



Viz Mosart Media Router Guide

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1 Media Router Introduction

Viz Mosart is a unique tool for making repetitive tasks easy. Your production is made effortless for the operator as robotic camera moves, video effects, audio stings, lighting states, and automatically assigned video ports cue for playback to make a perfectly presented production.

This document contains an overview of system prerequisites, installation, and configuration of the **Media Router** within your broadcast environment.

For information about the other components of Viz Mosart, see the *Viz Mosart User's Guide* and *Viz Mosart Administrator's Guide*.

This section contains the following topics:

- [Related Documents](#)
- [Customer Feedback and Suggestions](#)
- [Customer Support Requests](#)

1.1 Media Router - Related Documents

- *Viz Mosart Administrator's Guide*
- *Viz Mosart User's Guide*
- *Viz Mosart Functional Specification*
- *Viz Mosart Media Router REST Protocol*

1.2 Media Router - Customer Feedback and Suggestions

We encourage suggestions and feedback about our products and documentation.

To give feedback and, or suggestions, please identify your local Vizrt customer support team at www.vizrt.com.

1. Click on **Contact** (top of page).
2. The Vizrt office which is nearest to your location will be shown, or select from the list of Vizrt offices.
3. Click on the Contact button for the office you want.
4. Complete the required details in the window that opens.

.....
Note: If this message is for Customer Support, and there is a Support Contract in place, then click on the 'For support requests, please visit our support portal' link in the message window.
.....

A Vizrt representative will contact you as soon as possible.

1.3 Media Router - Customer Support Requests

Support Requests are supported by Vizrt if customers have a valid Service Agreement in operation. Customers who do not have a Service Agreement and would like to set up a Service Agreement should contact their regional sales representative (see [Customer Feedback and Suggestions](#)).

When submitting a Support Request, relevant and correct information should be given to Vizrt Support, to make sure that Vizrt Support can give the quickest and best solution to your Support Request.

This section contains the following topics:

- [Before Submitting a Support Request](#)
- [Submitting a Support Request](#)

1.3.1 Before Submitting a Support Request

Before a Support Request is submitted make sure that you:

Read:

- The relevant User Guide or Guides
- The release notes

and Check:

- That the system is configured correctly
 - That you have the specified hardware, tested and recommended versions
- Always refer to your Vizrt Service Level Agreement document.

1.3.2 Submitting a Support Request

When completing a Support Request, add as much information as possible.

Content of a Support Request

The report should contain information about these topics:

- **Problem description:** Include a good description of what the problem is and how to reproduce it. Specify your workflow. Remember to use simple English.
- **Screen shots and illustrations:** Use these to simplify the message. These are extremely useful for Vizrt Support.
- **Software configuration:** Add exact versions of software (-build) used. This is also extremely important information.
- **System locale:** Specify the Region and Language settings of the system.
- **System log files:** Send the system log files.
- **Crash log files:** Send the error report and crash log files.
- ***System Config file:** Send the system config files.
- **Hardware configuration:** Add exact versions of hardware used.

Optional:

- **System setup:** Describe differences in the installation, if any, from the recommended setup.
- **System Network:** Add a description of how the network, bandwidth, routers, and switches are configured.

Always refer to your Vizrt Service Level Agreement document.

To submit a Support Request:

1. On the www.vizrt.com page, click on Support.
2. Click on **Report a case**.
3. Click on **LOG IN** to login to the Customer and Partner portal.
4. At the top of the Case Management page, click on **Report a Case**.
5. In the online form complete the required minimum information (shown by a red asterisk) and click **SAVE**.
6. In the saved Support Case that opens, complete the various text boxes and upload any required documents, files, etc. (see [Content of a Support Request](#)).

To **track the status** of open support tickets, login to the Customer and Partner portal. Add information or communicate about the cases directly with the support team.

2 About Media Router

Media Router allows for device sharing in a limited resource environment. It is used to share broadcast media resources between multiple Viz Mosart Servers and other broadcast equipment.

Media Router uses the functionality provided by Viz Mosart Server, allowing changes to Viz Mosart-controlled resources to be made dynamically, that is, without restarting any of the Viz Mosart applications.

The equipment types which are controllable by Media Router are:

- Video Servers (VS)
- Overlay Graphics (OG)
- Fullscreen Graphics (FG)
- Robotic Cameras (RC)
- Lights (L)
- Video Wall (W)

Media Router is normally used in the following scenarios:

- To change the resource configuration of a Viz Mosart server installation prior to running a show. That is, to share resources between multiple Viz Mosart server installations/galleries.
- In emergencies to make use of backup resources.

Media Router relies on a relational database to store and sync data across servers, workstations, and Viz Mosart applications.

Changes to Media Router are done via the Media Router Administrator. Configuration of Media Router resembles a router in that changes are done by setting crosspoints in a router setup. Thereby connecting resources (inputs) with Viz Mosart (outputs).

