


MediaFirst Content Processing

Content Processing v1.0

USER GUIDE

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CHAPTER 1

MFVP products and compatibility

Browser compatibility

The Controller Web UI is compatible with the following **browsers and minimum required versions**:

- IE (v11)
- Chrome (v46)
- Firefox (v41)

MFVP Products

Table 1.

Product	Abbreviations
Encoding On-Demand	MFVP-OD
Encoding Live	MFVP-EL
Stream Processing	MFVP-SP
Packaging	MFVP-P
C2 (Custom)	MFVP-C2
Content Processing	MFVP-CP

MFVP product compatibility

The table below lists **minimum required versions** for the listed features.

Feature	MFVP-EL	MFVP-SP	MFVP-P	MFVP-OD	MFVP C2
Service conf.	from v8.0	from v2.0	from v8.0	from v5.0	from v11.4 (Based on unit UI)
Resource assignment	from v8.0	from v2.0	Pool defined at installation	from v5.0	from v11.4 (Based on unit UI)
Start/Stop service	from v8.0	from v2.0	from v8.0	from v5.0	from v11.4 (Based on unit UI)
Templates	from v8.0	from v3.1		planned v5.2	
Service alarms	from v8.0	from v2.0	from v8.0	planned v5.2	from v11.4
Service stats	from v8.0	from v2.0	from v8.0	from v5.0	
Server usage	from v8.0	from v2.0	from v8.0	from v5.0	from v11.4 (Based on unit UI)
User management	from v8.1	from v3.0	from v8.0	from v5.1	from v11.4
Licensing	from v8.1	from v3.1	from v8.1 (node-locked)	from v5.1	n/a
High availability	Failover v8.1	Active/Active	LoadBalancing	LoadBalancing v5.1	From 11.4 (Based on unit UI)
Backup & restore	from v8.1	from v3.0	from v8.1	from v5.0	n/a
Failover	from v8.1.8	n/a	n/a	n/a	n/a

CHAPTER 2

Quick start

Connect to MediaFirst Video Processing

1. Open a Web browser.
2. Enter the access URL, then press **Enter**.

NOTE Your access is either HTTP or HTTPS depending on your security settings.

http://[ServerIP]:8080

http://[serverIP1] or https://[ServerIP]:8443 if not using the default port.

The **Login** page displays if user authentication is activated and configured.



Username

Password

Login

3. If the **Login** page displays: Enter your **username** and **password**.

NOTE Default admin user log in information:

- **Username: admin**
- **Password: admin**

The **Home** page displays.

MFVP menus and navigation

Menus and navigation

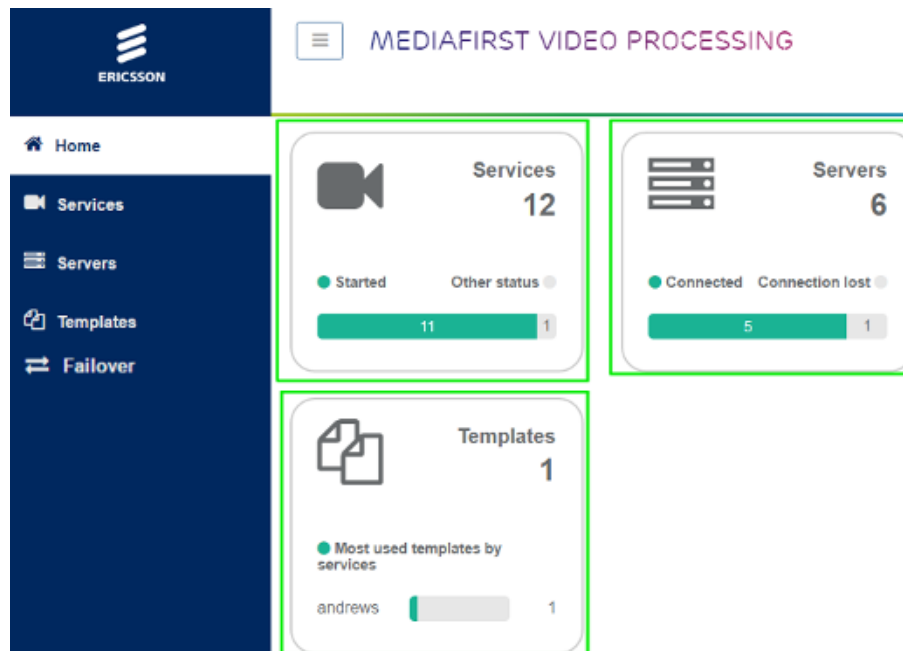
There are multiple navigation options in MediaFirst Video Processing. Some menu options depend on the MFVP products that you have installed.

IMPORTANT Features, menus and options vary based on your solution and the MFVP products installed.

Home page and dashboard overviews

The Home page displays a dashboard with overviews for services, servers and templates.

TIP Click an overview to link to the related page.



Collapse/expand button

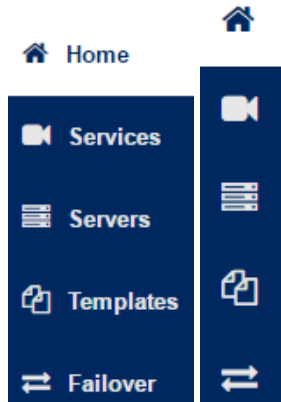
The button collapses or expands the Menu panel to either hide or display menu text.



Menu panel

Access information and configuration options.

