



# **FORUM API DEVELOPER PORTAL**

## **QUICK START GUIDE**

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## Table of Contents

I.	Introduction .....	4
1.	Overview .....	4
2.	Terms and Glossary .....	4
3.	About the Forum API Developer Portal .....	4
4.	More Information.....	4
II.	Minimum Requirements and Prerequisites .....	6
1.	Forum API Developer Portal Virtual Machine – Requirements .....	6
2.	Forum Sentry API Security Gateway – Requirements .....	6
III.	Forum Sentry Configuration for the Forum API Developer Portal .....	8
	Forum Sentry Installation Procedures .....	8
	Forum Sentry Configuration .....	8
1.	Data Source Policy .....	8
2.	Portal API .....	9
3.	Import a sample OpenAPI Policy .....	10
4.	Create an OpenAPI Policy .....	10
IV.	Forum API Developer Portal Installation and Configuration .....	12
	Important Notes .....	12
1.	Launch and Configure the VM .....	12
2.	Access the DevPortal via Browser .....	13
V.	Using the Forum API Developer Portal .....	14
1.	Users and Logging In .....	14
2.	API Products .....	14
3.	Apps .....	15
VI.	Support & Documentation.....	17
1.	Contacting Forum Systems Support .....	17
2.	Forum Sentry Documentation .....	17
3.	Forum API Developer Portal Documentation .....	17

# I. Introduction

## 1. Overview

This Quick Start Guide will provide an introduction to the Forum API Developer Portal product (aka “Forum DevPortal” or “DevPortal”) from Forum Systems.

The guide will cover the following topics:

1. Requirements and installation procedures.
2. Configuring the Forum API Developer Portal to communicate with a Forum Sentry API Security Gateway.

## 2. Terms and Glossary

**API Products:** The APIs secured by Sentry that are documented in the DevPortal.

**Apps:** Developers accessing the DevPortal can create **Apps** in the DevPortal to register their applications and receive API credentials.

The following terms will be used interchangeably throughout this guide:

**Forum API Developer Portal:** “DevPortal”, “the portal”

**Forum Sentry API Security Gateway:** “Forum Sentry”, “Sentry”, “the gateway”, “API Gateway”

## 3. About the Forum API Developer Portal

The Forum API Developer Portal is a Drupal based platform for API Management that is provided as a standalone CentOS 7 VM. All software required to run the DevPortal, including Drupal, is pre-installed and configured on the packaged VM downloaded from Forum Systems. Once the VM is launched, the DevPortal admin will run through a series of scripts (detailed below) to configure the DevPortal for the user specific environment.

The DevPortal will communicate directly with a Forum Sentry instance for the purposes of cataloging the APIs that are virtualized and secured by Sentry. Developers accessing the DevPortal will be able to view the definitions for the APIs deployed in Sentry as well as register applications to access the APIs with credentials generated in the DevPortal.

## 4. More Information

This Quick Start Guide assumes a general knowledge of the Forum Sentry API Security Gateway. This document does not include step by step instructions for the Sentry policy configuration or install.

Sample Sentry config files (.fsg) are attached to the [Quick Start Guide KB article](#). These can be imported into Sentry to simplify the configuration process.

Links to the full Sentry documentation are included in the last chapter, as is the full contact information for Forum Systems Support.

The full DevPortal Admin Guide can be found at the **/node/10** directory of your DevPortal. For example: <https://devportal.forumsys.com/node/10>

Upon request, [Forum Systems Support](#) is able to assist in the setup and configuration of both the Sentry instance as well as the DevPortal.

## II. Minimum Requirements and Prerequisites

There are two products discussed in this guide (the DevPortal and Sentry) and the requirements for both are outlined in this chapter.

### 1. Forum API Developer Portal Virtual Machine – Requirements

The DevPortal beta release is provided as a packaged CentOS 7 VM. The following are the minimum requirements for this VM.

- VMware Workstation 8.x or ESX 5.x or later
- 200GB Hard Drive
- 8GB memory 1GHz CPU
- Network connectivity to the Sentry instance

### 2. Forum Sentry API Security Gateway – Requirements

#### Sentry Version

The DevPortal communicates with a Forum Sentry instance to display the APIs deployed in the gateway. This communication utilizes a Portal API that is available in Sentry v9.1 only.

The DevPortal does not work with Sentry v8.X.

For assistance launching a Forum Sentry instance or more information on obtaining v9.1, please contact [Forum Systems Support](#).

#### Network Connectivity

As the DevPortal calls into the Sentry Portal API, network connectivity between the DevPortal and Sentry is required. The traffic is HTTPS and the port that is used is configurable.

