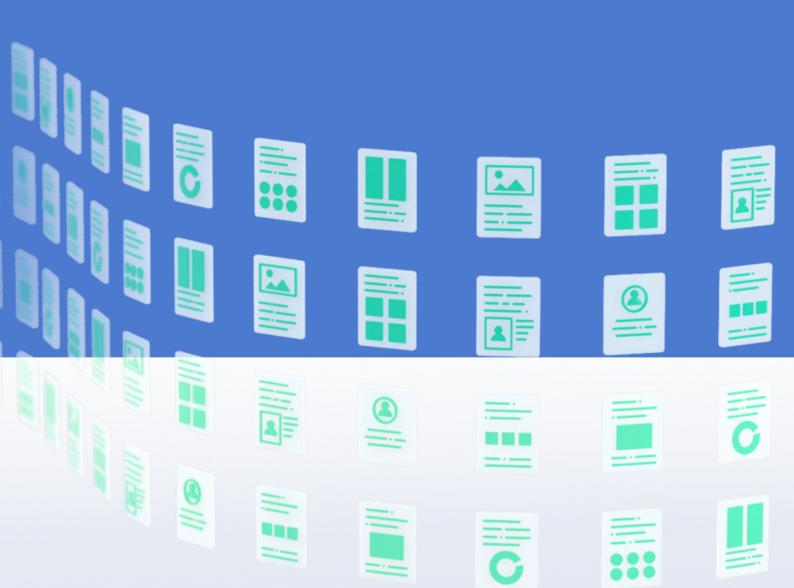
VOTIRG

Votiro SaaS

Knowledge Base



March 2025



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www.votiro.com



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1 How to Integrate Azure AD Single Sign-on with Votiro using SAML Toolkit

In this tutorial, you'll learn how to integrate Azure AD single sign-on with Votiro using SAML Toolkit to enable users to log in to the Votiro Management console using their corporate credentials.

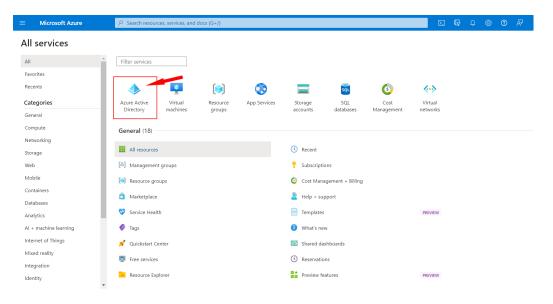
1.1 Prerequisites

Ensure you have the following items:

- Azure AD subscription
- Azure AD SAML Toolkit enabled on the above-mentioned subscription

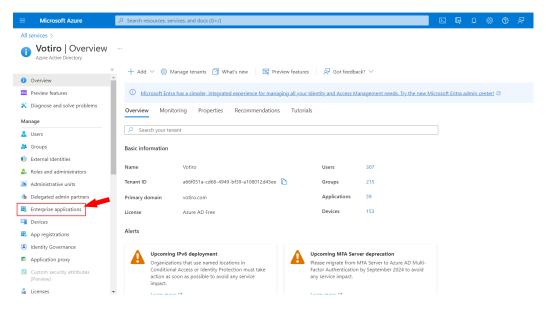
1.2 Procedure

- 1. Sign in to the Azure portal.
- 2. Select Azure Active Directory.

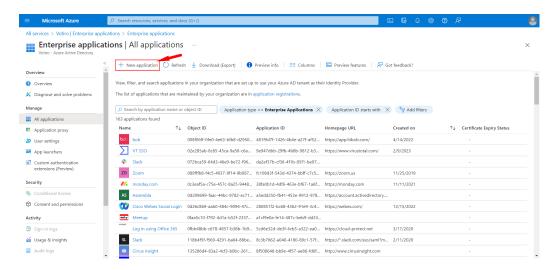


3. In the left pane, select **Enterprise applications**.





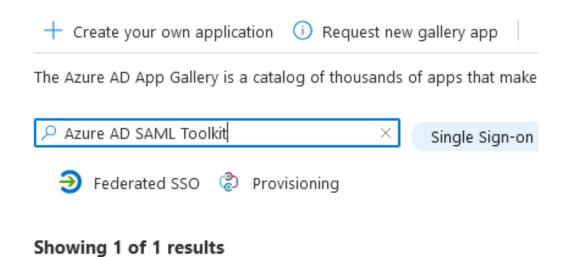
4. Select **New application**:



5. In the search field type **Azure AD SAML Toolkit**.



Browse Azure AD Gallery ...

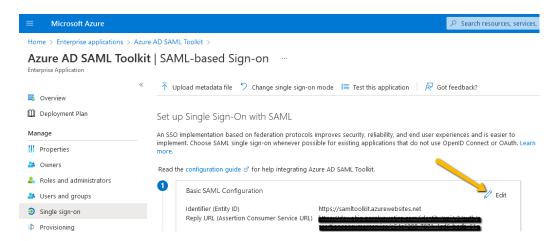






- 6. Lastly, select it from the results and add it. After a few moments, the app will be added to your tenant.
- 7. Navigate back to **Enterprise applications | All applications** and select the newly added app: **Azure AD SAML Toolkit**.
- 8. On the left pane, select **Single sign-on**.
- 9. On the **Basic SAML Configuration** page, click the pencil button to edit the configuration.





- 10. For Identifier (Entity ID), leave as default https://samltoolkit.azurewebsites.net.
- 11. Both Reply URL (Assertion Consumer Service URL) and Sign on URL should be in the following format: https://<VOTIRO-FQDN>/assertionconsumerservice.

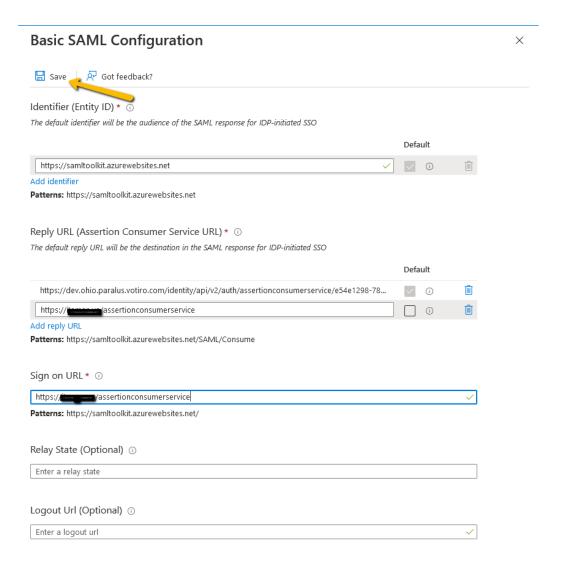
Note:

If you're configuring SAML for SaaS cluster, please make sure to include the tenant id after the Reply URL and Sign on URL:

https://<VOTIRO-FQDN>/assertionconsumerservice/<TENANT_ID>

12. Other fields are optional and will remain blank, lastly press the **Save** button.





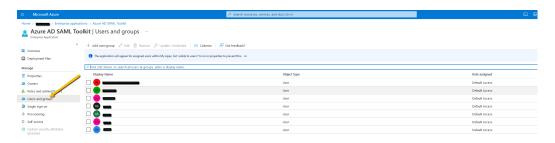
- 13. On the **Attributes & Claims** section, click the pencil button to edit the configuration.
- 14. Select **Add a group claim** on the left-hand side, choose All groups, expand **Advanced options**, select **Customize the name of the group claim**, and provide it with a name, for instance, "AzureGroup1", then press the **Save** button. Also create a group with that name if you choose to use "AzureGroup1" and copy it's objectID to the Votiro UI.



