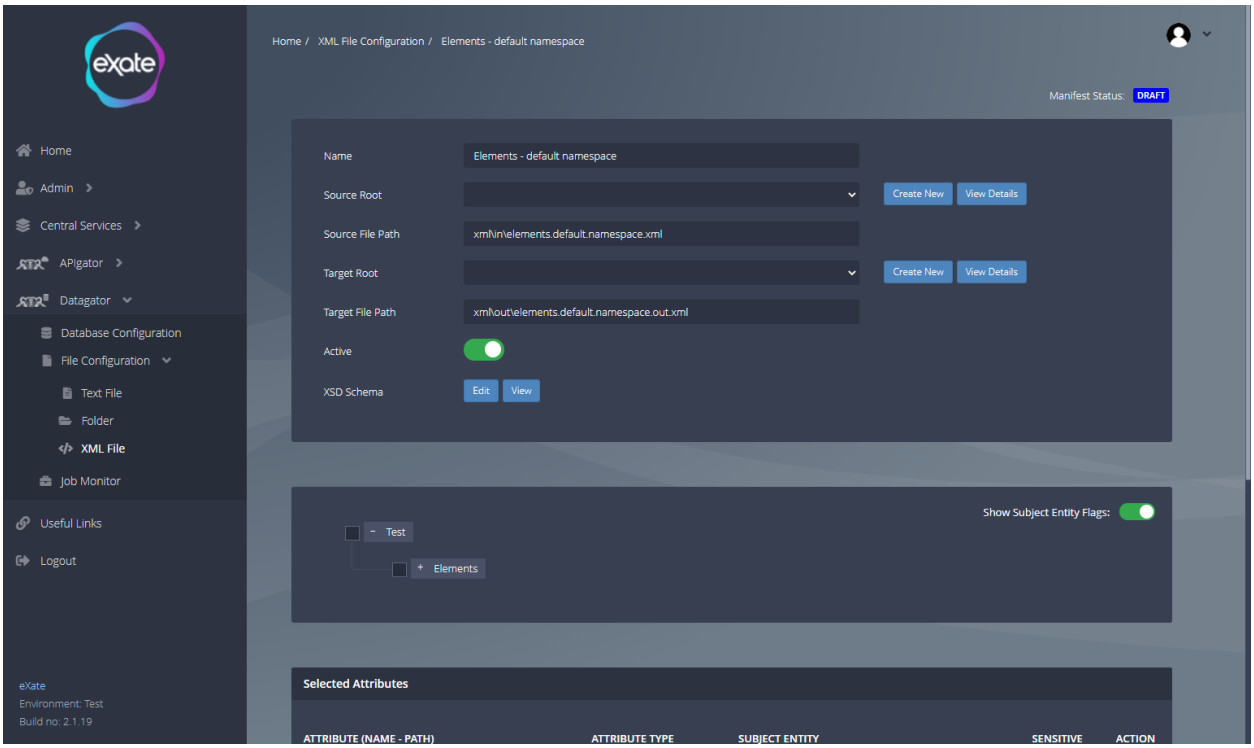
.**Target Root:** The Network Path of the target directory.

Target File Path: The address with the File name of the target directory.

Active: Toggle box to indicate whether active or not

XSD Schema: It contains the structure of the XML File.

Edit XML File



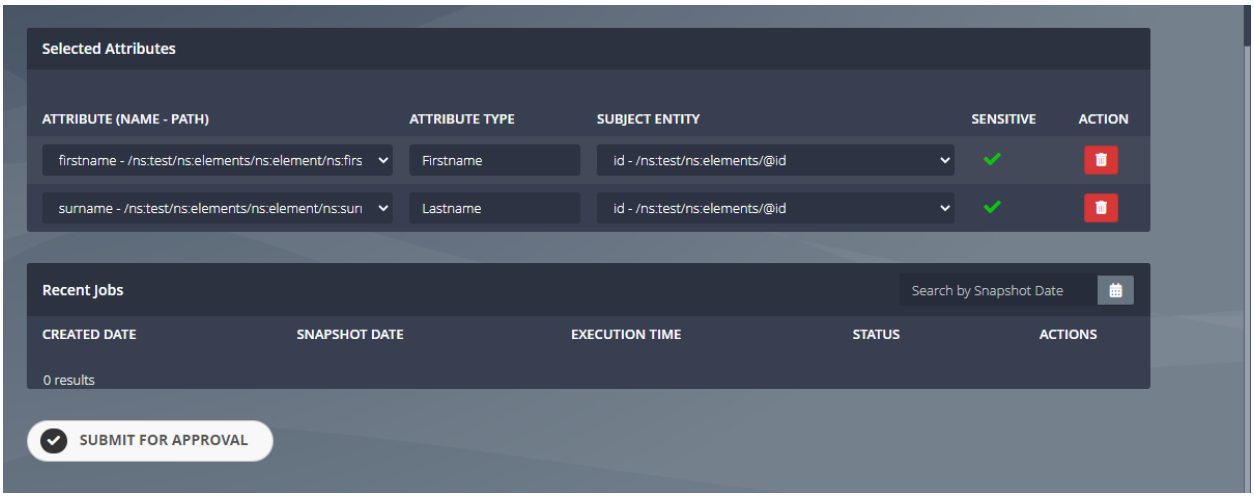


Figure 95 - Editing an XML File

Figure 95 shows editing an XML file. To edit an XML file locate the pencil icon next to the chosen XML file on the XML File configuration page. It also shows the selected attributes and recent jobs associated with the XML file..

When editing an XML file you are able to create a new source root or view the details of the source root. To do this navigate to the button next to the source root fields. When clicking

these buttons it will take you to the eXate vault which shows the details of the XML file source root or empty fields to add a new source root.

The Tree Structure is viewed automatically after saving the XSD Schema. Check the checkboxes to select which attributes to protect.

Job Monitor

The Job Monitor is one on which the user can view all the recent jobs which have run in the recent time along with their current status.

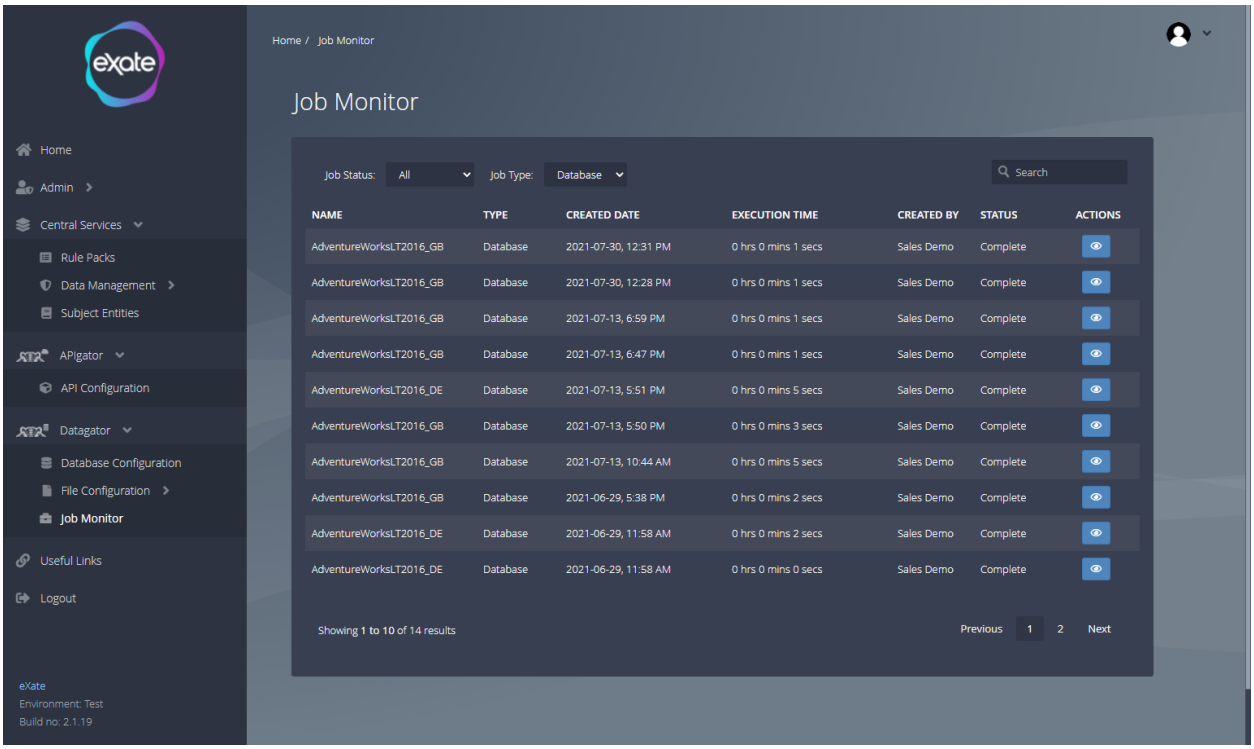


Figure 96 - Job Monitor

Figure 96 shows the Job Monitor page. To access the job monitor page navigate to the left menu bar and click “Datagator”' and then “Job Monitor ” from here you are able to view all jobs.

View Job Monitor

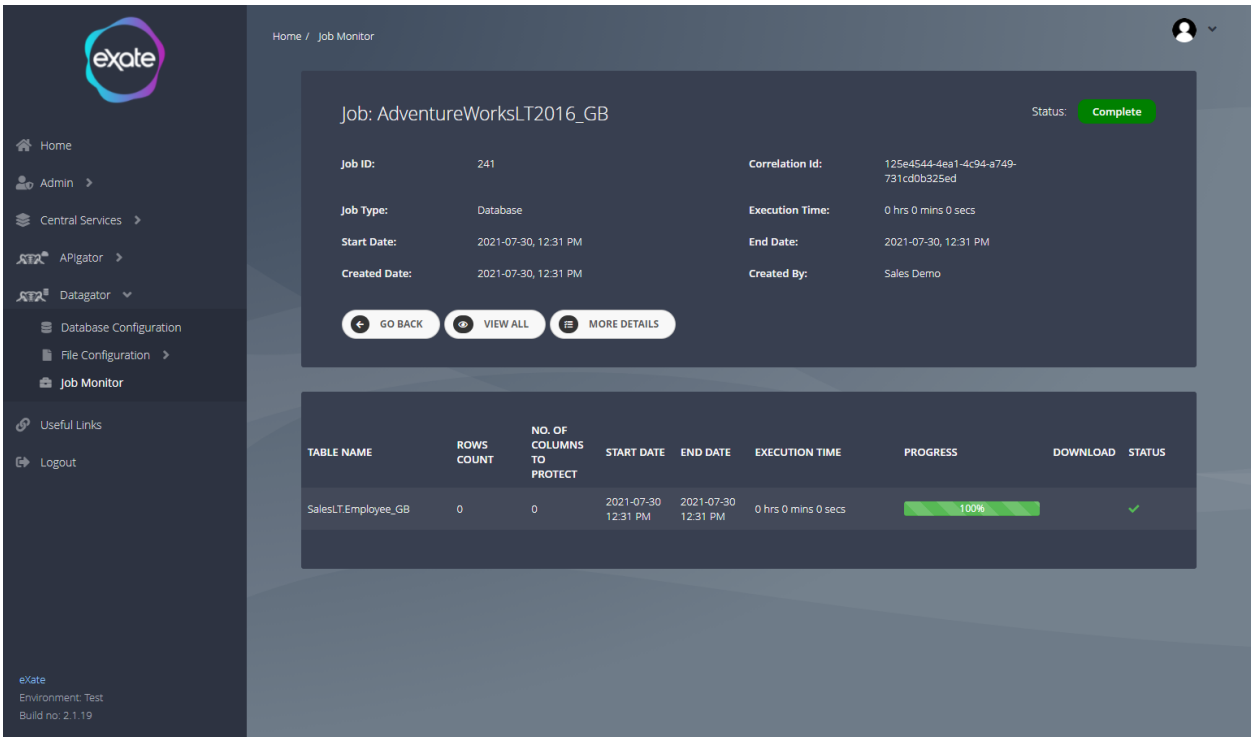


Figure 97 - View Jobs

Figure 97 shows viewing a job. To view a job click the eye icon next to the chosen job on the job monitor page.