#### External Database

The Forum Sentry instance requires an external database for persistence of the DevPortal related objects (Apps, client credentials, etc.). Supported databases are Oracle, MySQL, and MS SQL Server. More information on the database configuration is included in the following chapter.

Connections to external databases are made through Data Source policies. The data source policy should be built (and tested) prior to configuring Sentry for use with the DevPortal. Additional instructions are provided in the next chapter.

#### DevPortal Users

The developer user accounts for the DevPortal are managed by Sentry. Therefore, developer user accounts in Sentry will be required for the developers. Be sure to create these WITHOUT privileged access to Sentry. While the developers will have access to the DevPortal they do not necessarily need any access to Sentry. It is possible to have user accounts that have access to both the DevPortal and Sentry. The DevPortal itself

will sync with a Sentry instance using the Sentry Portal API. This uses the “bgsync” user account, the password is set during the DevPortal setup. This user also needs to be added to Sentry.

### **Important DevPortal & Sentry Prerequisite – System Time**

The time on the servers (DevPortal and Sentry) should be set correctly and both should be configured to use the same NTP server.

## III. Forum Sentry Configuration for the Forum API Developer Portal

### Forum Sentry Installation Procedures

Forum Sentry v9.1.X needs to be installed and configured first as the DevPortal config scripts will call into the Sentry Portal API during the DevPortal setup. The Sentry instance will run on a separate server than the DevPortal.

Full installation and licensing instructions for the Forum Sentry API Security Gateway (software and virtual appliance) can be found in the [Quick Start Guide](#).

### Forum Sentry Configuration

The Forum API Developer Portal will communicate with the Forum Sentry API Gateway via an HTTPS REST API known as the **Portal API**.

The DevPortal will sync with the gateway for various reasons, including: cataloging of the available APIs, registering client apps and credentials, and DevPortal user management.

Developers building applications that will invoke the APIs secured by Sentry will use the DevPortal to browse and subscribe to the available **API Products**. Developers can also create **Apps** in the DevPortal to register their applications and receive API credentials.

This chapter will cover the setup of the Forum Sentry API Security Gateway so that a stand-alone Forum API Developer Portal can communicate with it.

#### 1. Data Source Policy

An external database is required for Forum Sentry to store policy objects related to the DevPortal. For example, registered apps and client credentials will be stored in an external database so that they are persisted across Sentry restarts.

Forum Sentry communicates with an external database via a Data Source policy. Sentry supports the following databases:

- Oracle
- MySQL
- SQL Server
- DB2

The database schemas used to build the database, that describe the Sentry tables, are available directly within the Data Sources page.

The DevPortal functionality will require two database tables specifically:

1. Table 1 – **clients**
2. Table 2 – **subscriptions**

For more information on using databases with Sentry including configuration instructions, see the article: [Best Practices: Using Databases with Sentry](#).



## 2. Portal API

The first step is to configure the Portal API in Sentry that allows communication from the DevPortal. The specific instructions are below.

### Create an HTTPS Listener Policy for the Portal API

1. Create or Import an SSL Key Pair to use with SSL Termination
2. Create an SSL Termination Policy using the Key Pair from the previous step
3. Create an HTTPS Listener Policy using port 5051 (or any port that is available)

NETWORK POLICIES > HTTP LISTENER POLICY

**POLICY NAME**

Policy Name:

Labels:

Date Created: 2020/04/02 13:25  
Date Modified: 2020/10/02 11:54

[Next](#)

**POLICY SELECTIONS**

<a href="#">Policy Name:</a>	Sentry_Admin_APis
<a href="#">IP ACL Policy:</a>	Unrestricted
<a href="#">Protocol:</a>	HTTPS (chunked)
<a href="#">Listener:</a>	192.168.1.246:5051
<a href="#">Timeout:</a>	
<a href="#">Password Authentication:</a>	
<a href="#">SSL Termination Policy:</a>	fssupport.net
<a href="#">Error Handling:</a>	Default Template

### Grant Portal API Access to a Sentry User

1. Add a new user account “dev1” – with whatever password you want - do not give this user account privileged access in Sentry
2. Add a new user account “bgsync” – with whatever password you want - do not give this user account privileged access in Sentry
3. Add the dev1 and bgsync accounts to a new User Group named “DevPortalUsers”
4. Create a new User ACL “DevPortalACL” and grant the “DevPortalUsers” group Execute privileges.