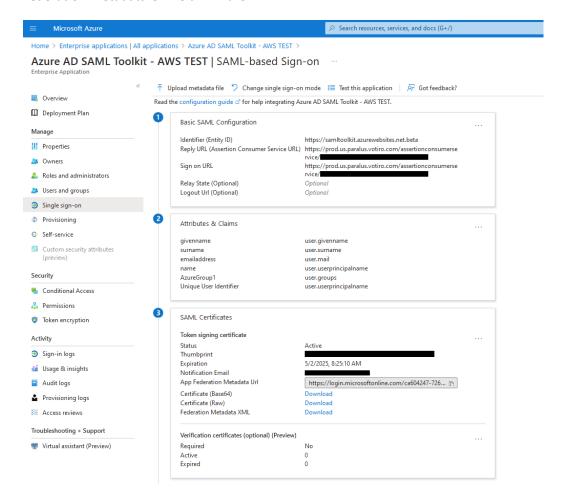
Group Claims Manage the group claims used by Azure AD to populate SAML tokens issued to your app	×		
This page includes previews available for your evaluation in the 'Advanced options' section.			
Which groups associated with the user should be returned in the claim?			
None			
All groups			
O Security groups			
O Directory roles			
Groups assigned to the application			
Source attribute *			
Group ID			
△ Advanced options☐ Filter groups (Preview)Attribute to match			
Match with	×		
String	•		
Customize the name of the group claim			
Name (required)			
AzureGroup1			
Namespace (optional)			
Emit groups as role claims ①			
Apply regex replace to groups claim content (Preview)			



15. To avoid issues such as "User without any role", make sure the users that should have access to the environment via SAML are listed under **Azure AD SAML Toolkit** | **Users and groups**.



16. Log in to Votiro's Management console. On the left pane, click on the cogwheel, and select SAML. For the IDP Metadata address, copy and paste the value from the App Federation Metadata Url field in Azure.

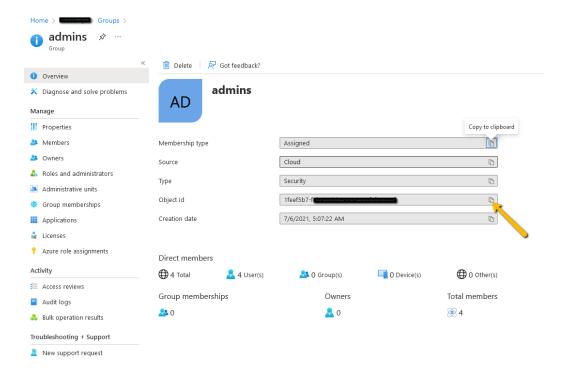


17. For the Issuer, copy and paste https://samltoolkit.azurewebsites.net from the Basic SAML Configuration you configured above.





- 18. For the SAML Username identifier, leave by default: http://schemas.xmlsoap.org/ws/2005/05/identity/claims/nameidentifier
- 19. The Admin role key should be the value you provided for the group above in **Group Claims**, in this case, AzureGroup1.
- 20. The Admin role value should be the Object Id of the group in which the admin's users are members.



21. Press the **Save changes** button, log out from the Management console and log in with the corporate credentials. You may continue and set up the Help Desk and SOC groups, similar to what was configured for the admins group.



2 How to Integrate SIEM with Azure Sentinel

In this tutorial, you'll learn how to integrate SIEM with Azure Sentinel using **Votiro Solution for Microsoft Sentinel**. **Votiro Solution for Microsoft Sentinel** is a collection of Data Connectors, Parser, Workbook and Analytic Rules that are used together to analyze data.

2.1 System prerequisites

Ensure you have the following:

- Linux machine with at least 4 CPU cores and 8 GB RAM
- Python 2.7 or 3 installed on the Linux machine
- Rsyslog: v8/Syslog-ng: 2.1 3.22.1
- Syslog RFC 3164/5424
- Download and unpack the file: Votiro-Offline.zip

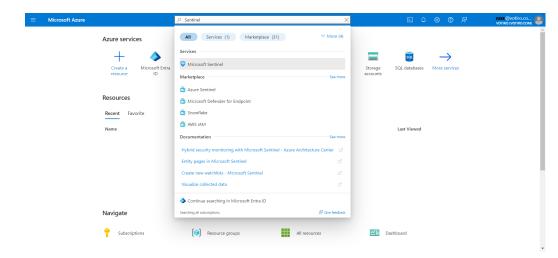
2.2 Procedure

2.2.1 Manual/Offline Deployment

To test the solution before publishing, follow the below steps.

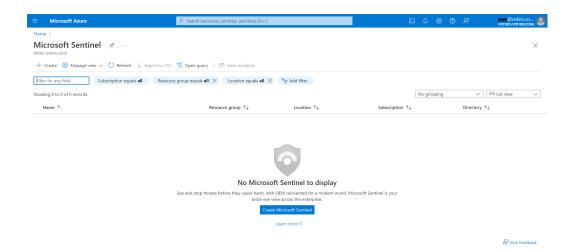
Deploy CEF Data Connector on Forwarder Machine

- 1. Sign in to the Azure portal.
- 2. Search for Microsoft Sentinel.

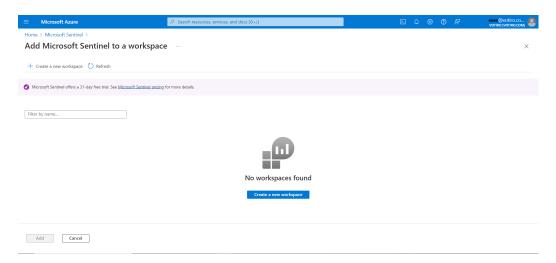


3. Select Microsoft Sentinel from Services.



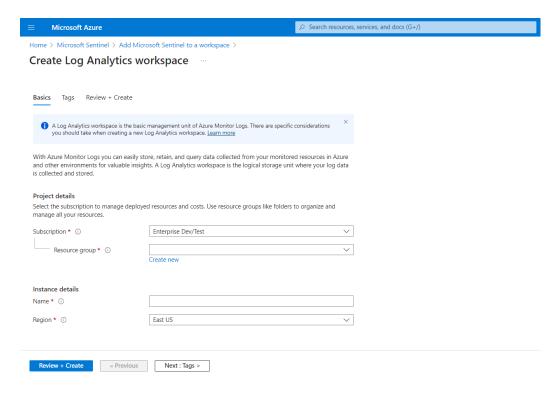


4. Press + Create or Create Microsoft Sentinel to add Microsoft Sentinel to a Workspace::

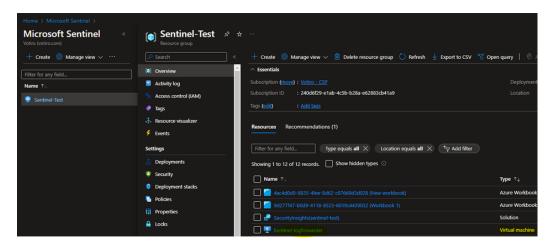


5. Press + Create a new workspace:



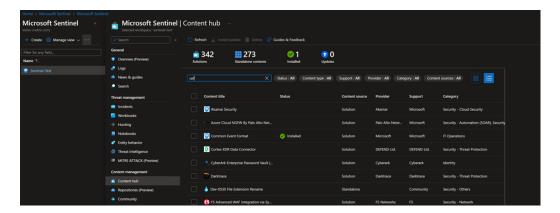


6. Create a new **Resource Group** if it does not exist yet. Then create a new machine with the system requirements mentioned above → via Resource Group > Create > select Virtual Machine (Ubuntu 22.06 server is recommended):

