fuse
Management Central

Fuse Management Central

Installation and Administration Guide

Version 1.2

VILT

Contents

16.2.4)

Fuse Management Central 1.2

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Disclaimer

1. Introduction

This guide walks you through the installation and administration of Fuse Management Central 1.2.

Fuse Management Central is an application management platform that simplifies OpenText ™ Content Server® management and accelerates its administration learning curve. The Fuse Management Central web administration console enables centralized management of OpenText ™ Content Server® instances as well as its component monitoring.

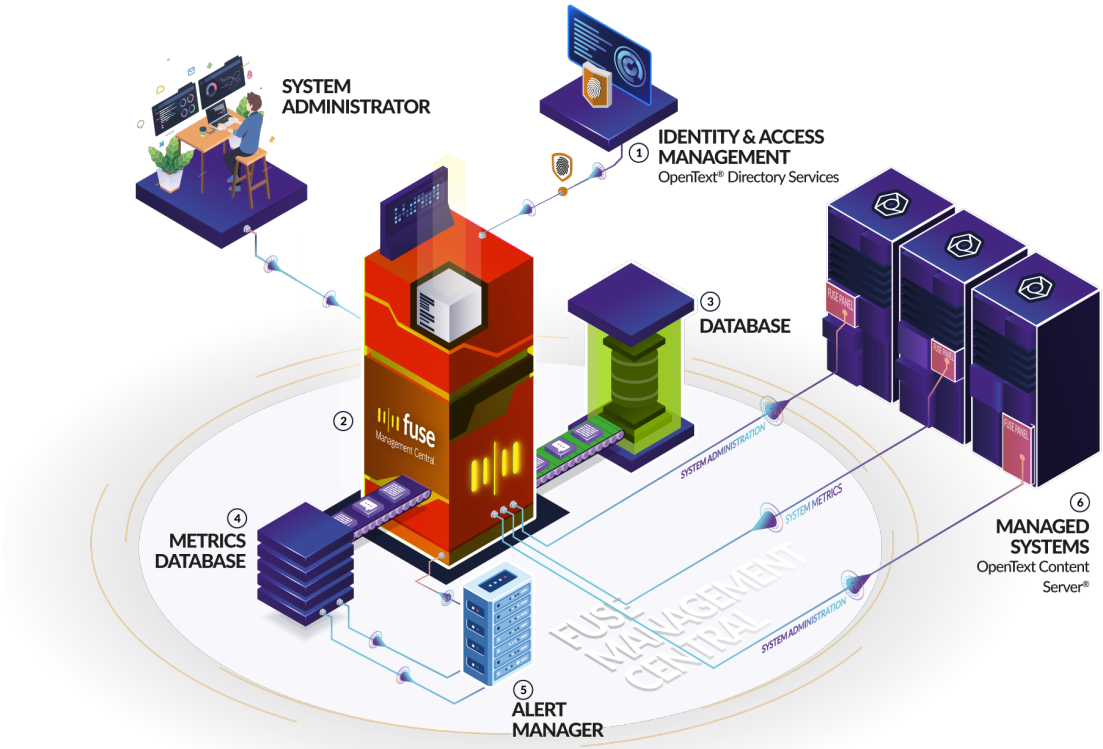
Fuse Management Central also separates system administration from content administration, introducing a new layer of security on top of the traditional OpenText ™ Content Server® administration tools.

1.1. Document Revision History

Revision Number	Modification Date	Section Modified	Modifications
1.0	2020-11-04	All	Initial version

2. Overview of Fuse Management Central Architecture

The diagram below display and briefly describes Fuse Management Central conceptual architecture, designed for high performance, scalability and security.



① Fuse Management Central integrate with OpenText ™ Directory Services to manage and authenticate its users.
OpenText ™ Directory Services provides a scalable identity management solution, by integrating multiple authentication services, such as Active Directory or Google.

② Fuse Management Central is the secret sauce central piece, responsible for orchestrating all system monitoring and management activities, regardless of its cluster type, whether productive or non-productive.

③ Fuse Management Central Database stores all application related data, such as administration settings, access roles.

④ Fuse Management Central Metrics Database is used for long term metric storage, allowing system administrators to perform a temporal search on system metrics, combining them on aggregated system metric snapshots over time.

⑤ Fuse Management Central Alert Manager takes care of interpreting, deduplicating, grouping, and routing alerts to Fuse Management Central while allowing the option of silencing and inhibition of alerts.