USER ACL MANAGEMENT > USER ACL DETAILS

**USER ACL DETAILS**

ACL Name: DevPortalUsers

#	USER GROUP	EXECUTE
1	<a href="#">DevPortalUsers</a>	<input checked="" type="checkbox"/>
2	<a href="#">LocalAdmins</a>	<input type="checkbox"/>

[Save](#)

## Enable the Portal API

1. Navigate to the Portal API page under System → Configuration
2. Enable the Portal API using the HTTPS Listener created earlier and selecting the DevPortalUsers ACL. Optionally set an IP ACL (access control based on IP addresses).

**PORTAL API**

**PORTAL API**

Enable:

Listener Policy:  [Edit](#)

Virtual URI: <https://192.168.1.246:5051/v1/portal>

ACL Policy:  [Edit](#)

IP ACL:  [Edit](#)

Data Source:  [Edit](#)

[Applications](#) [Save](#)

## 3. Import a sample OpenAPI Policy

Attached to the [Quick Start Guide](#) article is a sample Sentry FSG file for an OpenAPI policy. The import password is password. This OpenAPI policy uses the public / demo [Petstore API](#). The FSG will import an OpenAPI policy with HTTPS listener and remote policies.

## 4. Create an OpenAPI Policy

OpenAPI policies in Sentry are used to secure access to APIs defined with OAS definition files (e.g. JSON or YAML files) while also providing a useful Swagger UI interface for the remote API itself.

With Open API policies access to the APIs can be controlled by operation (HTTP method). OpenAPI policies will automatically be available in the DevPortal once a sync between the DevPortal and Sentry occurs over the Portal API.

**FORUMSENTRY** > API SECURITY GATEWAY **FORUMSYSTEMS**

**OPENAPI POLICIES > PETSTORE\_OPENAPI\_POLICY**

Overview Operations Remote API

**OVERVIEW**

Policy Name\*

Labels:

Open API Version: 2.0

Title: Swagger Petstore

Version: 1.0.5

Remote API: [Download](#)

**LISTENER POLICY SETTINGS**

Listener Policy\*  [Edit](#)

Base Path\*

**REMOTE POLICY SETTINGS**

Remote Policy\*  [Edit](#)

**ACCESS CONTROL**

ACL Policy:

[Apply](#) [Save](#)

Other types of Content Policies (i.e. REST, JSON, and XML Policies) in Sentry can also be documented with the DevPortal but they will not be available in the DevPortal by default. An OpenAPI document needs to be associated to these policies first. This Quick Start Guide does not provide those details, please contact [Forum Systems Support](#) for assistance as required.

This guide does not provide the step by step instructions for generating an OpenAPI Policy in Sentry. The process is straight forward and documented in the OpenAPI Policies Guide.

## IV. Forum API Developer Portal Installation and Configuration

The steps below outline the procedures for launching and configuring the Forum API Developer Portal. Scripts have been provided on the VM to accomplish much of these tasks. Several important steps involve changing default passwords. Please be sure to read through the Important Notes below before proceeding.

### Important Notes

1. The CentOS VM provided by Forum Systems with the pre-installed packages and the Forum API Developer Portal product is not a hardened or secure Linux VM. The DevPortal admin should take the necessary steps to harden and secure the OS in accordance with existing company InfoSec guidelines.
2. While some of the configuration scripts provided are for changing OS settings (e.g. changing the root password), Forum Systems is not responsible for OS level configuration, including but not limited to: network setup, network troubleshooting, OS updating, user management, etc. The VM should be configured for the network (set IP, DNS, routing, etc.) prior to configuring the DevPortal.
3. The DevPortal will require network connectivity to Sentry on the port specified in the Portal API HTTPS Listener Policy (port 5051 is recommended above). As part of the configuration of the DevPortal, the admin will need to enter in the hostname of the Sentry instance and the port that the Portal API is listening on. This network connectivity needs to be in place before step 9 below or it will fail.
4. The DevPortal utilizes HTTPS and a key pair for the DevPortal hostname will be required during the configuration wizard. The key pair will need to be uploaded to the DevPortal in step 10 below. The default key pair shipped with the DevPortal VM is for devportal.forumsys.com.

