

Camio Monitoring User Guide

V1.0

April 2025



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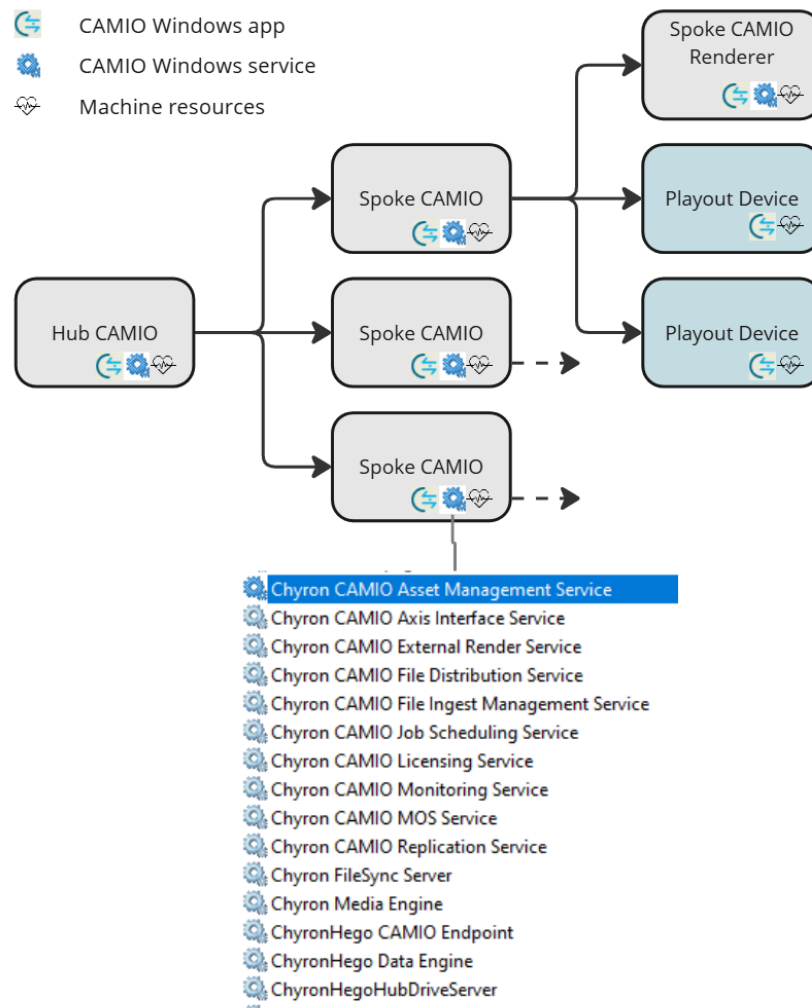
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How It Works

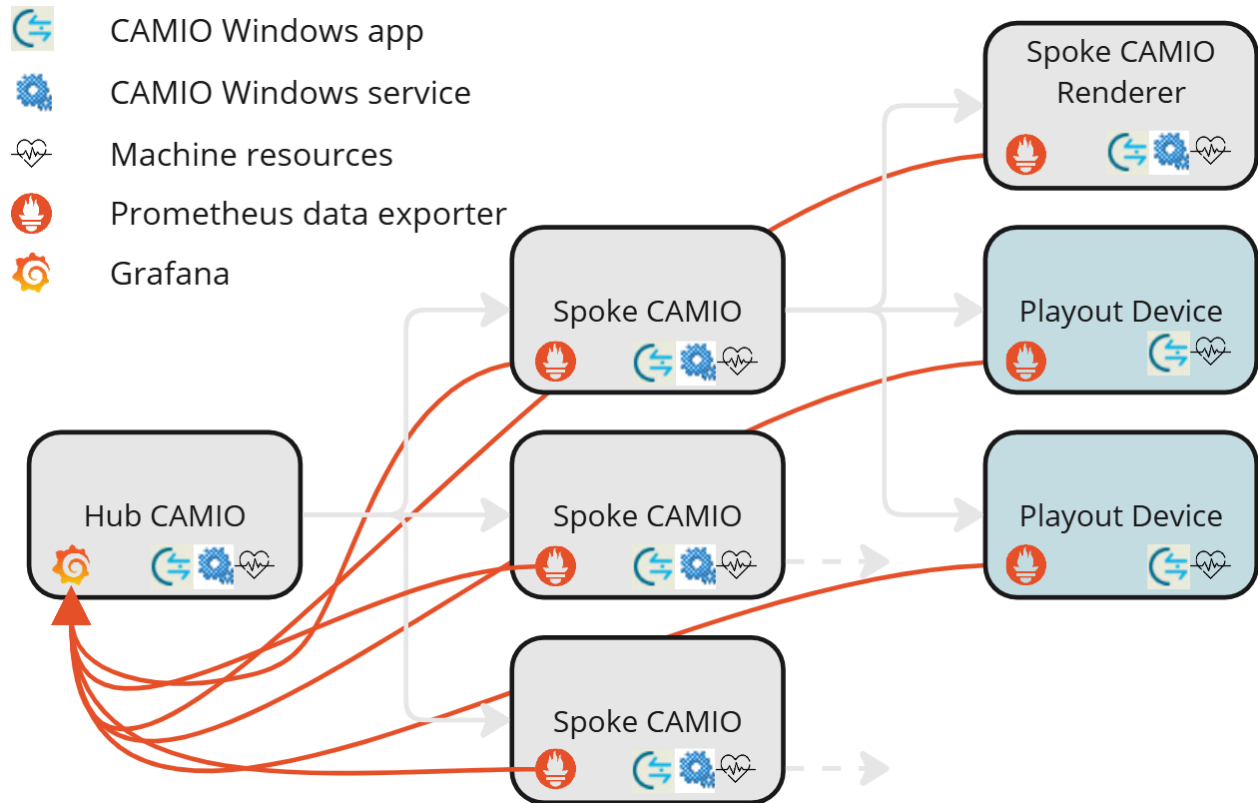
CAMIO monitoring is a solution designed to answer the question - Are all of my CAMIOs running correctly? It provides this answer by monitoring each CAMIO server, CAMIO renderer and playout machine with any CAMIO services installed including FileSync and ISQ.

Depending on the specific customer's installation, the CAMIO ecosystem may be multi-tiered with Hub and spoke CAMIO servers and CAMIO Renderers and playout devices linked to each CAMIO at each location. This creates an extensive set of devices and services running on those devices which need to be monitored so that if a service stops running or machine resources are overloaded then proactive remedial action can be taken.

The diagram below shows a simplified illustration of such a CAMIO ecosystem. Each CAMIO server/renderer has multiple CAMIO apps and services running. The playout devices also have CAMIO apps running. If any of these stop running then the workflow is potentially interrupted.

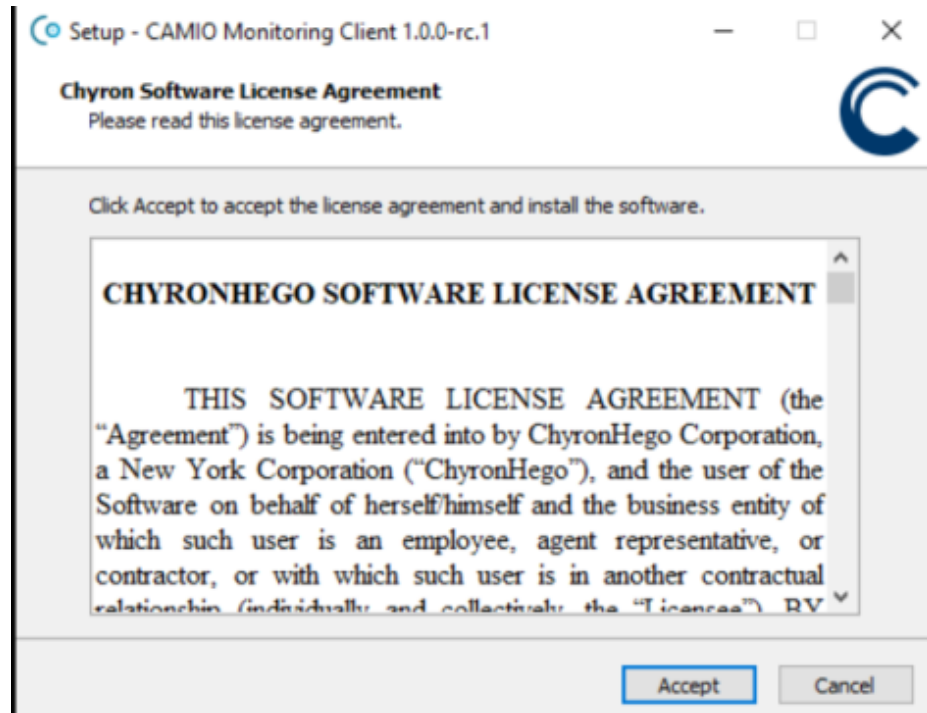


CAMIO Monitoring uses a Prometheus data exporter on each CAMIO device which collects data on the CAMIO services and the CPU, RAM and disk usage on each machine. This is sent to the Grafana server which can be installed on any suitable Windows machine but will most likely be installed on the CAMIO server at the hub location. From there, dashboards, alerts and notifications can be configured to report on the status of CAMIO across the ecosystem.

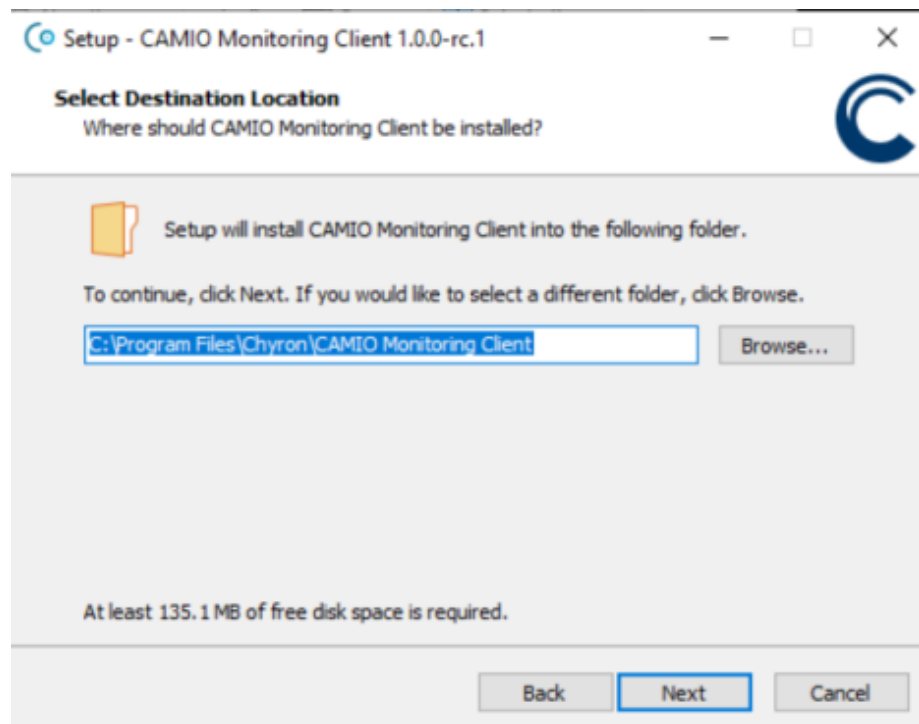


CAMIO Monitoring Client installation

1. Download CAMIOMonitoringClient_1.0.0.exe installer from [the CAMIO Download Area](#)
2. Run installer:
 - a. Accept Licence Agreement:

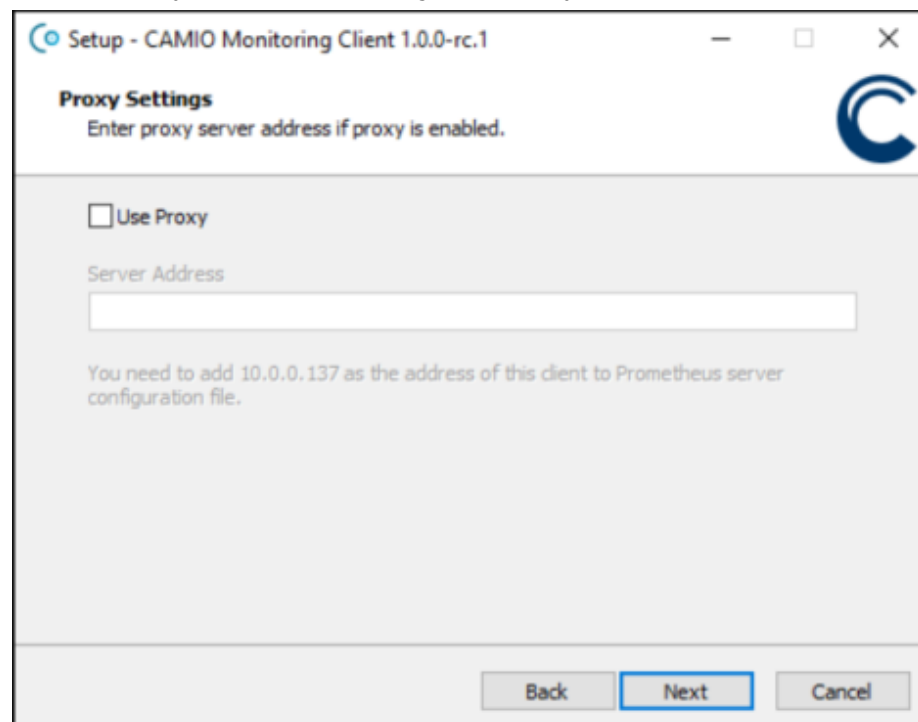


- b. Choose installation location:

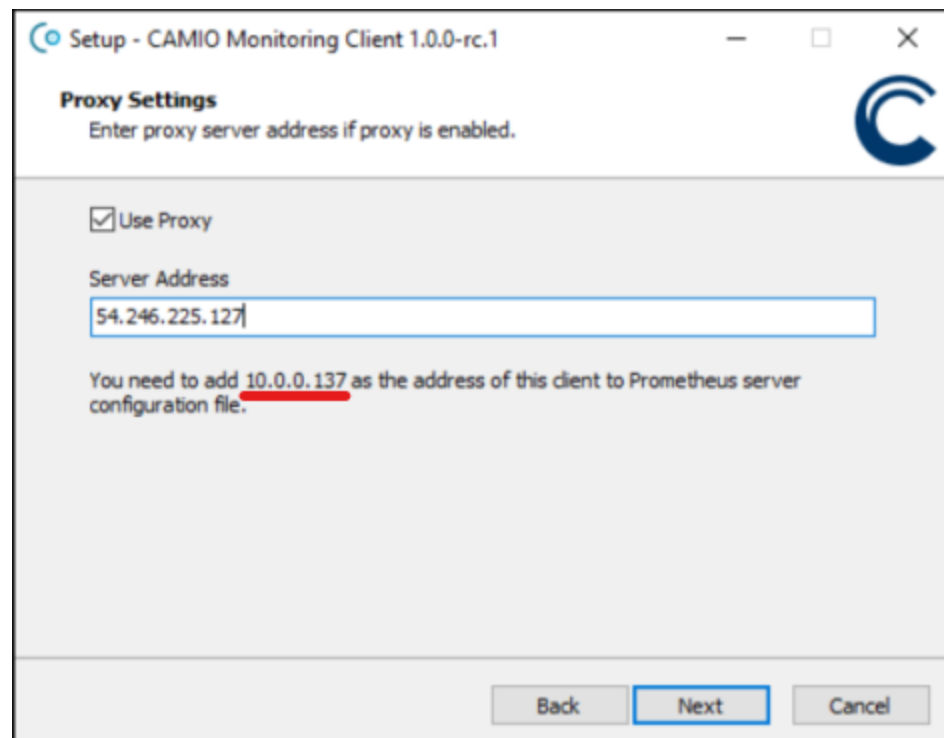


- c. Choose whether to use proxy:

- i. Without proxy - leave **Use Proxy** box empty and click on **Next**:



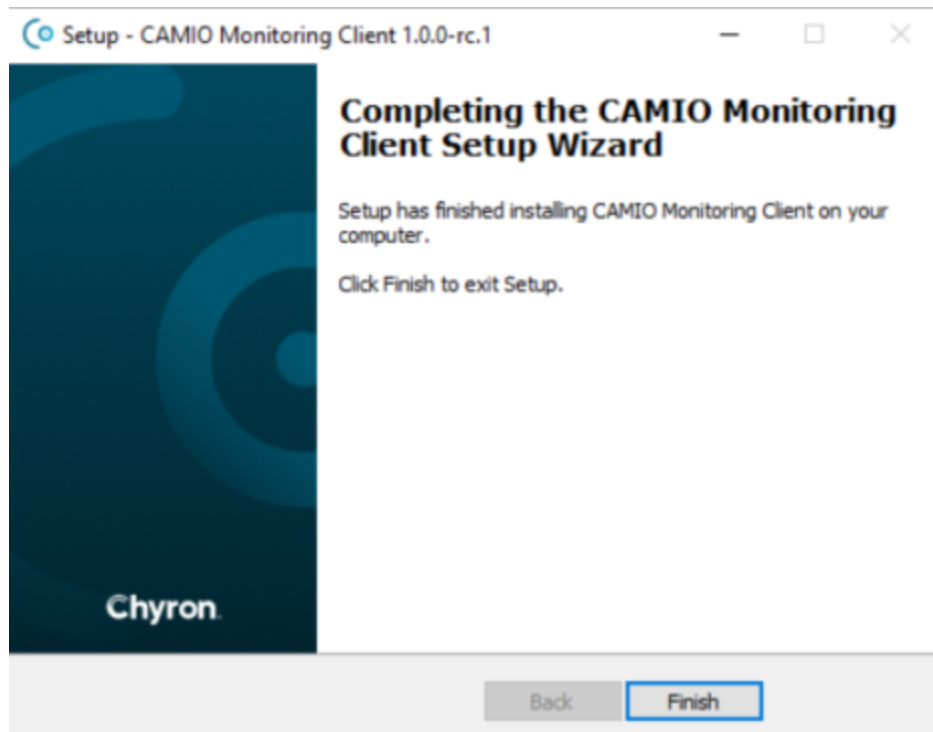
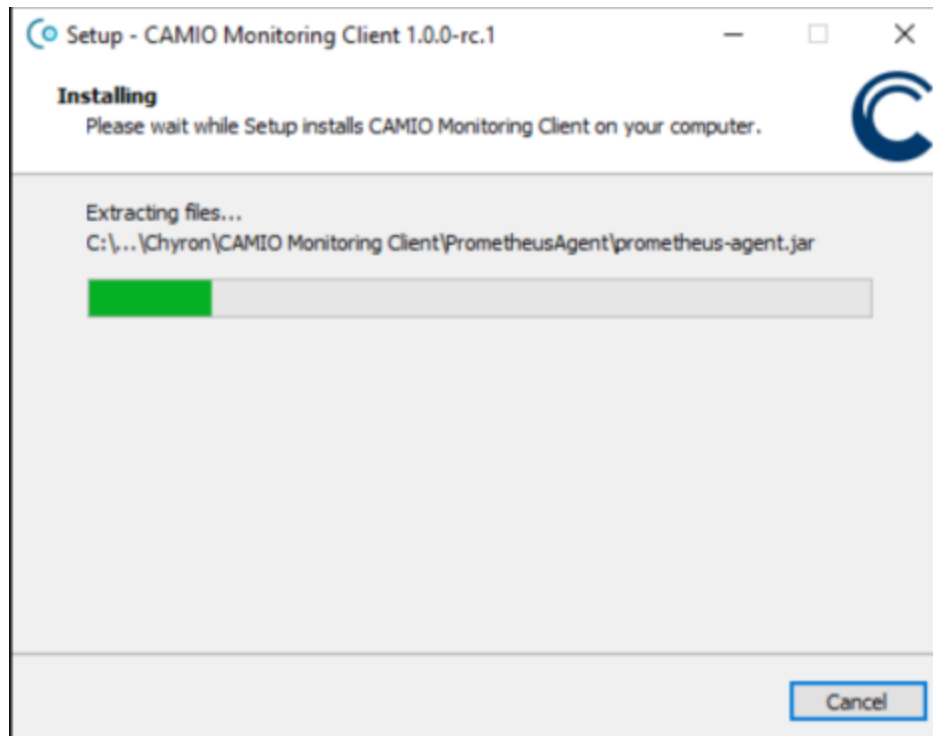
- ii. With proxy - check the **Use Proxy** checkbox and fill in the monitoring server ip address. The monitoring server needs to be reachable from the client on port 50051:



The screenshot shows the 'Setup - CAMIO Monitoring Client 1.0.0-rc.1' window. The 'Proxy Settings' section is active, with the instruction 'Enter proxy server address if proxy is enabled.' The 'Use Proxy' checkbox is checked. The 'Server Address' text box contains '54.246.225.127'. Below this, a message states: 'You need to add 10.0.0.137 as the address of this client to Prometheus server configuration file.' The 'Next' button is highlighted in blue, while 'Back' and 'Cancel' are disabled.

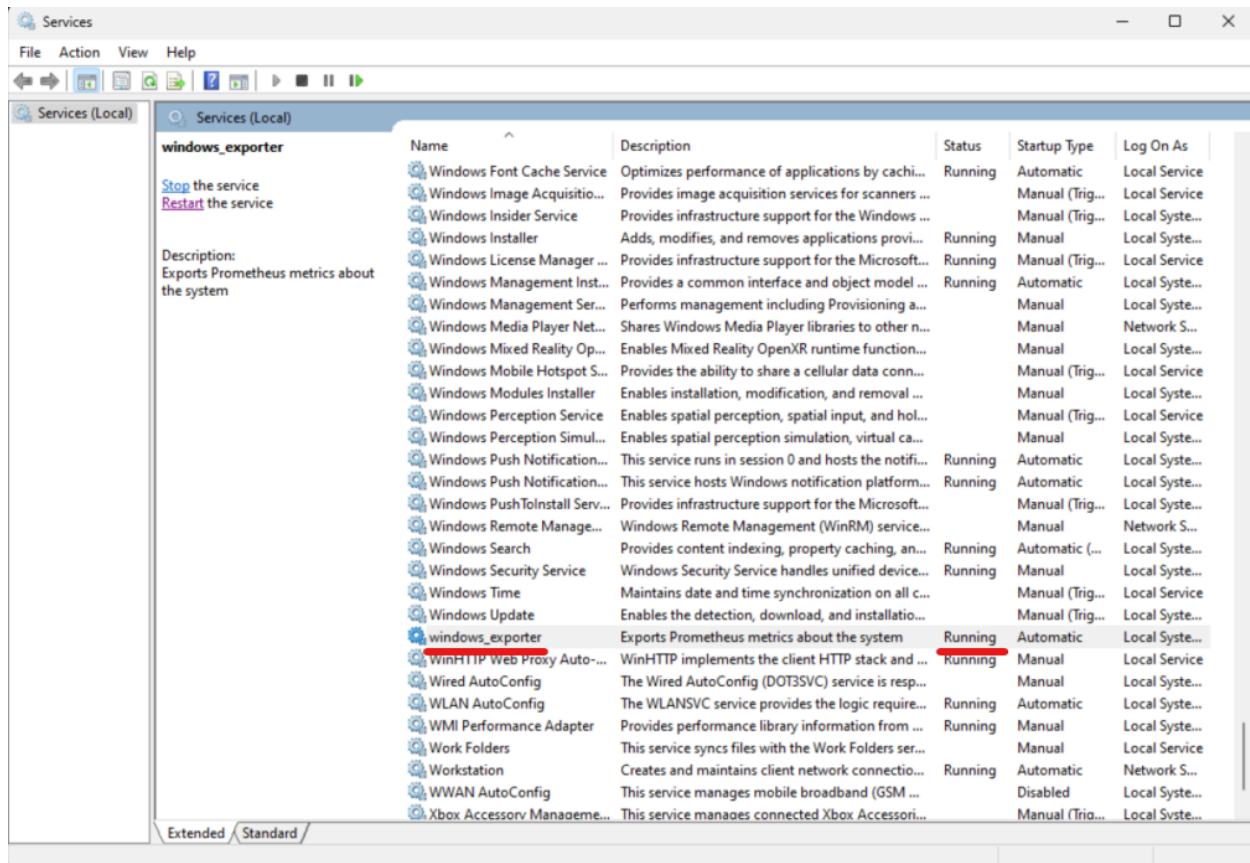
NOTE: Make sure to note the client ip address under the server address box. In case the client server has multiple network interfaces, this is the address that will be used as an identifier. It will need to be added to the list of client addresses on the monitoring server.