⑥ All managed systems require Fuse Management Client installed and activated. Fuse

Management Client is responsible not only for collecting and dispatching all system components metric data but also to make the system management interface available while ensuring the data interchange security.

3. Install Fuse Management Central

3.1. Pre-Installation Tasks

- ✅ Review Operating System Support
- ✅ Review Hardware Requirements
- ✅ Review Communication Ports Availability

> ! Please refer to the **Release Notes** document for a complete listing of supported systems and compatibility prior starting Fuse Management Central installation process.

3.1.1. Install Java

Before you start the Fuse Management Central installation, please check whether a supported JDK is already installed.

Please validate your current JDK version:

- *Option 1:* On Windows go to **Control Panel > Programs and Features** to see what JDK version is installed.
- *Option 2:* Check if JDK is already installed, opening a command line and typing the following command:

```
java -version
```

1. Check Fuse Management Central **Release Notes** document to find out which JDK versions are supported for your Fuse Management Central version.
2. If no JDK is installed or the installed version is not supported:
    - Download and install Java with the default option selected and make sure it is available in your `path`

> 💡 Free long term support (LTS) versions of JDK are provided by AdoptOpenJDK and Oracle. We recommend you install a long term support version to use with Fuse Management Central.

3.1.2. Install NTP (recommended)

To avoid inconsistent metric data, and as a general good practice rule, it is highly advisable to keep the servers clocks synchronized.

For this purpose, installing Network Time Protocol (NTP) is strongly recommended in the Fuse Management Central server and all your configured Systems as well.

NTP helps ensure a consistent time of day across all of the service nodes in the cloud. If you enable NTP in a network, configure the service nodes to obtain their time over the network.

3.1.3. Enabling SSL Security

Optionally, for enabling enabling SSL security on Fuse Management Central, please refer to the Configure SSL section in the Spring Boot Reference Documentation.

3.2. Installation on Microsoft Windows

To run Fuse Management Central installer on Windows:

1. Log on to Windows as a user who is a member of the **Local Administrators** group.
2. **Start Fuse Management Central installation** wizard, by double-clicking the installation file (`/Fuse Management Central/Windows/Fuse Management Central 1.2-Winx64.exe`).
3. In the **Choose Components** dialog box, leave the default values selected and click **Next**.
4. In the **Choose Install Location** dialog box, accept the default **Destination Folder** or click Browse to select a different folder, and then click **Next**.
5. In the **Choose Data Location** dialog box, accept the default **Data Directory** folder or click Browse to select a different folder, and then click **Next**.

To ensure business continuity, the **Data Directory** path should have a backup policy applied, enabling data recovery in the event of a disaster.

6. In the **Choose Start Menu Folder** dialog box, click **Install**.
7. When the installation process is complete, click **Close**.
8. Open Windows Services console and start **Fuse Management Central** service, once started all dependency services will start automatically.
   The following windows services must be running:
   - **Fuse Management Central**
   - **Fuse Management Central (Alert Manager)**
   - **Fuse Management Central (Database)**
   - **Fuse Management Central (Metrics Database)**

3.3. Upgrade on Microsoft Windows

If you have a previous version of Fuse Management Central installed follow the following procedure:

1. Backup your license file and Fuse Data Directory.
   a. You license should be installed in folder `<fuse_installation_folder>/license` (e.g. `C:\Program Files (x86)\Fuse Management Central\license`).

b. Fuse Data Directory is setup accordingly to the installation instructions on chapter Installation on Microsoft Windows

2. Uninstall Fuse Management Central following the instructions in the chapter Uninstall Fuse Management Central.
3. Install Fuse Management Central following the chapter Uninstall Fuse Management Central configuring the same data directory used previously when prompted.
4. Restore your license file after the installation is completed and before starting the services.

3.4. Docker Deployment

3.4.1. Install Docker

Before proceeding, please make sure you have installed the latest version of Docker and Docker Compose, as defined in the official documentation:

- Docker: https://docs.docker.com/install/
- Docker Compose: https://docs.docker.com/compose/install/

> ! Please refer to the **Release Notes** for the required minimum versions.

3.4.2. Run with Docker Compose

1. Load the docker image with:

```
docker load < fuse-docker-image.tar
```

This will create an image with the tag `vilt-group/fuse-server`

2. In the same directory as the `docker-compose.yml` provided, start all the services with:

```
docker-compose up
```

After start up open Fuse Management Central login page in your browser: http://localhost:2100

> ! Make sure that port `2100` is available in your system. Otherwise change the exposed port in the `docker-compose.yml`file to one available.