This section contains the following:

- [Naming Convention for Components](#)
- [Typical Media Router Setup](#)
- [The Router Concept](#)
- [Media Router Internal Salvos](#)
- [Relation to ProBel Router Protocol](#)

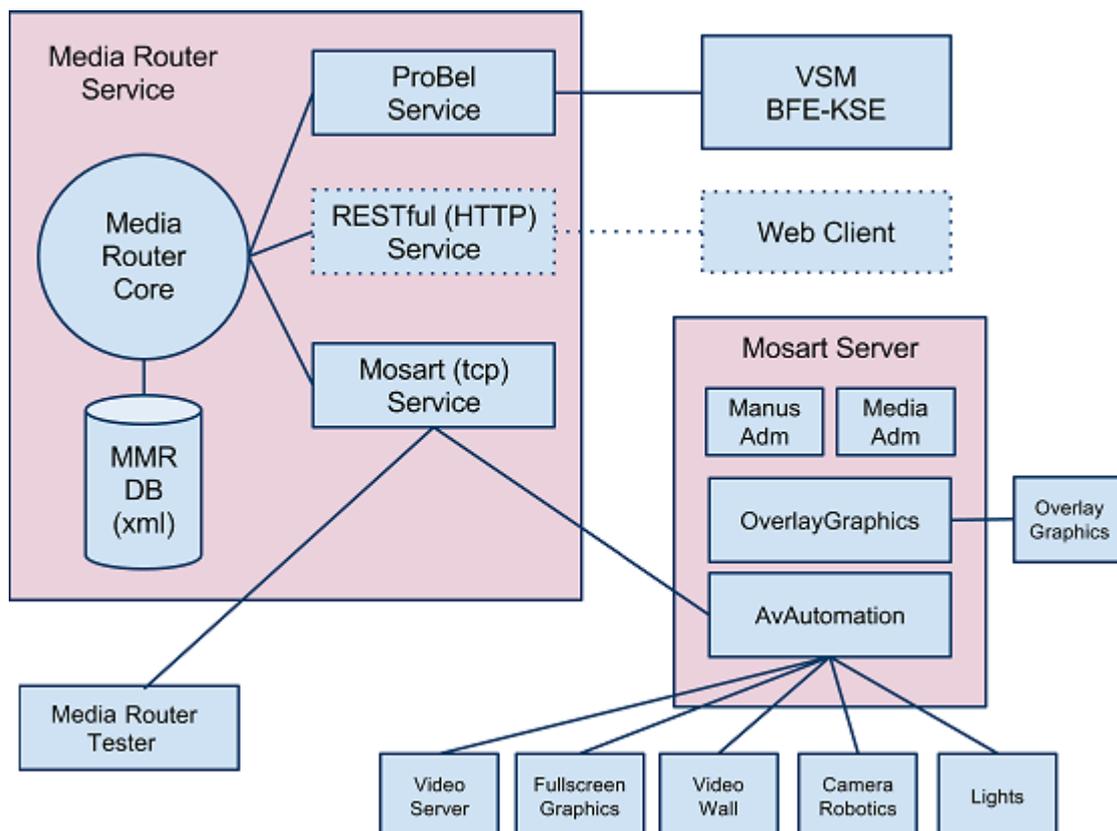
2.1 Media Router Naming Convention for Components

When contacting support there is a standard naming convention for the following applications and components that form Viz Mosart:

| | |
|-----------------|--|
| AVA | AV Automation. Application controlling attached equipment |
| Client (output) | A client in this context denotes a service which are given access to one or more sources via the Media Router. In router terminology a client defines an output of a router matrix |
| CurrentSalvo | Internal Media Router state containing validated crosspoints. |

| | |
|----------------------------|---|
| GUI | Viz Mosart GUI. Main user control application |
| Manus Admin | Manus Administrator. Application controlling the Viz Mosart rundown |
| Media Admin | Media Administrator. Application for monitoring media objects (clips) |
| Overlay Graphics Interface | Application that controls non-Vizrt overlay graphic systems |
| PendingSalvo | Internal Media Router state containing all pending crosspoints. I.e. corresponding configuration changes to be validated by Mosart servers. |
| Source (input) | A dedicated media content provider to be controlled. Examples of sources in this context are video play-out server ports and graphics controllers. In router terminology a source defines an input of a router matrix |
| Media Router | Previously known as Mosart Media Router or MMR. Application that shares broadcast devices between control rooms. |
| MMT | Media Router Test Application |
| NCS, NRCS | Newsroom Computer System |
| Salvo | A predefined list of crosspoint operations which when executed all occur simultaneously. |