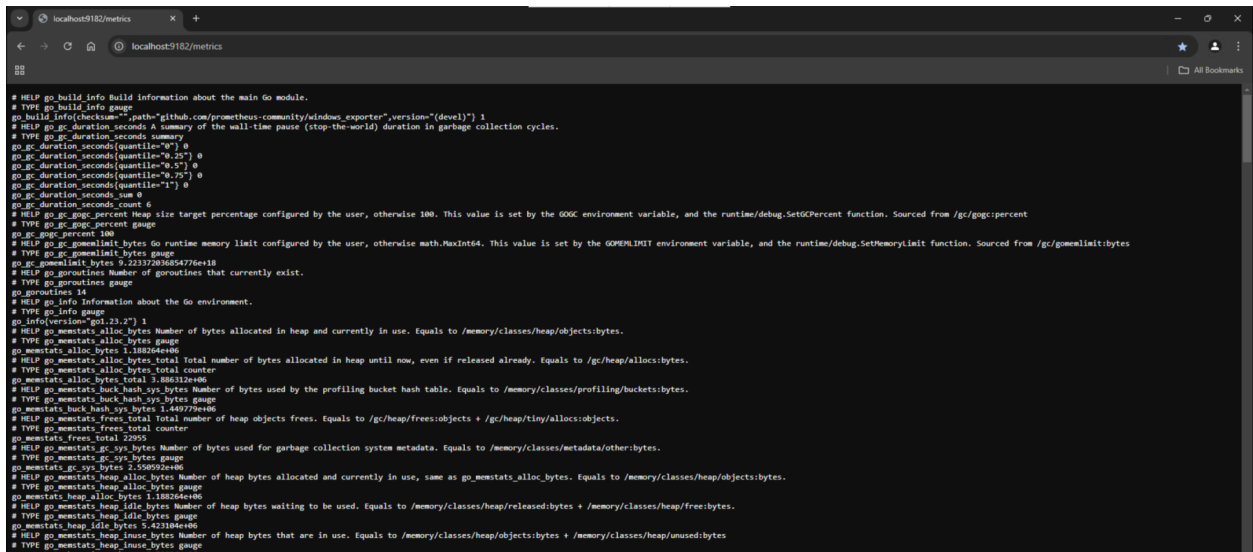
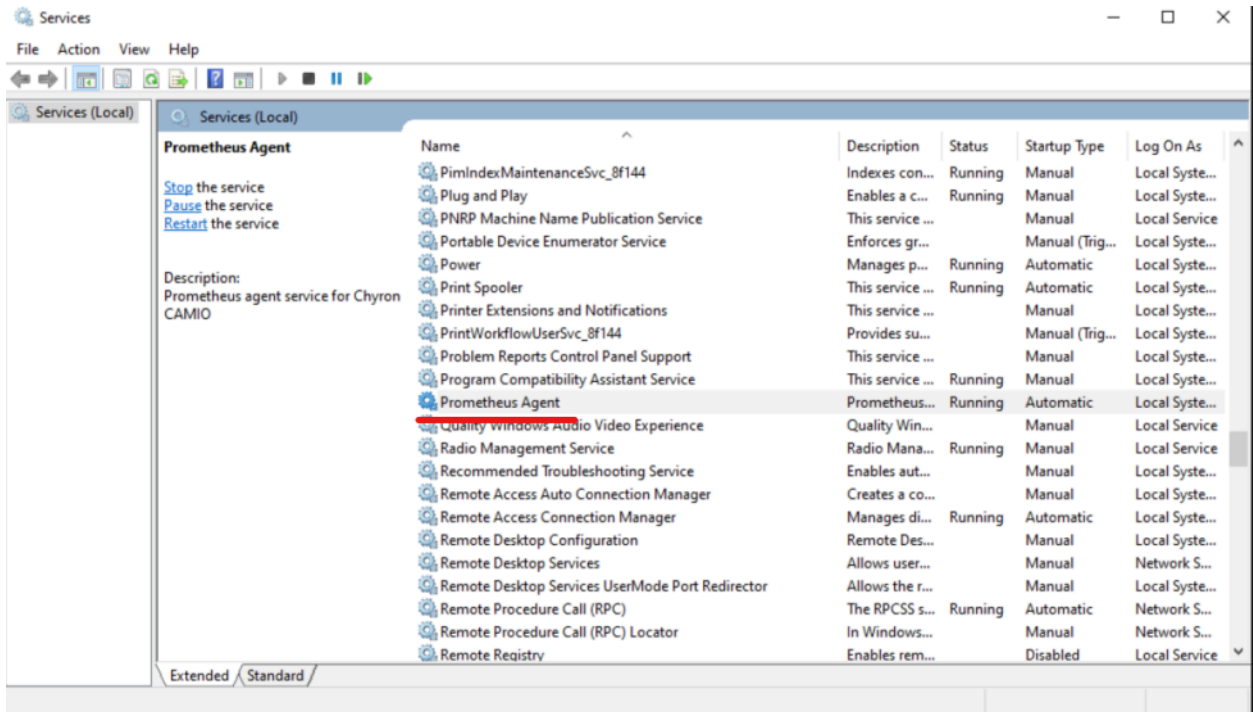
- d. Wait for installation to finish:



The installer will add two applications to the server - **CAMIO Monitoring client** and **windows_exporter**. The Monitoring Client application is only a wrapper for windows_exporter, it will not work without it. The windows_exporter will create a service, which needs to be running for metrics to be collected. To check the installation, you can open <http://localhost:9182/metrics> in a browser and you should see the metrics.

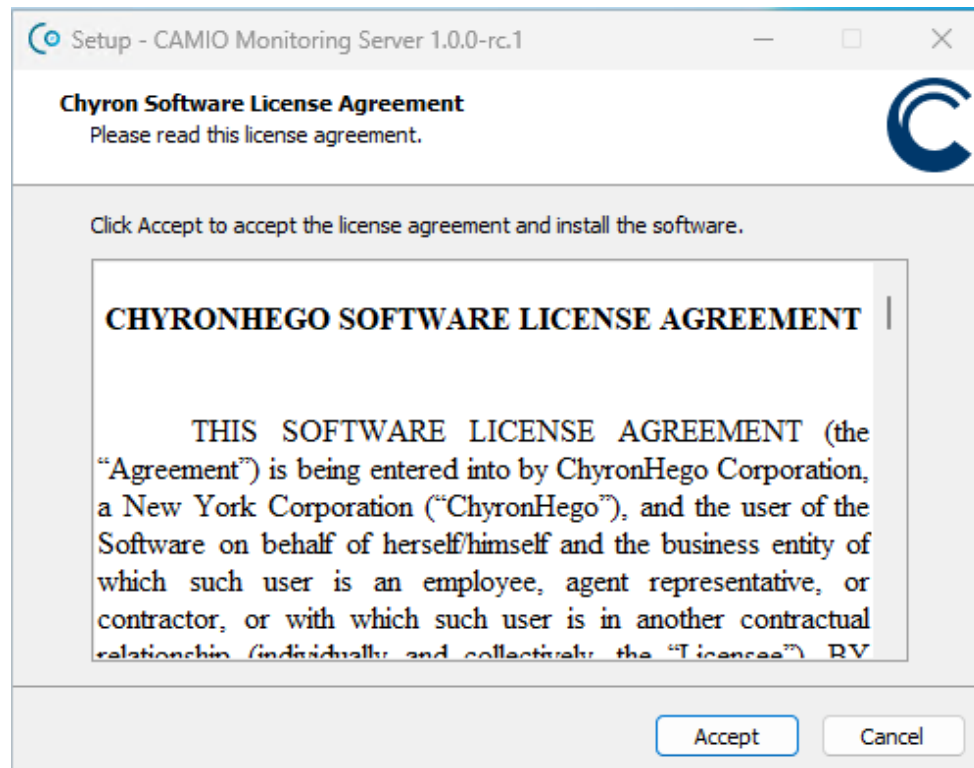
If you choose to use proxy, there will also be a second service called **Prometheus Agent**.



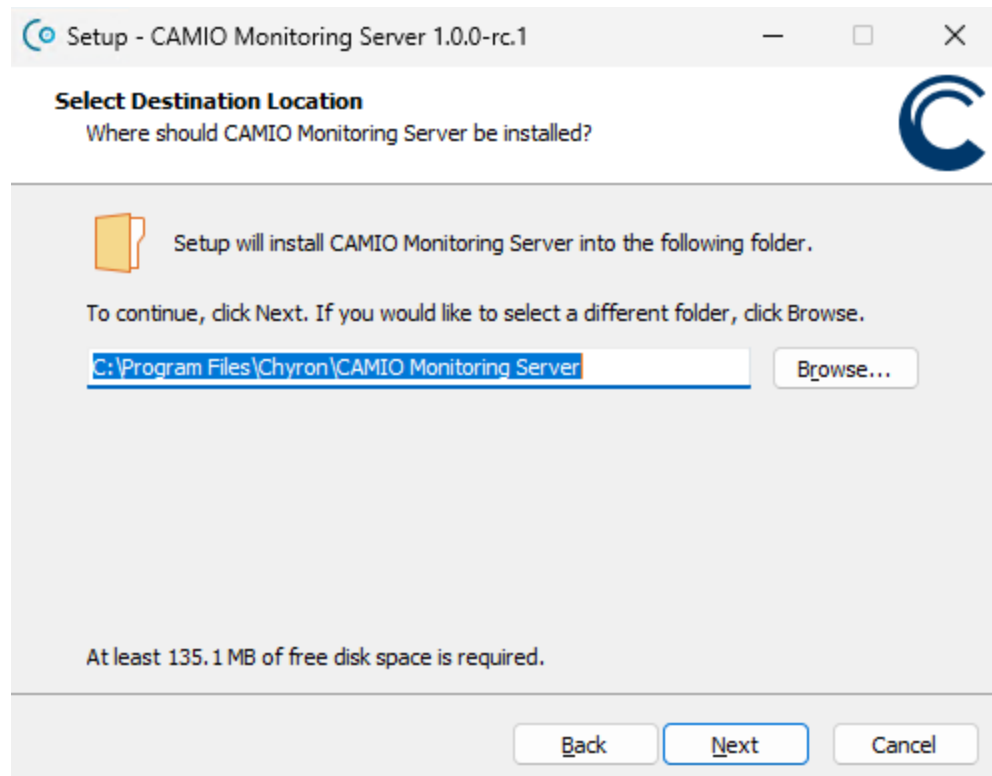


CAMIO Monitoring Server installation

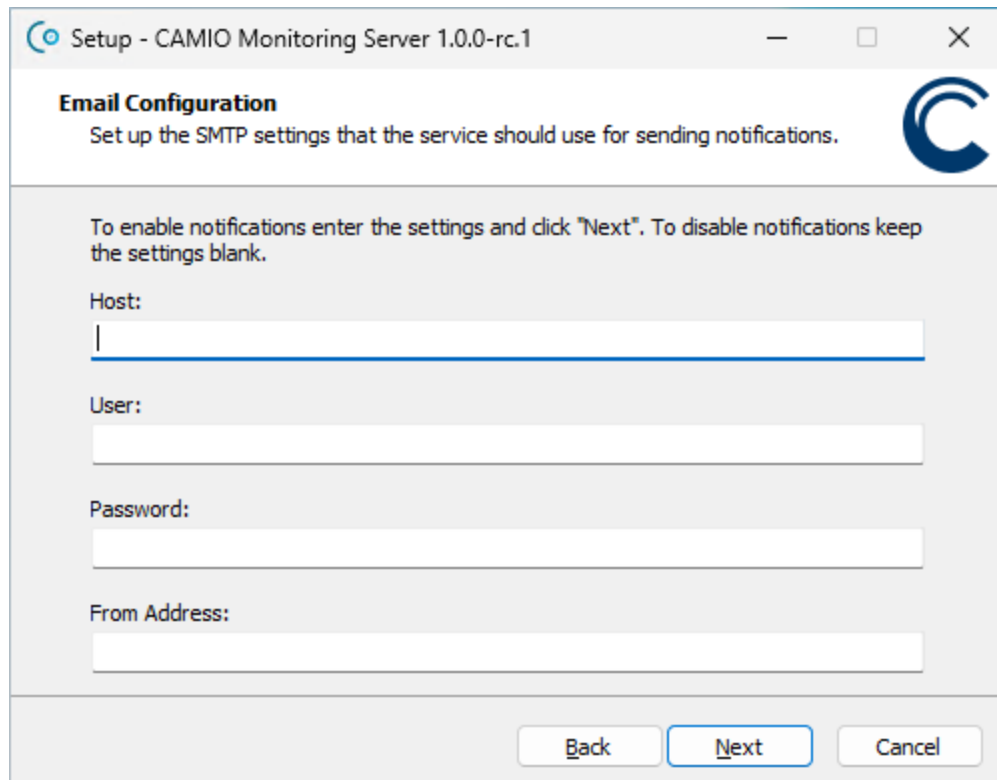
1. Download CAMIOMonitoringServer_1.0.0.exe installer from [the CAMIO Download Area](#)
2. Run installer:
 - a. Accept Licence Agreement:



- b. Choose installation location:



- c. Enter SMTP server configuration:



Email Configuration
Set up the SMTP settings that the service should use for sending notifications.

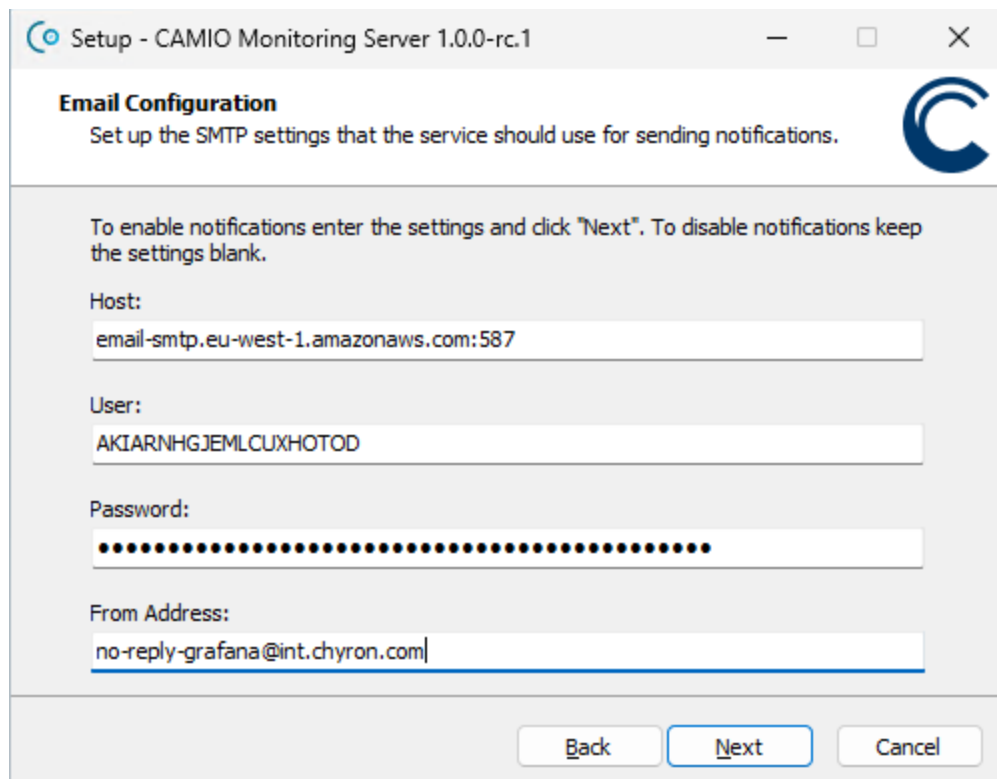
To enable notifications enter the settings and click "Next". To disable notifications keep the settings blank.