### 1. Launch and Configure the VM

1. Launch the Forum API Developer Portal VM using the VMware interface, using the minimum requirements listed in Chapter II of this document.
2. Using the VMware shell console, log into the OS using the following credentials: **root / password**
3. Change the CentOS 7 root password:

```
passwd root
```

4. Change the CentOS 7 portal account password:

```
passwd portal
```

5. Change the database passwords (root and portal user) (note the existing password is password)

```
/var/www/sites/dev-portal/set_database_password.sh
```

6. Change the directory to /var/www/sites/dev-portal

```
cd /var/www/sites/dev-portal
```

7. Change the DevPortal WebAdmin password

```
./set_site_admin_password.sh
```

8. Configure the network settings and ensure the DevPortal VM can access the Sentry instance.
9. Edit the host file if necessary, to ensure the local loopback is set correctly and that the DevPortal VM can resolve the Sentry hostname

```
vi /etc/hosts
```

10. Set the Sentry host name and Portal API port (and retrieve Sentry server certificate)

```
./set_sentry_host.sh
```

11. Set the bgsync user account and password which is used with the Sentry Portal API – we recommend using bgsync as the user name

```
./set_bgsync_password.sh
```

12. Set the DevPortal host name

```
./set_site_host.sh
```

13. Upload your (unencrypted) developer portal server key and certificate with ssh or wget to the DevPortal VM – This step is optional but recommended.

*Note that the DevPortal certs shipped with the VM are for devportal.forumsys.com*

14. Set the DevPortal certificate and private key to use with HTTPS connections to the DevPortal

```
./set_site_certificate.sh
```

15. Restart the HTTPD daemon after changing the certs

```
systemctl restart httpd
```

16. Configure SSH keys – Optional but recommended

## 2. Access the DevPortal via Browser

1. Access the WebAdmin interface of the DevPortal using a browser. For example, if you used devportal.yourcompany.com as the DevPortal hostname, the URL to use is <https://devportal.yourcompany.com>.
2. Depending on the DevPortal certs used, you may need to accept or bypass the browser's SSL warning.
3. Log into the DevPortal WebAdmin with the username **admin** and the password set above. Note that this is the DevPortal admin account, a typical developer (user) for the DevPortal will not have the same access or permissions as this admin account. For example, the top menu bar for admin tasks is only visible to admin users.
4. If everything has been configured correctly in Sentry, you should also be able to log in with your Sentry admin account or any other account in the Local User Group created earlier. This Sentry user will be a typical DevPortal user account – a “Developer” - not a DevPortal admin account.

## V. Using the Forum API Developer Portal

The Forum API Developer Portal is designed for the developers of client applications aiming to invoke the APIs that are virtualized and secured by Forum Sentry.

When developers log into the DevPortal, some of the main features available to them will be:

1. browsing available APIs
2. viewing the Swagger definitions of the API to see methods and sample requests
3. invoking the APIs
4. registering Apps to get credentials for the API
5. setting redirect URLs for their Apps
6. reading any other detailed information related to the APIs through Blog posts and User Forums
7. accessing a customer support portal to receive help with using the APIs

### 1. Users and Logging In

There are two types of users that will log into the DevPortal: Admin Users and Developers.

1. **Admin Users** are admins of the DevPortal and have the ability to customize the layout, enable/disable pages, and perform other general Drupal admin tasks. This Quick Start Guide does not cover DevPortal / Drupal administration.
2. **Developers** are the end users of the DevPortal. The developer user accounts will be stored in Forum Sentry or in an external user repository (e.g. LDAP) that Sentry can communicate with. When a Developer attempts to log into the DevPortal, an API call to the Sentry Portal API is made to validate the credentials. Developers can belong to multiple groups and API restrictions can be set per group.

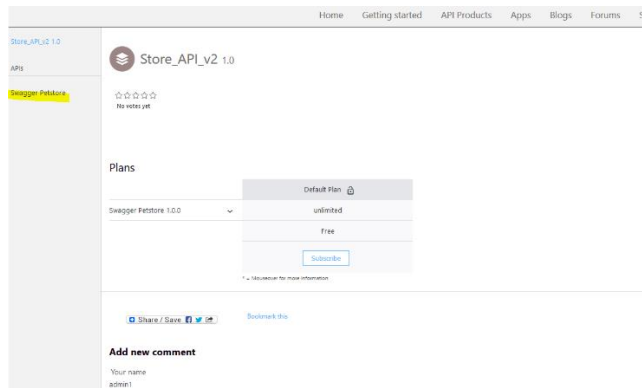
### 2. API Products

The API Products page is where Developers can browse the APIs that are available to them. These are the APIs that are deployed in Sentry.