2.2 Typical Media Router Setup



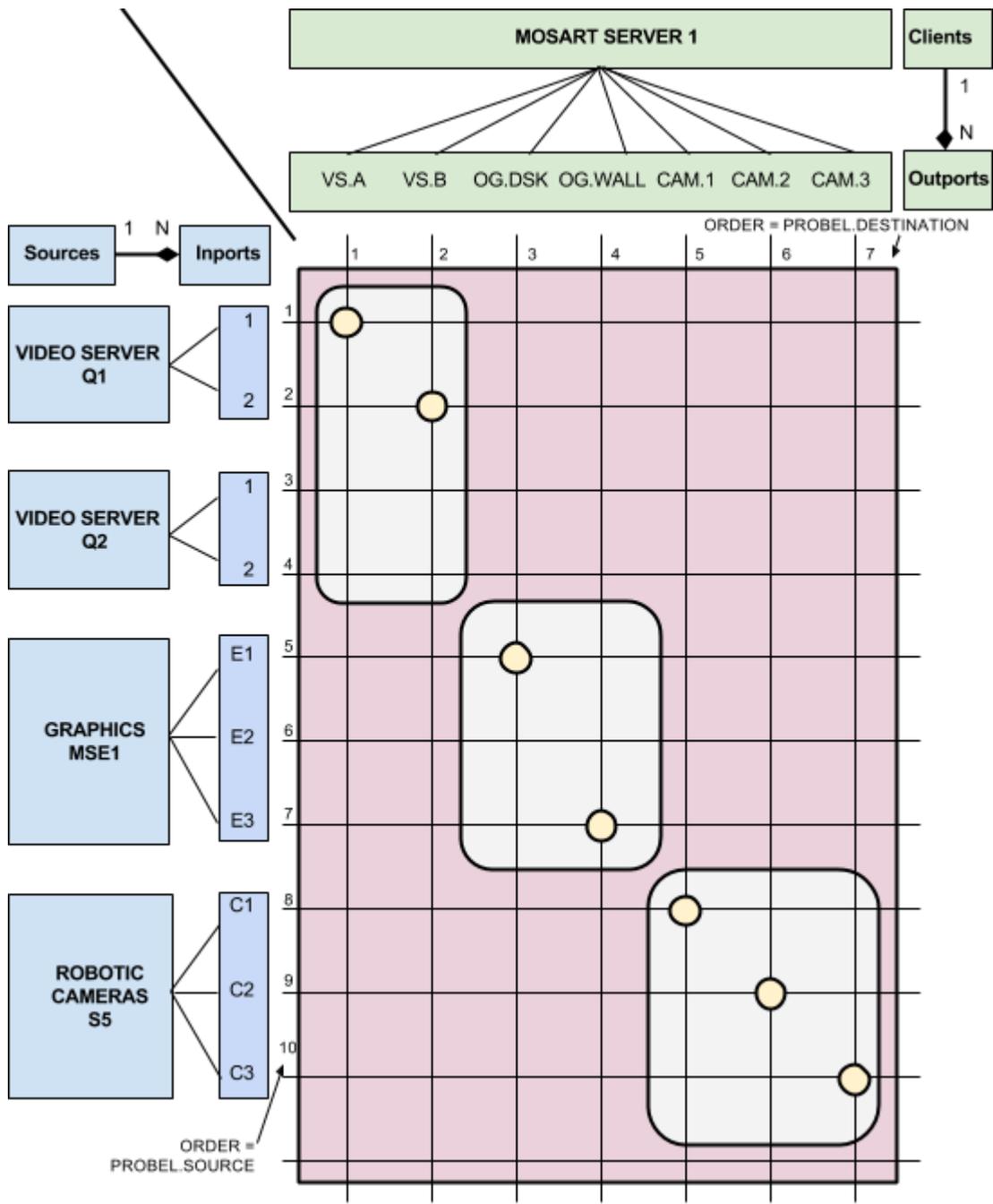
The typical setup, as shown in the figure above consists of the following:

- **Media Router service:** This can be configured to support multiple services for connection. Normally the ProBel SW-P-08 protocol is used for controlling the Media Router whilst the Viz Mosart (TCP) service is used to communicate with the Viz Mosart servers.
- A **Viz Mosart Server** using shared resources for device types currently supported by Media Router. The AV Automation application is responsible for communication with Media Router. Note that AV Automation may forward Media Router configuration to the other Viz Mosart server applications.
- An **external controller** system used to set and change the crosspoints of the Media Router via the ProBel protocol.
- The **Media Router Test Application.** This is a console application part of the Viz Mosart Test suite which may be used to verify the Media Router configuration.
- A **web client** is used to control the Media Router service via the Media Router Rest protocol.

2.3 The Router Concept

Media Router does dynamic configuration changes to Viz Mosart servers by connecting Viz Mosart device representations with physical devices using a virtual 2D router matrix.

The following figure shows the 2D matrix. It is only possible to set crosspoints in the grey areas.



Physical devices are localised on the vertical dimension organized as Sources with Inports. A source may have one or several inports. Viz Mosart servers are localized at the horizontal dimension organized as Clients with Outports. A client may have one or several outputs.

In the figure above we have the following configuration:

- Sources:
 - Two video servers, Q1 and Q2 both with two video ports as inports.
 - One graphics system, MSE1 with three graphics engines as inports
 - One robotic camera system, S5 with three robotic cameras as inports

- Clients: One single Viz Mosart Server (M1) with the following device representations as outputs:
 - Two video ports, A and B
 - Overlay Graphics for DSK and WALL graphics
 - Three cameras to be controlled by robotic cameras, CAM1, CAM2 and CAM3.
 By setting crosspoints the following Viz Mosart configuration is accomplished:

- M1.VS.A = VS.Q1.1
- M1.VS.B = VS.Q1.2
- M1.OG.DSK = OG.MSE1.E1
- M1.OG.WALL = OG.MSE1.E3
- M1.RC.CAM1 = RC.S5.C1
- M1.RC.CAM2 = RC.S5.C2
- M1.RC.CAM3 = RC.S5.C3

2.4 Media Router Internal Salvos

The internal state of the Media Router is stored a set of internal salvos (or set of crosspoints).