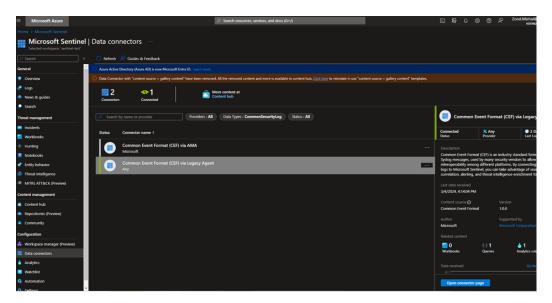


7. Select the created workspace, then go to Content Hub > Select Common Event Format (CEF) and install it:



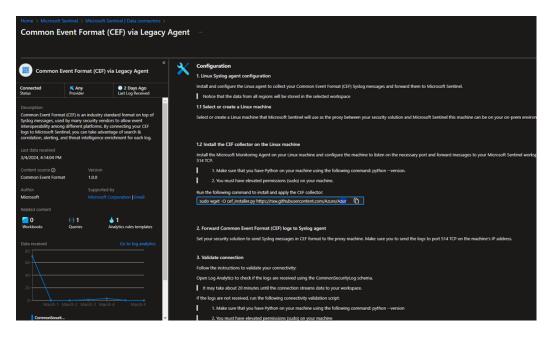


8. Once installed, go to your workspace > Data Connectors > Open Connector Page:



9. Follow the instructions in 1.2 below, **Install the CEF collector on the Linux machine**:





10. Verify that you have Python 2.7 or Python 3 installed on the Linux machine by running:

python --version or python3 --version

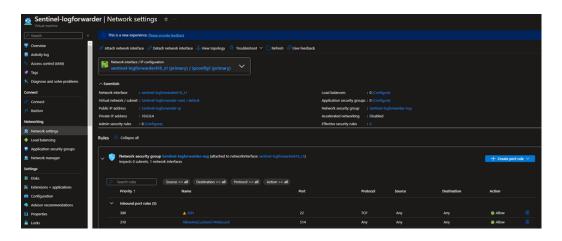
11. Copy the command below:

```
sudo wget -O cef_installer.py
https://raw.githubusercontent.com/Azure/Azure-
Sentinel/master/DataConnectors/CEF/cef_installer.py&&sudo
python cef_installer.py [WorkspaceID] [Workspace Primary
Key]
```

Note: You must have the GNU Wget package installed on the Linux machine.

- 12. Paste the command into the command line on your log forwarder, and replace [WorkspaceID] and [Workspace Primary Key] with their values.
- 13. Run the command. This installs the CEF connector and Log Analytics Agent on the forwarder machine. Once done, the connector is now listening to events on TCP port 514.
- 14. Verify that the port used is indeed opened via the Virtual Machine's Network settings:





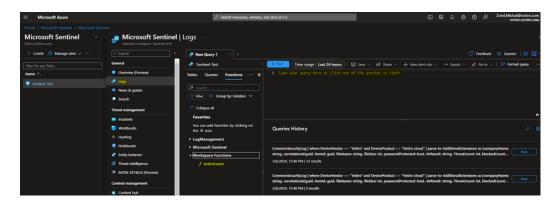
Note: In this case, we used TCP port 514 (default) and **Allow=any**, but the best practice is to use the TLS protocol with other ports used and restrict to specific IPs pointed to specific NAT gateways. For example, in prod.us:



Deploy Parser Function

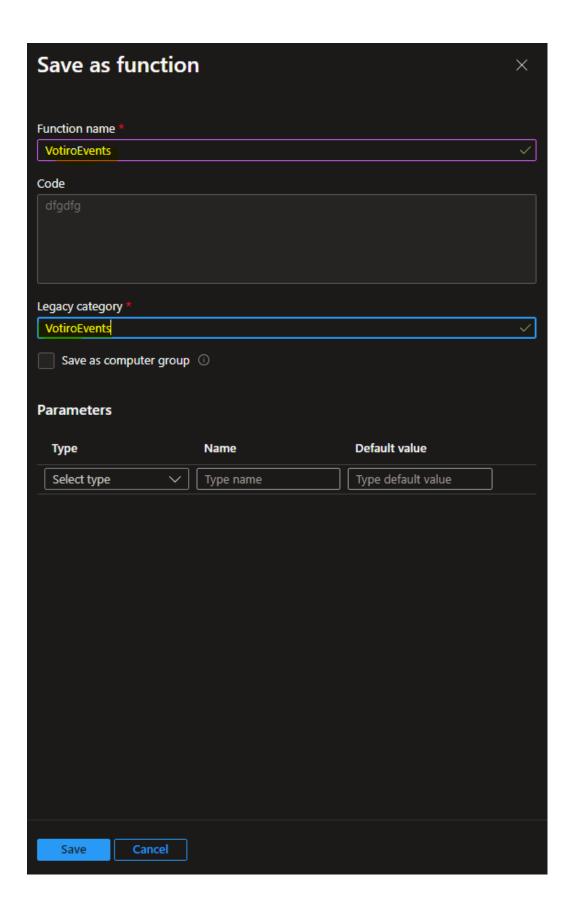
Follow the instructions to parse ingested data:

- Copy the function code from the downloaded package file: /Votiro-Offline/Parser/VotiroEvents.txt
- 2. On Microsoft Sentinel → Go to your created Workspace -> Logs
- 3. Paste the content of **VotiroEvents.txt** in the area as shown below:



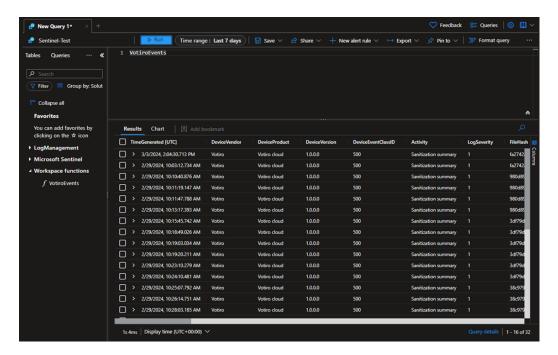
4. Then click on Save > Save as function. Enter the Function name as VotiroEvents and click on Save:







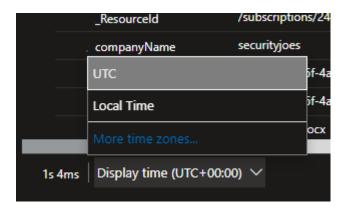
5. Try running the query to see the following type of results (adjust the time range according to data ingested):





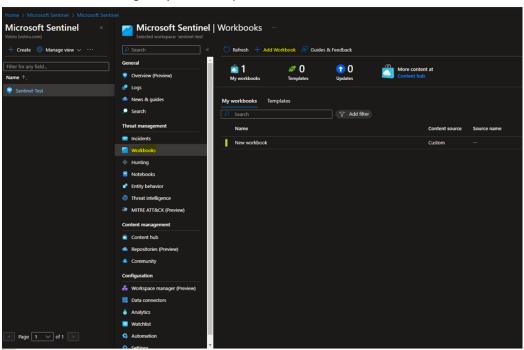
6. Results can be viewed in **Local Time** zone by changing the option in the bottom bar:





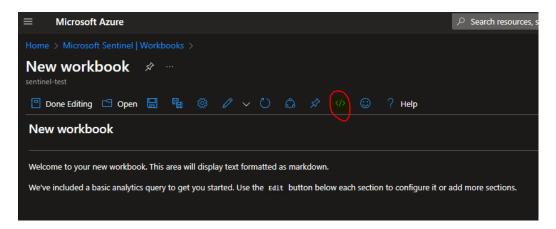
Deploy the Workbook

- Copy the contents of the file: /Votiro-Offline/Workbooks/Votiro Monitoring Dashboard.json
- 2. On Microsoft Sentinel, go to your WorkSpace > Workbooks > Add Workbook":