Host:

User:

Password:

From Address:



Email Configuration
Set up the SMTP settings that the service should use for sending notifications.

To enable notifications enter the settings and click "Next". To disable notifications keep the settings blank.

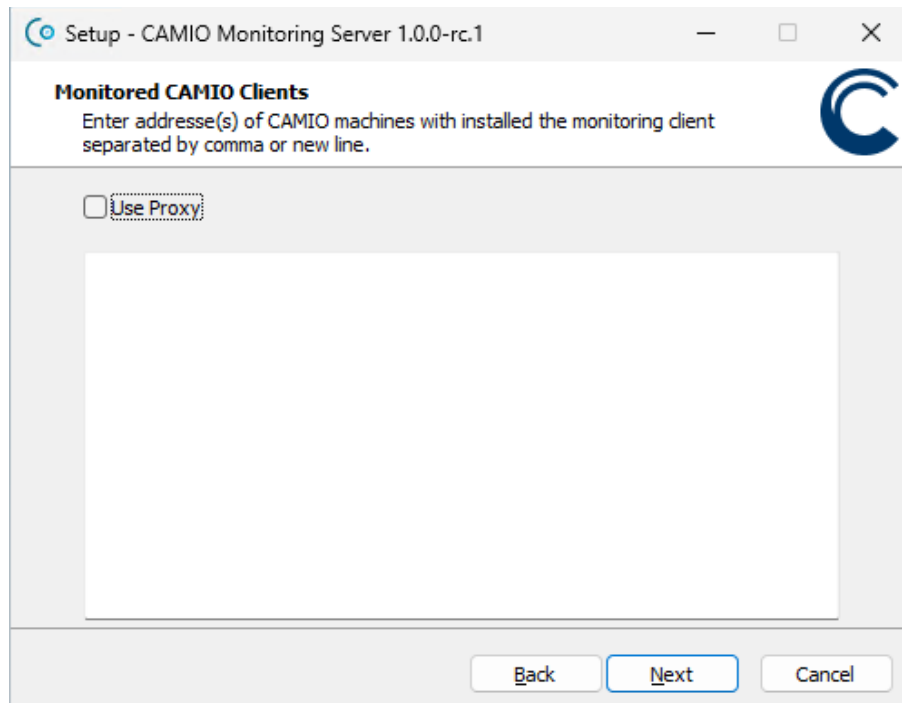
Host:

User:

Password:

From Address:

- d. Enter list of clients - machines to scrape metrics from



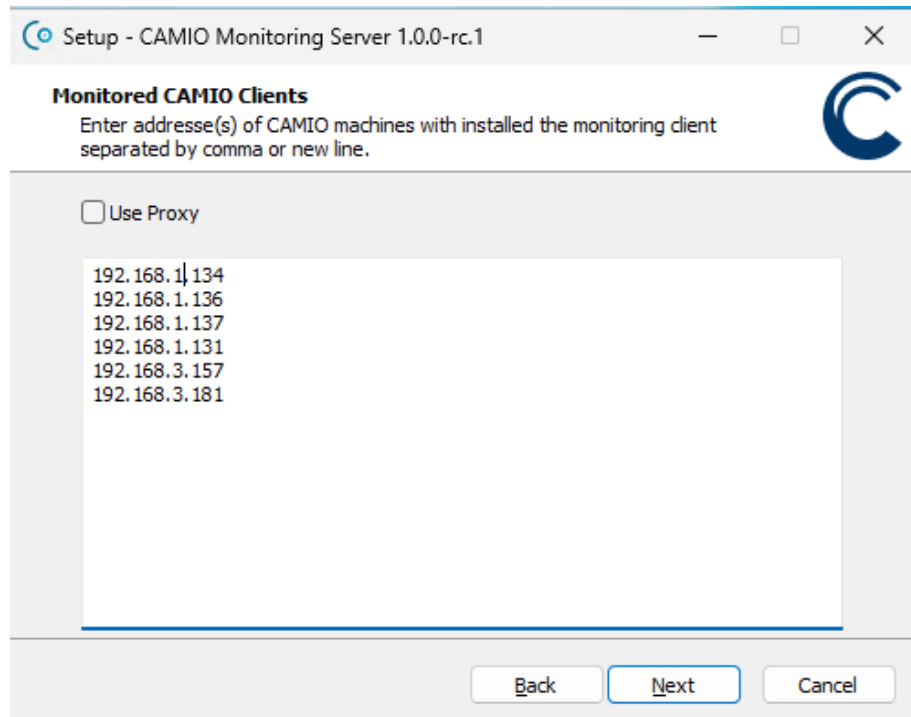
Setup - CAMIO Monitoring Server 1.0.0-rc.1

Monitored CAMIO Clients
Enter addresse(s) of CAMIO machines with installed the monitoring client separated by comma or new line.

☐ Use Proxy

Back Next Cancel

- i. Without proxy - leave **Use Proxy** box empty and enter list of target addresses - machines need to be reachable from monitoring server on port 9182



Setup - CAMIO Monitoring Server 1.0.0-rc.1

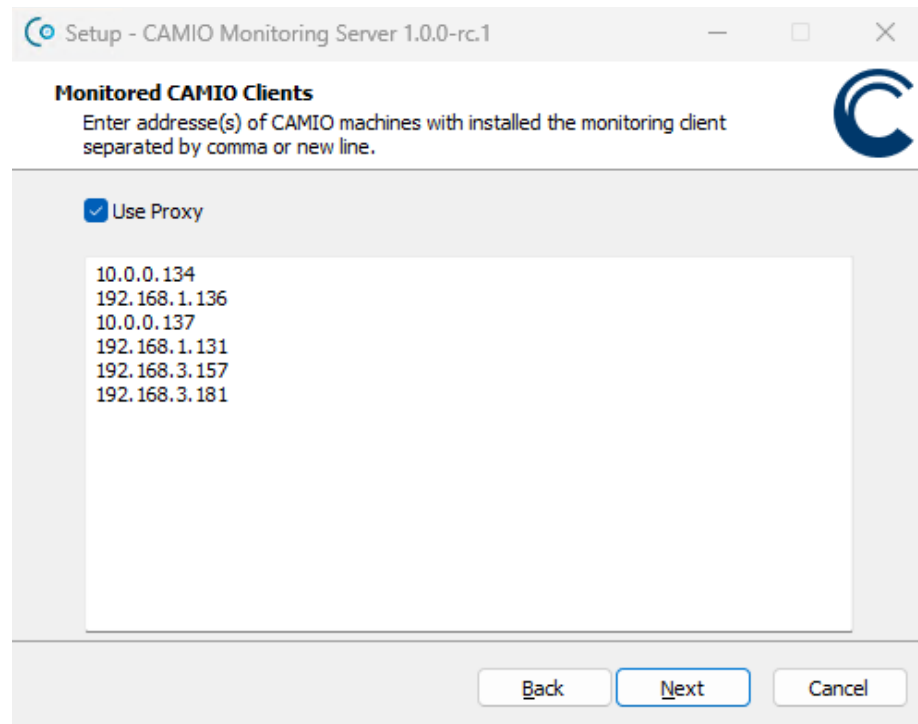
Monitored CAMIO Clients
Enter addresse(s) of CAMIO machines with installed the monitoring client separated by comma or new line.

☐ Use Proxy

192.168.1.134
192.168.1.136
192.168.1.137
192.168.1.131
192.168.3.157
192.168.3.181

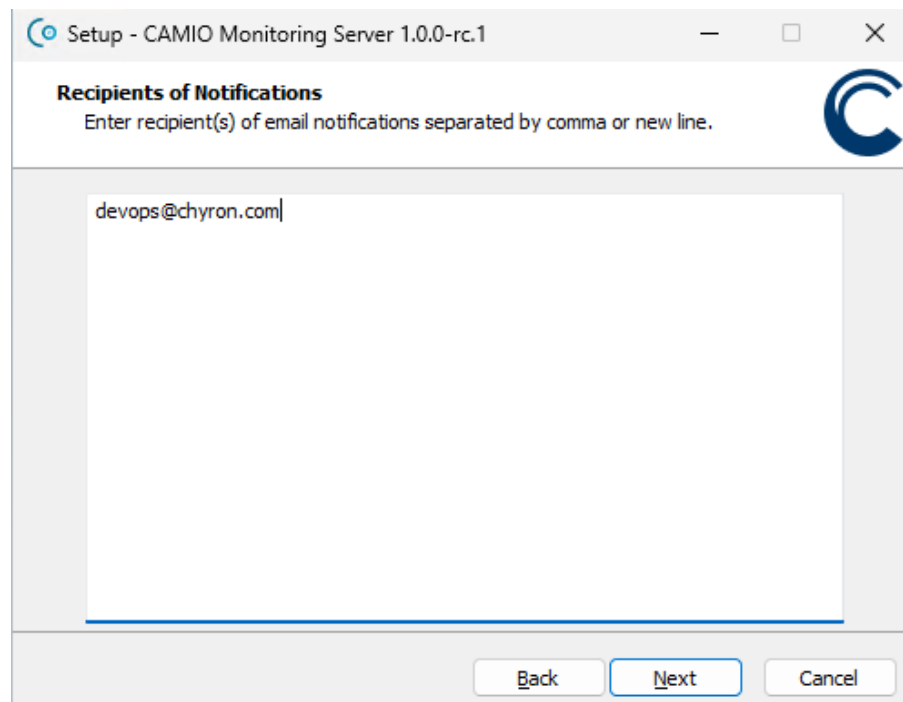
Back Next Cancel

- ii. With proxy - check the **Use Proxy** box and enter list of target identifiers (currently we use ip addresses) - you can see the identifier during the client installation (see step 2c in CAMIO Monitoring Client installation section of the guide)



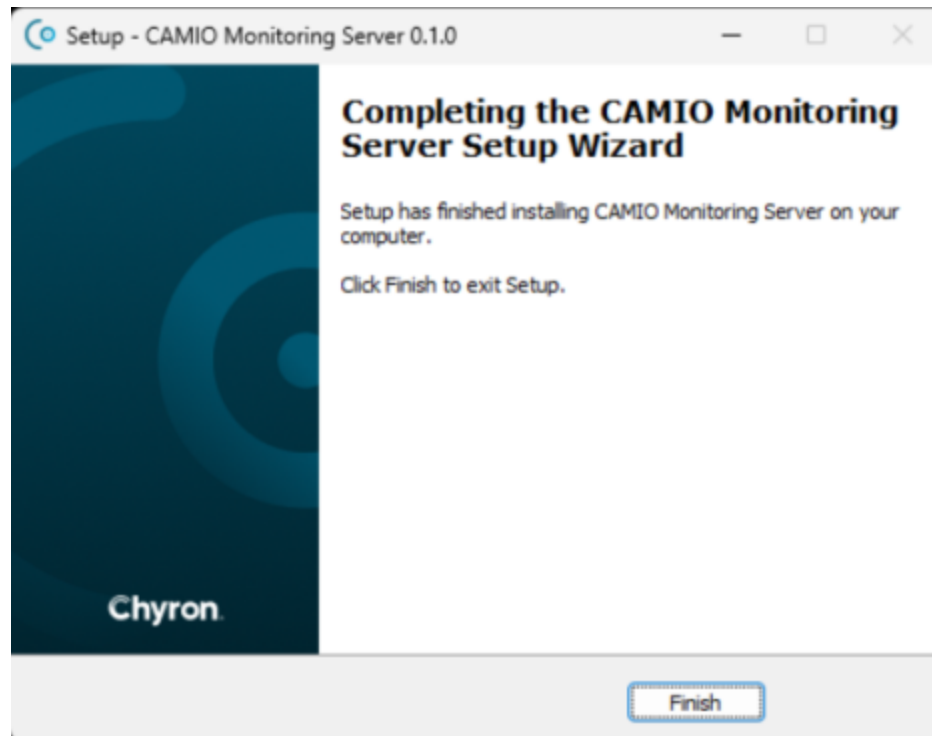
The screenshot shows a window titled "Setup - CAMIO Monitoring Server 1.0.0-rc.1". The main heading is "Monitored CAMIO Clients" with a sub-instruction: "Enter addresse(s) of CAMIO machines with installed the monitoring client separated by comma or new line." A checkbox labeled "Use Proxy" is checked. Below it, a text area contains the following IP addresses: 10.0.0.134, 192.168.1.136, 10.0.0.137, 192.168.1.131, 192.168.3.157, and 192.168.3.181. At the bottom right are "Back", "Next", and "Cancel" buttons.