The following internal Media Router salvos exist:

- [MMR PendingSalvo \(__PENDING\)](#)- Represent all current connections.
- [MMR CurrentSalvo \(__CURRENT\)](#)- Represent current connections that are verified as valid connections
- [MMR ProbelSalvo \(__PROBEL\)](#)- Represent all current connections set from a controlling ProBel device.

2.4.1 MMR PendingSalvo (__PENDING)

This salvo contains all crosspoints that are currently set in Media Router and shall therefore be treated as the current state of Media Router. Any changes to the PendingSalvo shall lead to configuration changes being sent to corresponding Viz Mosart Servers.

2.4.2 MMR CurrentSalvo (__CURRENT)

This salvo contains all crosspoints currently set and verified by the corresponding Mosart Servers. I.e all crosspoints set in the CurrentSalvo shall represent a valid connection between a Mosart Server and a device controlled by the Mosart Server. The CurrentSalvo shall always be a subset of the PendingSalvo.

2.4.3 MMR ProbelSalvo (__PROBEL)

This salvo represents all crosspoints set by a controlling ProBel device. This salvo is used to combine multiple crosspoints changes from the controlling ProBel device into a single salvo.

2.5 Relation to ProBel Router Protocol

Media Router is controllable from any service supporting the **ProBel router protocol, SW-P-08**. The relation to the ProBel protocol is done by assigning crosspoints a unique number with the “Order” attribute. This order number is directly related to the ProBel protocol as follows:

- Probel.Source = Inport.Order
- Probel.Destination = Outport.Order

The diagram in the section [The Router Concept](#), shows how the corresponding order numbers are indicated for all inports and outports.

3 Media Router Installation

Media Router can usually be installed on any computer connected to Viz Mosart Server. It may be a dedicated database server or hosted on another MySQL server available on the network, alternatively the Viz Mosart Database can also be virtualised.

This section contains the following topics:

- [Viz Mosart Database](#)
- [Media Router Administrator](#)

3.1 Viz Mosart Database

The Viz Mosart Database used for the Media Router is the same database as used by the Template Database. Installation and upgrade procedures are described in the *Viz Mosart Administrator's Guide*.

3.2 Media Router Administrator

The Media Router Administrator web application is used for configuring Media Router. It must be installed on a server with Internet Information Services (IIS).

This section contains the following topics:

- [Installing Internet Information Services](#)
- [Installing the Web Application](#)
- [Upgrading the Web Application](#)
- [Verifying the Installation or Upgrade](#)

3.2.1 Installing Internet Information Services

The Media Router Administrator web application requires Internet Information Services on the server.

Viz Mosart recommends IIS version 7.5, as found in Windows 7 Professional and Windows Server 2008 R2.

The exact procedure is dependent on the OS. On Windows 7 Professional IIS 7.5 is installed as follows:

1. Open Windows Control Panel
2. Choose Programs and Features
3. Choose Turn Windows features on or off
4. Check Internet Information Services

.....
Note: By default, this feature is not installed in its entirety
.....

5. Expand the Internet Information Services node by clicking on the + sign to the left
6. Expand the World Wide Web Services node
7. Expand the Application Development Features node

8. Check ASP.NET.

.....
Note: Some other features will also be checked
.....

9. Click OK, and wait for the installation to finish.
10. On completion, you may be asked to restart the machine.

3.2.2 Installing the Web Application

Media Router Administrator web application is installed as follows:

1. Ensure that *Internet Information Services* has been installed, see [Installing Internet Information Services](#)
2. Run the Media Router Administrator web application installer:

```
MosartMediaRouterAdminInstaller.<version>.msi
```
3. Configure the Media Router Administrator web application as outlined in [Media Router Administrator](#).
4. Optionally, verify the install as described in [Verifying the Installation or Upgrade](#).

3.2.3 Upgrading the Web Application

The following procedure is recommended for upgrading the Media Router Administrator web application:

1. There are two upgrade options. Refer to the following sections in the *_Viz Mosart Administrator's Guide_* for more information:
 - Installation > Viz Mosart Installation Administrator > Semi-Automated Installation
 - Installation > Upgrading Viz Mosart
2. Configure the Media Router Administrator web application as outlined in [Media Router Administrator](#).
3. Optionally, verify the install as described in [Verifying the Installation or Upgrade](#).

3.2.4 Verifying the Installation or Upgrade

To verify Media Router Administrator web application has correctly installed, perform the following:

In IIS:

1. The Application Pools list contains the Media Router Administrator App Pool with the following properties:
 - Status: Started
 - .NET Framework version: v4.0
 - Pipeline mode: Integrated
 - Identity: ApplicationPoolIdentity
2. The Default Web Site is started.
 - Not strictly part of the verification process, but should be checked

3. Under Default Web Site, look for an application named MediaRouterAdmin with the following properties:

- Application pool: Media Router Administrator App Pool
- Physical path: <Program Files>\Mosart Medialab\Mosart Media Router Admin\MediaRouterAdmin (or similar if a non-default folder was chosen at install)
- Virtual path: /MediaRouterAdmin
- The list of 'Activated protocols' should include http.