Vault

The vault is extra security for connection strings, limited number of users to access the login details

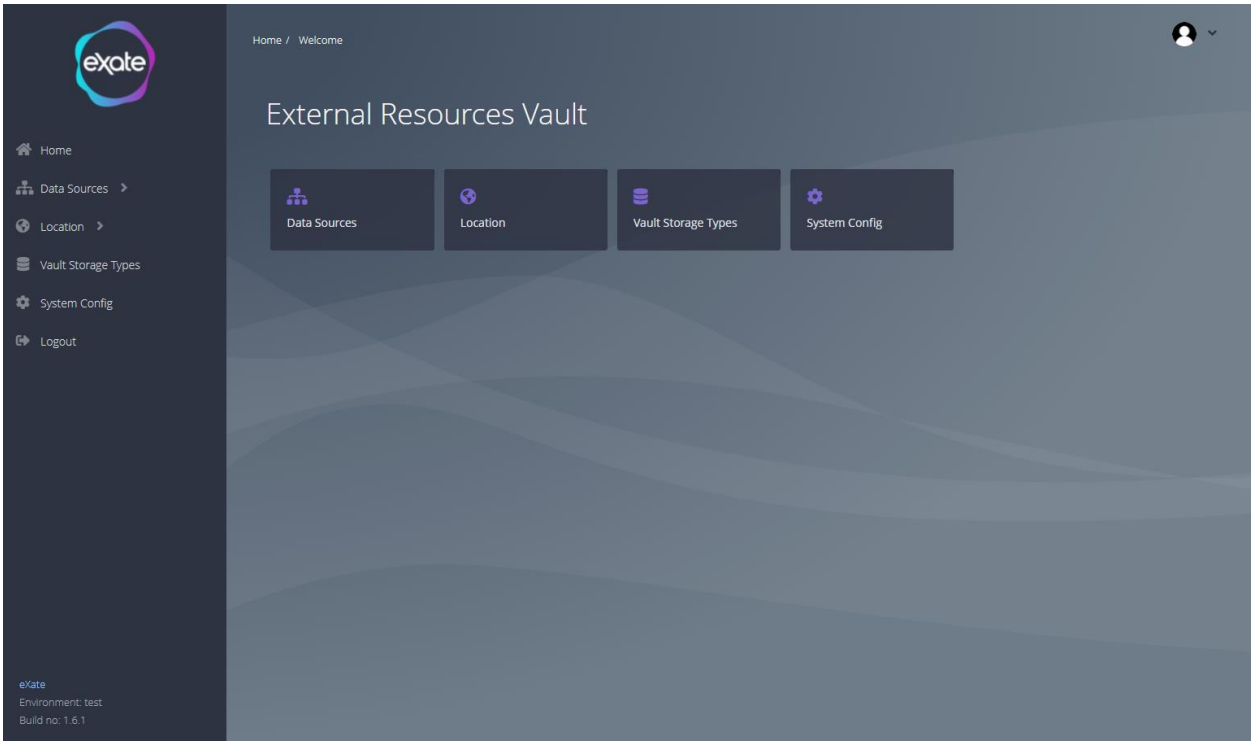


Figure 98 - eXate Vault

Figure 82 shows the external resources vault page. From here you can access data sources, location, vault storage types and system config.

Data Sources

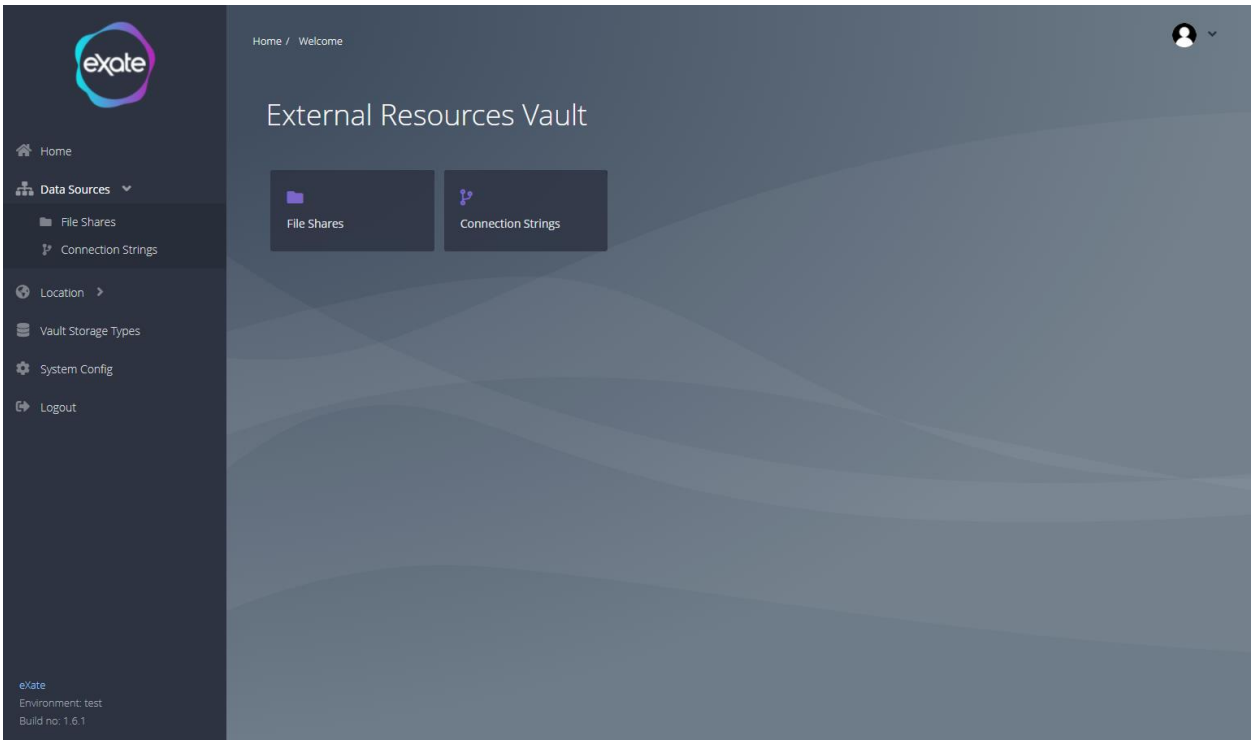


Figure 99 - External Resources Vault

Figure 99 shows the data sources vault. To navigate to this page click the “Data Sources” on the left hand menu. From here you can access the file shares and connection string.

File Shares

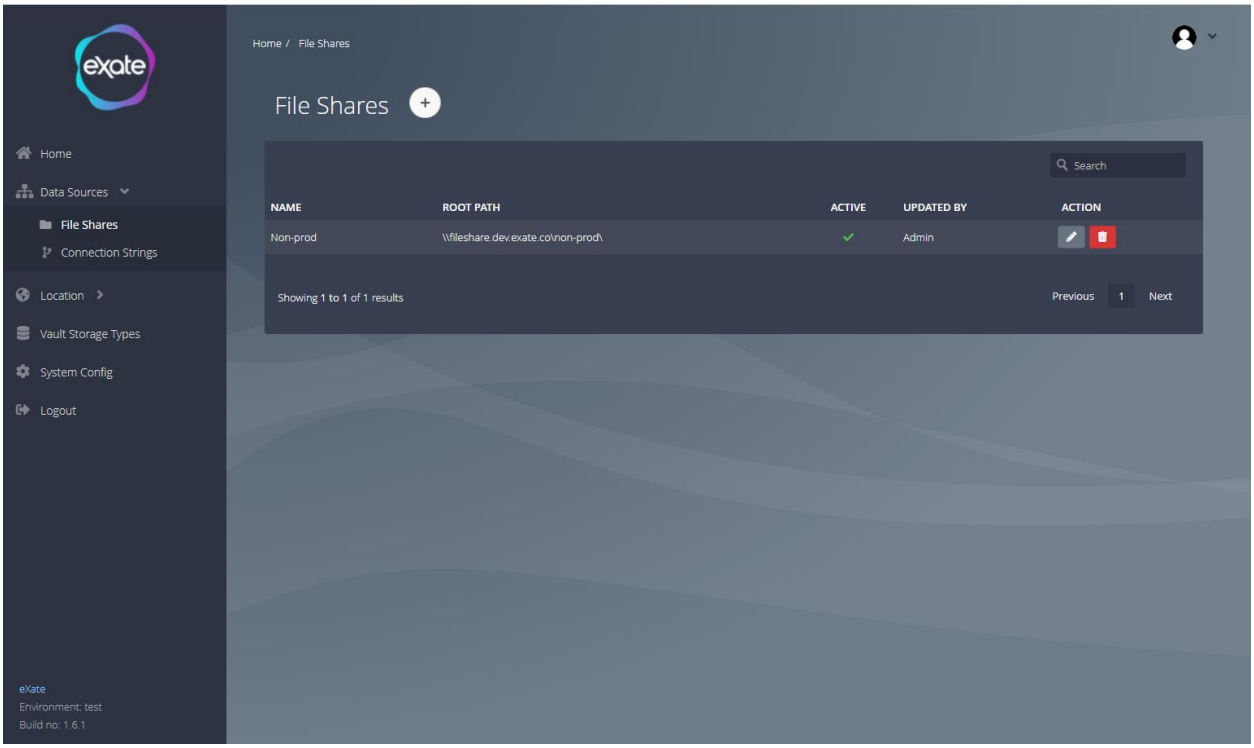


Figure 100 - File Shares

Figure 100 shows the existing file shares. To navigate to this page click the “File Shares” shown on the left hand menu. From here you can add, edit and delete file shares.

Edit a File Share

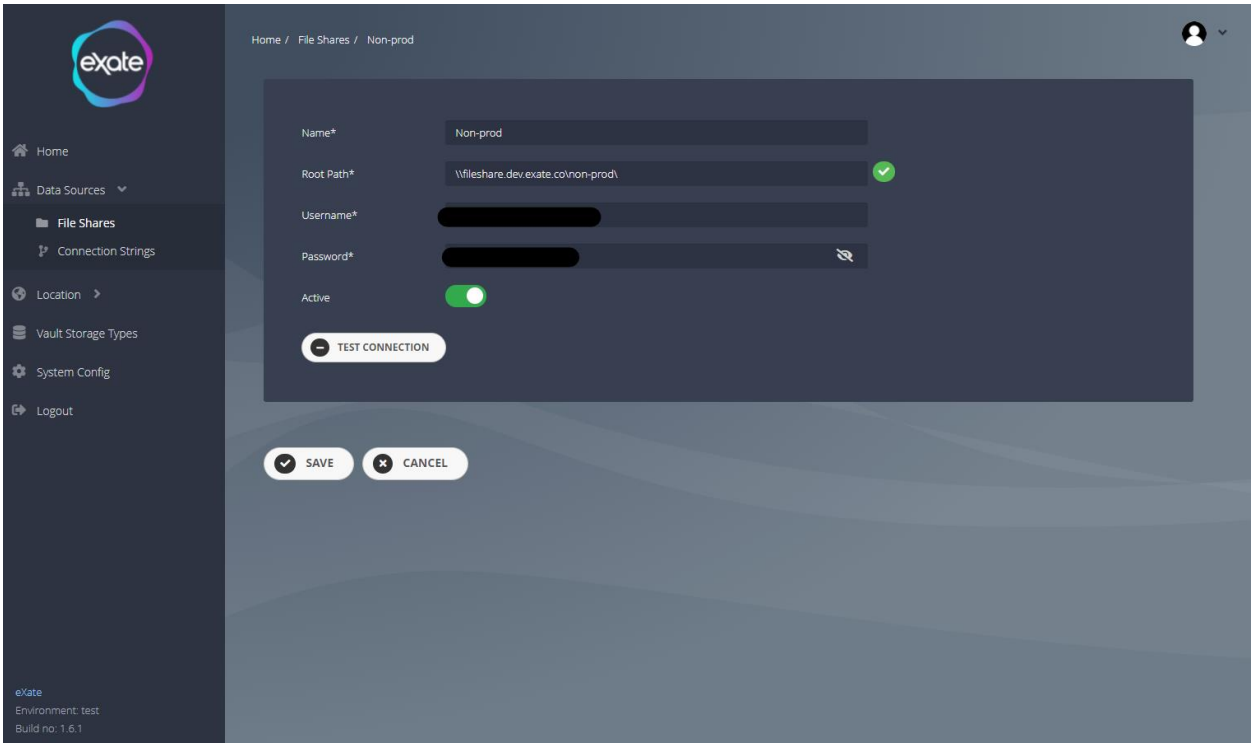


Figure 101 - Editing a file share

Figure 101 shows editing a file share, to navigate to this page click the pencil icon next to the file share chosen shown in Figure 100. From here you can edit the following fields:

Name: Name of file share

Root Path: Path root of the file share

Username: Username

Password: Password

Active: Toggle box to indicate to whether active or inactive

Once editing the file share you can test the connection to ensure the connection works.