- e. Enter list of email addresses that will receive email alerts:



The screenshot shows a window titled "Setup - CAMIO Monitoring Server 1.0.0-rc.1". The main heading is "Recipients of Notifications" with a sub-instruction: "Enter recipient(s) of email notifications separated by comma or new line." A text area contains the email address "devops@chyron.com". At the bottom right are "Back", "Next", and "Cancel" buttons.

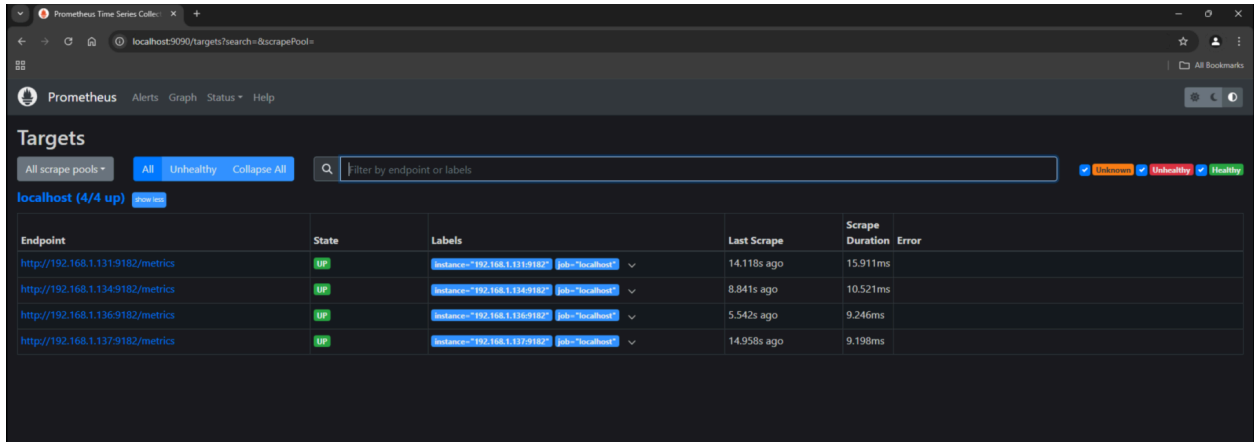
- f. Wait for installation to finish:



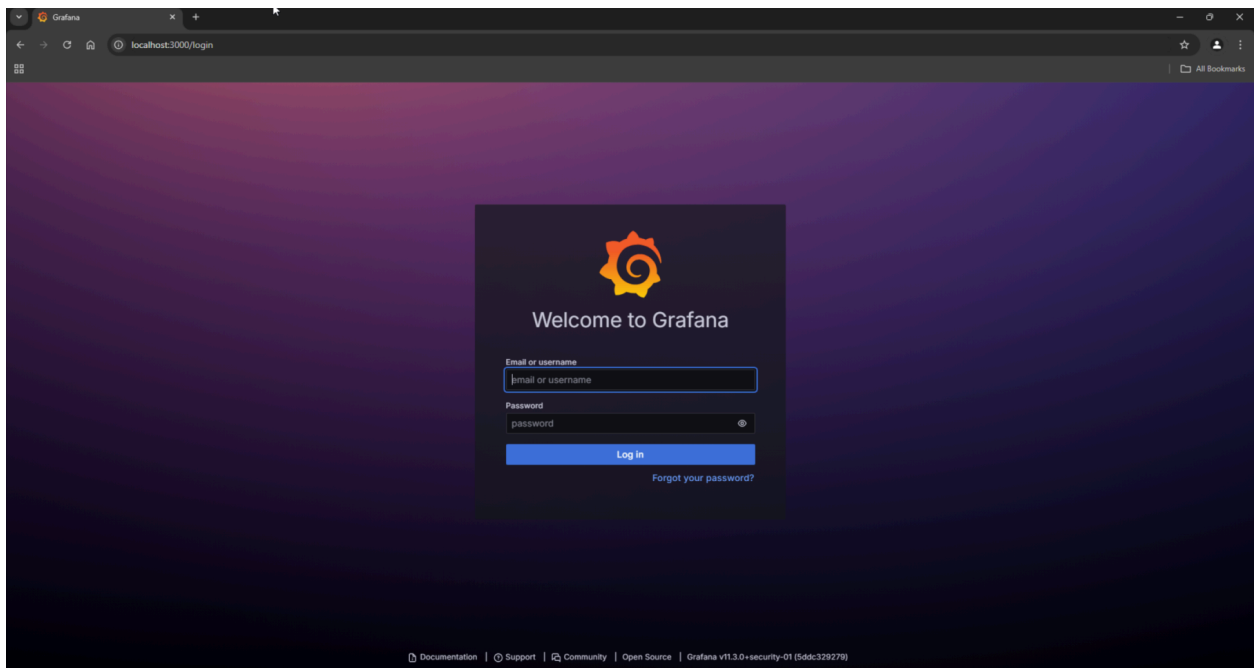
3. (optional) To check the configured target machines, you can open <http://localhost:9090> in a browser to access Prometheus, then go to *Status => Targets* to view the machines. If the targets are configured correctly Camio Monitoring Client is installed on all machines and correct port is opened (either on client or server), then the state should be UP.

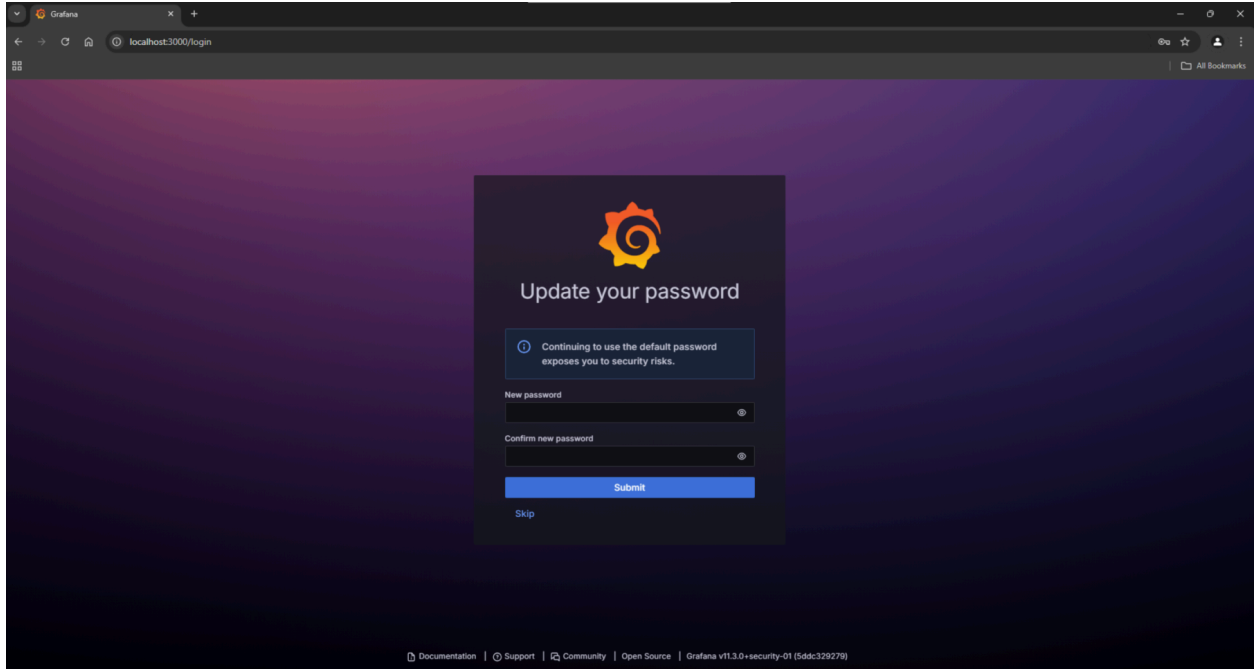
A screenshot of a web browser showing the Prometheus Targets page. The address bar shows "localhost:9090/targets?search=&scrapePool=". The page has a dark theme and a navigation bar with "Prometheus", "Alerts", "Graph", "Status", and "Help". Below the navigation bar, there's a "Targets" section with a filter "All scrape pools" and buttons "All", "Unhealthy", and "Collapse All". A search bar "Filter by endpoint or labels" is also present. On the right, there are status indicators: "Unknown", "Unhealthy", and "Healthy". The main content shows a table of targets for the "localhost (2/4 up)" scrape pool. The table has columns: Endpoint, State, Labels, Last Scrape, Scrape Duration, and Error. The first two targets are "UP", and the last two are "UNKNOWN".

Endpoint	State	Labels	Last Scrape	Scrape Duration	Error
http://192.168.1.137:9182/metrics	UP	instance="192.168.1.137:9182" job="localhost"	4.274s ago	30.989ms	
http://192.168.1.131:9182/metrics	UP	instance="192.168.1.131:9182" job="localhost"	3.434s ago	291.711ms	
http://192.168.1.134:9182/metrics	UNKNOWN	instance="192.168.1.134:9182" job="localhost"	Never	0s	
http://192.168.1.136:9182/metrics	UNKNOWN	instance="192.168.1.136:9182" job="localhost"	Never	0s	



4. Open <http://localhost:3000> in browser to access Grafana.
5. Login with username *admin* and password *admin* (credentials for default administrator account). You will be asked to change the password.



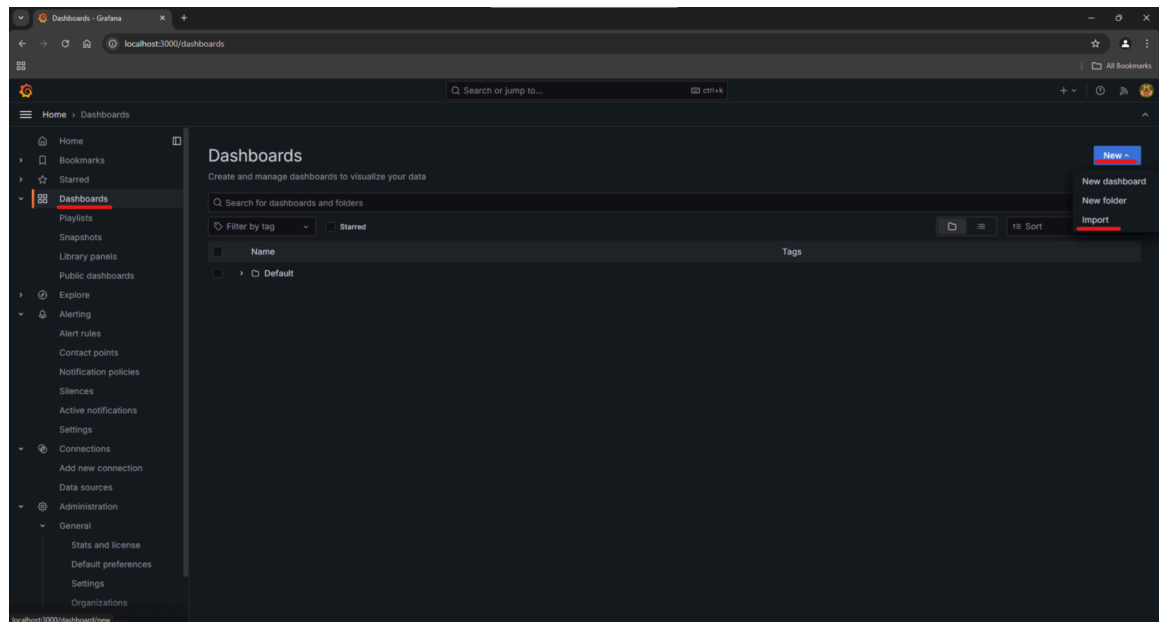


6. Find dashboards in Grafana's installation directory (default location is *C:\Program Files\Chyron\CAMIO Monitoring Server\grafana*). There should be three files
 - a. *Overview.json*
 - b. *Server_details.json*
 - c. *server_history.json*

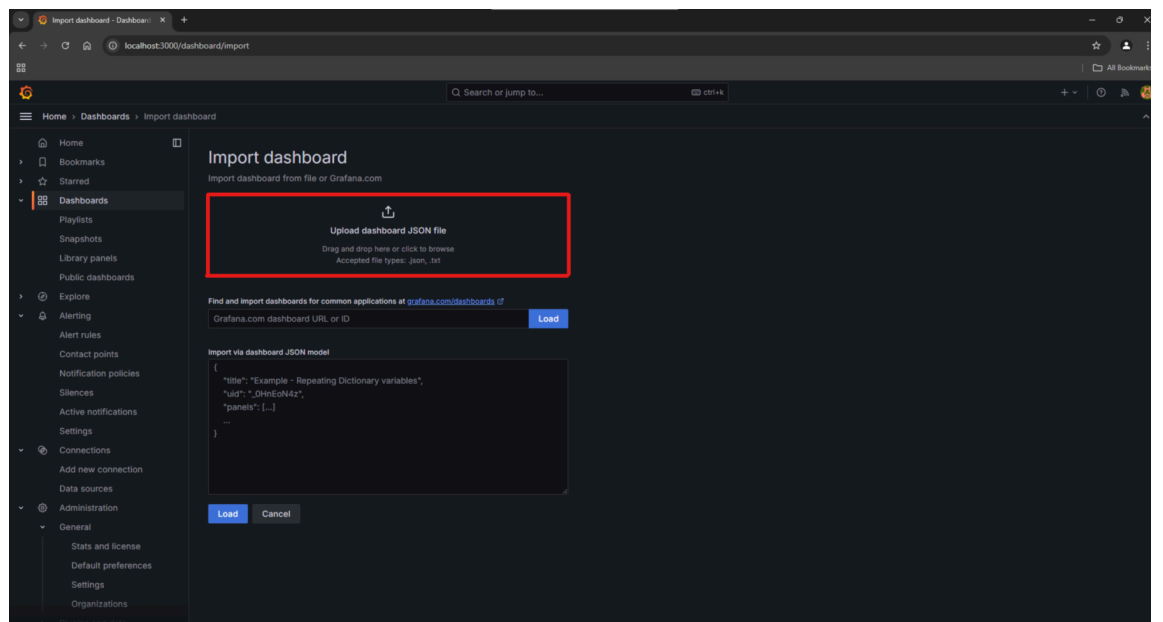
For each of the three files:

- d. In Grafana go to *Dashboards*.