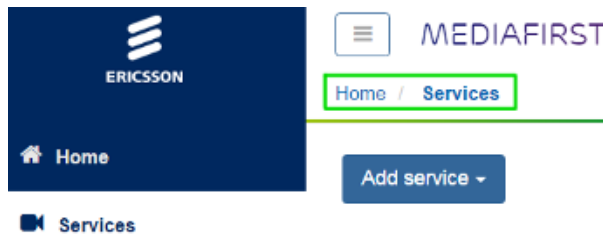
Full / Collapsed



Breadcrumbs

Breadcrumbs are navigational links to previous pages. They display above the viewing screen.

NOTE No breadcrumbs display when viewing the **Home** page.



System center menu

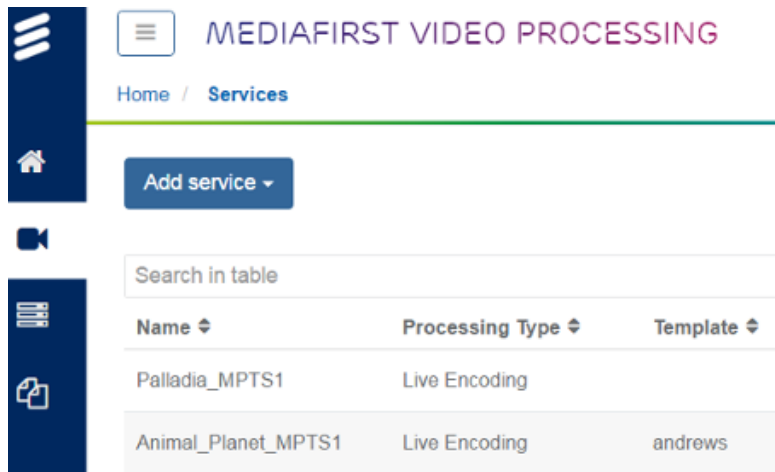
The System Center menu drops down after clicking the in the upper right corner of the screen.



Services and processing types

A service is a set of parameters required for a given processing type. Services require an assigned server to run. A same service can run on 1 or several servers. Services can be manually started and stopped.

NOTE Quickly access services from the **Home** page or the left-side menu panel.



Processing types

Processing type	Required Software
Live Encoding	MFVP Encoding Live
Multiplexing	MFVP Stream Processing
VOD Packaging	MFVP Packaging Recorder
Live Packaging	MFVP Packaging Dynamic
Catalog	MFVP Packaging
Monitored Generic Work Flow (C2)	MFVP C2
OD Encoding	MFVP Encoding On-Demand
Content Processing	Content Processing
Licensing	<p>Dedicated license server running the license manager</p> <p>NOTE The license manager may also be installed on the MFVP Management Controller server.</p>

- NOTE** Services can be created:
- From scratch
 - From an existing service (using a template)

Servers

A **server** is a computing entity able to handle different processing types. Server types have different functions: encoding, packaging, multiplexing and stream processing. The **Servers** view displays system information to monitor and manage servers.

NOTE See [processing types](#) for more information.



System Center for MFVP solution administration

The **System Center** menu provides access to administration features. Administrators can manage users, system backups and restore options, as well as server monitoring.

System Center access rights

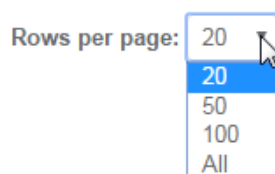
The **System Center** menu includes a number of options for system administration and monitoring.

System Center				
Group	Restore	Backup	User Management	Failover
<i>Admin</i>	Yes	Yes	R+W	Yes
<i>Monitoring</i>	No	Yes	N/A	Yes
<i>Configuration</i>	Yes	Yes	N/A	Yes

Edit the number of rows displayed

Edit the number of rows per page in lists or table displays.

1. Use the left-side **Menu** panel to open a page with a table display.
 - [Services](#)
 - [Servers](#)
2. Scroll to the bottom of the page and edit the number of rows to display per page.



Use the search bar

The **Search** bar displays in pages with table displays. Searches are based on **any element in the table:** text, headers, labels, etc.

1. Use the left-side **Menu** panel to open a page with a table display.

- [Services](#)
- [Servers](#)

2. Enter one or several keywords in the **Search** bar to filter the table.

Search requirements:

- Keyword based
- Case insensitive
- No Wildcards

Name ↕	IP Address ↕	Processing Type
C2_primary	213.246.134.114	Stream Processing (C2)

CHAPTER 3

Managing MFVP Solutions

Manage services

Display services

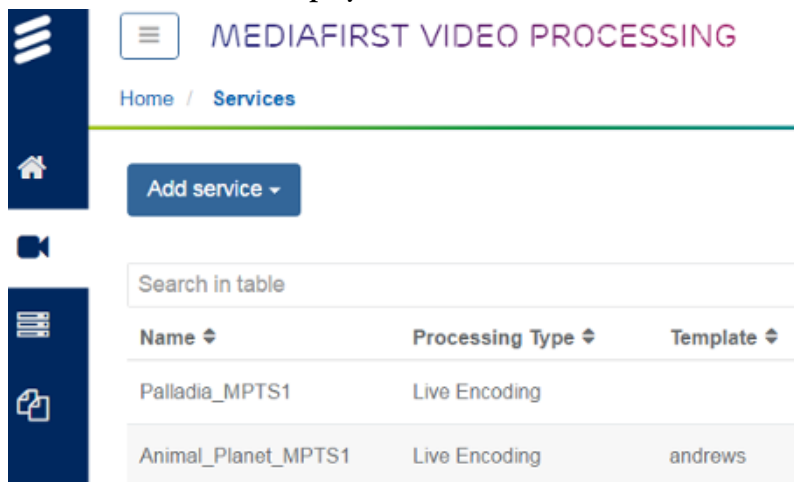
Services are listed in a table. You can edit, delete, add new or import services.