3. On the New Workbook page, click on Edit > Advanced Editor icon:





4. Replace the Gallery template contents with the copied contents, and click on **Apply**:

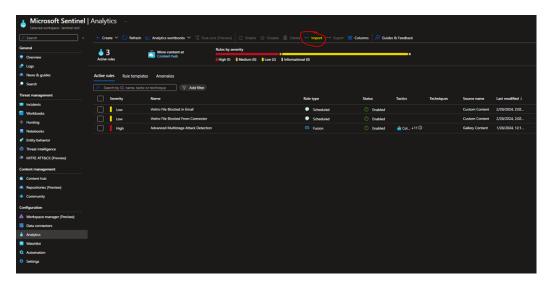
```
Microsoft Azure
                                                                                             Search resources, serv
New workbook 🕏 …
 Shown below is a JSON representation of the current item.
Any changes you make here will be reflected when you press 'Apply'.
Template Type 🕕
  allery Template ARM Template
     "items": [
         "content": {
  "json": "## This Workbook is used to analyse file sanitization data from Votiro's endpoints."
         },
"customWidth": "90",
         "name": "text - 5",
         "styleSettings": {
           "maxWidth": "90"
         "type": 9,
         "content": {
           "version": "KqlParameterItem/1.0",
           "parameters": [
               "id": "8b8cd15e-bd0d-4cb9-aef6-07e117e2cf5a",
               "version": "KqlParameterItem/1.0", "name": "TimeRange",
               "type": 4,
               "isRequired": true,
                 "durationMs": 604800000
                "typeSettings": {
                  "selectableValues": [
                     "durationMs": 300000
```

5. The Following Workbook must be visible: After a scroll

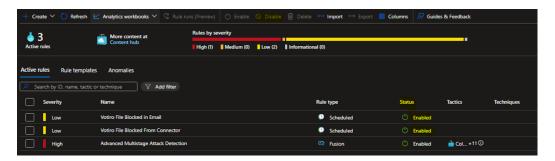


Set Alert Queries for Incidents

- Go to /Votiro-Offline/Analytic Rules. Keep both Votiro File Blocked FromConnector.json and Votiro File Blocked in Email.json files ready.
- 2. On Microsoft Sentinel > Workspace, select **Analytics**.
- 3. Click **Import** (from the bar at the top of the screen) in the resulting dialog box, navigate to and select the JSON files one by one, and select **Open**:

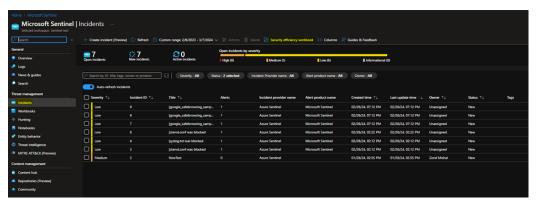


4. Make sure that the status of each active rule is enabled:



5. Check for recent alerts or incidents on the **Overview** page. Incidents are also available on the **Microsoft Sentinel** > **Incidents** page.





Select the security efficiency workbook for a better view.

- 6. Alerts Logic:
- Votiro File Blocked From Connector: If the syslog message includes "blocked" under -Sanitization result- field and "false" under -password protected- field and "null" under -from- field create an alert with the following message: [file name] with hash [file hash] that was sent from connector [connector name] was blocked by Votiro due to Policy [policy name], see more detail in the following link [incident url]
- Votiro File Blocked in Email: If the syslog message includes "blocked" under Sanitization result- field and "false" under -password protected- field and not "null" under -from- field create an alert with the following message: Attachment [file name] with the hash [file hash] was blocked in an email that was sent from user [from] to the following recipients [Recipients] by Votiro due to Policy [policy name], see more detail in the following link [incident URL]



3 How to Send Files to Votiro via Postman

Postman is an API platform for developers to design, build, test and iterate their APIs. It is an HTTP client that tests HTTP requests, utilizing a graphical user interface, through which different types of responses are returned that need to be subsequently validated. This article describes how to use Postman with Votiro.

3.1 Prerequisites

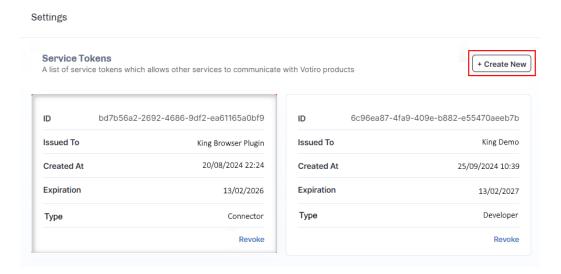
Install Postman by downloading one of the following:

- The Postman app from Download Postman.
- The Postman portable app from Postman™ portable.

3.2 Procedure

3.2.1 Generating a Service Token

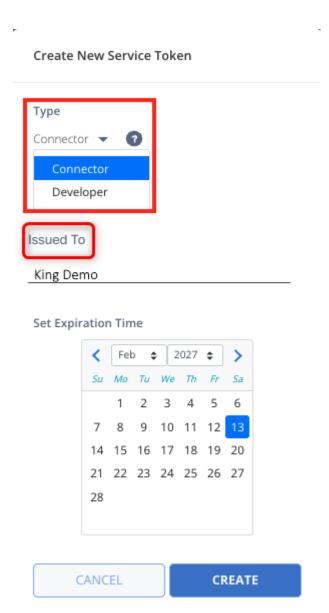
1. Generate a Service Token. Go to **Settings** > **Service Tokens** > **Create New** :



2. Select the token **Type**:

- a. **Connector** Basic integration. Allows authentication for uploading files procedure.
- b. **Developer** Advanced integration. For all available APIs. Handle it with
- 3. Enter a name for the new token under **Issued To**.
- 4. Set Expiration Time
- 5. Press **CREATE**:





6. Copy and save the token string that appears on this page.



WARNING!



Save the token string. This page will only appear once.

Please Save Your Token, You Won't Be Able To See It Again

ID	ff5e09af-0867-4514-bfed-4186e86ef2fe
Issued To	Test-Token
Expiration	15/03/2023

Token

eyJhbGciOiJSUzI1NiIsImtpZCI6IjI0OTMxRUM5QzA4NTIGOEV GNkM0NUY0MDExQTU0MTAzNzhGMTY5REEiLCJ0eXAiOiJK V1QifQ.eyJ1bmlxdWVfbmFtZSI6IIRlc3QtVG9rZW4iLCJncm91c HNpZCI6IIZvdGlyb0ludGVybmFsU2VydmljZXMiLCJyb2xIIjoiQ WRtaW5pc3RyYXRvciIsImp0aSI6ImZmNWUw0WFmLTA4Njct NDUxNC1iZmVkLTQxODZIODZIZjJmZSIsIm5iZiI6MTY0NzgzN DQxMCwiZXhwIjoxNjc4ODA5NjAwLCJpYXQiOjE2NDc4MzQ0 MTB9.EYm24-

YcS6RnXSCh7LiYDFAMA5d_U7Z6nBW670FOgiA6AH3tG14am RWc6wjo2LpKxNAVLbrmMUbrVUTCRToAWABPvT47gJslBdafP 9R0sPOh0voAdbh_hjt-

J9jspYuF8hu7NfukUxUVhDd3oKRnGDmWizBANbqCbXXw2fE GLgWpn0VuR88y_o7vxoBp5mqlqRWvQ1p3mGTEAem6sl1U8 HhYqvOvKMYY9TH9cxnuRbnpA-

xVwGCQ80FQuA6ITJw9ehwl34vUA22qri65-xNvWoakgXVAtiHSpWxdgWrmeLK88wKum7dUyFfDu4rrEadvvmLFZK3eEZ1K pZ0v1DcDg