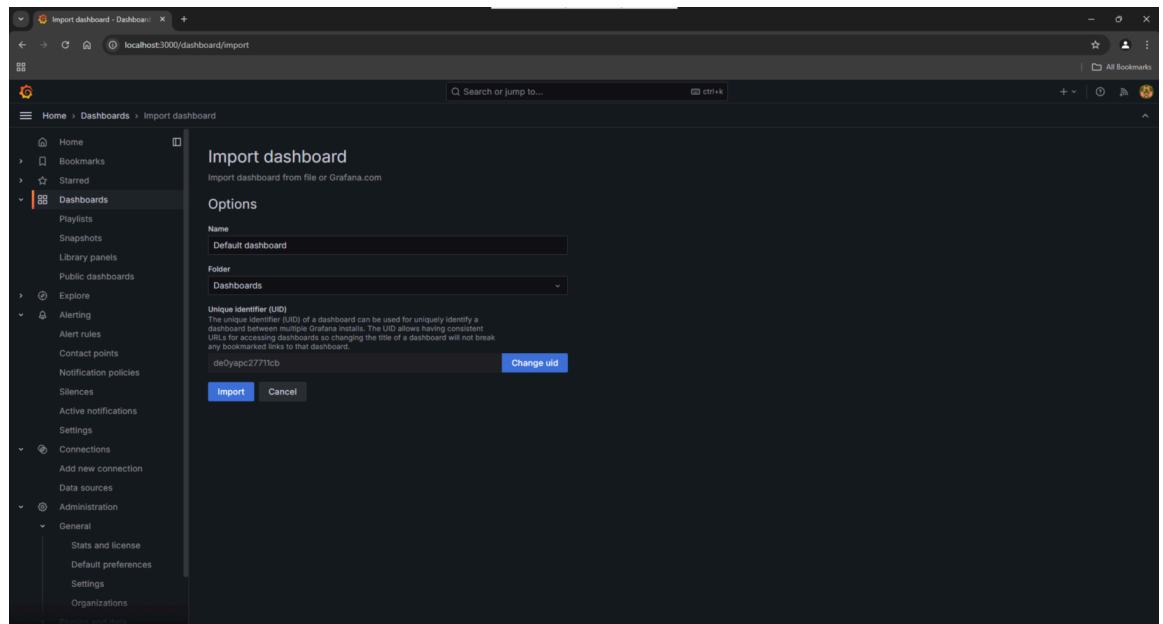
e. Click on *New => Import*:



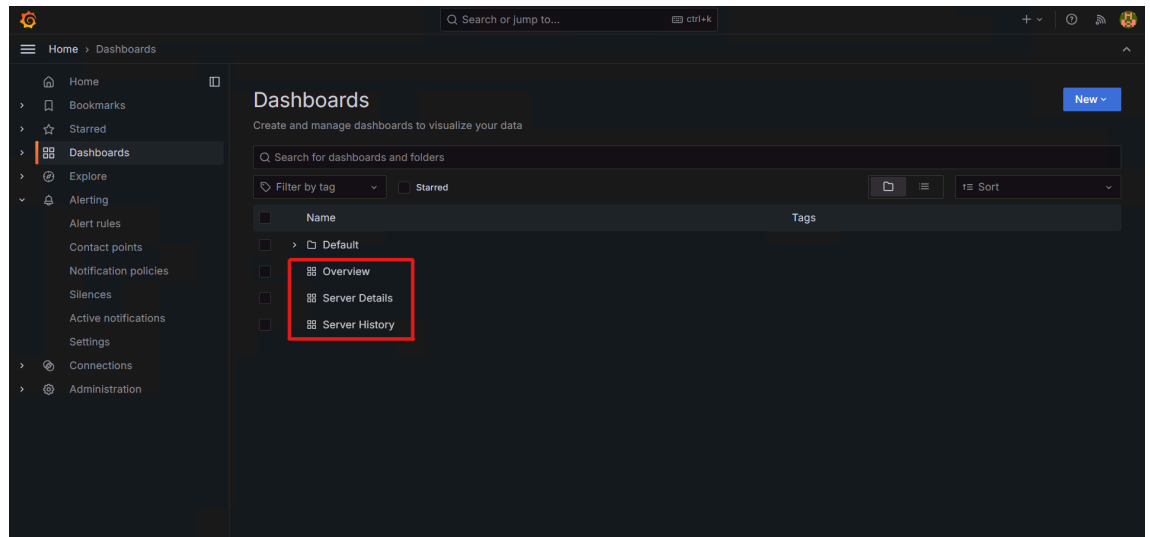
f. Upload the file:

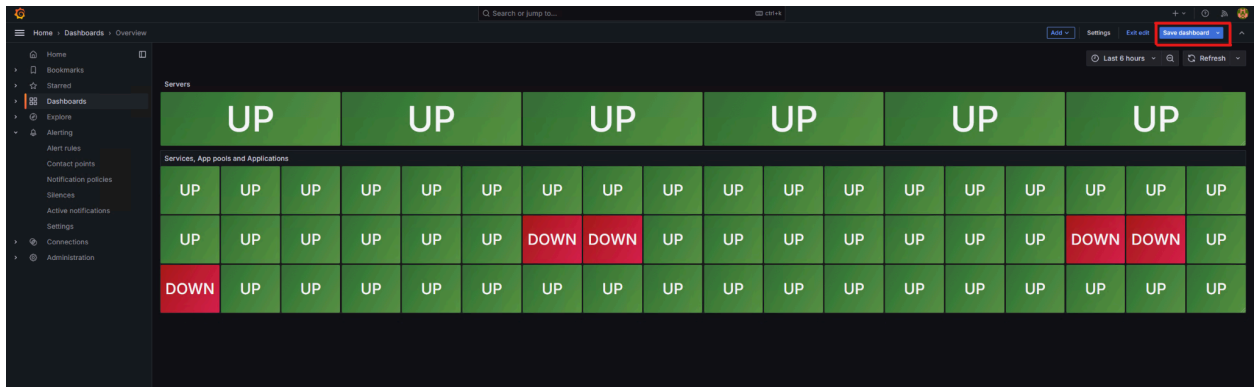
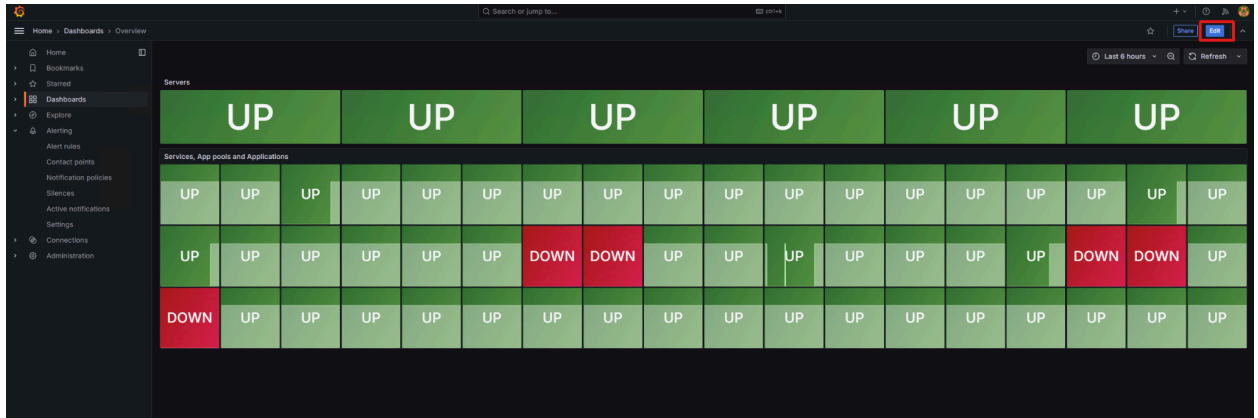


g. Click on Import:



h. You should now have three dashboards:



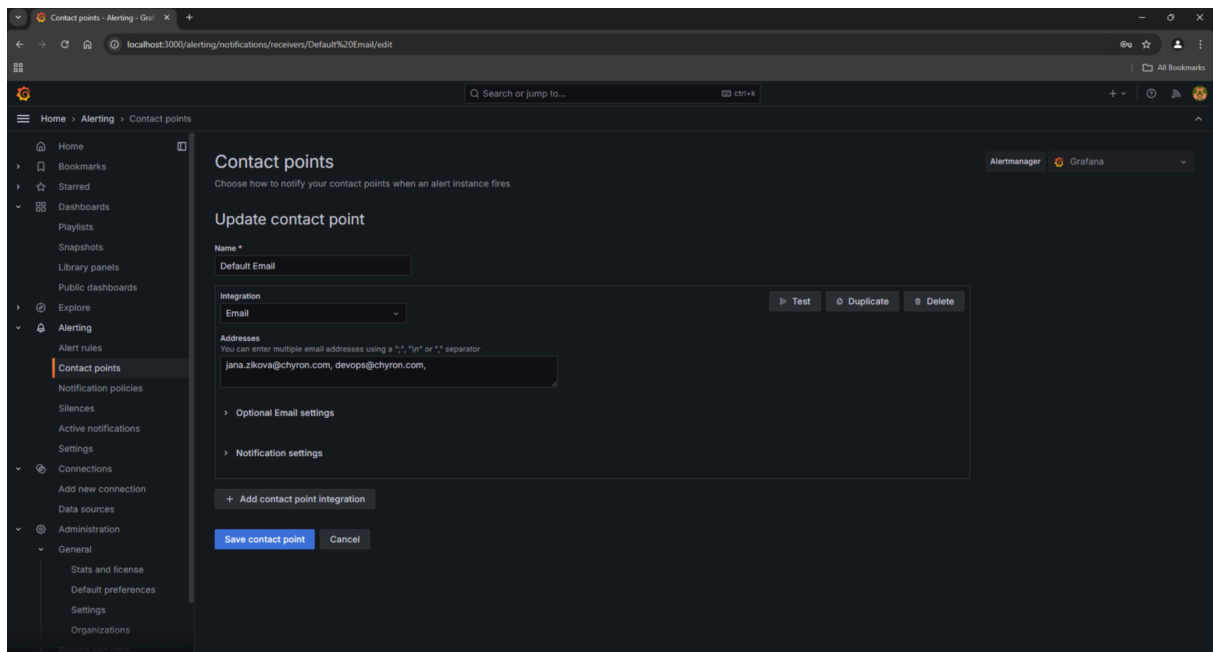
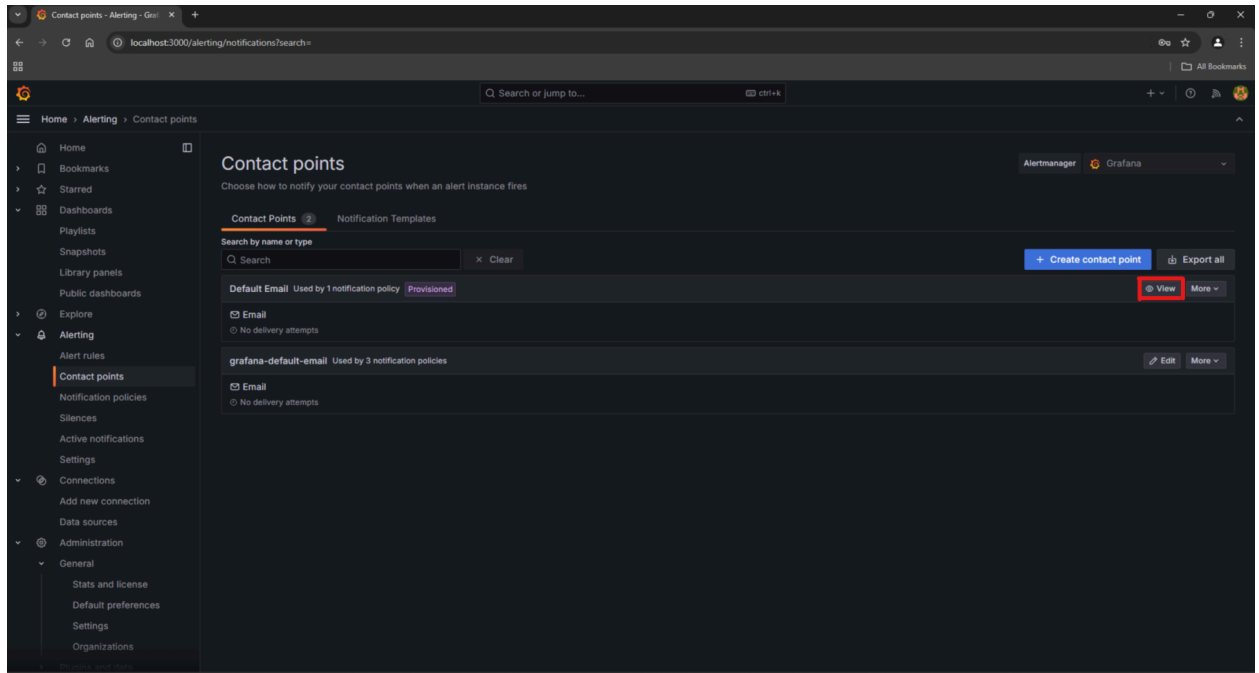


8. (optional) To check configured alerts you can go to *Alerting* => *Alert rules*.