- You are connected to MFVP with the correct access rights.
- At least one service is configured.

1. Click [Services](#) from the left-side menu panel.

TIP The **Services** page is also available from **Home > Services**.

The table of services displays.

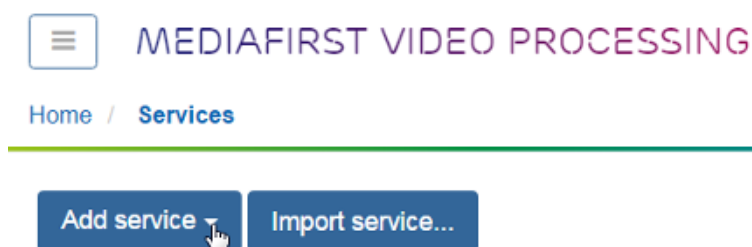


2. Optional: Edit the number of [rows displayed](#) or use the [search bar](#) to filter the display.

Create a service

Service configurations vary per processing type. See specific product user guides for detailed information about service creation.

1. [Display services](#).
2. Click **Add Service**.



3. Select a [processing type](#).

The service parameter options display.

4. **Configure the service parameters.**

IMPORTANT Parameters vary per **processing type**. See specific product User Guide for detailed information about configuring services.

5. **Assign a server** to the service.

6. Use the buttons in the action column to **start** or **stop** the service.

Export a service configuration

Exported service configurations are for importing onto a **different MFVP** system. This is useful for product or production support, or testing (parameters and expected function).

- You are connected to MFVP with the correct access rights.
- At least one service is configured.

IMPORTANT Exports are for importing onto a **different MFVP controller** server. Exports **exclude** the service state (started or stopped). Importing service configurations may require manually starting or stopping services.

1. **Display services.**

2. Click  to export.

A file downloads to the Web browser default location.

IMPORTANT The download date in the file name is in the following format: MM/DD/YYYY

Start a service

Services can be started and stopped manually from the **Services** page.

- You are connected to MFVP with the correct access rights.
- A service exists.


1. **Display services.**

2. Click the field in the **Server** column to assign the service to a server.

3. Click  to launch the service.

The **Status** is **started**.

NOTE If an alarm is raised:

- Click  to display all alarms.
- Alarm colors are based on severity.

Stop a service

1. [Display services.](#)










TIP Use the [rows per page](#) or the [search bar](#) to filter multiple services and to find a specific service.

2. Click  in the **Actions** column to stop the service.

You are prompted to confirm.

3. Click **Yes, Stop it.**

The service stops running and the service status displays **stopped**.

Stats	Alarms 	Servers	Status
		controller1 	stopped
		controller1 	stopped
		controller1 	stopped
		controller1 	stopped

Assign a service to a server

Services require a server to run. Select a server for each service before starting the service

- You are connected to MFVP with the correct access rights.
- A service exists.

NOTE

- Inactive backup servers (in a failover group) cannot be assigned to run a service.
- A primary server (in a failover group) that is in failover, meaning that a backup server has taken over and it is no longer running services, cannot be assigned to run services.

1. [Display services.](#)

2. Click the field in the **Servers** column to display available servers.

3. Select a server to assign.

Deleting a service

Deleting a service consists in removing a service from the list of available services



- You are connected to MFVP with the correct access rights.
- A service exists.

1. [Display services.](#)

2. Click  in the **Actions** column to delete the service.

The service is now removed from the services table and is no more available.

Configure advanced parameters for an existing service

1. [Display services](#).
2. Click  to edit the service.
3. Click  to display options.
4. Enter the parameters and click **Add**.

TIP You can add multiple advanced parameters to the service.

5. When finished, click **Apply**.

Manage servers

Display servers

Servers are listed in a table. You can view server settings and usage statistics per server.

At least one server is installed.

1. Click **Servers** from the left-side **Menu** panel.

TIP The Servers page is also available from **Home > Servers**.


The table of servers displays.

2. Optional: Edit the number of **rows displayed** or use the **search bar** to filter the display.

Display server information (system)


Check server functions and performance to manage server and service allocation, or to view license information. System settings and information display for each server.

You are connected to MFVP with the correct access rights.

1. [Display servers](#).
2. Click  in the **Actions** column to view server information.
Available information displays based on the server type.
3. Click the tabs to display server information.
 - **General**
 - **System Settings**
 - **Statistics**

Display a server IP address

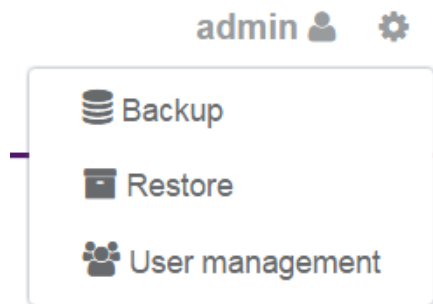
View the server IP address for system administration or to view general server information.

1. [Display servers](#).
2. Click  in the **Actions** column to view server information.
 - **General**
 - **System Settings**
 - **Statistics**

MFVP system administration

System center

Management and administration features for failover, users, backup, and restore are available in the **System Settings** menu (⚙️).



Backup and restore

Backup and restore configurations

Backups include services, server definitions, and locally defined users. Backup your configurations in order to restore a previous configuration: upgrade, rollback, server crash, etc.

- NOTE**
- All access to configurations are blocked while a backup or restore is in progress.
 - Up to 30 Backup files are supported for local backups.
 - The oldest backup is deleted once 30 is reached.