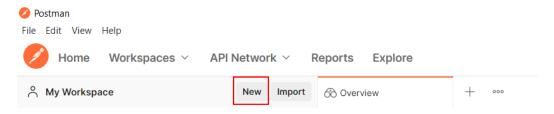
OK

7. Press **OK** to close the Token window.

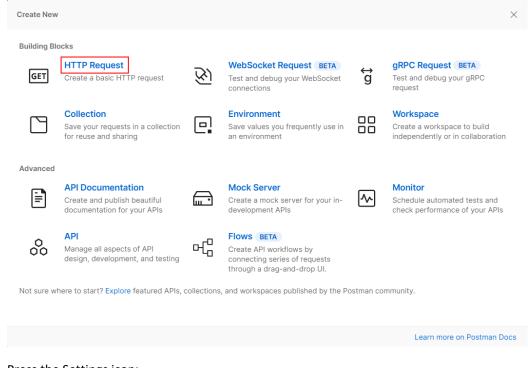


3.2.2 Postman Setup

1. In the Postman app, go to **Workspaces** > **My Workspace** and press **New**:



2. The Create New window opens. Select HTTP Request:

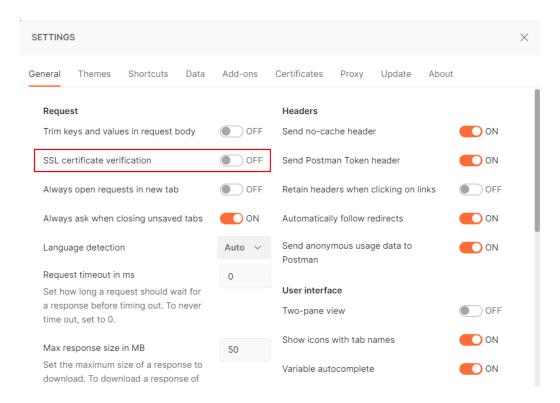


3. Press the Settings icon:



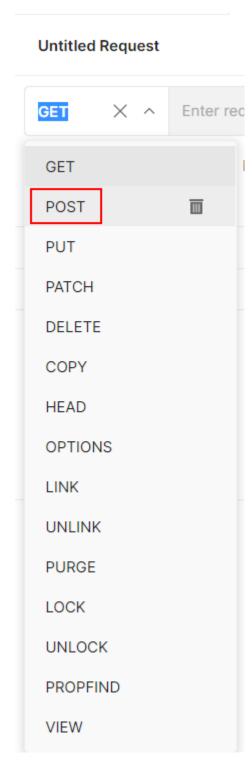
4. The **Settings** window opens. To ensure that http requests will go through even if your VA is using a self-signed certificate, toggle **SSL certificate verification** to **OFF**:





- 5. Close the **Settings** window.
- 6. Under the **Untitled Request** dropdown box, select **POST**:





7. In the **Enter request URL** box, enter your VA FQDN in the following format:

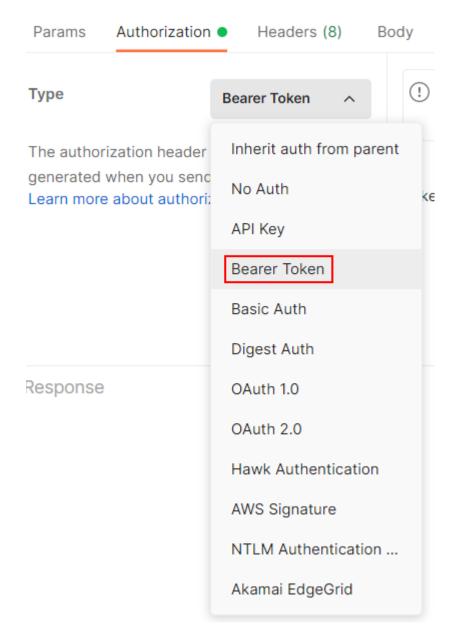
https://<VA-FQDN>/disarmer/api/disarmer/v4/upload



For example:

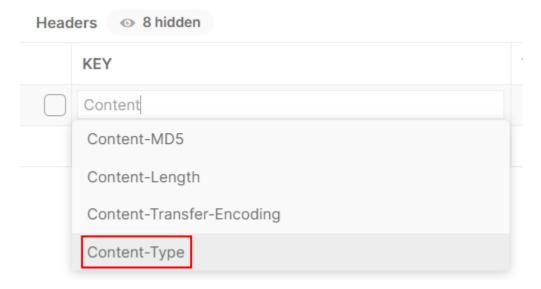


8. Select the **Authorization** tab and under the **Type** dropdown, select **Bearer Token**:

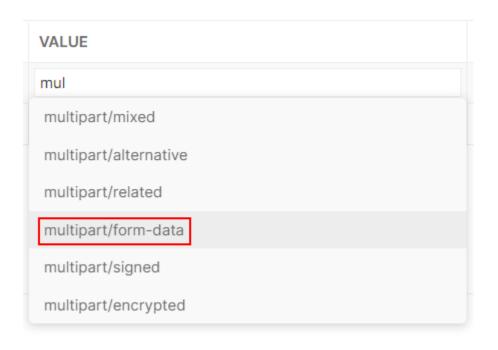


- 9. Select the **Headers** tab.
- 10. In the first row of the **Key** column, start to type **Content** until a dropdown list appears. Then select **Content-Type** from the dropdown list:





11. In first row of the **Value** column, start to type **multipart** until a dropdown list appears. Then select **multipart/form-data** from the dropdown list:

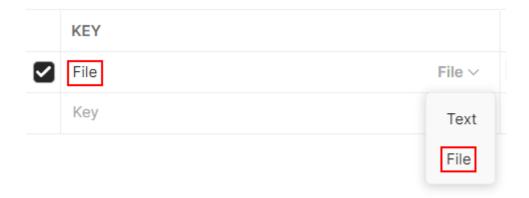


12. Select the **Body** tab and then select **form-type**:



13. In the first row of the **KEY** column, type **File**, and select **File** from the hidden dropdown list:

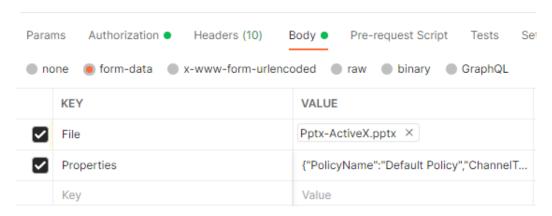




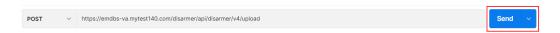
- 14. In the first row of the **VALUE** column, press **Select Files** and select the desired file from the browser window that opens.
- 15. In the second row of the **KEY** column, type **Properties**.
- 16. In the second row of the **VALUE** column, enter the following:

```
{"PolicyName":"Default
Policy","ChannelType":"FileConnector",
"ChannelId":"827b50a3-d585-4ba5-a5ca-
100b09068123","ChannelName":"API Up-Sync"}
```

17. After completing steps 13-16, the **KEY** and **VALUE** table should be identical to the below screenshot, with the exception of the file name:



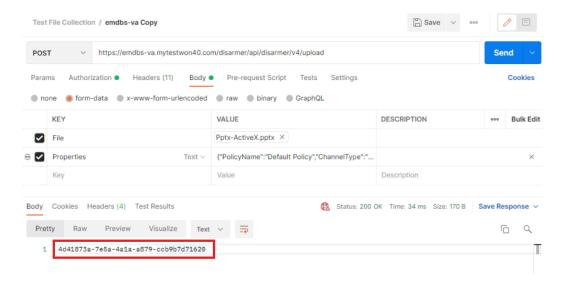
18. Press the **Send** button:



19. You should get a HTTP/200 response and a GUID string in the body. This will be the Correlation ID of the file that you have submitted.