Add a File Share

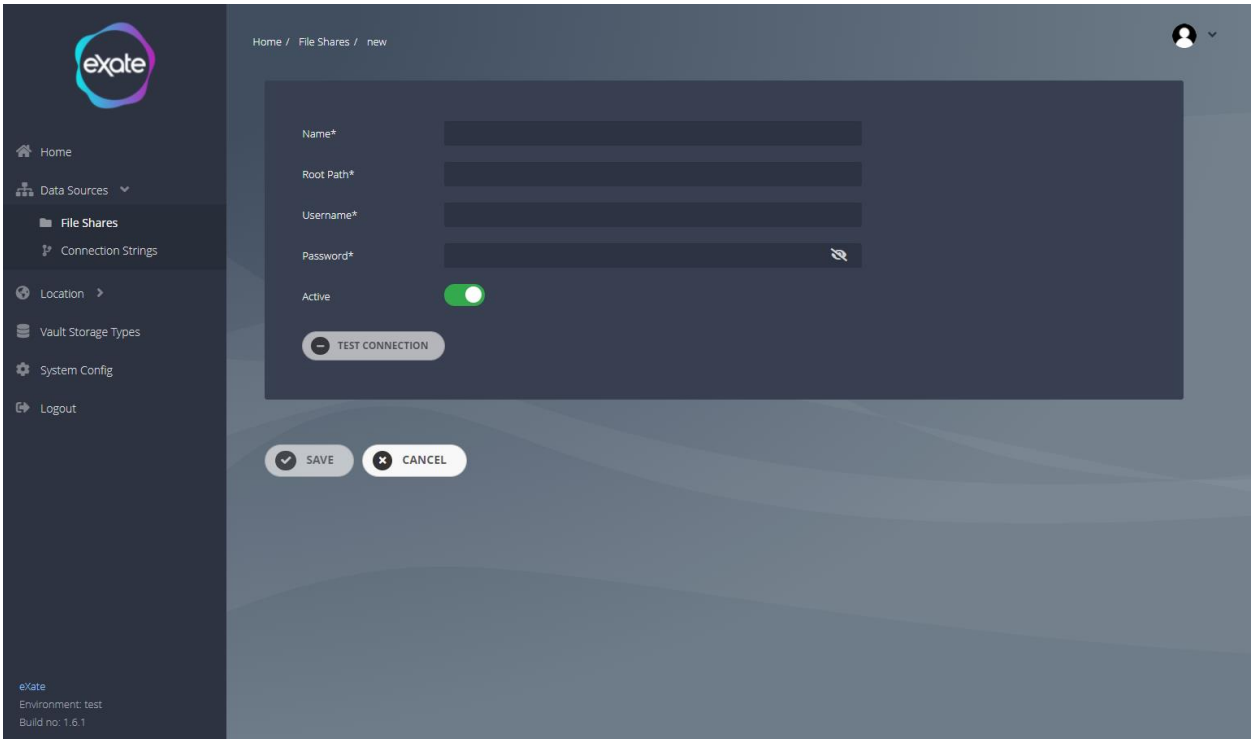


Figure 102 - Adding a file share

Figure 102 shows adding a file share. To add a file share navigate to the plus button shown in Figure 100. From here you can add the following fields:

Name: Name of file share

Root Path: Path root of the file share

Username: Username

Password: Password

Active: Toggle box to indicate to whether active or inactive

Once filling in the fields you can then test the connection by clicking the 'Test Connection' button.

Connection Strings

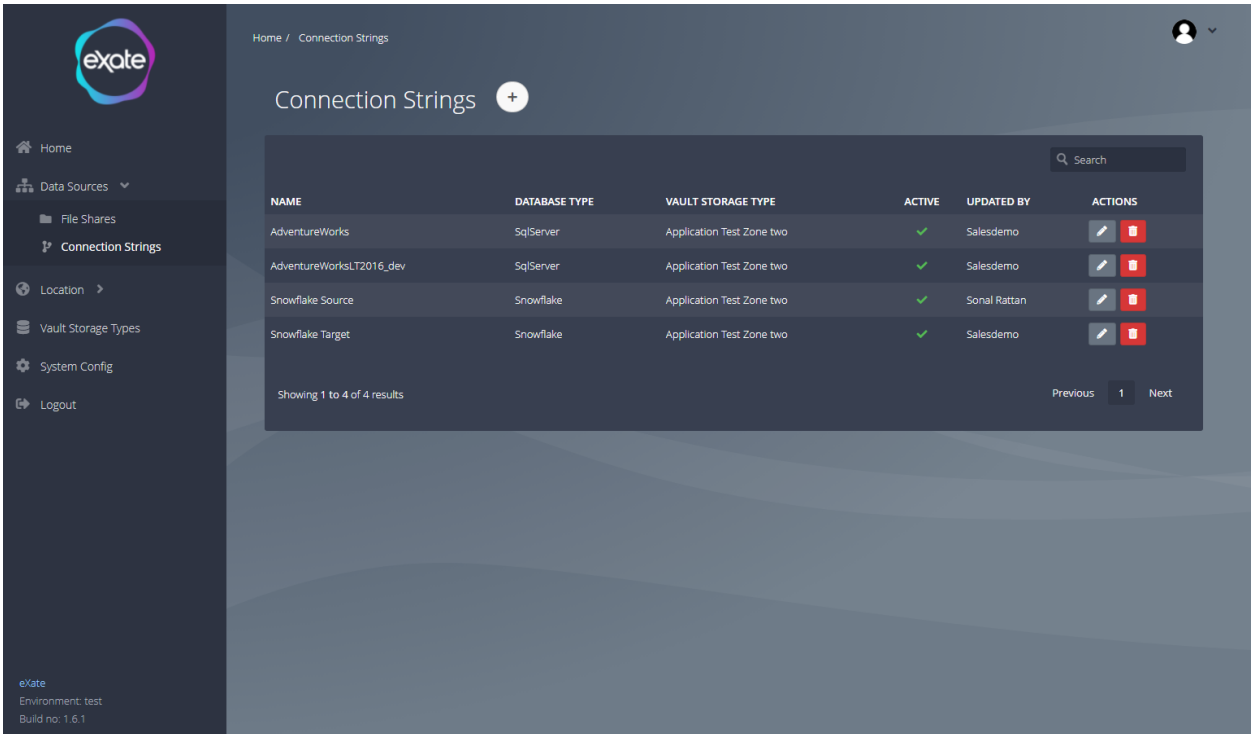


Figure 103 - Connection String

Figure 103 shows the existing connection strings. To navigate to the page click 'connection String' on the left hand menu under 'Data Sources'. From here you can add, edit and delete connection strings.

Edit a Connection String

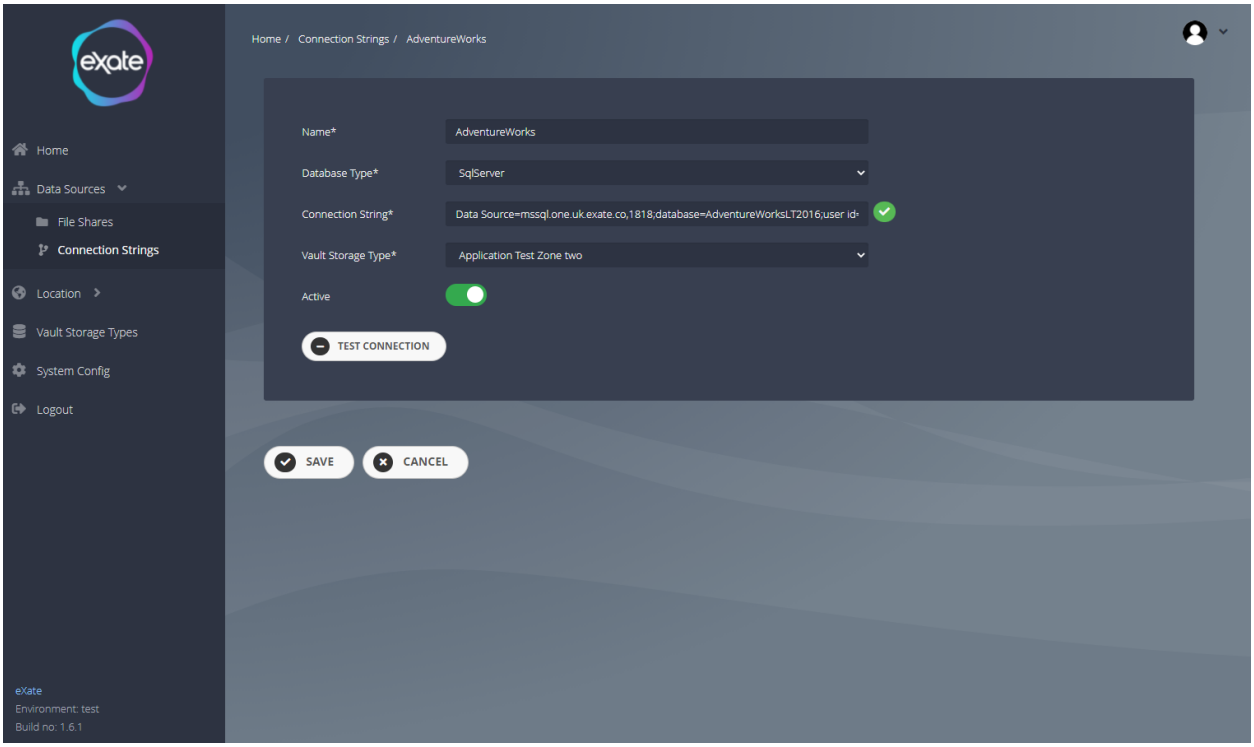


Figure 104 - Editing a connection string

Figure 104 shows editing an existing connection string. To navigate to this page, click the pencil icon next to the chosen connection string. From here you can edit the following fields:

Name: Name of connection string

Database Type: Type of database

Connection String: Connection string for the database

Vault storage Type: Type of vault storage

Active: Toggle box to indicate whether active or inactive

Once editing the fields you can then test the connection by clicking the 'Test Connection' button.