The screenshot shows the 'Alert rules' page in the Chyron Monitoring dashboard. The page title is 'Alert rules' and it includes a subtitle 'Rules that determine whether an alert will fire'. There are filters for 'Search by data sources', 'Dashboard', 'State', 'Rule type', and 'Health'. A table lists 29 rules, with 1 pending and 28 normal. The rules are categorized by State, Name, Health, Summary, Next evaluation, and Actions.

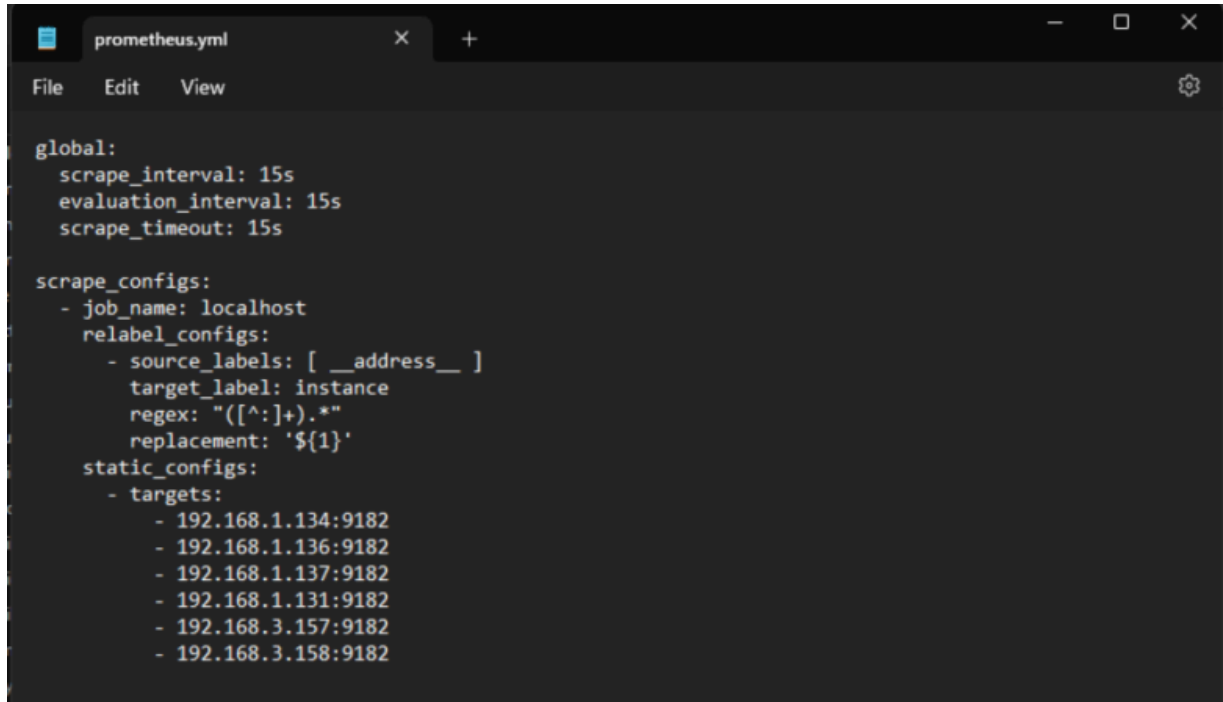
State	Name	Health	Summary	Next evaluation	Actions
Normal	Server is unreachable	Provisioned	ok	in a few seconds	More
Pending	FileSync Client application is not running	Provisioned	ok	in a few seconds	More
Normal	CAMIO application pool is not running	Provisioned	ok	in a few seconds	More
Normal	CAMIO4 application pool is not running	Provisioned	ok	in a few seconds	More
Normal	CamioApi application pool is not running	Provisioned	ok	in a few seconds	More
Normal	CAMIO-External application pool is not running	Provisioned	ok	in a few seconds	More
Normal	CAMIO4-External application pool is not running	Provisioned	ok	in a few seconds	More
Normal	CoreApi application pool is not running	Provisioned	ok	in a few seconds	More

9. (optional) To check configured email recipients go to *Alerting* => *Contact points*, find *Default Email* and click on *View*.



Adding target machines - without proxy

1. Open file `C:\Program Files\Chyron\CAMIO Monitoring Server\Prometheus\prometheus.yml` as Administrator in any text editor:

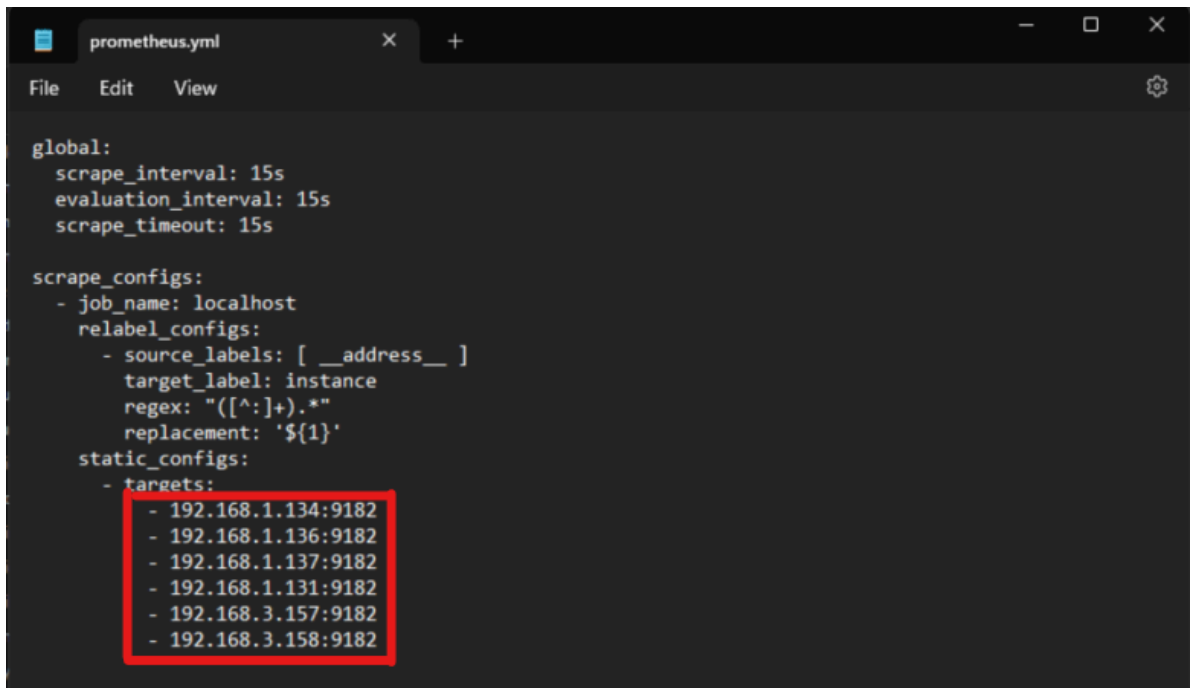


```
global:
  scrape_interval: 15s
  evaluation_interval: 15s
  scrape_timeout: 15s

scrape_configs:
  - job_name: localhost
    relabel_configs:
      - source_labels: [ __address__ ]
        target_label: instance
        regex: "([^\:]+).*"
        replacement: '{1}'
    static_configs:
      - targets:
          - 192.168.1.134:9182
          - 192.168.1.136:9182
          - 192.168.1.137:9182
          - 192.168.1.131:9182
          - 192.168.3.157:9182
          - 192.168.3.158:9182
```

2. Under targets modify the list of client machines as needed (port is always 9182 and needs to be included in the address). **Note:** only use spaces to indent the IP addresses.

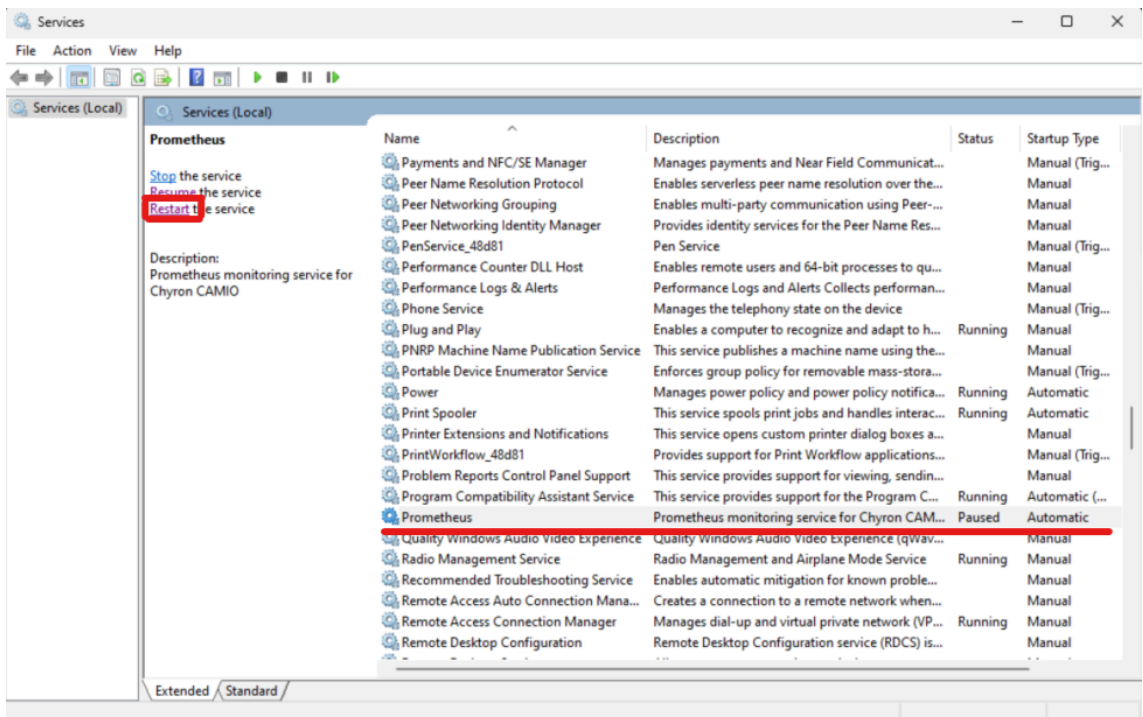
Using tabs may cause problems starting the service.



```
global:
  scrape_interval: 15s
  evaluation_interval: 15s
  scrape_timeout: 15s

scrape_configs:
  - job_name: localhost
    relabel_configs:
      - source_labels: [ __address__ ]
        target_label: instance
        regex: "([^:]+).*"
        replacement: '${1}'
    static_configs:
      - targets:
          - 192.168.1.134:9182
          - 192.168.1.136:9182
          - 192.168.1.137:9182
          - 192.168.1.131:9182
          - 192.168.3.157:9182
          - 192.168.3.158:9182
```

3. Save and close file.
4. Find Prometheus in Services and restart it:



Adding target machines - without proxy

1. Open file `C:\Program Files\Chyron\CAMIO Monitoring Server\Prometheus\prometheus.yml` as Administrator in any text editor:



```
! prometheus.yml X
C: > Program Files > Chyron > CAMIO Monitoring Server > Prometheus > ! prometheus.yml
1 global:
2   scrape_interval: 15s
3   evaluation_interval: 15s
4   scrape_timeout: 15s
5
6 scrape_configs:
7   - job_name: client1
8     metrics_path: 10.0.0.134
9     relabel_configs:
10      - source_labels: [ __metrics_path__ ]
11        target_label: instance
12    static_configs:
13      - targets:
14        - localhost:50050
15   - job_name: client2
16     metrics_path: 192.168.1.136
17     relabel_configs:
18      - source_labels: [ __metrics_path__ ]
19        target_label: instance
20    static_configs:
21      - targets:
22        - localhost:50050
23   - job_name: client3
24     metrics_path: 10.0.0.137
25     relabel_configs:
26      - source_labels: [ __metrics_path__ ]
27        target_label: instance
28    static_configs:
29      - targets:
30        - localhost:50050
31   - job_name: client4
32     metrics_path: 192.168.1.131
33     relabel_configs:
34      - source_labels: [ __metrics_path__ ]
35        target_label: instance
36    static_configs:
37      - targets:
38        - localhost:50050
39   - job_name: client5
40     metrics_path: 192.168.3.157
41     relabel_configs:
42      - source_labels: [ __metrics_path__ ]
43        target_label: instance
44    static_configs:
45      - targets:
46        - localhost:50050
47   - job_name: client6
```