In a web browser:

- Enter the following URL:
 - <http://localhost/MediaRouterAdmin/>
 - It should display the hierarchical main menu

4 Using Media Router

This section contains the following:

- [Running Media Router as a Console Application](#)
- [Running Media Router as a Windows service](#)
- [Media Router Console Commands](#)
- [Redundancy Setup](#)
- [Mirror Mode](#)

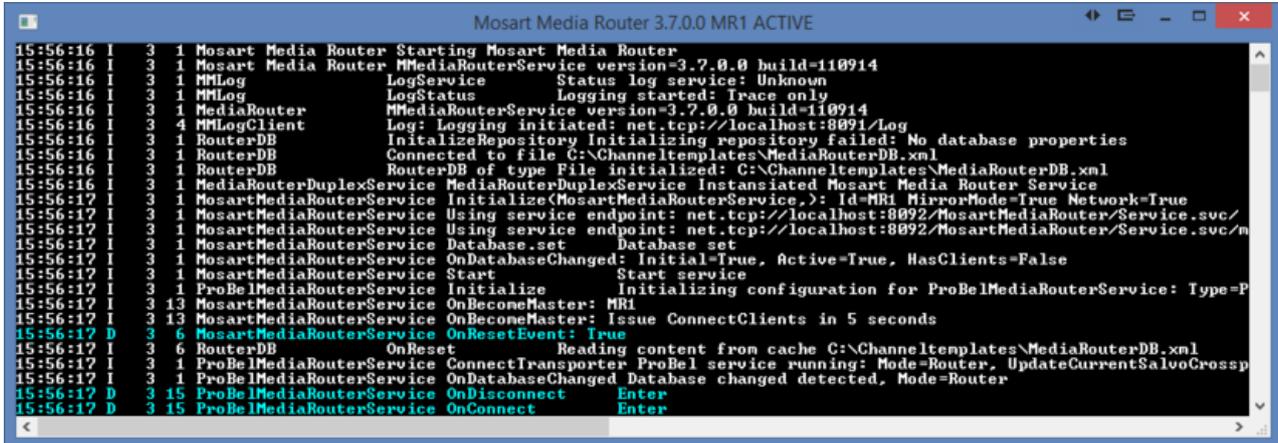
4.1 Running Media Router as a Console Application

Normally Media Router is started as a console application. This makes it possible to monitor changes done by the Media Router as well as controlling it by using appropriate [Media Router Console Commands](#).

```
%ProgramFiles%\Mosart Medialab\Mosart Media Router  
Service\MMediaRouterService.exe
```

.....
Note: It is recommended to stop any running Media Router service prior to starting the Media Router as a console application.
.....

Start the application as any other Windows application. The console window will appear as shown in the figure below



```
Mosart Media Router 3.7.0.0 MR1 ACTIVE  
15:56:16 I 3 1 Mosart Media Router Starting Mosart Media Router  
15:56:16 I 3 1 Mosart Media Router MMediaRouterService version=3.7.0.0 build=110914  
15:56:16 I 3 1 MMLog LogService Status log service: Unknown  
15:56:16 I 3 1 MMLog LogStatus Logging started: Trace only  
15:56:16 I 3 1 MediaRouter MMediaRouterService version=3.7.0.0 build=110914  
15:56:16 I 3 4 MMLogClient Log: Logging initiated: net.tcp://localhost:8091/Log  
15:56:16 I 3 1 RouterDB InitializeRepository Initializing repository failed: No database properties  
15:56:16 I 3 1 RouterDB Connected to file C:\Channeltemplates\MediaRouterDB.xml  
15:56:16 I 3 1 RouterDB RouterDB of type File initialized: C:\Channeltemplates\MediaRouterDB.xml  
15:56:16 I 3 1 MediaRouterDuplexService MediaRouterDuplexService Instansiated Mosart Media Router Service  
15:56:17 I 3 1 MosartMediaRouterService Initialize(MosartMediaRouterService,): Id=MR1 MirrorMode=True Network=True  
15:56:17 I 3 1 MosartMediaRouterService Using service endpoint: net.tcp://localhost:8092/MosartMediaRouter/Service.svc/  
15:56:17 I 3 1 MosartMediaRouterService Using service endpoint: net.tcp://localhost:8092/MosartMediaRouter/Service.svc/  
15:56:17 I 3 1 MosartMediaRouterService Database.set Database set  
15:56:17 I 3 1 MosartMediaRouterService OnDatabaseChanged: Initial=True, Active=True, HasClients=False  
15:56:17 I 3 1 MosartMediaRouterService Start Start service  
15:56:17 I 3 1 ProBelMediaRouterService Initialize Initializing configuration for ProBelMediaRouterService: Type=P  
15:56:17 I 3 13 MosartMediaRouterService OnBecomeMaster: MR1  
15:56:17 I 3 13 MosartMediaRouterService OnBecomeMaster: Issue ConnectClients in 5 seconds  
15:56:17 D 3 6 MosartMediaRouterService OnResetEvent: True  
15:56:17 I 3 6 RouterDB OnReset Reading content from cache C:\Channeltemplates\MediaRouterDB.xml  
15:56:17 I 3 1 ProBelMediaRouterService ConnectTransporter ProBel service running: Mode=Router, UpdateCurrentSalvoCrossp  
15:56:17 I 3 1 ProBelMediaRouterService OnDatabaseChanged Database changed detected, Mode=Router  
15:56:17 D 3 15 ProBelMediaRouterService OnDisconnect Enter  
15:56:17 D 3 15 ProBelMediaRouterService OnConnect Enter
```

Note the initial messages in the console window which gives information regarding the various protocols (services) used by the Media Router. The following protocols are configured to be active in the sample setup as shown in the figure above:

- Media Router Service – Used internally by Viz Mosart applications. Used to communicate with Viz Mosart Server using a proprietary protocol
- ProBel Media Router Serial Service – Allows router control via the ProBel protocol (3). Both serial and TCP/IP connections are supported.