Backup MFVP database configurations

Create a backup of MFVP configurations to save a version locally or on a remote server.

Display backup MFVP database options

Backup the MFVP configuration to a local or remote server. Backups include services, servers, and users. Backups are time-stamped.

You are connected to the Controller with the correct access rights.

1. Click ⚙️ in the upper-right corner of the screen.
The **System Center** menu displays.
2. Select **Backup**.
The **Backup Controller Database** options display.

Create a local backup

Local backups of MFVP settings are still accessible even when no remote access is possible. Backups only include the list of servers, services, and user configurations.

You are connected with the correct access rights.

1. [Display backup options.](#)

The screenshot shows a web interface for backup configuration. At the top, there are two tabs: 'Backup Location' (active) and 'Scheduled Backup'. Below the tabs, there are two radio buttons: 'Local Backup' (selected) and 'Remote Backup (secure FTP)'. Under 'Remote Backup', there are five input fields: 'Host*' with the value 'ftpserver-4backups', 'Port*' with '21', 'Path*' with 'controller', 'Username' with 'ftlogin', and 'Password' with masked characters '.....'. At the bottom of the form is a blue button labeled 'Backup Now' with a document icon.

NOTE The **Host**, **Port** and **Path** are only required for a [remote backup](#).

Local Backup is selected by default.

2. Click **Backup now**.
The backup is stored on the local drive.

Create a remote backup

Create remote backups to restore MFVP settings from a remote server using FTP.

You are connected with the correct access rights.

1. [Display backup options.](#)
2. Select **Remote backup**.
[Required fields](#) are highlighted.
3. Enter the required remote backup settings information.

Backup Location | **Scheduled Backup**

Local Backup

Remote Backup (secure FTP)


Host*

Port*

Path*

Username

Password

Backup Now 

IMPORTANT Editing the backup file storage location impacts scheduled backups.

4. Click **Backup Now**.

Schedule an automatic backup (periodic)

Set a schedule to backup MFVP database on a regular basis: monthly, weekly or daily. Backup guard times may impact backup availability.

You are connected to MFVP with the necessary access rights.

1. Enable the scheduled backup.
2. Select the time setting options to schedule the backup.

NOTE The time stamp is based on the current time on the Controller server.

3. Open the **Backup Location** tab to set the backup file storage settings, if they are not currently configured.
4. Save and exit.

Restore configurations


Restore configurations for recovery or troubleshooting. Local or remote backups must be available in order to restore. Backups are selected based on the backup time stamp.

- IMPORTANT**
- The Database is **inaccessible until the restore completes**.
 - Only one restore can be launched at a time.
 - Alarms and statistical data are not restored because they are dynamic.

Display restore options

You can restore the MFVP database configuration from existing local or remote backups.

You are connected to the MFVP with the correct access rights.

1. Click  in the upper-right corner of the screen.

The **System Center** menu displays.

2. Select **Restore**.

The **Restore Controller Database** page displays.

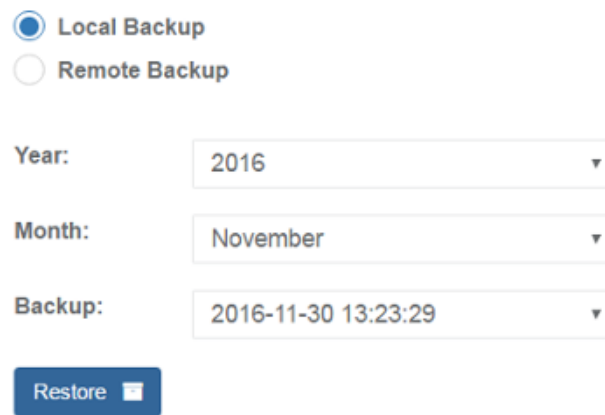
Restore configurations from a remote backup

You are connected to MFVP with the correct access rights.

1. [Display restore options](#).
2. Select **Remote Backup**.
3. Select a **Year > Month > Backup**.

NOTE

- Available backups are **time-stamped**.
- Guard time configurations may impact availability.



The screenshot shows the 'Restore Controller Database' page. At the top, there are two radio buttons: 'Local Backup' (selected) and 'Remote Backup'. Below this, there are three dropdown menus: 'Year' (set to 2016), 'Month' (set to November), and 'Backup' (set to 2016-11-30 13:23:29). At the bottom of the form is a blue 'Restore' button with a small square icon to its right.

4. Click **Restore**.

IMPORTANT The Controller is unavailable to all users until the restore completes.

The backup restores successfully.

Restore configurations from a local backup

You are connected MFVP with the correct access rights.

1. [Display restore options](#).
Local Backup is selected by default.
2. Expand the drop down list of available backups.

NOTE

- Available backups are **time-stamped**.

- Guard time configurations may impact availability.

3. Select a backup to restore.

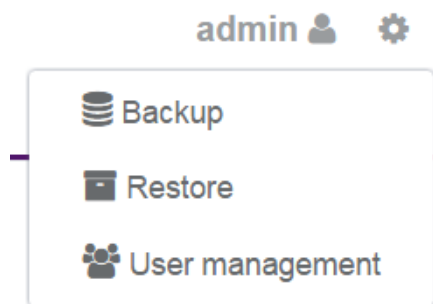
4. Click **Restore**.

All users are temporarily assigned to the **Monitoring user group** until the restore completes or is terminated.

User management

Manage users

Administrators have rights to create users and assign groups. Access to User Management features may be activated or deactivated in the configuration files. Groups reflect different user roles with specific permissions. Permissions authorize access to MFVP applications, menus and features.