2. Modify the list of jobs under *scrape_configs* as needed - there is one job per client machine, *job_name* needs to be unique and *metrics_path* needs to be set to client identifier (see step 2c in CAMIO Monitoring Client installation section of the guide). The *relabel_configs* and *static_configs* need to be the same for all jobs. **Note:** only use

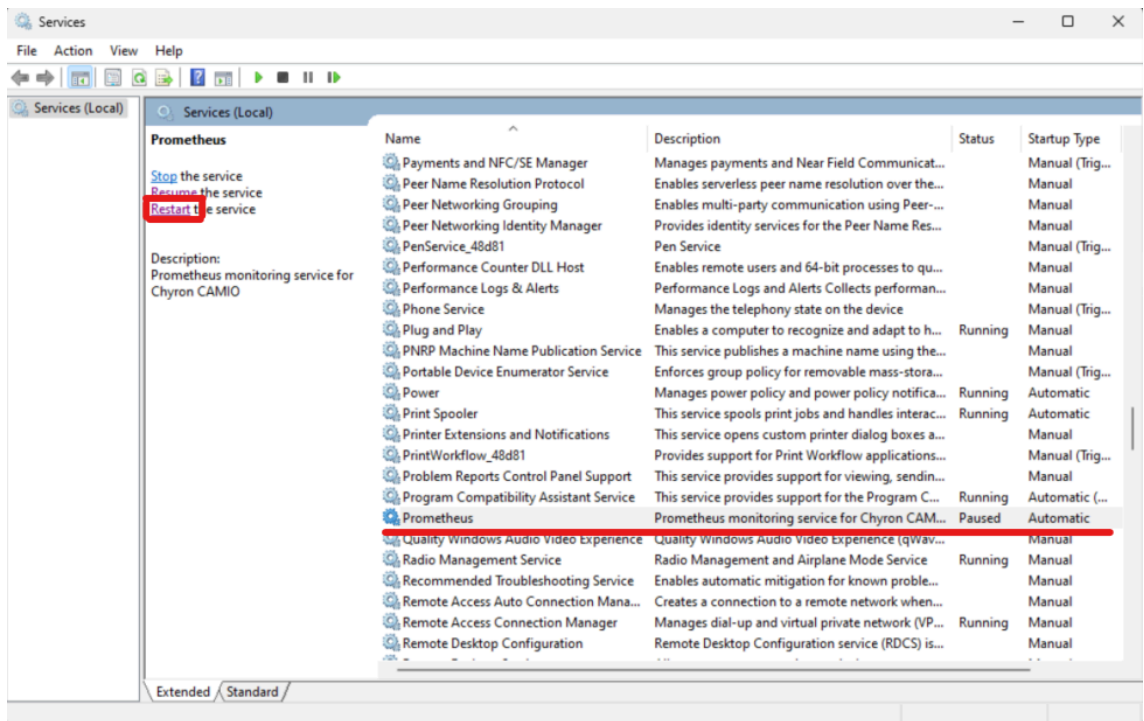
spaces for indentation. Using tabs may cause problems starting the service.

```
! prometheus.yml X
C: > Program Files > Chyron > CAMIO Monitoring Server > Prometheus > ! prometheus.yml

1 global:
2   scrape_interval: 15s
3   evaluation_interval: 15s
4   scrape_timeout: 15s
5
6 scrape_configs:
7   - job_name: client1
8     metrics_path: 10.0.0.134
9     relabel_configs:
10      - source_labels: [ __metrics_path__ ]
11        target_label: instance
12      static_configs:
13        - targets:
14          - localhost:50050
15   - job_name: client2
16     metrics_path: 192.168.1.136
17     relabel_configs:
18      - source_labels: [ __metrics_path__ ]
19        target_label: instance
20      static_configs:
21        - targets:
22          - localhost:50050
23   - job_name: client3
24     metrics_path: 10.0.0.137
25     relabel_configs:
26      - source_labels: [ __metrics_path__ ]
27        target_label: instance
28      static_configs:
29        - targets:
30          - localhost:50050
31   - job_name: client4
32     metrics_path: 192.168.1.131
33     relabel_configs:
34      - source_labels: [ __metrics_path__ ]
35        target_label: instance
36      static_configs:
37        - targets:
38          - localhost:50050
39   - job_name: client5
40     metrics_path: 192.168.3.157
41     relabel_configs:
42      - source_labels: [ __metrics_path__ ]
43        target_label: instance
44      static_configs:
45        - targets:
46          - localhost:50050
47   - job_name: client6
```

3. Save and close file.

4. Find Prometheus in Services and restart it:

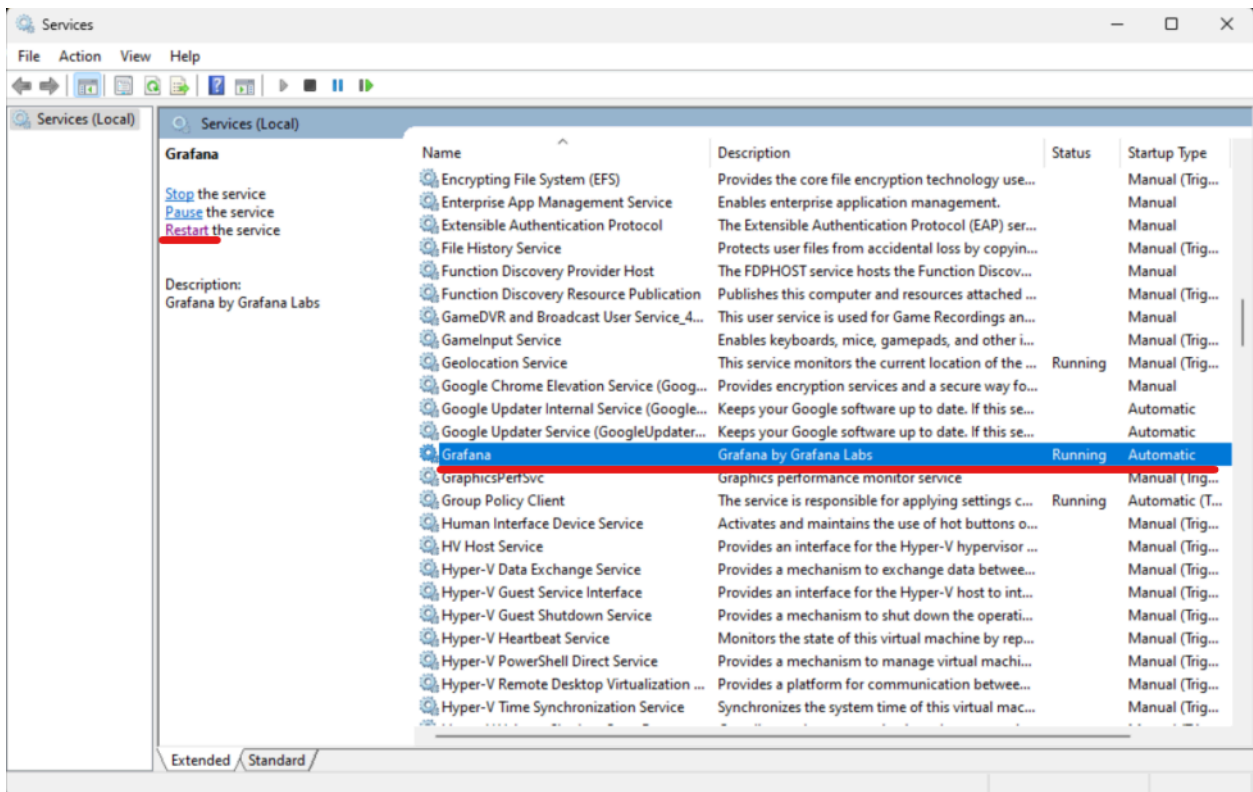


Adding notification email recipients

The provisioned resources created by installer can't be edited in Grafana. To change the recipients emails list you can edit file `C:\Program Files\Chyron\CAMIO Monitoring Server\grafana\conf\provisioning\alerting\contact_point.yaml`. Open the file in a text editor as Administrator, edit the **addresses** attribute value and save the file. Then go to Services and restart **Chyron CAMIO Monitoring Service**. Afterwards you should see the new value in Grafana as well.

```
contact_point.yaml

apiVersion: 1
contactPoints:
  - orgId: 1
    name: Default Email
    receivers:
      - uid: contact_point_0
        type: email
        settings:
          addresses: devops@chyron.com, jana.zikova@chyron.com
          message: use_chyron_email_template
          singleEmail: false
          subject: '{{ template "email_subject" . }}'
          disableResolveMessage: true
```



FAQs

If I don't have the SMTP details at the time of installation, how do I add them later?

Go to:

C:\Program Files\Chyron\CAMIO Monitoring Server\grafana\conf

And update the SMTP section:

```
Unset
##### SMTP / Emailing #####

[smtp]
enabled = true
host = host
user = User

# If the password contains # or ; you have to wrap it with triple quotes.
Ex """"#password;""""

password = password
cert_file =
key_file =
skip_verify = false
from_address = email address
from_name = Grafana
ehlo_identity =
startTLS_policy =
enable_tracing = false
```

How do I add additional recipients to an alert?

See the section on [Adding notification email recipients](#)

How do I configure other notification types like Slack?

Can this be done?

Link to Grafana help

Can I install the CAMIO monitoring client on the same machine as the monitoring server?

Yes. The monitoring server and client can both be installed on the same machine and the server then becomes one of the machines that is monitored.

Can I modify the pre-installed dashboards?

In order to ensure CAMIO dashboards are functioning correctly, Chyron needs some basic information to be sent from the pre-installed dashboards, alerts and notifications, so they must not be changed.

Additional dashboards, alerts and notifications can be added as you see fit.

What elements of CAMIO are not included in the monitoring?

See Appendix A for what is monitored

What's the roadmap for the products?

This is not set in stone, but the goals of CAMIO monitoring are:

- Cover all aspects of the CAMIO ecosystem - include CAMIO apps, potentially PRIME, AXIS etc as they relate to CAMIO
- Proactively warn of issues - at the moment, services are only monitored for being not running. Extending that to *not responding* (but still appearing to be running) will allow potential issues to be addressed sooner.

What happens if the Monitoring server loses contact with a client data collector?

Monitoring clients collect local metrics and publish them for the server to collect. They only have the state at a given time, they don't keep any history.

If the server doesn't have access to client(s) to collect the metrics, then the metrics are not collected and there's no way to get them later.

This disconnection between the server and client(s) should trigger an alert that the machine is not reachable.

Can Chyron setup dashboards, alerts and notifications for me?

A default dashboard is included in the install which meets the goal of answering the question - *Are all of my CAMIOs running correctly?*

Grafana is very well documented and highly configurable. [The documentation can be found here](#) and has an AI helper whom you can ask questions of. We advise experimenting with additional dashboards and notification types to suit your organisations needs. We do still want to hear what problems you're solving with Grafana and will consider building-in common requirements into future versions.

Will the dashboards data collection slow down the machines I install it on?

Answer needed - how does this sound

What version of CAMIO do I need to be running to install the CAMIO dashboards?

CAMIO dashboards will work with any version of CAMIO 4 or 5. Some features e.g. the Amber status of services will only be available from CAMIO 5.6 onwards.

Will CAMIO charge for the dashboards after the POC?

No. CAMIO dashboards are there to make your life easier and reduce the admin overhead of managing the CAMIO ecosystem. As such we've come up with a simple yet extensible solution that we encourage you to adapt to your own needs over time.

Appendix A: List of monitored items

Insert from spreadsheet...

Item	Type	Product	Supported in CAMIO Monitoring Version
			1.0
Asset Management Service	Windows Service	CAMIO	RAG
Axis interface service	Windows Service	CAMIO	RAG
Cluster	Windows Service	CAMIO	---
Data Engine	Windows Service	CAMIO	RAG
Disaster Recovery Client	Windows App	CAMIO	RAG
Disaster Recovery Service	Windows Service	CAMIO	RAG
Endpoint	Windows Service	CAMIO	R-G
External Render Service	Windows Service	CAMIO	RAG
File Distribution Service	Windows Service	CAMIO	RAG
File ingest Management Service	Windows Service	CAMIO	RAG
Job Scheduling Service	Windows Service	CAMIO	RAG
Licensing Service	Windows Service	CAMIO	RAG
Media Engine	Windows Service	CAMIO	R-G
MOS Management Service	Windows Service	CAMIO	RAG
Replication Service	Windows Service	CAMIO	RAG
Website backend service	Windows Service	CAMIO	RAG
FileSync Client	Windows App	FileSync	R-G

FileSync Server	Windows Service	FileSync	R-G
ISQ Service	Windows App	ISQ	R-G
ISQ Viewer	Windows App	ISQ	R-G
Monitoring Service		CAMIO	