Add a Connection String

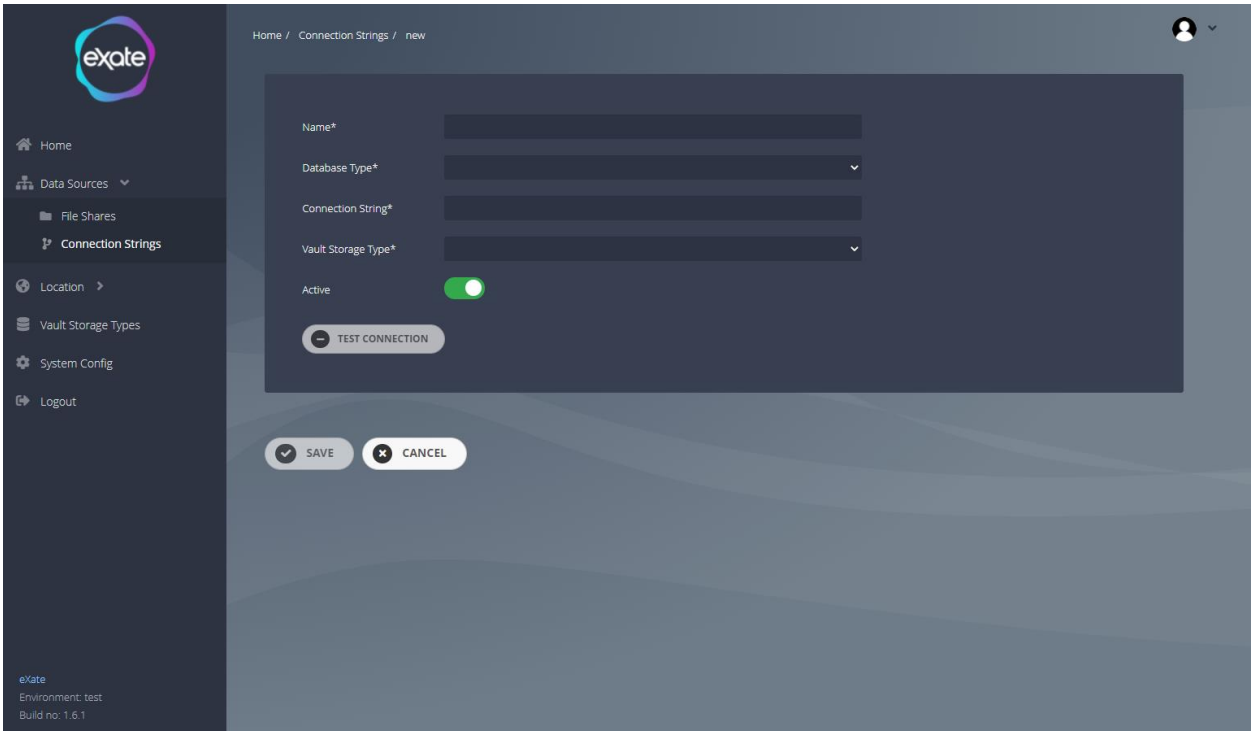


Figure 105 - Adding a connection string

Figure 105 shows adding a connection string. To add a connection string navigate to the plus button shown in Figure 103. From here you can fill in the following fields:

Name: Name of connection string

Database Type: Type of database

Connection String: Connection string for the database

Vault storage Type: Type of vault storage

Active: Toggle box to indicate whether active or inactive

Once filling in the fields you can then test the connection by clicking the 'Test Connection' button.

Location

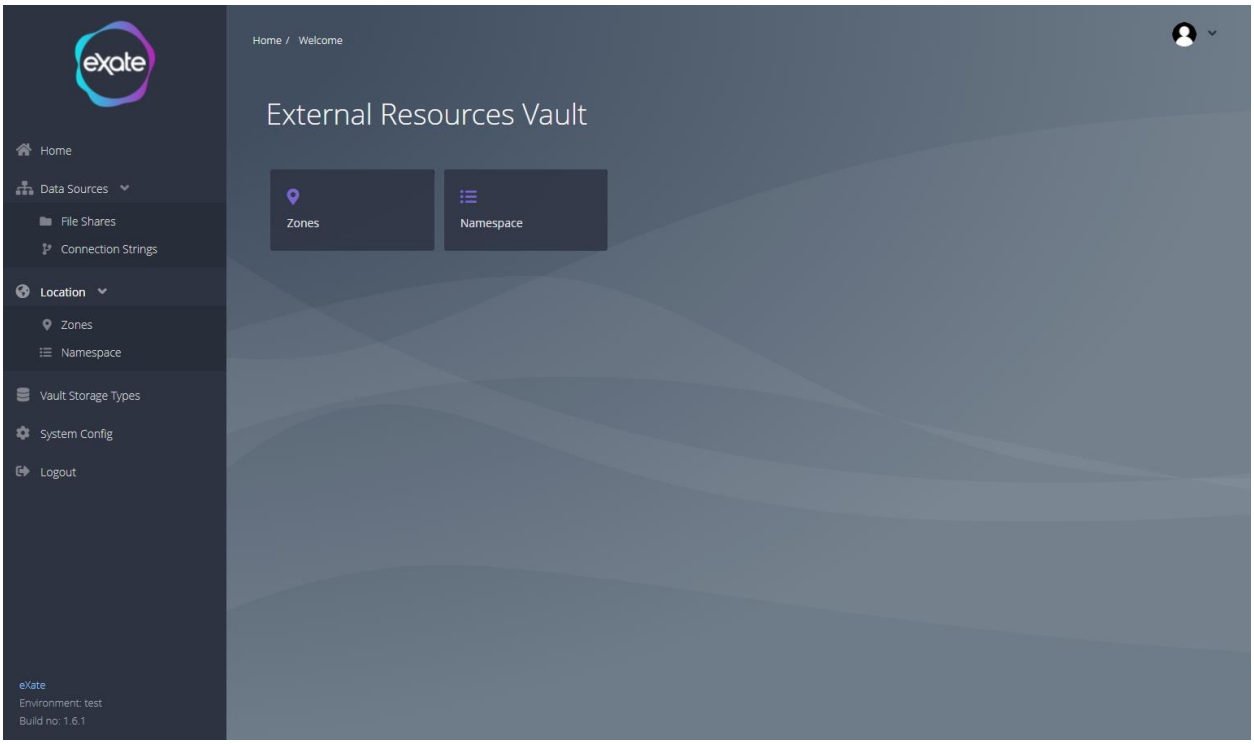


Figure 106 - Location

Figure 106 shows the location page. From here you can access zones and namespaces. To access the location page navigate to the left hand menu and click 'Location'.

Zones

Zones specify the valid operating country codes that the eXate services can work in. This will be defined by where your kubernetes clusters are located and is then mapped to a namespace.

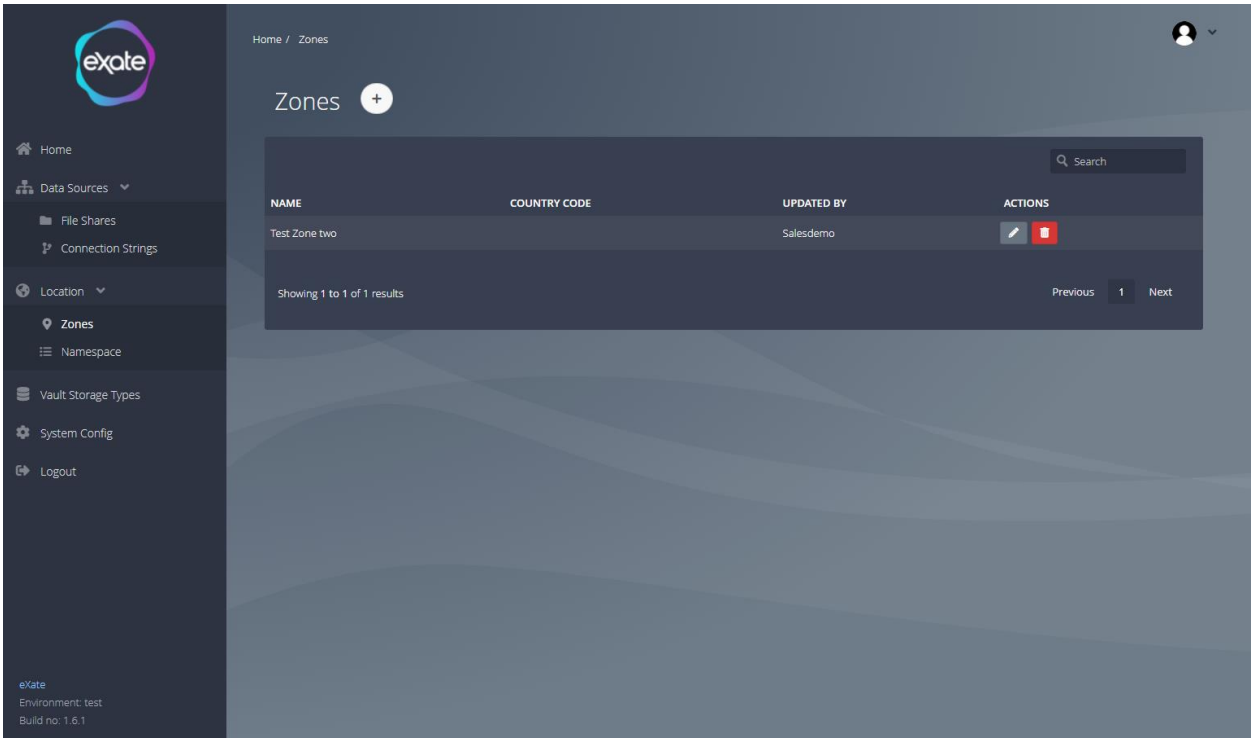


Figure 107 - Zones

Figure 107 shows existing zones. To navigate to the zone click the 'Location' and then 'Zones' on the left hand menu. From her you can add, edit or delete a zone.

Edit a Zone

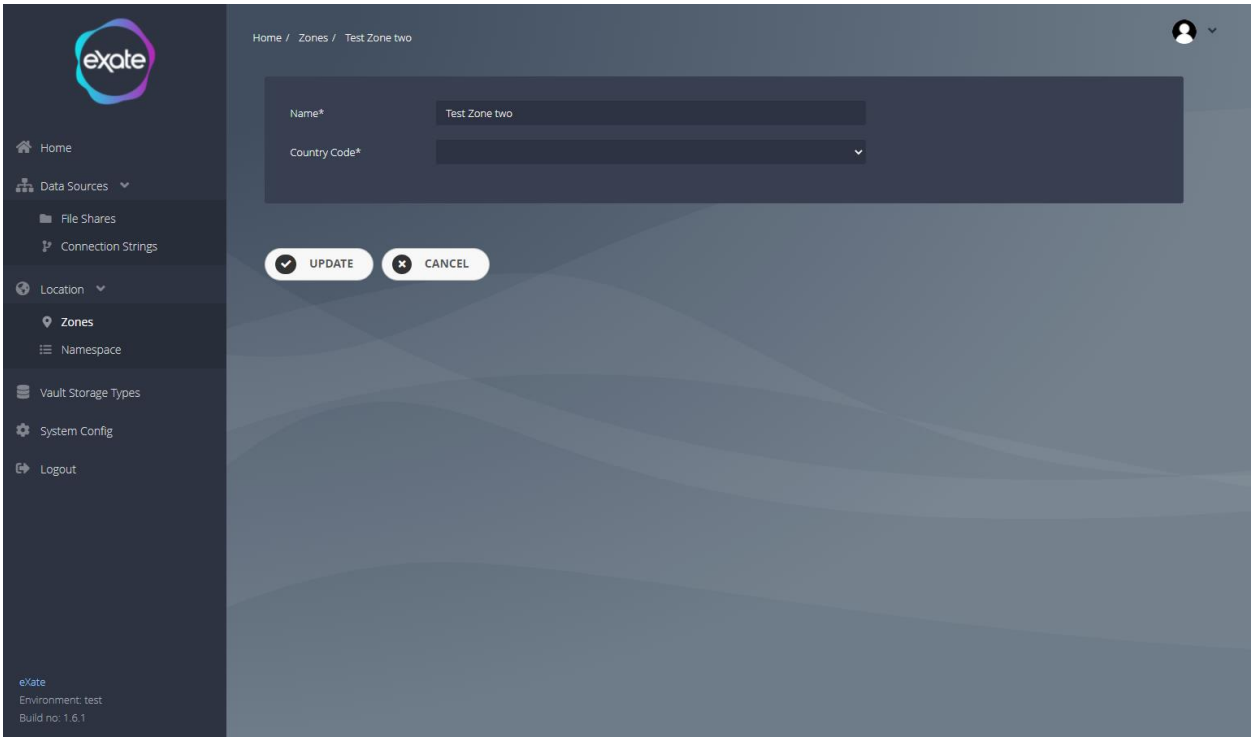


Figure 108 - Editing a zone

Figure 108 shows editing a zone. To edit a zone navigate to the pencil icon next to the chosen zone shown on Figure 107. From her you can edit the following fields:

Name: Name of the zone

Country code: Country Code

Add a Zone

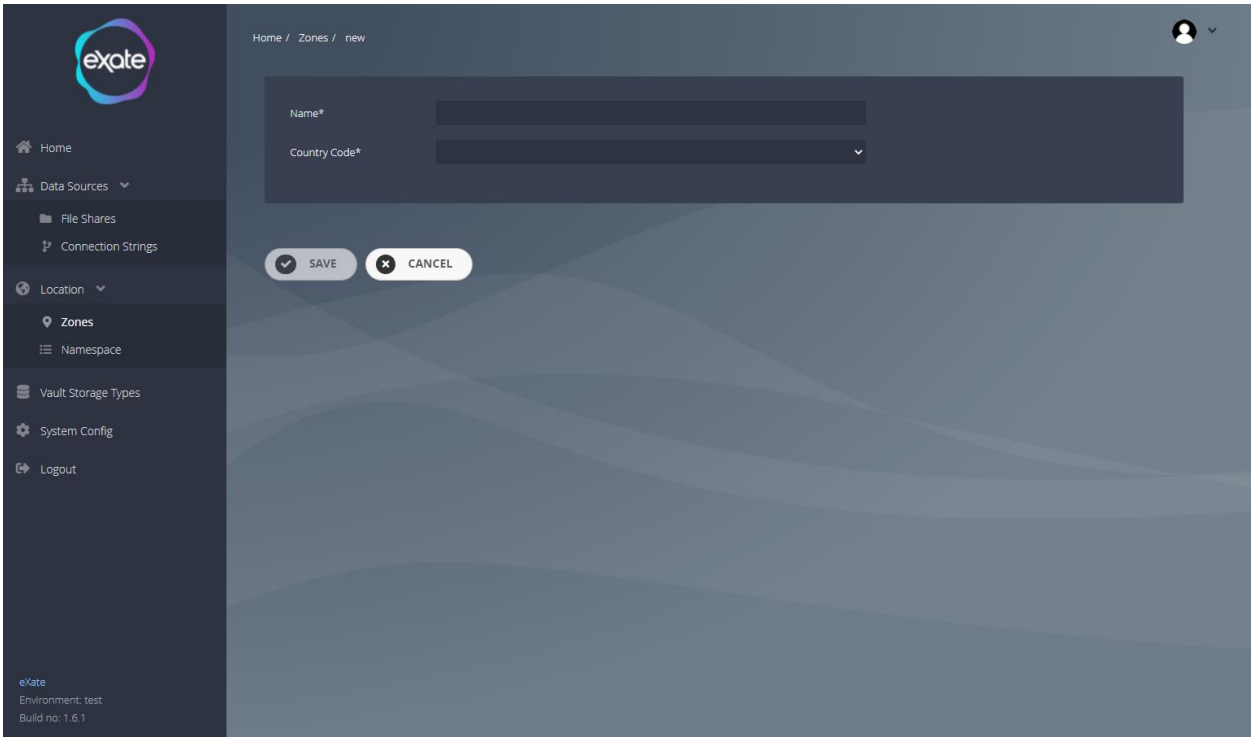


Figure 109 - Adding a zone

Figure 109 shows adding a zone. To add a zone navigate to the plus button shown in Figure 107. From here you can fill in the following fields:

Name: Name of the zone

Country code: Country Code

Namespace

Registering a namespace with the eXate system and linking it to the API endpoints.

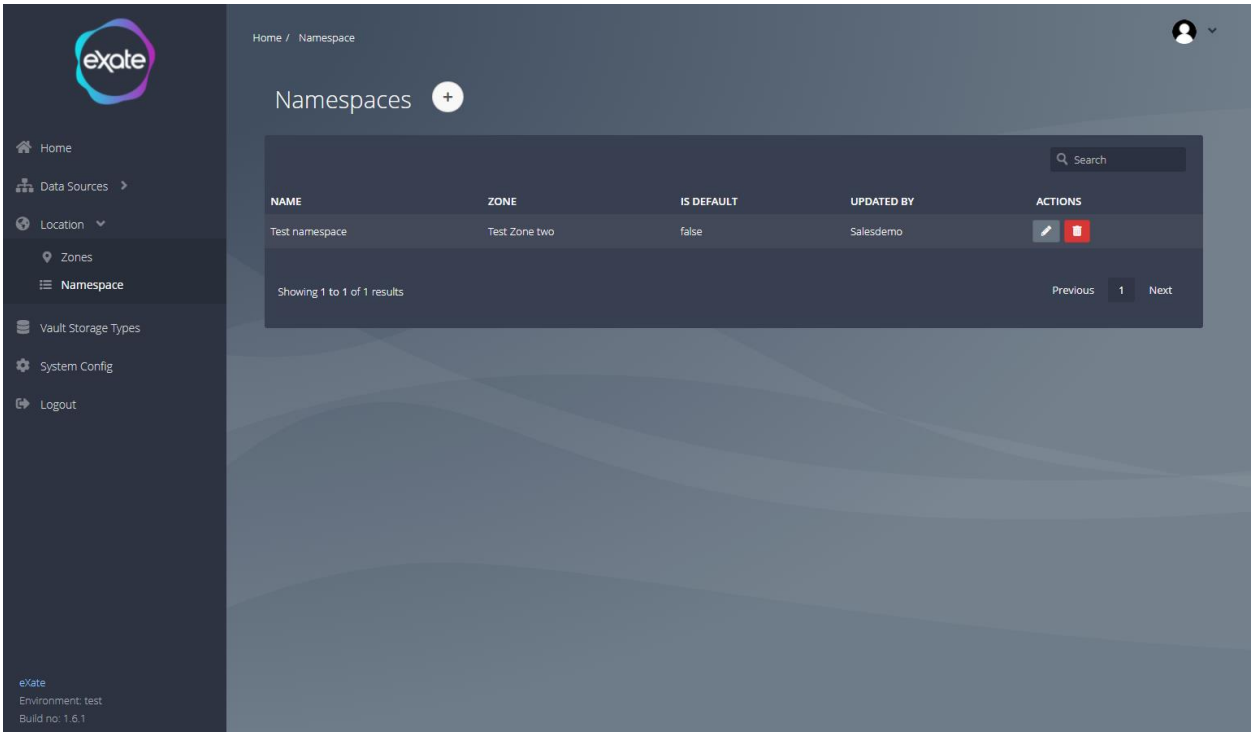


Figure 110 - Namespaces

Figure 110 shows the existing namespaces. To navigate this page click 'Location' then 'Namespace' on the left hand menu.

Edit a Namespace

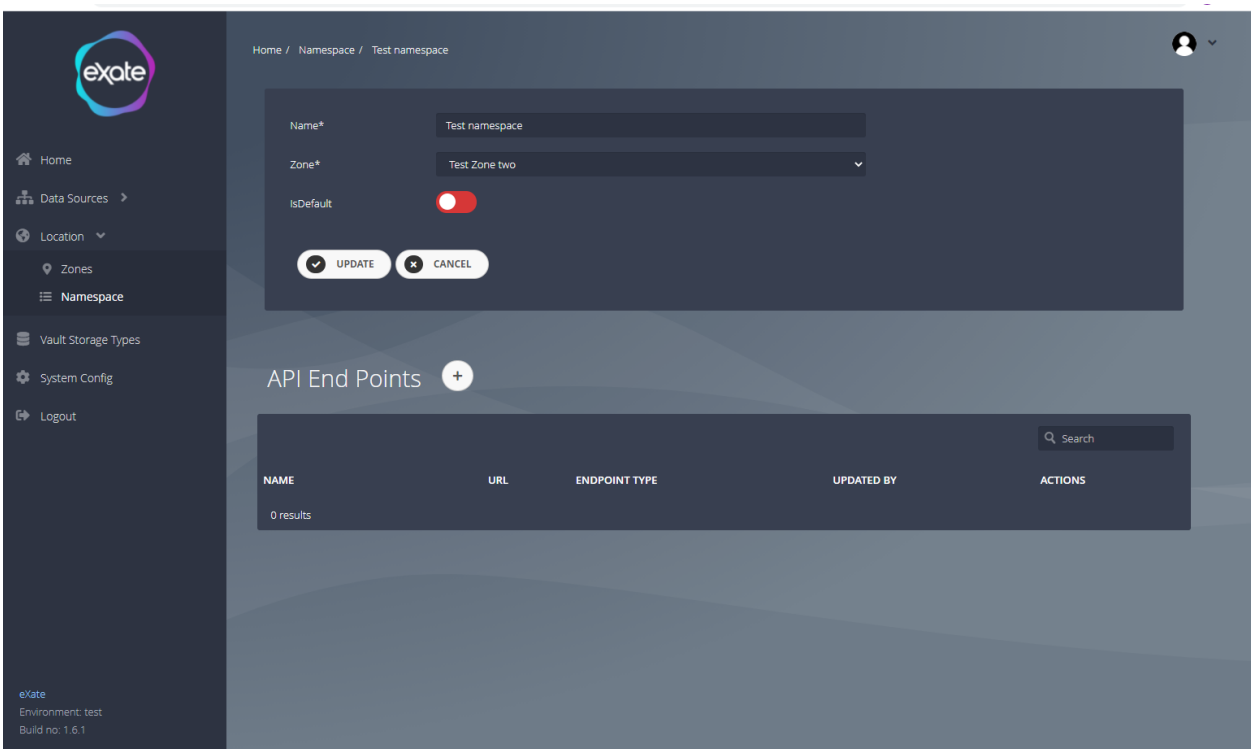


Figure 111 - Edit a Namespace

Figure 111 shows editing a name space. To edit a namespace click the pencil icon next to the chosen namespace. From here you can edit the following fields:

Name: Name of the namespace

Zone: Zone of the namespace

IsDefault: Toggle box to indicate whether the namespace is default

Add an API Endpoint

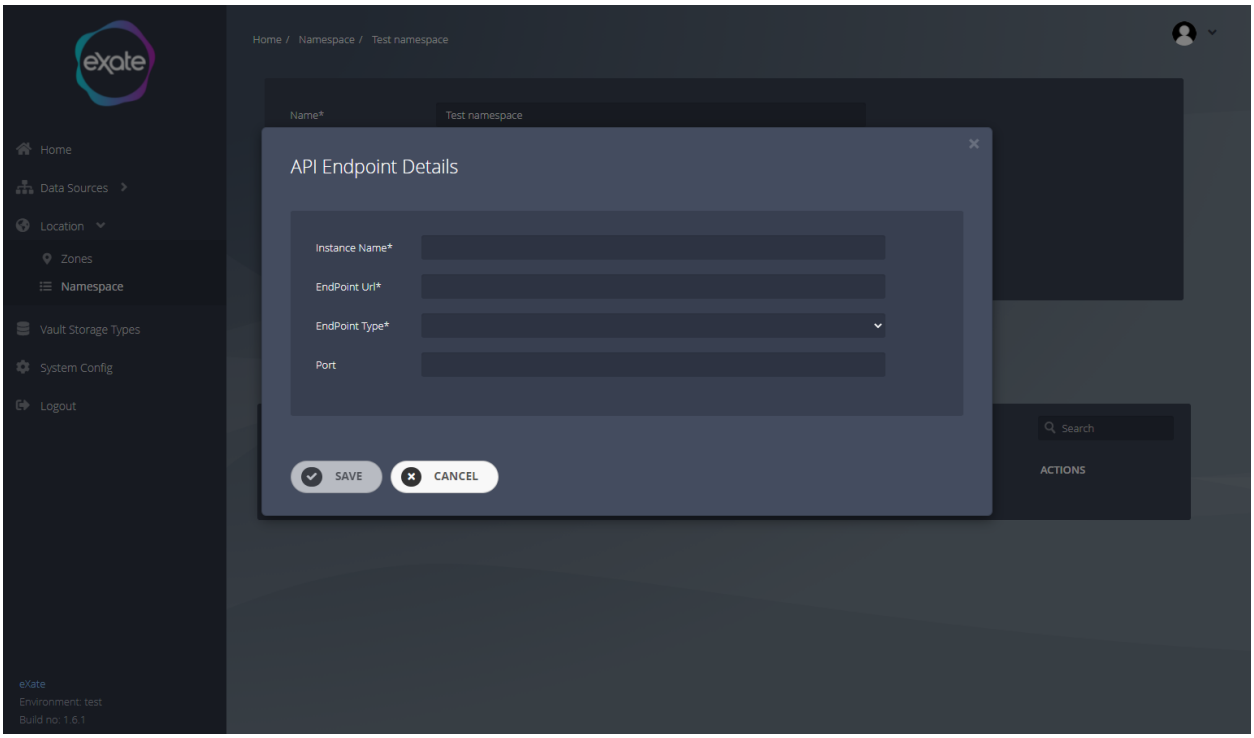


Figure 112 - Add an API endpoint

Figure 112 shows adding an API endpoint when editing a namespace. To add an API endpoint navigate to the plus button shown in Figure 111. From here you can fill in the following fields:

Instance Name: Name of the API endpoint

EndPoint URL: URL of the endpoint

EndPoint Type: Type of endpoint

Port: Port of the endpoint

Add a Namespace

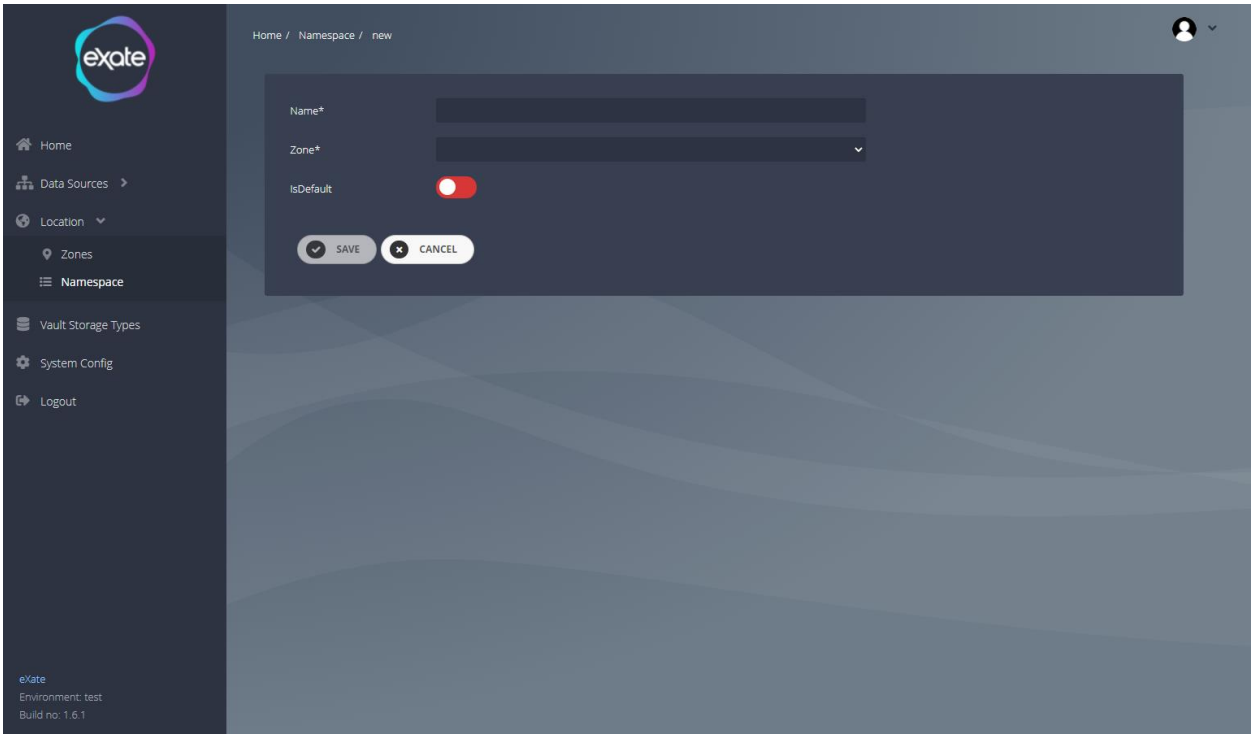


Figure 113 - Adding a Namespace

Figure 113 shows adding a namespace. To add a namespace navigate to the plus button shown in Figure 110. From here you can fill in the following fields:

Name: Name of the namespace

Zone: Zone of the namespace

IsDefault: Toggle box to indicate whether the namespace is default

Vault Storage Types

Vault storage types are where you can define different zones to store sensitive information in different database repositories.

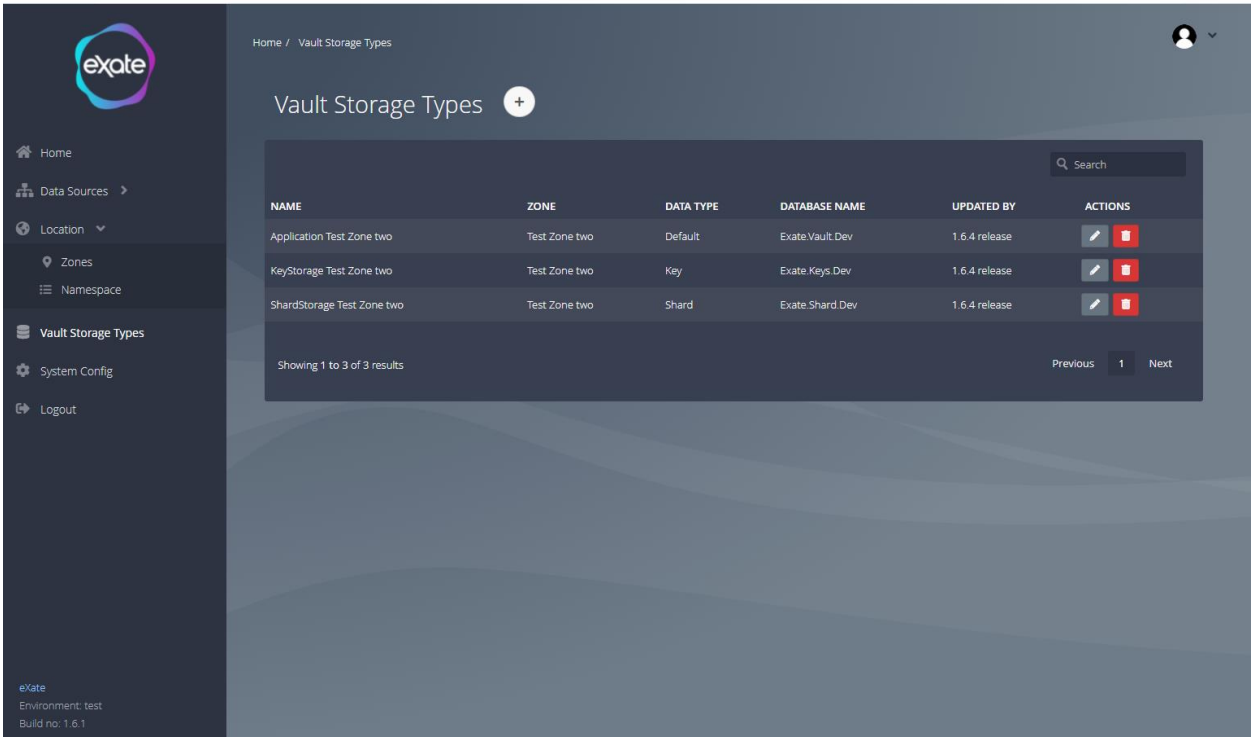


Figure 114 - Vault Storage Types

Figure 114 shows the existing vault storage types. To navigate to the page click 'Vault Storage Type' on the left hand menu. From her you can add, edit and delete vault storage types.

Edit Vault Storage Types

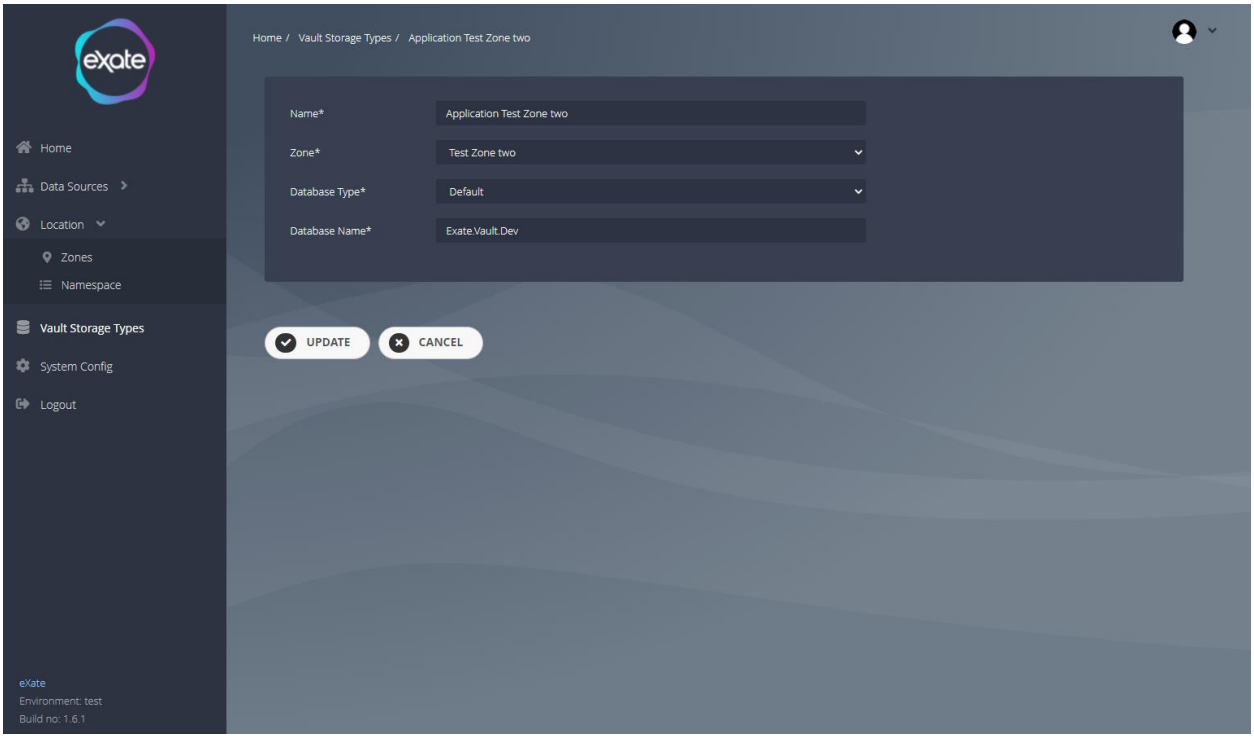


Figure 115 - Editing a Vault Storage Type

Figure 115 shows editing a vault storage type. To edit a vault storage type navigate to the pencil icon next to the chosen vault storage type shown in Figure 114. From hee you can edit the following fields:

Name: Name of the vault storage type

Zone: Zone of the vault storage type

Database Type: Type of database

Database Name: Name of the database

Add Vault Storage Type

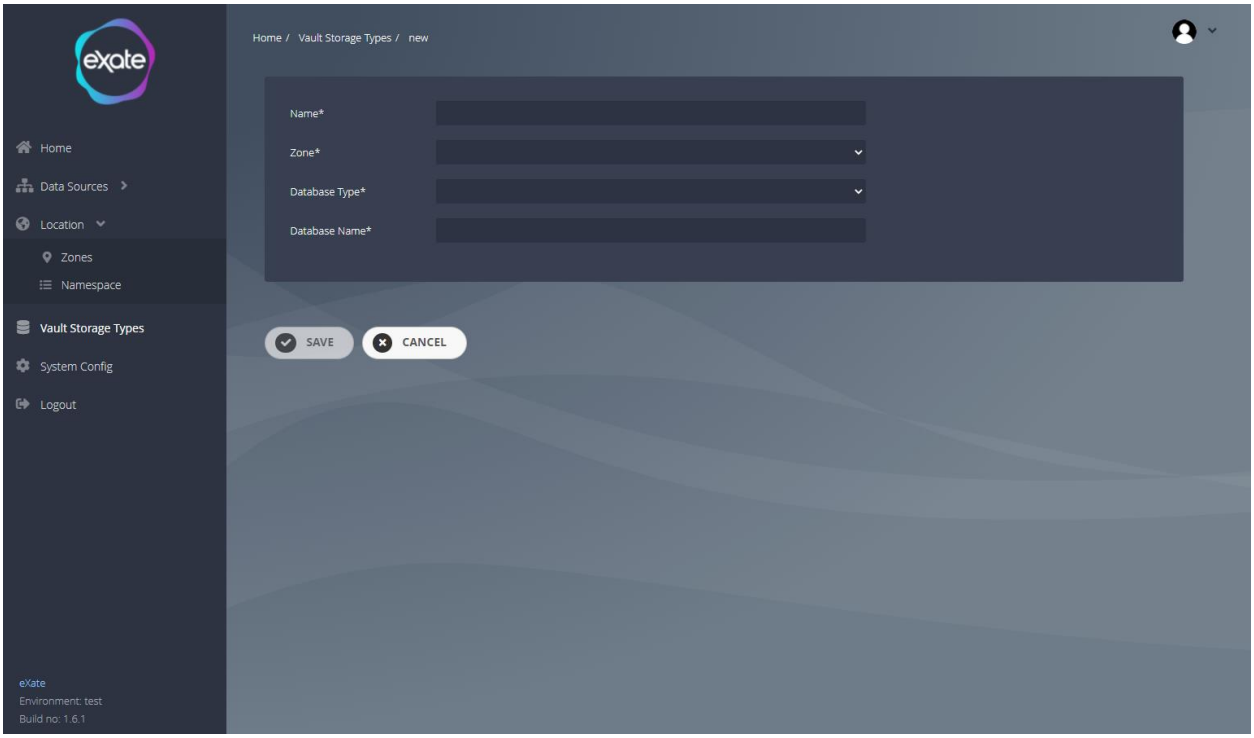


Figure 116 - Adding a vault storage type

Figure 116 shows adding a vault storage type. To add a vault storage type click the plus button shown in 114. From here you can add the following fields:

Name: Name of the vault storage type

Zone: Zone of the vault storage type

Database Type: Type of database

Database Name: Name of the database

System Config

Key-value pair that the eXate system uses.

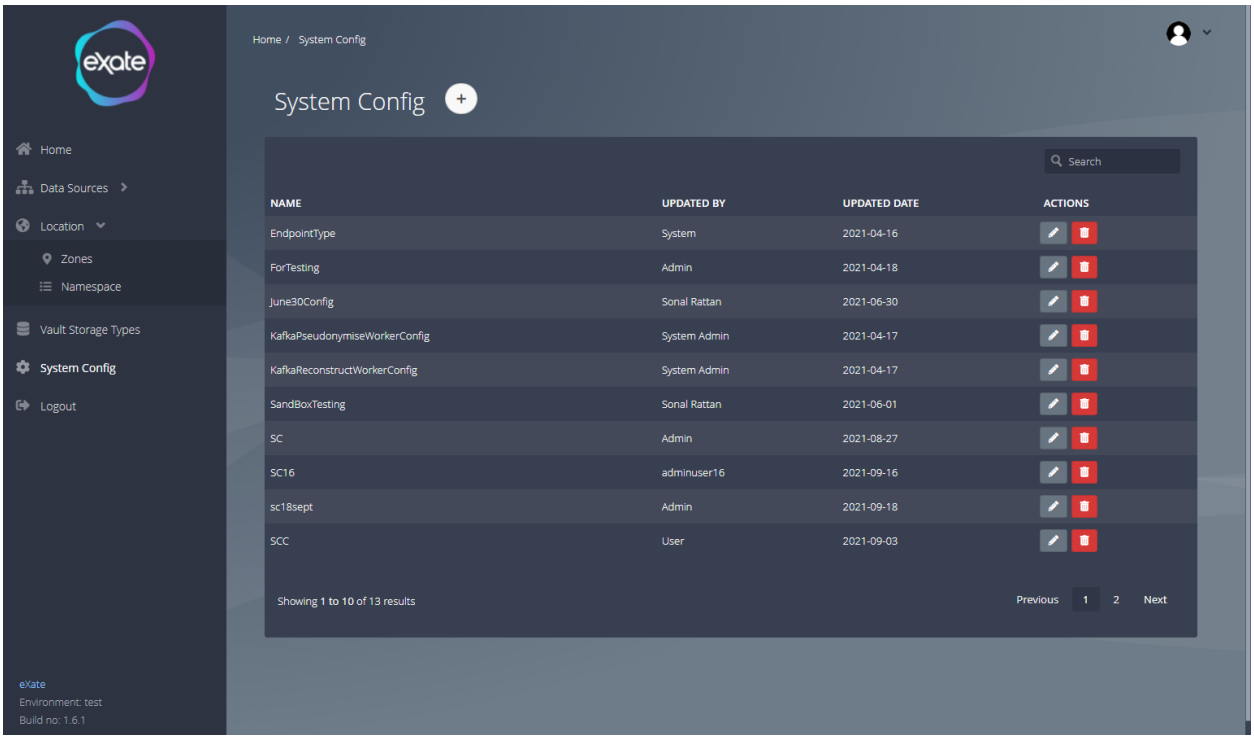


Figure 117 - System Config

Figure 117 shows existing system configs. To navigate to this page click 'System Config' on the left hand menu. From here you can add, edit and delete system configs.

Edit System Config

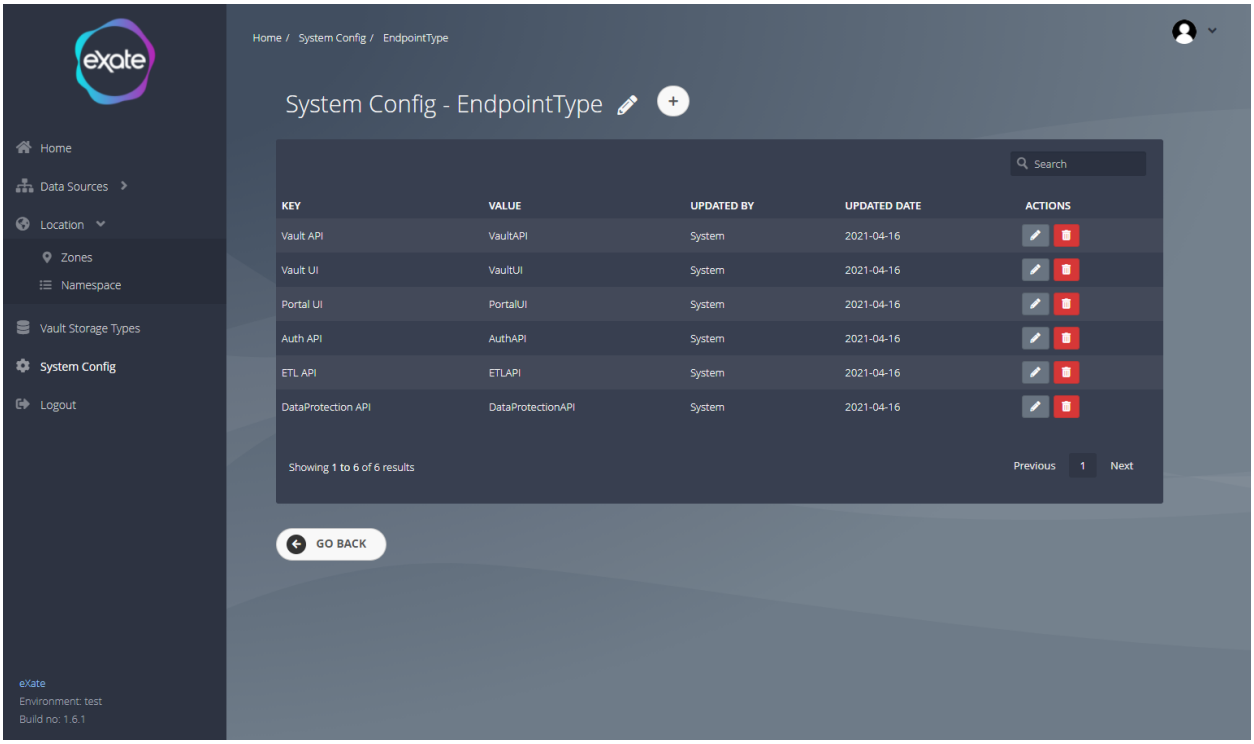


Figure 118 - Editing a system config

Figure 118 shows editing a system config will take you the key and value pairs of the chosen system configuration. From here you can add, edit and delete the system config values.

Edit the System Config Name

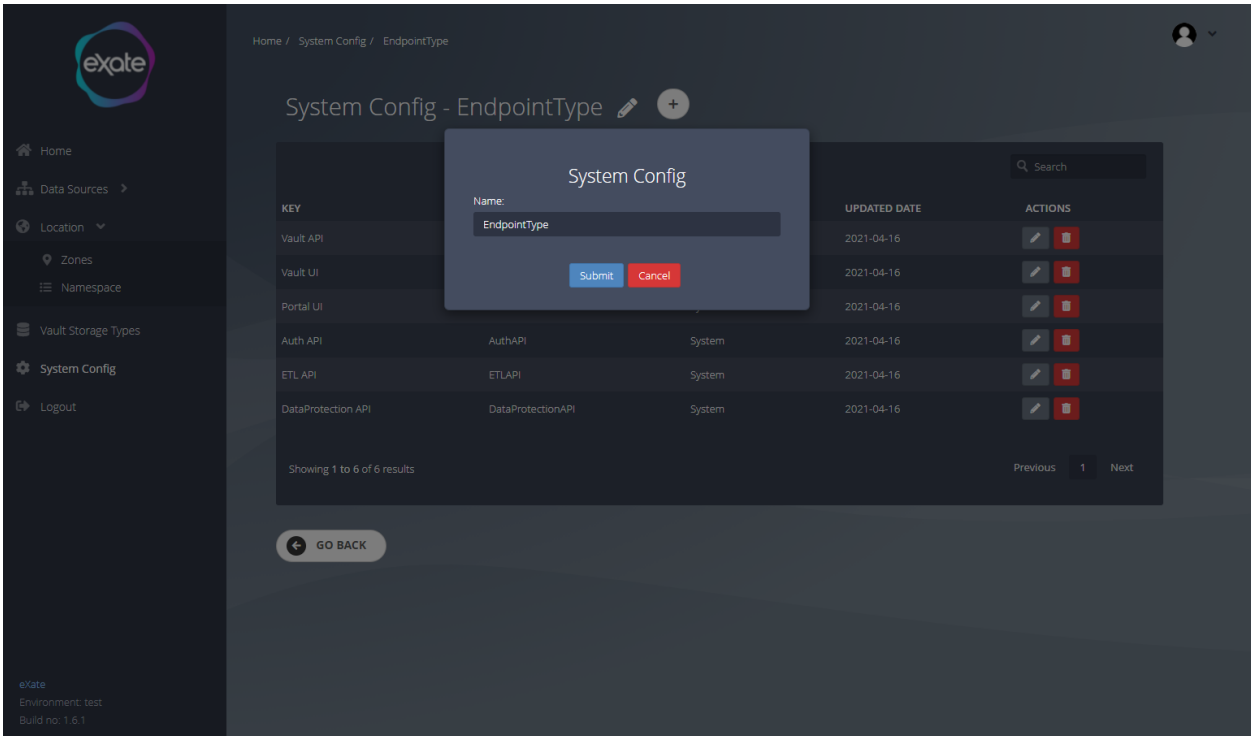


Figure 119 - Edit the System Config Name

Figure 119 shows you can edit the name of the system config name by clicking the large pencil icon at the top of the page shown in Figure 118. From here you can fill in the name.