3.4.3. Advanced Configuration

Data Persistence

Data is persisted in volumes, however backups are recommended for all the volumes. For backup recommendations please refer to Docker official documentation.

```
volumes:
  postgresql:
  prometheus:
  alertmanager:
```

Alternatively you can also map the data directories to filesystem mount points. Please follow the official documentation for the third-party containers.

JVM Options

To configure advanced JVM options in Fuse service use the `JAVA_TOOL_OPTIONS` environment variable:

```
    environment:
      - JAVA_TOOL_OPTIONS=
```

Third-Party Components

For more information regarding third-party configurations, please refer to the official third-party images documentation:

- Postgres
- Prometheus
- AlertManager

For information on running the docker image with kubernetes, please contact us by email product.support@vilt-group.com.

3.5. Validate Fuse Management Central Installation

To confirm if Fuse Management Central was successfully installed, open Fuse Management Central Administration page by using one of the following methods:

1. On Windows, click **Start**, point to **Programs**, point to the program folder name that was entered on the installation process (*default: **Fuse Management Central***), *and then click the *Fuse Management Central Administration* shortcut.
2. Open the following URL:

```
http://<fuse-management-central-host>:2100/#/admin
```

3. Login with your authentication credentials:
    - **Username**: `fuseadmin` *(default)*
    - **Password**: `fuseadmin` *(default)*
4. On Fuse Management Central Administration area, click **Status**

If all Fuse Management Central components are green and healthy, Fuse Management Central was **successfully installed**!

3.6. Next Steps

Once Fuse Management Central is installed is **mandatory to perform a set of initial configurations, required for Fuse Management Central to properly operate** and for security reasons.

Post-installation checklist:

- ✅ Review the **Security** settings
- ✅ Update **General** settings
- ✅ Rquest and apply a valid **License**

4. Install Fuse Management Client

1. Extract Fuse Management Client ZIP file (`Clients/Fuse Management Client 1.2/fuse-management-client-1.2.zip`)* outside of the OpenText ™ Content Server® installation folder*.
2. Copy all the extracted `fuse-management-client-1.2` folder contents to the `<Content Server home>` directory, overriding the `staging` folder.

> If you are installing Fuse Management Client on a UNIX/Linux system, make sure that you are performing the setup actions with the user who installed OpenText ™ Content Server® and runs the Content Server service.

3. Open **Content Server Administration** page in a Web browser.
4. If prompted, enter the Administrator password, and then click **Log-in**.
5. Install or upgrade Fuse Management Client:
    a. If you already have a previous version of Fuse Management Client:
        i. Select:
            - *(OpenText ™ Content Server 16.2.5 and below)* **Module Administration > Upgrade Modules**
            - *(OpenText ™ Content Server 16.2.6 and above)* **Core System > Module Configuration > Upgrade Modules**

    b. For new installations:
        i. Select:
            - *(OpenText ™ Content Server 16.2.5 and below)* **Module Administration > Install Modules**
            - *(OpenText ™ Content Server 16.2.6 and above)* **Core System > Module Configuration > Install Modules**
6. From the **Installable Modules** list, install/upgrade **Fuse Management Client** module.
7. After the installation of **Fuse Management Client** module is completed, restart **Content Server**.

> For some Content Server versions, specially earlier ones, we found out that the standard soft-restart is not enough to reload all the loaders required for Fuse Management Client, so we suggest you do a second hard-restart to make sure everything was updated. Please check the troubleshooting section.

4.1. (Optional) Install using Opentext System Center Manager

Alternatively If OpenText System Center Manager (OTSCM) is installed in all your systems it can be used to install the Fuse Management Client 1.2 module:

1. Upload Fuse Management Client ZIP file :
    a. Open OTSCM, navigate to **Settings** and on the left menu choose **External Vendor Files**.
    b. On the top right there is a button named **Select external vendor files** that allows to upload a new file.
    c. Upload Fuse Management Client ZIP file (`Clients/Fuse Management Client 1.2/fuse-management-client-1.2.zip`).
2. Create an installation plan for Fuse Management Client:
    a. Navigate to the **Plans** tab and use the button **Add plan** to create a new plan for installing Fuse Management Client.
    b. Add each configured system where fuse-management-client-1.2 is to be installed, and for each one of them configure the required attributes:

Field	Description
Module Vendor	Third Party
Thirt party Module	Previously uploaded Fuse Client ZIP (e.g. *"fuse-management-client-1.2.zip"*)
Instance path	Path to OpenText Content Server installation
Admin username	OpenText Content Server Admin user
Host name	OpenText Content Server hostname
Site name	OpenText Content Server site name (configured in mappings.tbl)

    c. Save the plan.
3. Execute plan:
    a. The plan can be executed by pressing the play button under actions.