- REST Media Router Service – Supports control via the Media Router REST protocol (4). To be used by custom web clients.

4.2 Running Media Router as a Windows service

The Media Router installer automatically registers Media Router as a Windows service.

This means that starting and stopping the Media Router as a service may be done via the Windows Service Manager. The service name is “Mosart Media Router Service”.

.....
Note: It is recommended to stop the Media Router service prior to starting the Media Router as a console application.

4.3 Media Router Console Commands

It is possible to activate predefined salvos, to set individual crosspoints and to get router information by entering appropriate console commands. The following commands are available:

- **autofailover:** Toggles auto failover mode. See the MosartMediaRouterService configuration.
- **autotake:** Toggle autotake mode. See the MosartMediaRouterService configuration.
- **clear:** Clears the console window
- **command:** Syntax: `command cmd [arg1] [arg2]`. Executes a Media Router command with two optional arguments. The following commands are available:
 - **backup:** Enforces a backup of the Media Router database
 - **get <filename> :** Retrieves the current Media Router database and stores the database using the given filename.
 - **reset:** Resets the Media Router to the latest Media Router database stored on the file system.
 - **restore <filename> :** Restores the Media Router database to the content of the database stored in the given filename
 - **flush:** Flushes the current content of the Media Router to file storage. This command may be used to set the initial state of the Media Router
- **deletesalvo:** Syntax: `deletesalvo salvo`. Deletes the specified salvo
- **exit:** Exits the Media Router
- **getConfig:** Syntax: `getConfig client`. Returns the current configuration for the given client. Used mainly for testing Mosart Server clients
- **getStatus:** Returns an xml string containing current Media Router status.
- **help:** Lists all commands
- **idle:** Toggles active / idle mode of the Media Router service. Used for testing
- **list:** Syntax: `list [salvos|clients|sources|inputs|outputs|all]`. List various router information
- **restore:** Syntax: `restore <filename>`. Restores the Media Router database to the content of the database stored in the given filename.
- **save:** Syntax: `save <filename>`. Retrieves the current Media Router database and stores the database using the given filename.
- **setactive:** Activates the Media Router service

- **setcrosspoint:** Syntax: `setcrosspoint inport outport [salvo]`. Sets a crosspoint in the given salvo:
 - If no salvo is given then the pending salvo is used. I.e. a set crosspoint request is sent to corresponding clients.
 - If the given salvo is not present, a new salvo will be created.
 - **setsalvo:** Syntax: `setsalvo salvo`. Fires the specified salvo
 - **verbose:** Turns on/off verbose diagnostics
- Note when specifying crosspoints in console commands the inport/outport name shall be used to identify the corresponding port.

4.3.1 Media Router console command examples

- List all current salvos: `list salvos`
- List active connections: `list salvos current`
- List pending connections: `list salvos pending`
- List a specified salvo: `list salvos M1.A`
- Connects video port M1.A.A to Quantel 2 / Port 1: `setcrosspoint VS.Q2.1 M1.A.VA`
- Sets a crosspoint in a salvo: `setcrosspoint VS.Q2.1 M1.A.VA M1.Backup`
- Fires a salvo: `setsalvo M1.Backup`
- Deletes a salvo: `deletesalvo M1.Backup`

4.4 Redundancy Setup

It is possible to use two Media Router service instances in a redundancy setup. In this case one of the Media Router service instances are configured to be the master in a master / slave relationship. The following rules are applied:

- There shall be only one Media Router service configured as master. This is done using the PreferredMaster property.
- The slave Media Router service will automatically take control if the master is down or not responding. This behaviour may be overridden by setting the AutoFailover property to false. If so, activating the slave Media Router service has to be done manually by issuing the SetActive command.
- The master Media Router service will always be the active Media Router service instance if it is running. I.e. if the master is started then the master will take over the control of any active slave.
- Inactive or idle Media Router services will ignore any crosspoint changes sent from any clients.
- The master Media Router service will ensure that the Media Router state is synchronized with the slave. Hence both master and slave shall always have the same configuration and crosspoints.
- Clients controlling the Media Router services need to apply one of the following strategies:
 - Send crosspoints to both master and slave Media Router services.
 - Send crosspoints only to the active Media Router service. In this case the clients need to monitor whether the Media Router services are active or not.

4.4.1 Related service properties:

- Id - To set an unique identity of the Media Router service

- PreferredMaster - Set to true for the master Media Router service
- Slave - Connection string to the other Media Router service in a redundancy setup.
- AutoFailover - Set to false to ignore automatic failover by the slave when loosing connection to the master.

4.5 Mirror Mode

Viz Mosart servers are normally configured in pairs in a redundancy setup. Most common the configurations sent to both Viz Mosart main and backup servers should be identical. I.e. both Viz Mosart servers are controlling the same devices.