User groups

A user group is a set of permissions for using MFVP features. Users are assigned to at least 1 user group. A user can be assigned to multiple groups.

NOTE New users are automatically assigned to the **Monitoring** group.


User group permissions

There are 3 default user groups. Permissions are either Read (R), Write (W), or Read and Write (R/W). Yes means the user group can carry out the action, but may be limited to specific options.

	Admin	Configuration	Monitoring
Services	R/W	R/W	R
Servers	R/W	R/W	R
Templates	R/W	R/W	R
Failover	R/W	R/W	R
System Center	R/W	R	R

	Admin	Configuration	Monitoring
Restore	Yes	Yes	No
Backup	Yes	Yes	Yes
User Management	R+W	N/A	N/A

Display the list of users

1. Click  in the upper right corner of the window.
2. Select **User Management**.
The **User Administration** page displays.
3. Select **Users**.
The **list of users** displays.
TIP Scroll to the end of the list to display the total number of users.

Create a new user for applications

The MFVP Management Controller is a single access point for MFVP products. Administrators manage users, groups and permissions from the system center.

You are connected to MFVP as an Administrator.

1. **Display users**.
2. Select **Add User**.
You are prompted to enter User information.
3. Enter the User information.
 - **Username**
 - **Password**

IMPORTANT

 - An Admin user can edit or create other Admin users and profiles, including passwords and permissions.
 - **Password** is case sensitive.
4. Select a **Save** option.
5. **Assign a user to a group** to manage user access **rights and permissions**.
By default, new users are assigned to the **Monitoring** group.

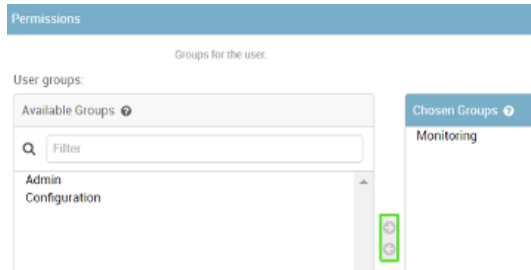
Assign a user to a group

Groups are a set of access rights and permissions. Permissions authorize users to either display or edit configurations. Give a user access rights by assigning the user to a group.

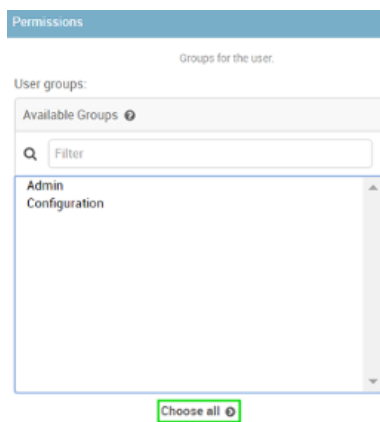
You are connected to MFVP as an Administrator.

1. **Display users**.

2. Click the user in the list to display user information and permissions.
3. Scroll to **Permissions** and use the arrows to add the group to the list of **Chosen groups**.



TIP You can add multiple groups, or click **Choose all** to assign the user to all available groups.



4. Click **Save**.

Link LDAP or Active Directory

The MFVP Management Controller can be linked with an external server (LDAP or ActiveDirectory) to identify and authenticate users. If activated, the authentication page displays before granting access to the Controller **Home** page.

- NOTE**
- The LDAP connection parameters are defined in a dedicated configuration file.
 - If using LDAP, then the MFVP Management Controller neither stores, nor manages user passwords that are managed by the external LDAP server.
 - Users defined on the external server can coexist with locally defined users.

1. See the Installation manual for LDAP configuration procedures.
When users are first installed from the LDAP or ActiveDirectory server they are automatically assigned to the Monitoring group. Administrators can [edit user groups](#) to [manage permissions](#) and access rights.

Edit user information

You are connected to MFVP as an Administrator.

1. [Display users.](#)
2. Select a **User**.
3. Edit the user information:

TIP An Admin user can edit or create other Admin users and profiles, including passwords and permissions.

 - **Username**
 - **Password**
 - **Personal information**
 - [Permissions](#)
4. Select a save option.

Edit a user password

Any user can edit their password, but only users with admin or configuration permissions can edit passwords for other users.

You are connected to MFVP with administrator user rights and permissions.

1. [Display the list of users](#) in the System Center.
2. Click the current Admin user from the list to edit.
3. Click the link as shown in the example below to change the password.

Home > User Management > Users > admin

Change User

Username:
Required. 30 characters or fewer. Letters, numbers and @/./+/-/_ characters

Password: algorithm: pbkdf2_sha256 iterations: 30000 salt: Z6lZOY***** hash: IRxvo7*****
Raw passwords are not stored, so there is no way to see this user's password, but you can change the password using [this form](#)

4. Optional: Edit user profile settings, then **Save**.

Save options for user management

Save Option	Result
Save	the user is added to the list
Save and continue	additional user information displays (groups and permissions)
Save and add another	user is added to the list and the add user page is refreshed to add another new user

Manage alarms

Display alarms

Check alarm details for services or failover groups.

1. Display the list of items that have an alarm.
 - [Services](#)

2. Click the alarm symbol in the **Alarm Status** column.

NOTE The alarm icon is only clickable for service alarms.

The [Alarms](#) page displays. [Alarm information](#) may vary depending on service type.

NOTE All time stamps are in **Universal Time (UTC)**.

Manage licensing

Manage Licensing

MFVP solutions offer flexible licensing models. Each model depends on your solution and installation options. Without license, a service can be configured but can only be processed for a limited period of time.

License servers and installation

The license manager is a micro-service application installed on one or two servers (in a redundancy mode). By default the Controller hosts this application that is identified by a Licensing processing type.