5. Fuse Management Central Administration

This chapter explains how to configure Fuse Management Central interactively using its Administration pages, allowing Fuse administrators to adjust all of the application features.

To access **Fuse Management Central Administration** area:

1. **Open** Fuse Management Central:

```
http://<fuse-management-central-host>:2100
```

2. Login with your authentication credentials:
    - **Username**: `fuseadmin` *(default)*
    - **Password**: `fuseadmin` *(default)*
3. Click **Fuse Administration** on the navigation menu

5.1. Security

By default, Fuse Management Central has a built-in administrator user account named `fuseadmin`, which cannot be deleted.

This chapter describes how to change this user account password and email.

5.1.1. Change *fuseadmin* password

For security reasons, is highly recommended to change the `fuseadmin` user default password.

To change `fuseadmin` default password:

1. On Fuse Management Central Administration area, click **Security**
2. Fill the following fields and click **Change Password**:
    - **Current password** *(Default: `fuseadmin`)*
    - **New password**
    - **Confirm password**

5.1.2. Change *fuseadmin* email

To change `fuseadmin` email address:

1. On Fuse Management Central Administration area, click **Security**.
2. Insert or update the email address and click **Submit**.

5.2. General

To allow your systems to communicate with Fuse Management Central, the **API Endpoint** URL must be updated with its FQDN URL.

> To allow systems to dispatch their metrics to Fuse Management Central, the **API Endpoint** URL must be accessible by all managed systems.

To update the **API Endpoint** URL:

1. On Fuse Management Central Administration area, click **General**.
2. Under the **Fuse Management Central URL** section, update the **API Endpoint** URL and click **Activate**:

> Please note that **API Endpoint URL is built-in on your license, changing it will invalidate your current license**.
> Before changing Fuse Endpoint URL please request an updated license providing the new license data.

5.3. License

A license file is required for Fuse Management Central to properly operate. By default, **when installed for the first time, Fuse Management Central has no license file applied**.

Please note that **under the following license scenarios, Fuse Management Central will have limited functionality**:

- **Not Licensed** *(No license file found in the `license` folder)*
- **Invalid License** *(License data mismatch Fuse Management Central API Endpoint)*
- **Trial License Expired** *(The current trial license period has expired)*

Fuse Management Central is currently supporting 2 license types:

Type	Description
Perpetual License for MSPs	Limited to a total of managed systems.
Perpetual License for End Users	Limited to OpenText Content Suite total licensed named users.
Subscription License for MSPs	License issued monthly and limited to a total of managed systems.
Subscription License for End Users	License issued monthly and limited to OpenText Content Suite total licensed named users.
Trial License	For evaluation purposes only, with an expiration date.

While Fuse Management Central is running using a Trial License a notification is permanently available, displaying its expiration date.

5.3.1. Request License

Request a license by providing the following information to your Account Executive or contacting the support team by email: product.support@vilt-group.com

- **Trial Period** *(Trial License Only)*
- **Customer Name**
- **Fuse Management Central URL**
- **Total Systems** *in case you are an MSP*
- **Total OpenText Content Suite total Licensed Named Users** *in case you are an end user*

Please be aware that when a license is issued all the above data will be hardcoded in it, meaning that any change on this data requires an updated license.

5.3.2. Apply License

To apply your license, please execute the following steps:

1. Copy the provided license file to folder `<fuse_installation_folder>/license` (e.g. `C:\Program Files (x86)\Fuse Management Central\license`).
2. **Restart** Fuse Management Central windows service or process.
3. Validate on **License Information** if the license was updated successfully, if not please review this procedure.

If you are using Fuse Management Central Docker image, please mount the license file directly to `/opt/fuse/license/key.license`

5.3.3. Validate License Status

To validate your license status:

1. On Fuse Management Central Administration area, click **License**.
2. Validate if your **License Information** data is correct and if Fuse Management Central license status is valid.

When Fuse Management Central is running using an invalid license (trial expired, Fuse Management Central URL mismatch, …), will cause all managed systems to automatically deactivate, limiting Fuse Management Central functionality.