In Media Router such a main/backup redundancy setup requires both Viz Mosart servers to be configured as clients with the same set of outports. In such scenarios it is required that the configurations to both Viz Mosart servers are synchronized. I.e. Media Router should ensure that the same configuration is sent to both. This is done by activating Mirror Mode

In Mirror Mode setting, a crosspoint related to one Viz Mosart server in a redundancy setup then the same configuration will be sent to both Viz Mosart servers.

4.5.1 Related service properties:

- MirrorMode - Set to true to activate Mirror Mode
- MirrorModeMaster - Specifies which Viz Mosart server that should receive crosspoint changes.
- SynchronizedMirroring - If set, then crosspoint changes related to any Viz Serveres will be reflected to both.

5 The Media Router Administrator

Changes to Media Router are done via the Media Router Administrator.

This section contains the following topics:

- [Service Configuration Files](#)
- [Administrator Setup](#)
- [Troubleshooting](#)

5.1 Service Configuration Files

The Media Router service has several configuration files which are outlined below:

- [MMediaRouterService.exe.config](#)
- [MediaRouterServiceConfig.xml](#)
- [MediaRouterDbSql.xml](#)

5.1.1 MMediaRouterService.exe.config

The config file is located in <Program Files>\Mosart Medialab\Mosart Media Router service (unless a different folder was chosen at install). There are some settings in the userSettings section (usually near the bottom of the file):

| Name | Description |
|-----------------------|---|
| Verbose | Default = False |
| DBConnectionString | Default = Type=File;Filename=C:\Channeltemplates\MediaRouterDB.xml |
| ConfigurationFile | The name of the main configuration file.Default = MediaRouterServiceConfig.xml |
| HeartbeatInterval | Default = 00:01:00 |
| Authentication | Default = True |
| QueryTimeOut | Default = 1000 |
| RESTfulWebServiceBase | The base URL of the Restful WS used by the MR Admin web application (see below).Default = http://localhost:8094/MosartMediaRouter/RESTfulWebService/The value should end in /If the MR Service and MR Admin web application are to be run on different PCs, this setting MUST be changed by replacing 'localhost' by the name of the PC running the service. |

5.1.2 MediaRouterServiceConfig.xml

This file (with the name given by the ConfigurationFile setting above) is located in C:\Channeltemplates. It has several sections:

- **Services:** This is a listing of the services offered. For the Media Router Administrator web application to work properly, the list **MUST** include

```
<Service type="RESTfulMediaRouterWebService" />
```
- **Database:** The type of database (XML file or SQL) used. For the Media Router Administrator web application to work properly, the element **MUST** be of the form

```
<Database type="RouterDbSql" name="RouterDbSql" configuration="MediaRouterDbSql.xml" />
```

The file name value of the configuration attribute may be different, though

5.1.3 MediaRouterDbSql.xml

This file (with the name given by the configuration attribute above) is located in C:\Channeltemplates. The root element should be MediaRouterDbSqlConfig with two sub-elements:

- **ProviderName.** This is the name of the database provider. At the time of writing, one option only is supported:
 - `MySQL.Data.MySqlClient`
- **ConnectionString.** This is the database connection string. The format is provider specific. However, the format for the `MySQL.Data.MySqlClient` provider is as follows:

```
server=<hostname>;User Id=<user>;Password=<password>;
database=<database>
```

5.2 Administrator Setup

This section describes the settings required for the Media Router Administrator web application.

The settings may be set either in IIS Manager on the web server (recommended), or in the web.config file of the application.

5.2.1 Setting via IIS Manager

To access the settings via IIS Manager (these instructions use IIS 7.5)

1. Go to **MediaRouterAdmin** (under Default Web Site)
2. Select **Function view**
3. Double-click **Application settings**

The settings are:

- **DefaultGraphicsPorts:** The default number of graphics ports of a Viz Mosart 'client'. Default = 4. This setting should be correct; however, the number of ports of any device may be changed at any time.
- **DefaultSourcePorts:** The default number of ports of a 'source' (e.g. video server). Default = 4. This setting should be correct; however, the number of ports of any device may be changed at any time.
- **DefaultVideoPorts:** The default number of video ports of a Viz Mosart 'client'. Default = 4. This setting should be correct; however, the number of ports of any device may be changed at any time.

- **RESTfulWebServiceBase:** The base URL of the Restful WS offered by the MR Service (see above). Default = <http://localhost:8094/MosartMediaRouter/RESTfulWebService/>. This setting must be identical to the corresponding setting on the MR Service (see above).

5.3 Troubleshooting Media Router

The Media Router Administrator web application is accessed through a browser running on the same or a different PC. Here is a list of problems that may be encountered:

- [The browser does not recognize the application URL](#)
- [500 Internal Server Error](#)
- [500.19 Internal Server Error](#)
- [500.21 Internal Server Error](#)
- [503 Service Unavailable](#)
- [System.Net.WebException: No connection could be made](#)
- [System.Net.WebException: The underlying connection was closed](#)

5.3.1 The browser does not recognize the application URL

Problem: The browser does not recognize the application URL at all, e.g. by redirecting to a search engine.

Solution: Verify the following:

- The URL is typed correctly
- In IIS Manager on the web server:
 - The Media Router Administrator App Pool is started.
 - The Default Web Site is started.