For example:



20. On the Incidents page, you will be able to see the exact string:



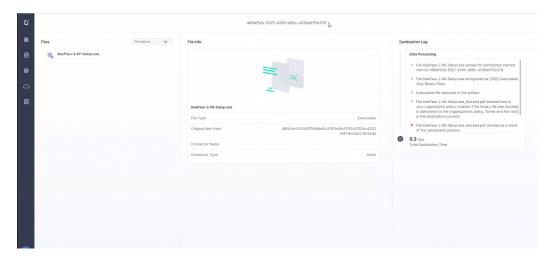


4 How to Use Kibana to Troubleshoot Votiro Incidents

This page describes how to use Kibana to view and troubleshoot Votiro Incidents.

4.1 Example of Votiro Incident

The following screenshot displays the Votiro Item/Incident sanitization information for a file that has undergone sanitization:



This screen shows the results of Votiro On-prem processing a file named KeePass-2.49-Setup.exe. The **File Info** pane displays some of the file properties and the **Sanitization Log** pane displays highlights of the file **Data Processing**.

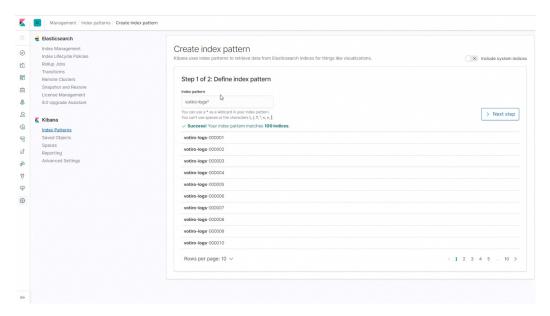
4.2 Procedure

4.2.1 Create and Configure an Index Pattern

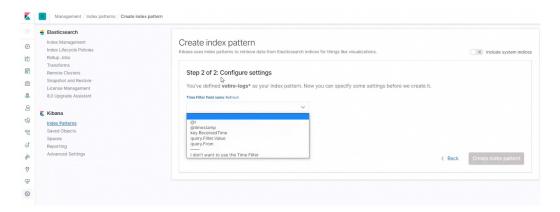
To begin, you must define a Kibana index pattern.

- 1. Login to the Kibana Discover interface with the credentials provided to you by Votiro Support.
- 2. Select Create index pattern. Step 1 of 2 Define index pattern appears.
- 3. Type **votiro-logs*** (or similar) as the Index pattern. Kibana displays a list matching the index pattern:

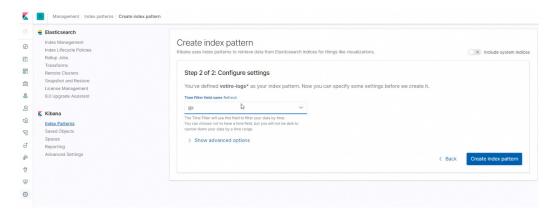




4. Click on **Next step**. **Step 2 of 2 Configure settings** appears.

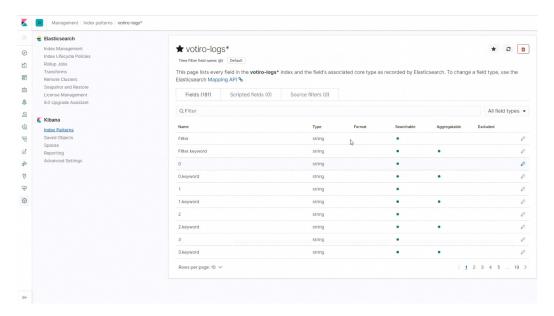


5. Select a **Time Filter field name** from the list. For example, **@t**:



6. Click on **Create index pattern**. Kibana displays every field and field type in the selected index (in this example, votiro-logs*):





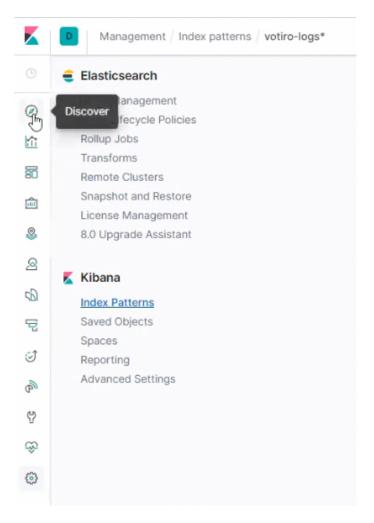
4.3 Analyze the Data

After the index pattern is created and configured, apply it to the data in Kibana's Discover mode to yield useful results by additional filtering of the data.



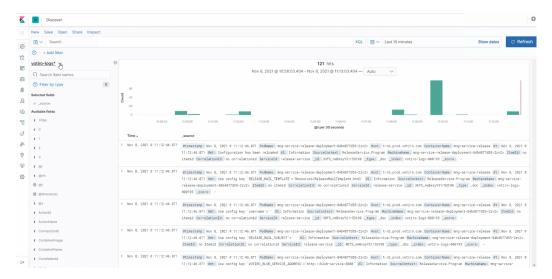
4.3.1 Discover

1. Click on the Discover icon on the left side of the screen:



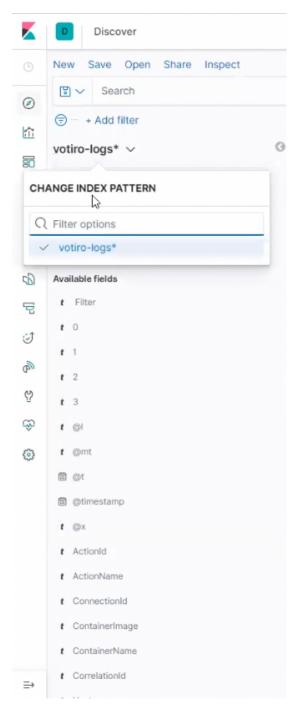
2. Kibana displays all hits that match the time filter criteria within the time range indicated (in this example, for the last 15 minutes):





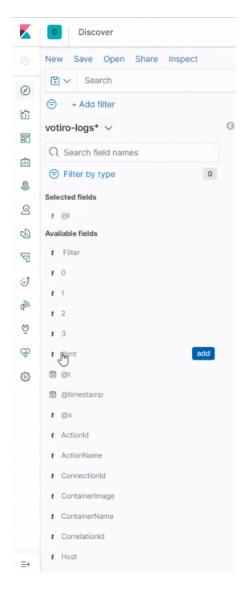
3. To further filter the results, click on V next to the index pattern (votiro-logs* by default) in the left side of the screen. The **CHANGE INDEX PATTERN** window opens:





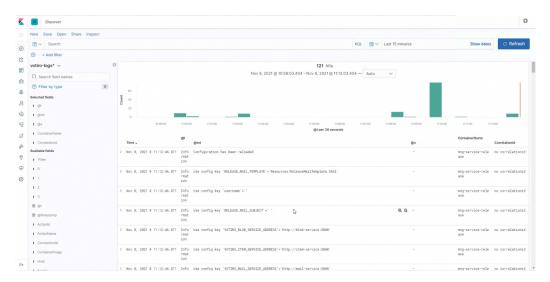
4. Move the cursor down the list of **Available fields** to select fields to filter. Then click on the **add** button to add the field to the filter:





- 5. In the example below, the following fields are added:
 - @I level
 - @mt message template
 - @x exception
 - ContainerName
 - ♦ CorrelationId
- 6. The display of hits is now updated to show only the selected fields:

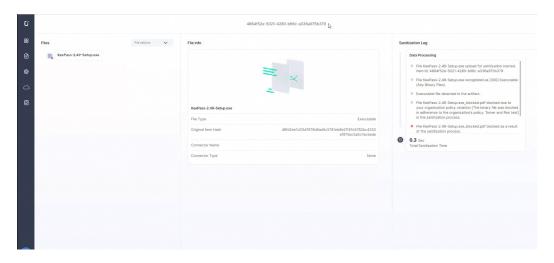




4.3.2 Votiro Explore Incident & File Info

To examine a specific file that was processed by Votiro On-prem, the threat ID is obtained from the Votiro Item/Incident sanitization information.