5.4. OTDS Integration

Fuse Management Central has a built-in administrator user account (`fuseadmin`), which cannot be deleted.
In order to allow other users to access Fuse Management Central it must be integrated with OpenText ™ Directory Services (OTDS).

Fuse Management Central has a native OTDS integration, leveraging its authentication capabilities while allowing a centralized user management.

5.4.1. Create OTDS Resource

For Fuse Management Central to integrate with OTDS, a resource is required to be created on OTDS.

To create the OTDS resource:

1. Open OTDS Administration (e.g. `http(s)://otds.company.com:8080/otds-admin`)
2. From the web administration menu, click **Resources**.
3. On the button bar, click **Add**. The New Resource wizard will guide you through the steps to create a new resource.
4. On the **General** page:
    a. In the **Resource Name** box, type a descriptive name for this resource (e.g. *Fuse Management Central*).

    Please note that the name you type here cannot be edited later.

    b. *(Optional)* In the **Display Name** box, you can optionally type a different resource name.
    c. *(Optional)* In the **Description** box, you can optionally type a short resource description.
    d. Leave all other options with default values and click **Next**.
5. On the **Synchronization** page, make sure that **User and group synchronization** option is not checked, and click **Next**.
6. On the **Principal Attribute** page, leave all options with default values and click **Save**.
7. In the **Resource Activation** window, copy or write down the resource identifier.

Add users and/or groups to the created Resource

Once the OTDS Resource for Fuse Management Central is created, OTDS will automatically create an Access Role named "Access to <*ResourceName*>". Users and/or groups who will be able to login to Fuse Management Central must be added to this Access Role.

For more detailed information regarding OTDS functionality, please refer to OpenText ™ Directory Services documentation.

5.4.2. Activate OTDS Resource

To activate Fuse Management Central with OTDS:

1. On Fuse Management Central Administration area, click **OTDS Integration**
2. Fill the following fields and click **Activate**:
    - **OTDS URL**: *The FQDN address of the OTDS Server (e.g. `http(s)://otds.company.com:8080`)*
    - **OTDS Resource ID**: *The ID of the resource that has been created in OTDS*

Once activated, the OTDS resource activation status will only be displayed when authenticating in Fuse Management Central using an OTDS account with administrative privileges (e.g. `otadmin@otds.admin`).

5.4.3. Configuring Fuse Management Central Access Roles

To manage user privileges a set of access roles are available in Fuse Management Central, each one with specific privilege sets:

Access Role	Privilege Description
Fuse Admin	Permits access Fuse Administration area, allowing full control over Fuse Management Central. In addition to these privileges this role also has all privileges of **System Admin** role.
System Admin	Can manage all systems, allowing to perform actions on them e.g. Restart, Apply Configurations, etc…
Guest	Limited privileges role, for users with "read-only" access, meaning that no management actions can be performed allowing only to observe monitoring metrics.

To allow users to authenticate in Fuse Management Central using OTDS, these access roles **must be mapped with one or more OTDS groups** from both synchronized or non-synchronized partitions, depending on your OTDS partition scenarios.

To map an OTDS group with a Fuse Management Central access role:

1. Login using to Fuse Management Central using the `otadmin@otds.admin` OTDS user account.
2. On Fuse Management Central Administration area, click **OTDS Integration**.
3. **Map** each role by selecting or inserting one or more OTDS groups to each role field.
4. click **Save roles**.

> **!** Please note that **all OTDS groups mapped with Fuse Management Central access roles must be added to Fuse Management Central OTDS Access Role**.
> This access role is automatically created when the Fuse Management Central resource is created in OTDS.

5.5. Notification Channels

Notification channels allow Fuse Management Central to integrate with SMTP and/or 3rd Party incident management or alert systems, to easily notify teams about OpenText performance or health issues.

5.5.1. SMTP

To enable email notifications for Fuse Management Central alerts, operations, etc… you must first configure the SMTP Settings.

1. On Fuse Management Central Administration area, click **Notification Channels**
2. On the **SMTP Settings** panel, fill in the following information:
    a. **Sender Email**: *Type the email address that will be used as the "From" address in all email notifications sent by Fuse Management Central*
    b. **SMTP Host**: *The FQDN hostname of the SMTP server to which Fuse Management Central will connect in order to send email.*
    c. **SMTP Port**: *The port number used by the SMTP server.*
    d. *(Optional)* **SMTP Username**: *If your SMTP server requires it, type the user name to be used in the connection to the SMTP server.*
    e. *(Optional)* **SMTP Password**: *If your SMTP server requires it, type the type the password for the user name you typed in the previous step.*
3. Click **Send test email** and validate if you have received a test email notification.

> **!** The test email notification will be sent to the email defined on your user account. If you are authenticated with the `fuseadmin` user account, this user account email must be properly set.

4. Click **Update** to save your STMP configurations.

5.6. Alert Manager

Fuse Management Central uses an Alert Manager to automatically detect system anomalies and consequently triggering real-time alerts. These alerts are used to report on warning or error situations, such as performance degradations, failing agent schedule, lack of resources, among others…

5.6.1. Notification Channels

The current supported notification channels are:

Channel	Description
User Interface *(Default)*	Notification events are displayed on Fuse Management Central user interface, being displayed on the events list and adjusting the failing component style, providing real-time feedback to users.
SMTP	If the SMTP Settings are properly set, alert notifications will be sent by email to system owners.

To manage an alert notification channel:

1. On Fuse Management Central Administration area, click **Alert Manager**.
    a. **Click** on the ON/OFF toggle button to fully disable the alert for all notification channels.
    b. **Click** on the specific notification channel (e.g. "SMTP") toggle button to disable it from being dispatched to that notification channel.
2. Click **Update** to save your new settings.

5.6.2. Metric Thresholds

Fuse Management Central system monitoring is based on numerous built-in, predefined metric thresholds. These default thresholds are set based on common usage scenarios but can be adjusted to fit your organization requirements.

To change the default metric thresholds:

1. On Fuse Management Central Administration area, click **Alert Manager**.
2. **Adjust** each alert threshold, to fit your requirements.
3. Click **Update** to save your new settings.

6. Uninstall Fuse Management Central

This chapter describes how to remove Fuse Management Central from a host server.
If you are upgrading to a newer version of Fuse Management Central, it may be necessary to uninstall the older version.

6.1. Uninstall on Microsoft Windows

Fuse Management Central uses a Windows Installer to remove components from a Windows platform. The program is designed to remove all program files installed at the time of the Fuse Management Central installation.

> **!** The uninstall process **will not remove any configuration and long term metric data**. This is beneficial because you can retain these data files for use if you upgrade your Fuse Management Central software.
> To force the deletion of all Fuse Management Central data files, please contact product.support@vilt-group.com.

To uninstall Fuse Management Central on Windows:

1. Stop all Fuse Management Central services.
2. Using the Windows application for removing programs (for example, **Programs and Features**), select Fuse Management Central installer and then click **Uninstall**.
3. Use the uninstall wizard automatically to remove all Fuse Management Central installed components.

7. Appendix A - Troubleshooting

7.1. Known Issues and Workarounds

This section describes scenarios that users may run into and how to troubleshoot and workaround or fix them.

7.1.1. Fuse Metrics Database corrupted files

Sometimes some data files in Fuse Metrics Database can get corrupted, preventing the Metrics service to start. We found that this commonly happens in these scenarios:

- Fuse Metrics Database service was not shutdown correctly
- Disk ran out of space

If this happens we suggest to shutdown Fuse Management Central (all services) and then restart Fuse Management Central (all services).

At this point some errors may appear when restarting Fuse Metrics Database, in case there are corrupted data files. If an error appears when starting Fuse Metrics Database, please check the Fuse Metrics Database logs. Errors like these should be being logged:

```
err="opening storage failed: block dir:
\"data\\\\01E270EBZ1YPKF7BB2WZ38H5SV\": open
data\\01E270EBZ1YPKF7BB2WZ38H5SV\\meta.json: The system cannot find the
file specified."
```

or

```
err="opening storage failed: found unsequential head chunk files 23 and
25"
```

In order to fix this, the folder or file specified in the log message, for example *01E270EBZ1YPKF7BB2WZ38H5SV* or chunk files *23* and *25*, should be deleted. These folders can be found in the Fuse Metrics Database installation folder, inside the **data** or **data/chunks_head** folders.

This process should be repeated for each folder or file that appears on the logs until Fuse Metrics Database is able to start with no errors.

7.1.2. Uninstall Fuse Management Client for OpenText Content Server (16.2.2, 16.2.3, 16.2.4)

For the Content Server versions **16.2.2**, **16.2.3** and **16.2.4**, we found out that the standard soft-restart is not enough to reload all the loaders required for Fuse Management Client, so we suggest you to restart the processes/services of Content Server to make sure everything was updated.