The license manager may also run dedicated servers for very large configurations.

TIP View [licensedetails per feature](#) to display:

- [licenseusage per feature](#)
- [license codes](#)
- [license expiry dates in Universal Time \(UTC\)](#)

Display license details

License information displays per feature and are identified with one code, per feature. Licenses are required for features and options in the MFVP solution and have expiry dates.

You are connected to controller with the appropriate access rights.

-
- IMPORTANT**
- Licenses are managed by a License Manager.
 - The License Manager is a micro-service application installed by default on the Controller server or a dedicated license server.

- There may be more than one license server if your solution is installed in redundancy.

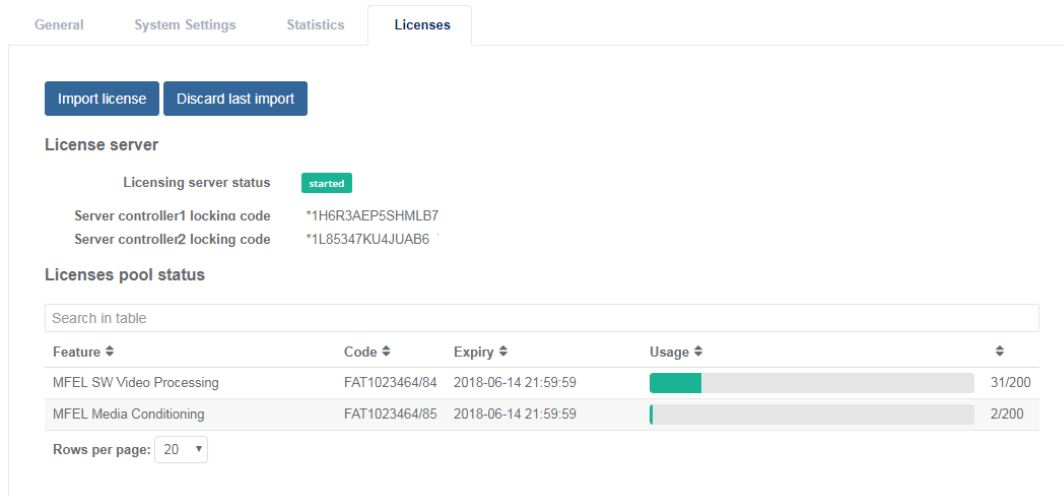
1. **Display servers.**

The servers display.

2. Click for the server with the Licensing **processing type**.

NOTE Controller may display with the Licensing processing type if the licensing manager is installed on the same machine as the Management Controller.

3. Select the **Licenses** tab.



The license information displays.

NOTE All time stamps are in Universal Time (UTC).

Request license file

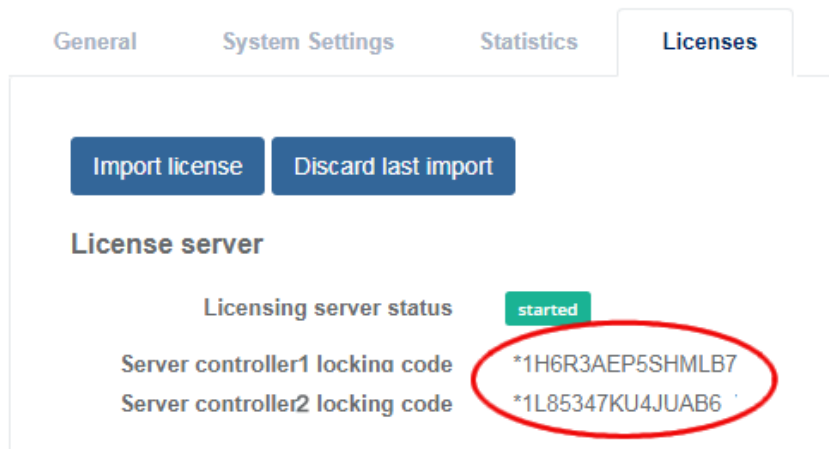
You connected for the first time to your MFVP user interface and want to request a license file.

You are connected to MFVP with the appropriate user rights.

1. **Display license details.**

The licensing information displays for the specific server.

2. Copy the locking code, including the asterix (*) and paste into the email or file you plan to send to Ericsson.



IMPORTANT In redundant solutions:

- Multiple locking codes display per server.
- Provide both locking codes.

3. Copy and paste the LAC reference number for your Software Handling Community to the same file or email and send to your Ericsson representative.

NOTE The LAC reference number and the Software Handling Community details are in the software Delivery Note. See software installation package.

Import license file

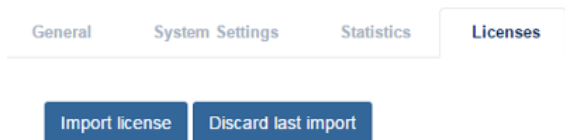
New license files are available in the from the support center.

- The new license file needs to be available on the machine.
- Only configuration and admin users can import license files.

1. [Display the license details.](#)

The licensing information displays for the specific server.

2. Click **Import license** > **Select file** to browse and select the file to import.



A summary displays.

TIP If an error occurs, keep a copy of the error number and contact support.

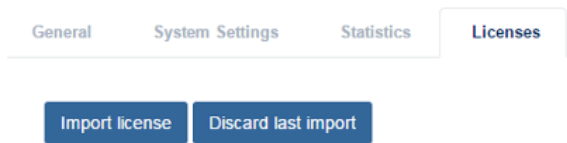
Revert to the previous license file

This feature is helpful when solving importation errors that restrict license use. **Only use if Ericsson support staff approves a revert.**

You are connected to MFVP with the appropriate user rights.