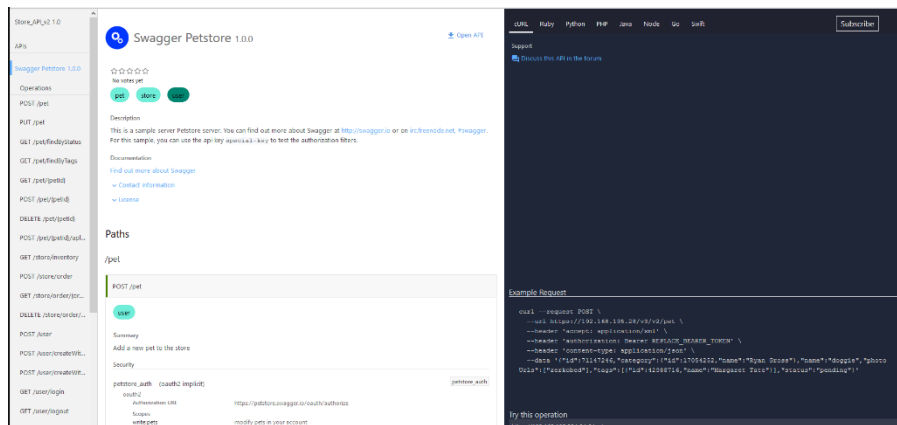
The DevPortal automatically syncs with Sentry via the Portal API, to pull in the OpenAPI JSON documents for each Sentry Content Policy. Each Content Policy in Sentry is represented by a single API Product in the DevPortal.

The API Products give Developers the ability to view the Swagger definitions for the API, test the API, see code examples in several different languages, select a usage plan for the API and ultimately subscribe and get credentials to use an API.

1. **Plans** – Developers can choose an appropriate plan for API usage. On this page Developers can also rate, post, and view comments about the API. To access the API definitions, click the API in the top left of the API Product as shown highlighted in the screen shot below:



- 2. API Definitions** – This page provides the API definitions based on the OpenAPI doc pulled from the Sentry Content Policy. Developers can see all of the operations and methods allowed for the API, download the OpenAPI doc for the API, and review code samples for requests in several languages.



### 3. Apps

The Apps page is where Developers can register an application that will utilize one of the API Products. When creating an App, the developer will obtain their API credentials that will be necessary to access the API through Sentry.

**Create New App** – Developers register new Apps to obtain API credentials and set OAuth Redirect URIs for their client applications. Once an App is registered, the developer can subscribe to an API.

## Register application

Title \*  
Client\_App\_1

Description

OAuth Redirect URI  
https://myclient.mycompany.com/app/

The URL, authenticated OAuth flows for this application should be redirected to.

Home Getting started API Products Apps Blogs Forums Support

← All Apps

Client\_App\_1

Client\_App\_1

Application created successfully.

- Your client secret is:   Show Client Secret


Now that you've registered your app, you can browse the [available APIs](#) and subscribe.

Make a note of your client ID and client secret. These may be needed for your application to access the API.

Your client secret will only be displayed once. If you forget or lose it, you can verify the secret to see if it's correct or reset it to get a new one.

### Client\_App\_1

**Details**

 Client\_App\_1

[Update](#)

OAuth Redirection URL  
https://myclient.mycompany.com/app/

**Credentials** | [Add credentials](#)

**Subscriptions**

No subscriptions found. Why not browse the [available APIs](#)?



## VI. Support & Documentation

### 1. Contacting Forum Systems Support

[Online Helpdesk](#) - create support tickets, access forums, docs, FAQs

Email Support: [support@forumsys.com](mailto:support@forumsys.com)

Phone Support: + 1.781.791.7510 option 2

### 2. Forum Sentry Documentation

[Full Sentry Documentation](#) (also available through the WebAdmin interface)

[Forum Sentry WebAdmin Overview Video](#)

### 3. Forum API Developer Portal Documentation

The full DevPortal Admin Guide can be found at the **/node/10** directory of your DevPortal WebAdmin interface.

For example: <https://devportal.forumsys.com/node/10>

Note that only DevPortal admin accounts have access to this Admin Guide.

The screenshot shows the top navigation bar with links: Home, Getting started, API Products, Apps, Blogs, Forums, Support. The main content area is titled "Admin Guide" and includes a submission timestamp: "Submitted by Anonymous (not verified) on Tue, 11/27/2018 - 01:42". Below this is a welcome message: "Welcome to your new Forum Systems API Management Developer Portal." and a note: "This guide should help familiarise you with the extensive configuration and customization options available." A list of navigation links is provided: Basic Configuration, Forum moderation, Content authoring, Configuring the site layout, Configuring content, Managing users, Managing security, and Extending. A "Book navigation" sidebar on the right lists the same items with expandable arrows. At the bottom of the content area, there are links for "add child page" and "printer-friendly version", and a "Basic Configuration" link. The footer contains "Terms of use" and "Privacy policy" links.