5.3.2 500 Internal Server Error

Problem: The browser shows the HTTP response code 500 Internal Server Error.

Solution: Use a browser on the server, in which case the error message will probably be more specific; see [500.19 Internal Server Error](#) and [500.21 Internal Server Error](#) below.

5.3.3 500.19 Internal Server Error

Problem: The browser shows the HTTP response code 500.19 Internal Server Error with the following additional information:

- Description: The requested page cannot be accessed because the related configuration data for the page is invalid.
- Error Code: 0x80070021
- ...more

Solution: Verify that IIS is properly installed according to the Installation manual.

5.3.4 500.21 Internal Server Error

Problem: The browser shows the HTTP response code 500.21 Internal Server Error with the following additional information:

- Handler " PageHandlerFactory-Integrated " has a bad module " ManagedPipelineHandler" in its module list
- Error Code 0x8007000d

Solution: Run the following:

```
%windir%\Microsoft.NET\Framework\v4.0.30319\aspnet_regiis.exe -i
```

In some situations, the error message:

- You must have administrative rights on this machine in order to run this tool.
The above error may be encountered when trying to run this command. It may be avoided by setting the UAC level to Never Notify:
 1. Start the Control Panel.
 2. Choose Action Centre.
 3. Choose Security.
 4. Click Choose Your UAC Level.
 5. Take a note of the present level.
 6. Choose Never Notify.
 7. OK.
 8. Restart if asked to.
 9. Try the command again.
 10. Verify that the 500.21 Internal Server Error does not persist.
 11. Reset the UAC level to its former value in a way similar to 1.-8. Above.)

5.3.5 503 Service Unavailable

Problem: The browser shows the HTTP response code 503 Service Unavailable.

Solution: Same as [500.19 Internal Server Error](#) above, in particular verify that, in IIS Manager on the web server, the Media Router Administrator App Pool is started.

5.3.6 System.Net.WebException: No connection could be made

System.Net.WebException: Kan ikke koble til den eksterne serveren---> System.Net.Sockets.

SocketException: No connection could be made because the target machine actively refused it

Problem: The browser shows the main hierarchical menu, but selecting any particular item yields an error message like:

```
HTTP GET request with Request-URI 'http://localhost:8094 /MosartMediaRouter/RESTfulWebService/sources' and Authorization header with credentials '' did not produce any response.: System.Net.
```

```
WebException: Unable to connect to the remote server ---> System.Net.
Sockets.SocketException: No connection could be made because the
target machine actively refused it [::1]:8094
```

Solution: The base URL (in italics above) probably reflects the RESTfulWebServiceBase application setting. Verify the following:

- The PC running the MR Service has a <Program Files>\Mosart Medialab\Mosart Media Router Service\MMediaRouterService.exe.config file as per [MediaRouterServiceConfig.xml](#) Otherwise Media Router service will not start properly at all.
- The RESTfulWebServiceBase setting in this file is correct as per [MMediaRouterService.exe.config](#) and [MediaRouterServiceConfig.xml](#)
- The RESTfulWebServiceBase web application setting is identical to the file setting on the workstation running Media Router service
- The ConfigurationFile setting in MMediaRouterService.exe.config (on the PC running Media Router service) is correct as per [MMediaRouterService.exe.config](#) and [MediaRouterServiceConfig.xml](#) The file referred to below exists: C:\Channeltemplates\MediaRouterServiceConfig.xml
- The Services section in this file has the following, as per [MediaRouterServiceConfig.xml](#).

```
<Service type="RESTfulMediaRouterWebService" />
```
- Media Router Service is running

5.3.7 System.Net.WebException: The underlying connection was closed

_System.Net.WebException: The underlying connection was closed: An unexpected error occurred on a receive ---> System.IO.IOException: Unable to read data from the transport c_onnection: An existing connection was forcibly closed by the remote host

Problem: The browser shows the main hierarchical menu, selecting any particular item redirects to a login page, but clicking 'Log in' on this page yields error messages like:

```
HTTP GET request with Request-URI 'http://bgo-j7kp43j:8094
/MosartMediaRouter/RESTfulWebService/users' and Authorization header
with credentials 'Basic U3RlZGlvNTpTdHVkaW81' did not produce any
response.: System.Net.WebException: Unable to read data from the
transport connection: An existing connection was forcibly closed by
the remote host
```

And

Could not get users; is MMR running?

Solution: Verify the following:

- The MR Service is running.
- C:\Channeltemplates\MediaRouterServiceConfig.xml (or, in general, the file referred to by the ConfigurationFile setting in MMediaRouterService.exe.config) has
 - <Database type="RouterDbSql" name="RouterDbSql" configuration="MediaRouterDbSql.xml" />
 - As per [MediaRouterDbSql.xml](#) above.

- C:\Channeltemplates\MediaRouterDbSql.xml (or, in general, the file referred to by the configuration attribute in the Database element) exists.
- The contents of this file is as described in [MediaRouterDbSql.xml](#).

6 Configuration

- [AV Automation and Templates](#)
- [Configuration Files](#)
- [Service Configuration](#)
- [Router Configuration](#)
- [Connect Media Router to Viz Mosart Server](#)
- [Configure Media Router in AV Automation](#)
- [Configure Overlay Graphics](#)