1. Open the Votiro Explore Incident:



2. Copy to the clipboard the file ID at the top of the screen, in this example:

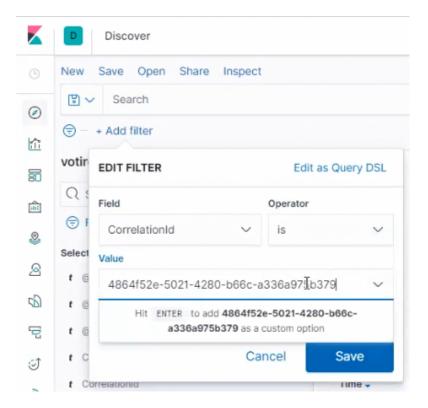
4864f52e-5021-4280-b66c-a336a975b379

4.3.3 File Sanitization Analysis

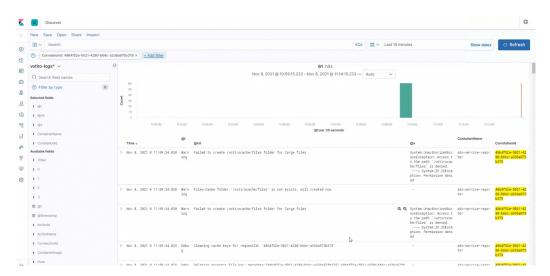
- 1. Return to the Kibana Discover screen.
- 2. In the left side of the Kibana Discover screen, click on **Add filter**. The **EDIT FILTER** window opens.
- 3. From the **Field** list, select **CorrelationId**.
- 4. From the **Operator** list, select **is**.



5. In the **Value** field, paste the file ID from the clipboard .

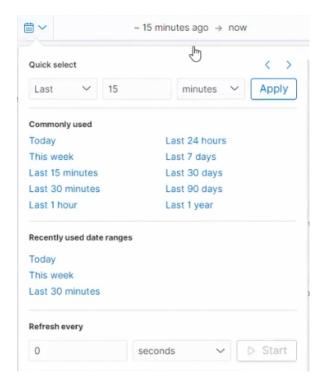


6. Click on **Save**. The list of hits displayed is updated to show only those hits for the relevant file, according to the CorrelationId (= Votiro item).



7. To change the time frame of the display, click on the time icon in the select the desired time interval:





8. To view the file processing history in Votiro, scroll down the list of hits. The selected fields displayed in the columns provide more information as to what occurred during the processing. Using the @I (message level), @mt (message template) and @x (exceptions) columns provides you with detailed information that can help you to troubleshoot the incident.



5 MSSP User Guide

A Managed Security Service Provider (MSSP) provides outsourced monitoring and management of security devices and systems. Common services include managed firewall, intrusion detection, virtual private network, vulnerability scanning and anti-viral services.

Examples of MSSP use cases supported by Votiro include:

- Creating new customers and assigning licenses by the MSSP admin
- Viewing/filtering all the MSSP customer's data on the MSSP dashboard
- Using the MSSP incidents to see/filter all the MSSP customer's incidents data
- Creating reports on each MSSP customer's data

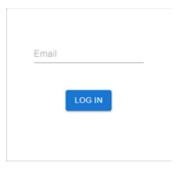
5.1 MSSP Tenant Management

1. Login

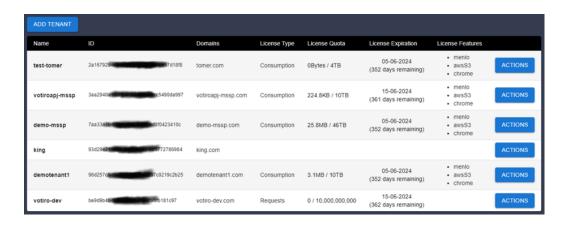
To login to MSSP Tenant Management, use the following URL address:

"https://{clusterName}/portal/#/votiro/login"

A login page will be displayed. Contact Votiro support to get the admin user credentials.



After successful login, the Votiro MSSP Tenant Management screen is displayed:



The MSSP admin can use the Tenant Management screen to:

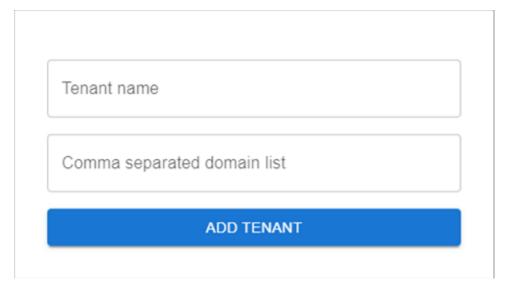
Add a customer tenant



- View the list of customer tenants
- View customer traffic information
- Manage each customer tenant's license
- View total actual usage compared to total license quota
- Delete customer tenants

2. Add a customer tenant

To add a new customer tenant, press the **ADD TENANT** button.



Enter:

- Tenant name for example, King Demo
- Comma separated domain list for example, kingdemo.com. If there are multiple domains, separate the domains by a comma. For example, kingdemo.com, rontest.com

After adding a new customer tenant, a default admin user will be created. Contact Votiro support to get the admin user credentials.

3. View the customer's tenant list

The following information is displayed on the Tenant Management screen for each tenant:

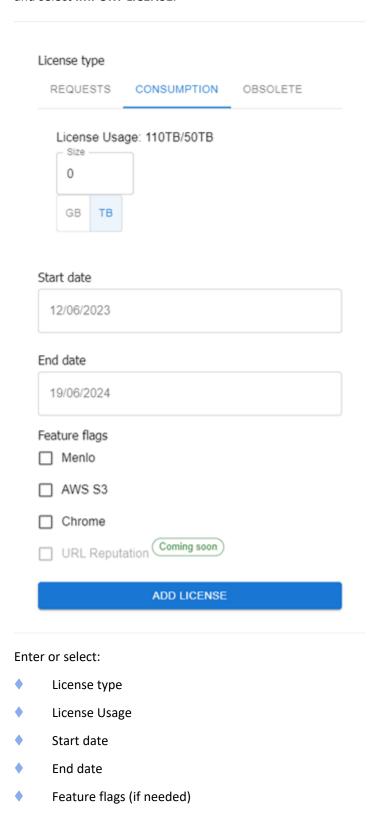
- Name Tenant name as configured in creation
- ♦ ID Tenant ID generated in UUID format
- Domains As configured in creation
- License Type The possible options are:
 - Consumption count by volume usage
 - Requests count by files



- License Quota Actual usage / License quota, as configured in the license import. The system will display up to date tenant usage.
- ♦ License expiration Expiration date and days remaining
- License features Currently, the possible options are:
 - menlo
 - aws s3
 - chrome
- 4. Import a license



To import a license for a customer tenant, press the corresponding **ACTIONS** button and select **IMPORT LICENSE**.