1. [Display the license details.](#)

2. Click **Discard last import**.



You are prompted to confirm.

3. Click **OK** to confirm.

The last license file import is discarded and the previous file is used.

CHAPTER 4

Using Content Processing

Configure decoding

Configure input for decoding (transport streams)

There are multiple types of transport stream configurations. Each type presents a different set of parameters.

Supported decoding formats

Video formats and decoding standards

Resolution	Frame rate	Bit depth	Chroma	Codec
1920 x 1080i	25 / 29.97 fps	8 / 10 bit	4:2:0 / 4:2:2	MPEG-2 H.264 H.265
1280 x 720p	50 / 59.94 fps	8 / 10 bit	4:2:0 / 4:2:2	MPEG-2 H.264 H.265
1920 x 1080p	50 / 59.94 fps	8 / 10 bit	4:2:0 / 4:2:2	MPEG-2 H.264 H.265
3840 x 2160p	50 / 59.94 fps	10 bit	4:2:0 / 4:2:2	H.265

Audio formats and decoding standards

Codec	Sample Rate	Bit Depth	Output format
MPEG1-LII	48Hz	n/a	Decode
Dolby Digital	48Hz	n/a	Decode
Dolby Digital +	48Hz	n/a	Decode
LPCM	48Hz	16 / 20 / 24	Pass-through
Dolby-E	48Hz	16 / 20 / 24	Pass-through


Data formats

Format	Output format
AFD / BAR data	SMPTE 2016
Teletext	OP47 / SMPTE 2031
Closed Captions	SMPTE 334M for EIA-708-B
Time code	SMPTE 12M + RP188
Generic VANC	SMPTE 2038

Configure transport stream input for ASI

Transport stream can be streamed into MFCP over either Ethernet or ASI depending on the hardware fitted to the M1 server.

At least one service is configured.


1. Display services.
2. Click  to edit the service.
3. Scroll to **Parameters** and select the **Input** tab.
4. Select **ASI** for **Current input** configure parameters.

NOTE Packet size depends on the input format. For ASI either 188 or 204.

5. Ensure that the input Source status is green and without error (this only applies if the source currently exists).


Configure transport stream input for IP in Unicast

Transport stream can be streamed into MFCP over either Ethernet or ASI depending on the hardware fitted to the M1 server.

1. Display services.
2. Click  to edit the service.
3. Scroll to **Parameters** and select the **Input** tab.
4. Select **Unicast**.
The Multicast IP box is greyed out and a physical port parameter displays.
5. Enter a **physical port**.
6. Enter the **UDP port** number for the incoming transport stream.
7. Select the physical Ethernet port that the incoming transport stream connects to.
8. Ensure that the input Source status is green and without error (this only applies if the source currently exists).

Configure transport stream input for IP in multicast

Transport stream can be streamed into MFCP over either Ethernet or ASI depending on the hardware fitted to the M1 server.

1. Display services.
2. Click  to edit the service.
3. Scroll to **Parameters** and select the **Input** tab.
4. Clear the **Unicast** check box and enter a **Multicast IP address**.


NOTE The Multicast parameter is greyed out if **Unicast** is selected.

5. Enter a **physical port**.
6. Enter the **UDP port** number for the incoming transport stream.
7. Select the physical Ethernet port that the incoming transport stream connects to.
8. Ensure that the input Source status is green and without error (this only applies if the source currently exists).

Configure video decoding

The MFCP is designed to decode video, audio and data from an incoming transport stream.


Inputs are configured.

1. Display services.
2. Click  to edit the service.
3. Scroll to **Parameters**, then select the **Decoding** tab.
The first service listed in the PAT of the incoming transport stream (input configuration) is selected.
4. Optional: Select a different service from the **Selected Service** drop down list to decode.
The first video and audio as listed in the service PMT is automatically decoded.
5. Check **Service Status**.
The first video and audio as listed in the service PMT are automatically decoded. The service name and associated PCR PID are displayed in the Service status window.
6. Check the **Video Status**.
The video PID, component bit rate, codec being used, resolution, picture aspect ratio and frame rate are displayed in the Video status window.
7. Check the **Input Monitor**.
A thumb nail of the decoded video is displayed in the Input monitor window. The thumb nail is updated every 5 seconds.
8. Check the **Audio Status**.
The audio PID, status and codec being used are displayed in the Audio status window.
TIP Hover your cursor over the audio status to displays the channel mode, language and component bitr ate.

Configure audio decoding

- At least one service is configured.
- **Video decoding** is configured.

IMPORTANT Up to a maximum of 16 audio components can be decoded simultaneously for each decoded video service.

1. Display services.
2. Click  to edit the service.

3. Scroll to **Parameters**, then select the **Decode** tab.
4. Select **Audio** to display audio decode settings.
The first decoded audio is automatically given the reference name **Audio 1**. This reference is used when configuring the audio outputs.
5. Select an audio **Input** from the drop down menu.
The PID and language of the audio being decoded is shown in the **Input** column.
6. Enter a PID value to be decoded.

TIP You choose to manually enter a PID.


The PID value entered is present in the incoming PMT then the MFCP attempts to decode any available audio.
7. Optional: [Add an audio](#) to decode.
8. Select an **Output channel configuration** for each audio.
Setting the output channel configuration also sets the number of embedded channels required for the SDI output.

IMPORTANT
 - 1 embedded channel for a Stereo pair
 - 3 embedded channels for a 5.1 service. If the incoming audio being decoded is a 5.1 service and Stereo is selected the audio will be down mixed to a Stereo pair

Add an audio to decode (optional)

- At least one service is configured.
- [Video decoding](#) is configured.

