Kiuwan On-Premises System Administration Guide

This is a guide for system administration (sysadmin) with Kiuwan On-Premises.

Contents:

KOP Administrators

There are two types of **KOP administrators:**

- **sysadmin**
  - access to KOP *sysconsole*, with functionalities related to monitoring and tuning KOP execution
- **kiuwanadmin**
  - access to Kiuwan functional administration modules such as Users, Applications and Model Management (see Admin Guide)

This System Administration Guide is addressed to the sysadmin user.

Please refer to Kiuwan Admin Guide for the Kiuwan functional administration guide.

SysAdmin Console

> **SysAdmin Console**
>
> The system administration user (**sysadmin**) has access to the **SysAdmin Console :**
>
> **http://<$KIUWAN_HOST>:<$KIUWAN_PORT>/saas**
>
> Please note that the SysAdmin console uses the same URL that KOP URL, just login in as sysadmin and SysAdmin Console will appear.

Sysadmin console provides access to following functionalities:

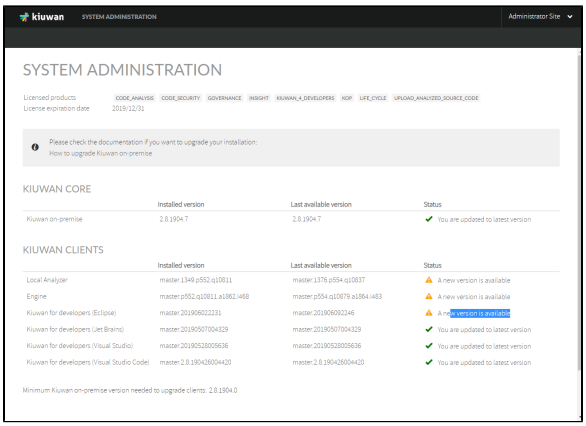
- System Administration page
- Account Management
- Analysis Administration
- Insights Administration
- Support

System Administration page is the default page when you log in to SysAdmin Console.

All the other options are available through the drop-down menu.

System Administration

Once you log into SysAdmin Console, the **System Administration** page is displayed

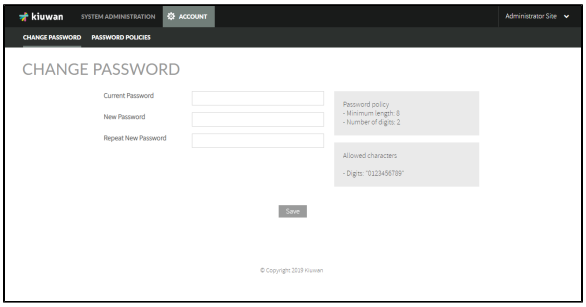


System Administration page display the following contents:

- **Licensed products**
  - A list with licensed products for your KOP installation
- **License expiration date**
  - The expiration date for your KOP license
- **Kiuwan Core**
  - Installed version and Last available version for **Kiuwan Core**
  - In case your installed KOP version is not the last available, you may decide to upgrade.
  - For instructions on upgrade your KOP installation, please visit Upgrading your KOP installation
- **Kiuwan Clients**
  - Installed version and Last available version for each of **Kiuwan Clients** (Kiuwan Local Analyzer, Kiuwan Engines and Kiuwan 4 Developers for supported IDE's)
  - In case of any installed KOP client is not the last available, you may decide to upgrade.
  - For instructions on upgrade your KOP installation, please visit Upgrading your KOP installation
  - **Minimum KOP version needed to upgrade clients**
    - There are some dependencies between Kiuwan Clients and Core.
    - This field indicates the minimum KOP Core version needed to be installed in order to upgrade the KOP Clients.
    - If your KOP current version is older than the minimum required, you need to upgrade Kiuwan Core.

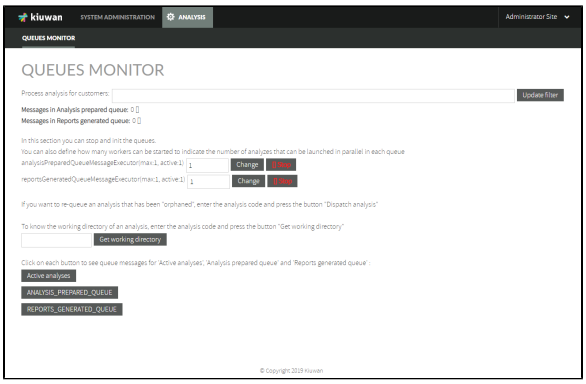
Account Management

The **Account Management** page lets you **change the password for the sysadmin user**.



Analysis Management

The **Analysis Management** page lets you access the **Queues Monitor**



A complete Kiuwan analysis involves two-phases:

- 1st Phase - Local Analysis
  - KLA analyzes source files and upload reports to Kiuwan
- 2nd Phase - Cloud Metrics Calculation
  - Indicators and metrics are calculated in the cloud based on uploaded analysis reports

KOP uses an in-memory message queue to process those reports. This message-based queue ("**Reports generated queue**") allows to process (and manage) analyses in an orderly fashion

Messages in this queue are processed by a JVM (executing WildFly and KOP application).

By default, the queue is attended by one thread in the KOP JVM.

This means that, **by default, analyses are sequentially processed.**

States of an analysis

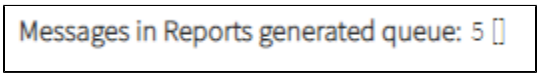
Once the local analysis finishes, KLA uploads reports to KOP and identifies the analysis by an Analysis Code (e.g. A-7e2-1669fcae0cf).

Then, the analysis could be in either of two possible states:

Analysis State	Meaning
STATIC_ANALYSIS_FINISHED	(1) The local static analysis is finished and results are **waiting to be processed** (to calculate indicators)
PARSING_REPORTS	(2) The analysis reports are **currently being processed (in progress)**

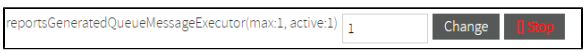
Messages in the queue

Queue monitor displays the number of messages in the Reports Generated Queue.



This means the number of analyses waiting to be processed.

If this number is constantly greater than 0, that means that there's a bottleneck and you (as sysadmin) should increase the throughput to avoid waiting states.



As said above, by default the KOP JVM listens to the message queue with 1 thread. You can configure the max number of threads by introducing an upper value and click on the **Change** button.

Also, you can stop processing by clicking on the **Stop** button.

Active Analyses

Click **Active Analyses** and the queue monitor will display ALL the active analyses, regardless of their state (STATIC_ANALYSIS_FINISHED and PARSING_REPORTS).

REPORTS_GENERATED_QUEUE

Click **REPORTS_GENERATED_QUEUE**, the queue monitor will display only the analyses waiting to be processed (i,e STATIC_ANALYSIS_FINISHED).

Dispatch selected Analysis

As said before, messages queues are maintained in memory (in Redis). But, message sates are also maintained in ddbb (MySQL).

Sometimes, Redis and MySql might get unsynced. This is not frequent, but after some JVM crashes (for whatever reason) you could get this situation.

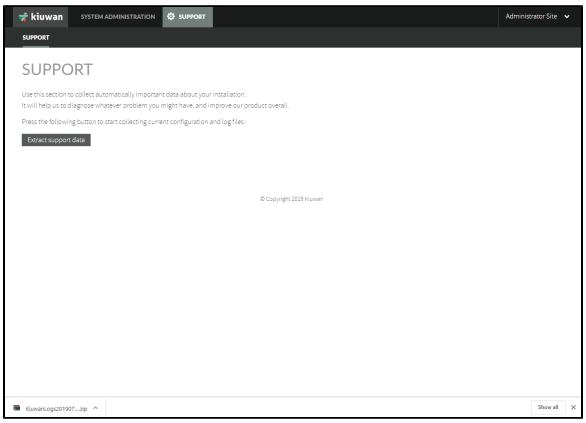
The most frequent unsyncing situation might be that an analysis is in PARSING_REPORTS state (in MySql) but it's not currently being processed (you will see that is not "red" in Active Analyses table.

This would mean that analysis is "orphaned".

In this case, the analysis needs to be manually enqueued. To do it, just check the analysis and click **Disp atch selected analysis**. This action will re-enqueue the analysis.

Support

The support page allows collecting the most important log files of KOP installation for troubleshooting purposes.



Click **Extract support data** to obtain a zip file with the most relevant log files.