Add a System Config Record

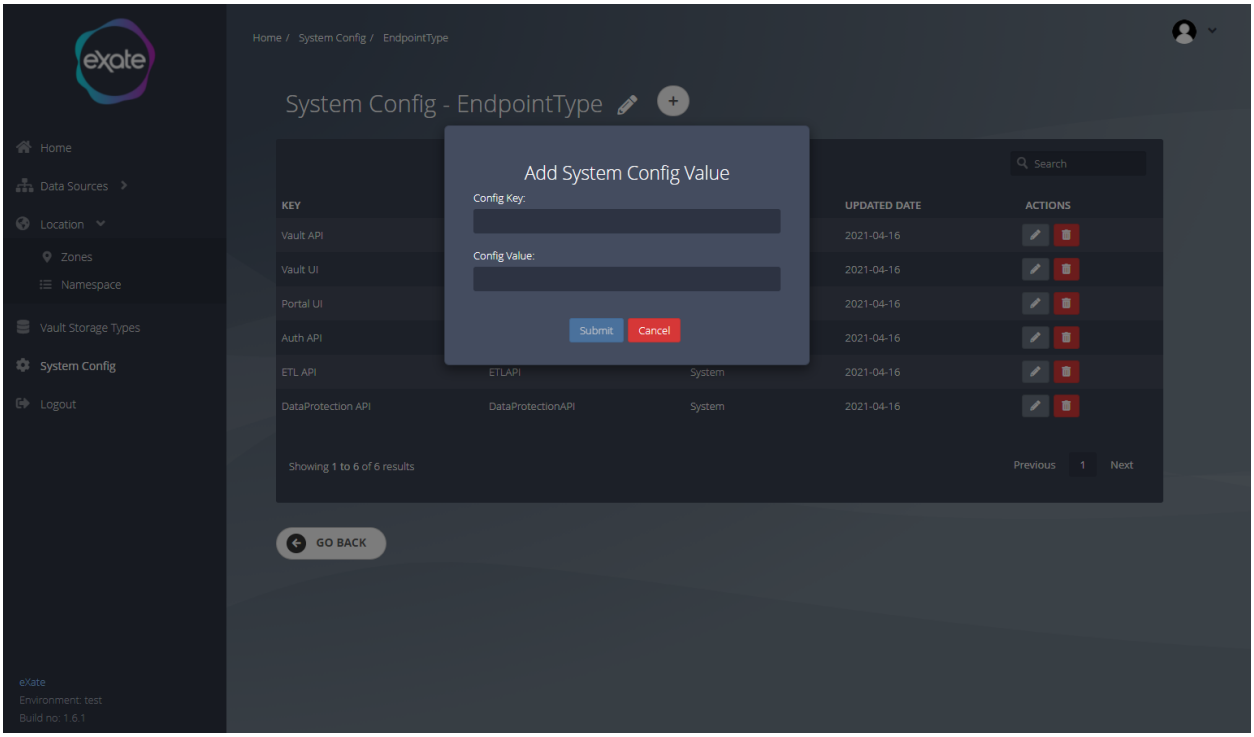


Figure 120 - Add a System Config Record

Figure 120 shows adding a record to the system config. To add a record click the plus icon shown in Figure 118. From here you can fill in the key and value pair.

Edit a record in the System Config

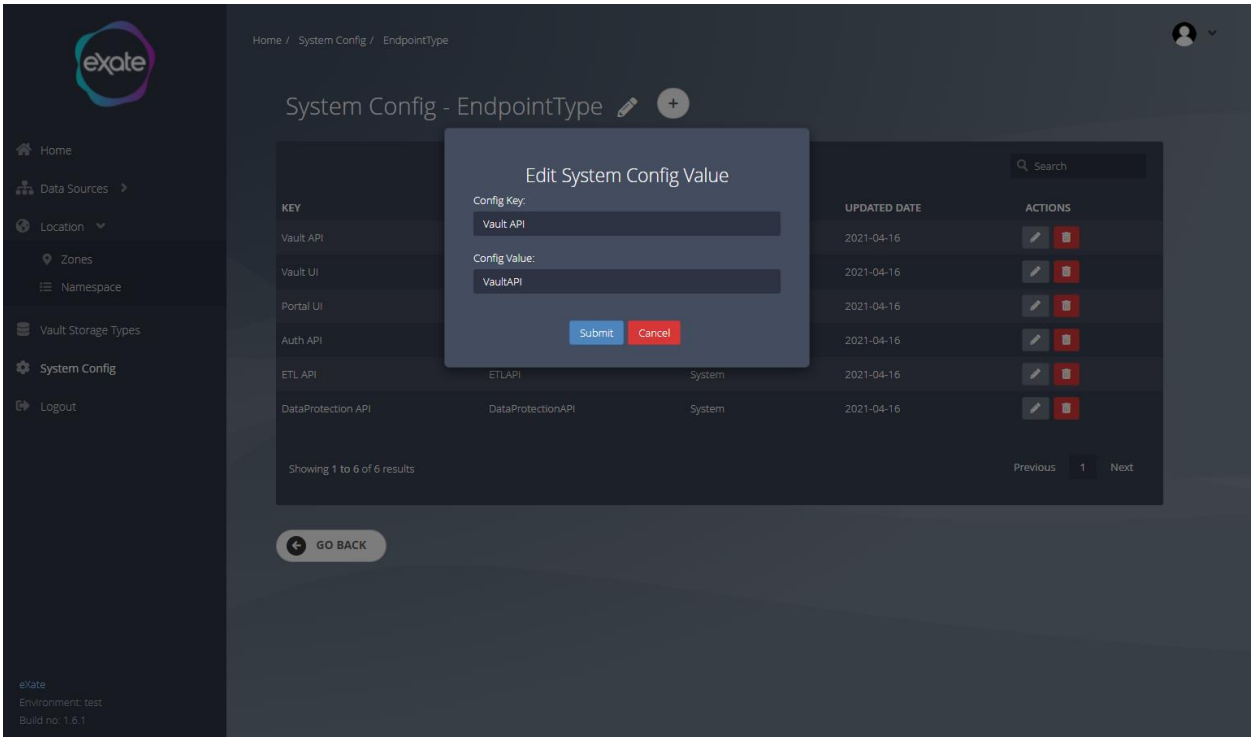


Figure 121 - Editing a Record in the System Config

Figure 121 shows editing a record in the System Config. To edit a record click the pencil icon next to the chosen record. From here you can edit the name of the key and value pair.

Add System Config

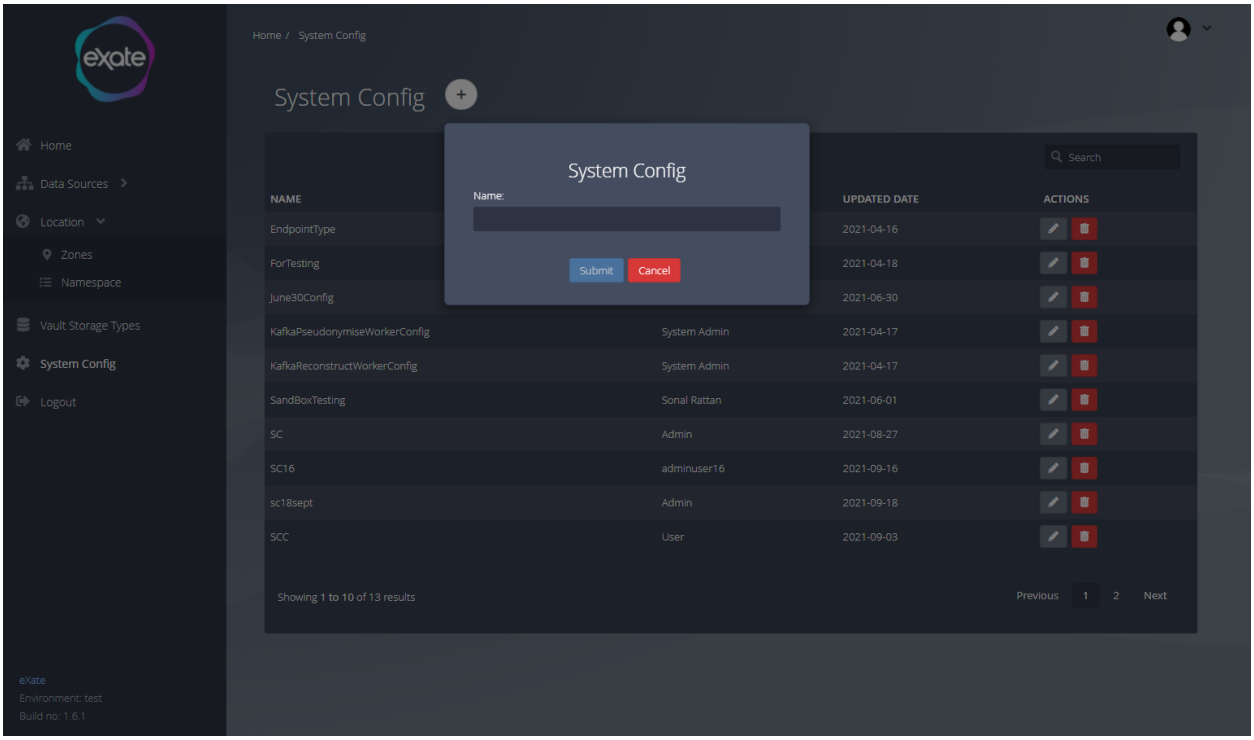


Figure 122 - Adding a System Config

Figure 122 shows adding a System Config. To add a system config click the large plus icon shown in Figure 117. From here you can fill in the name of the system config.

Glossary

GDPR: The General Data Protection Regulation (GDPR) is a legal framework that sets guidelines for the collection and processing of personal information of individuals within the European Union (EU)

JSON: JavaScript Object Notation, is an open standard format that uses human-readable text to transmit data objects consisting of attribute–value pairs. It is used primarily to transmit data between a server and web application, as an alternative to XML.

PII: Personal Identifiable Information is information that can be used on its own or with other information to identify, contact, or locate a single person, or to identify an individual in context.

Pseudonymisation: is a data management and de-identification procedure by which sensitive data fields within a data record are replaced by one or more artificial identifiers, or pseudonyms.

REST: Representational State Transfer (REST) is an architectural style that defines a set of constraints to be used for creating web services. Web Services that conform to the REST architectural style, or RESTful web services, provide interoperability between computer systems on the Internet.

XML: Extensible Markup Language is a markup language that defines a set of rules for encoding documents.

Versioning Table

Date	Version	Written By	Approved By
11/10/2021	1.0	Alice Wild	