IMPORTANT Up to a maximum of 16 audio components can be decoded simultaneously for each decoded video service.


1. Display services.
2. Click  to edit the service.
3. Scroll to **Parameters**, then select the **Decode** tab.
4. Select **Audio** to display audio decoding parameters.
The first decoded audio is automatically given the reference name **Audio 1**. This reference is used when configuring the audio outputs.
5. Select an audio **Input**.
The PID and language of the audio being decoded is shown in the **Input** column.
6. Select an **Output channel configuration**.

Decode all input audio (optional)

- At least one service is configured.

- At least one audio decoding is configured.



IMPORTANT Up to a maximum of 16 audio components can be decoded simultaneously for each decoded video service.

1. Display services.
2. Click  to edit the service.
3. Scroll to **Parameters**, then select the **Decode** tab.
4. Select **Audio** to display audio decoding parameters.
5. Click **Decode all input audio**.
All the incoming audio components for the selected service that are not currently being decoded are added in the order that they are listed in the PMT (up to a maximum of 16 decodes per service).
When an input audio is added to the list of decoded audios it is added with the Output channel configuration set to **Stereo**.

Delete an audio from a decode configuration (optional)

- At least one service is configured.
- **Video decoding** is configured.

IMPORTANT Up to a maximum of 16 audio components can be decoded simultaneously for each decoded video service.

1. Display services.
2. Click  to edit the service.
3. Scroll to **Parameters**, then select the **Decode** tab.
4. Select the **Audio** tab to display audio decoding parameters.
5. Click  to delete an audio or click **Remove all decoded audio**.
The audio decode is now removed from both the list of decoded audios and from any output configurations.

Configure data decoding

The following section explains how to decode data in MFCP that is carried on a separate PID.

MFCP currently supports the following data types.

- Closed captions
- Teletext
- Time code
- AFD
- Generic data.


Data is carried with the transport stream in 1 or 2 different ways, depending on the type of data.

1. Encapsulated in the video component as SEI (H.264 / H.265) or USER data (MPEG2)
2. In a separate data PID.

Prerequisites:

- You are connected to MFCP with the appropriate access rights.
- At least one service is configured.
- The service to be decoded has been selected from the Selected service menu

IMPORTANT Up to a maximum of 8 data components can be decoded at any one time for each decoded video service.


1. Display services.
2. Click  to edit the service.
3. Scroll to **Parameters**, then select the **Decode** tab.
4. Select **Data** to display data decoding parameters.
5. Optional: Add a data to decode.
6. Select an **Input PID**.

TIP You can choose to manually enter a PID.

When the PID value entered is present in the incoming PMT then the MFCP will attempt to decode any data present.

7. Select a **Data type**.


Add a data decoding

1. Display services.
2. Click  to edit the service.
3. Scroll to **Parameters**, then select the **Decode** tab.
4. Select **Data** to display data decoding parameters.
5. Click **Add data decode**.
A new data displays in the list.
6. **Configure data decoding** parameters.



Decode all input data

- At least one service is configured.
- **Video decoding** is configured.

IMPORTANT Up to a maximum of 16 audio components can be decoded simultaneously for each decoded video service.

1. Display services.
2. Click  to edit the service.
3. Scroll to **Parameters**, then select the **Decode** tab.
4. Select **Data** to display data decoding parameters.
5. Click **Decode all input data**.
All the incoming data components for the selected service that are not currently being decoded are added in the order that they are listed in the PMT (up to a **maximum of 8 decodes per service**).
When an input data is added to the list of decoded data it is added with the **Data type** is set to **Ancillary**.

Delete data from a decoding configuration

- At least one service is configured.
 - At least one data input is configured for decoding.
1. Display services.
 2. Click  to edit the service.
 3. Scroll to **Parameters**, then select the **Decode** tab.
 4. Select **Data** to display data decoding parameters.
 5. Click  to delete a data from the decoding or click **Remove all input data**.

Configure Output

Configure output

The MFCP is designed to output a decoded video and related audio and data components.

Supported output formats

Output formats

Format	Notes
1.5G / 3G SDI	4 x 3G is required for UHD
12G SDI	Available Q4 2017
HDMI 2.0b	Available Q4 2017
SMPTE 2022-6	Available Q1 2018
SMPTE 2110	Available Q1 2018

TIP See [Supported decoding formats](#) on page 34.

CHAPTER 5

Parameter descriptions

Remote backup parameters

Host	Remote server Hostname or IP address. Possible values: 32 characters max
Port	IP Port for the secure FTP connection. Possible values: 1 to 65535 Recommended value: 21
Path	Backup file storage directory on the remote server. This path is a relative path , and must exist on the remote server. Possible values: 128 characters max
Username	For the secure FTP connection. Must be a valid secure FTP server user. Possible values: 16 characters max
Password	Allows the configured username to connect to the secure FTP server. Possible values: 16 characters max

Failover parameters

Group name	Enter a unique failover group name for your selected primary and backup servers.
Group processing type	Select the processing type to display compatible servers.
Group mode	In Automatic mode, the system triggers a server failover when a critical alarm occurs (manual triggers are still possible).

Related Tasks

[Create a failover group](#)

License parameters

Licensing server status	started: the server is running and available.
Licensing version	License software version installed on the license server.
Feature	MFVP processing options per processing type.
Code	License code used to identify the feature.
Expiry	Date when the feature is no longer available unless the license is renewed.
Usage	Displays current use of licenses in relation to the total of available licenses.
Count	Displays total licenses currently used in relation to the total of available licenses.