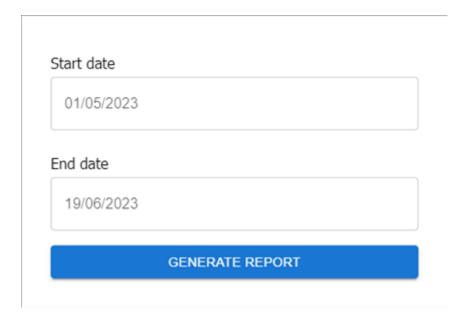


After creating a license, the system will display the imported license in:

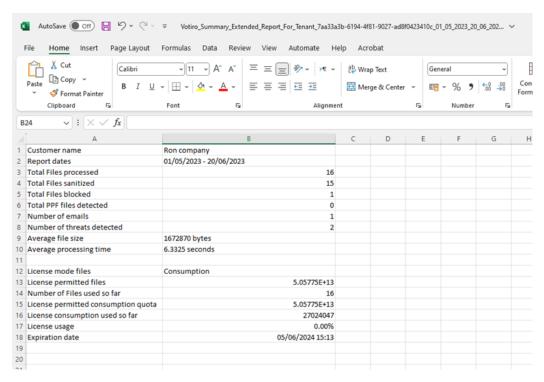
- Votiro MSSP Tenant Management screen
- Customer tenant Management console license page
- 5. **Download Analytics Report**



To download an analytics report for any of the customer's tenants, press the corresponding **ACTIONS** button and select **DOWNLOAD REPORT**.



Enter the **Start date** and **End date** to select the report's time interval, and press **GENERATE REPORT**. The report will be downloaded in CSV format.



6. Delete a customer tenant

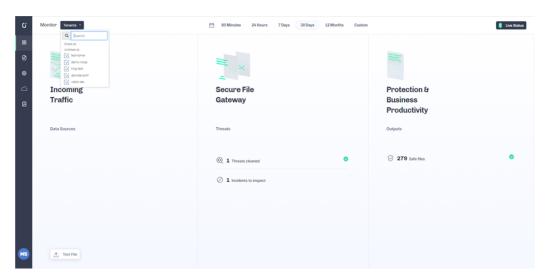


To delete a customer tenant, press the corresponding **ACTIONS** button and select **DELETE TENANT**.

5.2 Monitoring Tenant Activity

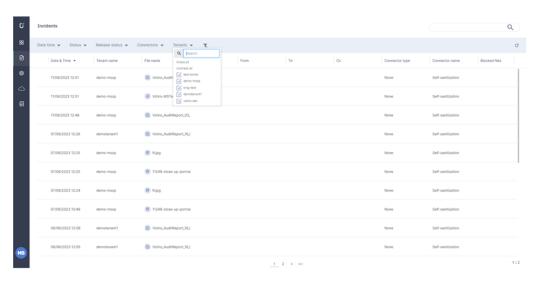
1. MSSP Dashboard

The MSSP user can view and filter Dashboard data by customers tenant selection.



2. MSSP Incidents

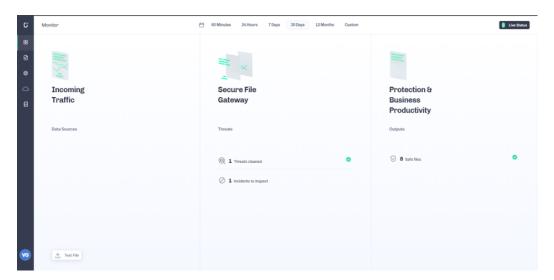
The MSSP user can view and filter incidents data by customer tenant selection in the **Tenants** column.



3. MSSP Customer's Dashboard

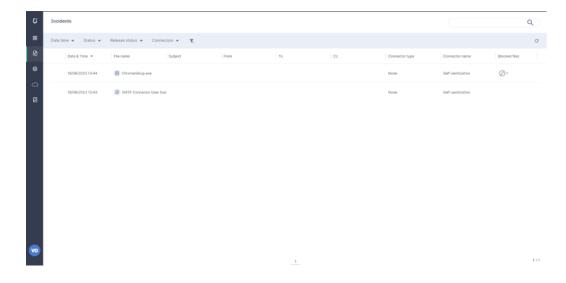






4. MSSP Customer's Incidents

An MSSP customer's user can view data only from their own tenant.





6 How to Use QR Code Sanitization

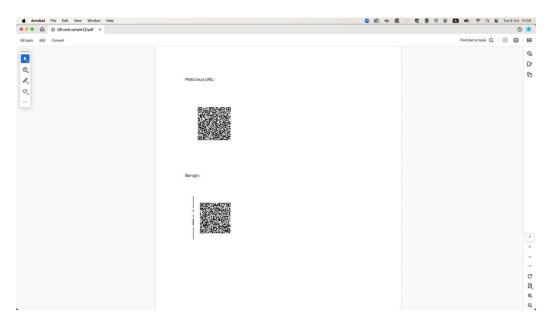
Votiro supports QR Code sanitization. This is relevant for PDFs and emails containing QR codes.

There are four options when dealing with QR codes:

- Ignore the QR Code is ignored. The file or email is passed on as-is.
- Detect QR Codes detect if there is a QR Code in the file.
- Disarm QR Codes the original QR code is rewritten with the Votiro QR Code.
- Block QR Codes Votiro blocks the QR Code.

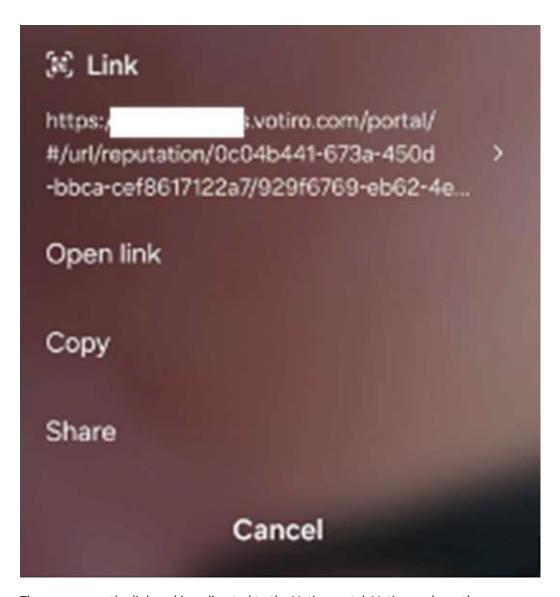
6.1 Disarm QR Codes behavior

1. The user scans the QR Code.



2. There will be an indication that the original QR Code was replaced with a Votiro QR Code pointing to the Votiro portal.





3. The user opens the link and is redirected to the Votiro portal. Votiro analyzes the URL for suspicious activity.

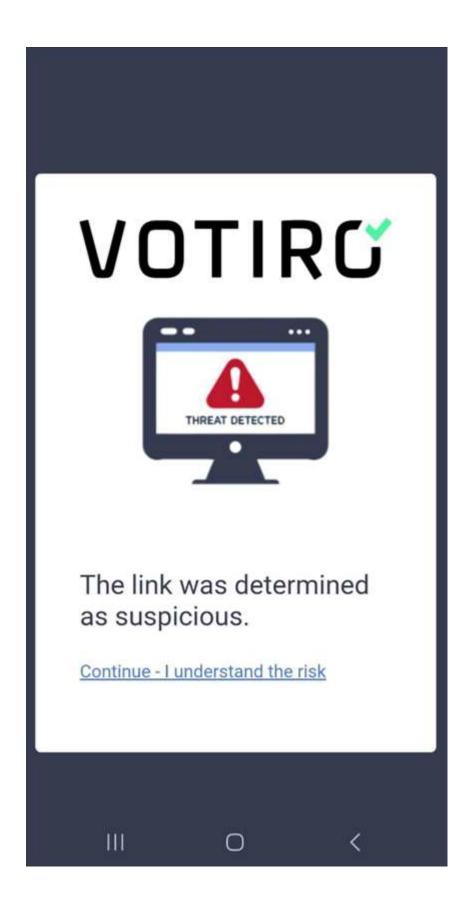






- 4. When the analysis completes:
 - If the URL was determined to be benign, the user will be redirected to the URL.
 - If the URL was determined as suspicious, the user will receive an indication that a threat was detected.







6.2 Votiro Administrator view

The file event will indicate if a:

- QR Code was detected and was rewritten by Votiro.
- Suspicious URL was detected.

For example:

