

## FAQ's

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Lumada Manufacturing Insights V 2.5.0

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# Chapter 1: Backup/Restore for Backend for Database

The steps to take backup databases are as follows:

1. Stop mi\_kong service (refer Lumada Manufacturing Insights Production Analytics Operation Guide for the command).
2. Stop mi\_keycloak service (refer Lumada Manufacturing Insights Production Analytics Operation Guide for the command).
3. Stop MI Frontend services/processes (Refer FAQ document for the command).
4. Stop MI Backend services/processes (Refer FAQ document for the command).
5. Login to MI Backend instance and execute following commands to take backup of databases:
  - `sudo su -`
  - `cd /opt`
  - `pg_dump --file "/opt/mi_datasource_bkp.sql" --host "127.0.0.1" --port "5432" --username "midataapp" --verbose --format=p --encoding "UTF8" "mi_datasource"`  
The above command will take backup of "mi\_datasource" DB in /opt/mi\_datasource\_bkp.sql file.
  - `pg_dump --file "/opt/mi_superset_bkp.sql" --host "127.0.0.1" --port "5432" --username "midataapp" --verbose --format=p --encoding "UTF8" "mi_superset"`  
The above command will take backup of "mi\_superset" DB in /opt/mi\_superset\_bkp.sql file.
6. Login to MI Backend instance as postgres user and execute following commands to take backup of databases:
  - `pg_dump -U postgres -Fc kong -f absolute-path-of-output-backupresult-files-for-kong`
  - `pg_dump -U postgres -Fc keycloak -f absolute-path-of-output-backupresult-files-for-keycloak`
7. Start MI Backend services (Refer FAQ document for the command).
8. Start MI Frontend services (Refer FAQ document for the command).
9. Start mi\_keycloak service (refer Lumada Manufacturing Insights Production Analytics Operation Guide for the command).
10. Start mi\_kong service (refer Lumada Manufacturing Insights Production Analytics Operation Guide for the command).

The steps to restore databases are as follows:

1. Stop mi\_kong service (refer Lumada Manufacturing Insights Production Analytics Operation Guide for the command).
2. Stop mi\_keycloak service (refer Lumada Manufacturing Insights Production Analytics Operation Guide for the command).
3. Stop MI Frontend services/processes (Refer FAQ document for the command).
4. Stop MI Backend services/processes (Refer FAQ document for the command).
5. Login to MI Backend instance and execute following commands:
  - sudo su -
  - sudo -u postgres psql
  - drop database mi\_datasource; Note: This will drop existing mi\_datasource database.
  - create database mi\_datasource;
  - grant all privileges on database mi\_datasource to midataapp;
  - drop database mi\_superset; Note: This will drop existing mi\_superset database
  - create database mi\_superset;
  - grant all privileges on database mi\_superset to midataapp;
  - \q
  - psql -h 127.0.0.1 -U midataapp -p 5432 mi\_datasource
  - \i /opt/mi\_datasource\_bkp.sql
  - \q
  - psql -h 127.0.0.1 -U midataapp -p 5432 mi\_superset
  - \i /opt/mi\_superset\_bkp.sql
  - \q
6. Login to MI Backend instance as postgres user and execute following commands:
7. Start MI Backend services (refer Chapter 1: FAQ Document for the command).
8. Start MI Frontend services (refer Chapter 1: FAQ Document for the command).
9. Start mi\_keycloak service (refer Lumada Manufacturing Insights Production Analytics Operation Guide for the command).
10. Start mi\_kong service (refer Lumada Manufacturing Insights Production Analytics Operation Guide for the command).
11. To verify, access MI Admin UI and Dashboard and validate the data is reflected as per backup.

## Chapter 2: Additional FAQ's

MI Instance	Purpose	Action to be performed
<b>MI Backend</b>	Command to set Timezone to UTC	timedatectl set-timezone UTC
	Command to set Language to en_US.UTF-8	<ul style="list-style-type: none"> <li>▪ localectl set-locale LANG=en_US.UTF-8</li> <li>▪ Re-login to instance</li> </ul>
	Disable MI Backend as System service	systemctl disable mi-backend.service systemctl disable mi-backend-only-PA.service
	Enable MI Backend as System service	systemctl enable /opt/mi-backend.service systemctl enable /opt/mi-backend-only-PA.service
	Stop MI Backend services/processes	/opt/stop-mi-backend.sh /opt/stop-mi-backend-only-PA.sh
	Start MI Backend services	service mi-backend start service mi-backend-only-PA start
	Reboot MI Backend Instance	<ul style="list-style-type: none"> <li>▪ /opt/stop-mi-backend.sh</li> <li>▪ reboot</li> <li>▪ /opt/stop-mi-backend-only-PA.sh</li> <li>▪ reboot</li> </ul>
	Check time taken to start MI Backend services as System service	systemd-analyze blame   grep mi-backend.service systemd-analyze blame   grep mi-backend-only-PA.service

	Log location of mi-data-app (Spring boot REST Application)	<p>/opt/mi-data-app/logs</p> <ul style="list-style-type: none"> <li>To change the log level of mi-data-app, edit /opt/mi-data-app/config/log4j2.xml file</li> <li>Stop MI Backend processes by executing: /opt/stop-mi-backend.sh</li> <li>Start MI Backend service: service mi-backend start</li> </ul>
	PostgreSQL configuration for handling higher volume of Data	<p>Edit <b>/var/lib/pgsql/10/data/postgresql.conf</b> and update following properties to increase Workers and memory used by PostgreSQL for better performance:</p> <ul style="list-style-type: none"> <li>work_mem = 2GB</li> <li>max_worker_processes = 8</li> <li>max_parallel_workers_per_gather = 2</li> <li>max_parallel_workers = 8</li> </ul> <p>After updating above properties restart PostgreSQL by executing following command:</p> <ul style="list-style-type: none"> <li>service postgresql-10 restart</li> </ul>
	<p>PostgreSQL commands to re-apply indexes on tables of mi_datasource and free-up the unwanted space acquired by PostgreSQL</p> <p>These commands are applied when slowness in Query is observed due to indexes are not applied/corrupted.</p>	<p>To re-create indexes in mi_datasource DB of PostgreSQL, execute following command by connecting to mi_datasource DB:</p> <ul style="list-style-type: none"> <li>REINDEX DATABASE mi_datasource;</li> </ul> <p>To free up the space acquired by PostgreSQL, execute following command by connecting to mi_datasource DB:</p> <ul style="list-style-type: none"> <li>VACUUM(FULL, ANALYZE);</li> </ul>
MI Frontend	Disable MI Frontend as System service	systemctl disable mi-ui.service
	Enable MI Frontend as System service	systemctl enable /opt/mi-ui.service
	Stop MI Frontend services	service mi-ui stop

Start MI Frontend services	service mi-ui start
Stop MI Frontend processes i.e. Admin UI and Superset	/opt/stop-mi-ui.sh
Check time taken to start MI Frontend services as System service	systemd-analyze blame   grep mi-ui.service
Increase number of Guicorn workers to scale-up Superset	Set SUPERSET_WORKERS property in /opt/superset/hitfe-master/superset/config.py_template  Recommended value: $(2 * CPU) + 1$  Reference: <a href="https://medium.com/building-the-system/gunicorn-3-means-of-concurrency-efbb547674b7">https://medium.com/building-the-system/gunicorn-3-means-of-concurrency-efbb547674b7</a>



**Note:** Instance configured should have correct system time as per it's timezone. Command to check timezone of Instance: **timedatectl | grep Time**. Command to set Time of instance: **timedatectl set-time {ACTUAL\_CURRENT\_TIME}**. For more command please refer: <https://www.tecmint.com/set-time-timezone-and-synchronize-time-using-timedatectl-command/>



**Note:**

**Best Visualization settings**

MI (both Dashboard and Admin UI) works best with Chrome with 100% browser's Zoom setting and recommended Desktop display settings are as given below:

**Scale and layout**

Change the size of text, apps, and other items

100%

[Advanced scaling settings](#)

Resolution

1920 × 1080 (Recommended)

Orientation

Landscape

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