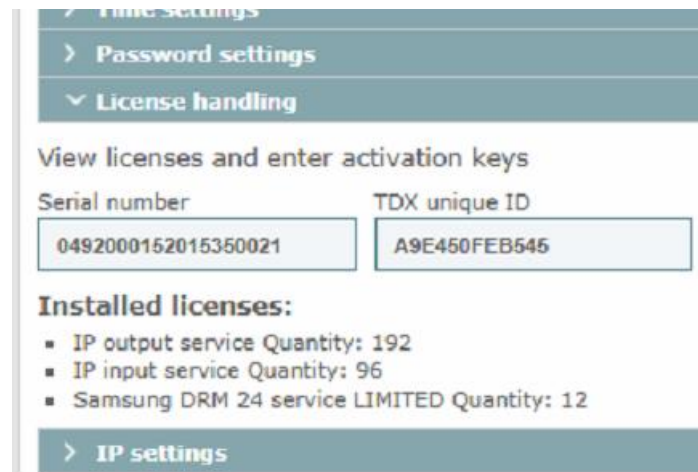


# TRIAX Academy

## TDX configuration for Samsung DRM

# TDX simulcrypt setup

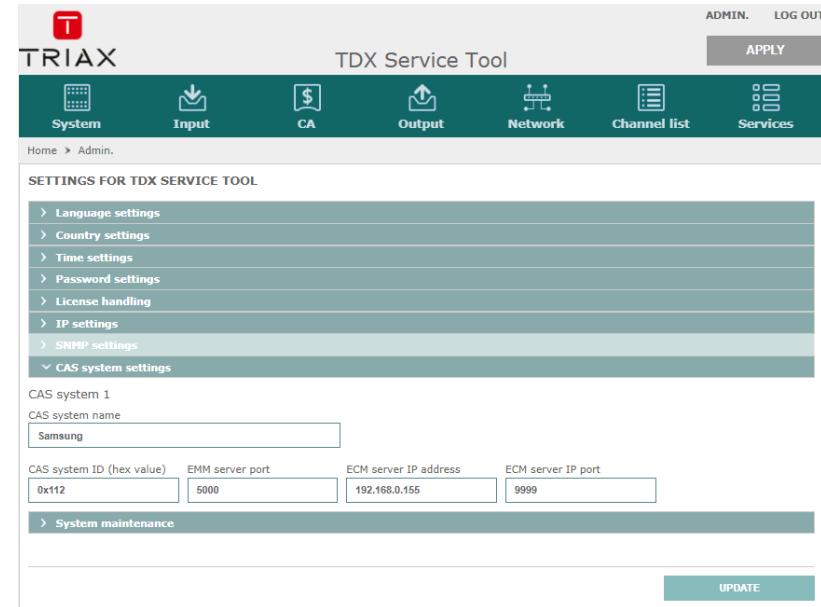
- **Purchase and enter the "Samsung DRM" license.**  
(<https://triax.freshdesk.com/en/support/solutions/articles/12000020494-purchase-retrieve-a-license>)



The screenshot shows a web interface for license management. It features a sidebar with navigation options: 'Time settings', 'Password settings', 'License handling' (selected), and 'IP settings'. The main content area is titled 'View licenses and enter activation keys'. It contains two input fields: 'Serial number' with the value '0492000152015350021' and 'TDX unique ID' with the value 'A9E450FEB545'. Below this, there is a section titled 'Installed licenses:' which lists three items: 'IP output service Quantity: 192', 'IP input service Quantity: 96', and 'Samsung DRM 24 service LIMITED Quantity: 12'.

# TDX simulcrypt setup

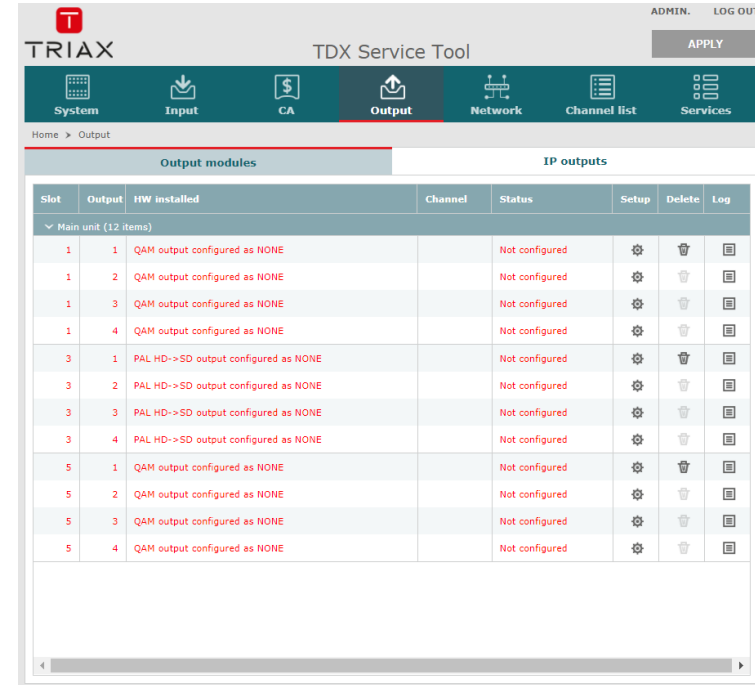
- Purchase and enter the "Samsung DRM" license.  
(<https://triax.freshdesk.com/en/support/solutions/articles/12000020494-purchase-retrieve-a-license>)
- Configure CAS settings (these are the default)
  - Cas ID : 0x112 (Samsung DRM)
  - EMM port: 5000
  - ECM server: IP-address of Lynk CAS server
  - ECM port: 9999
- The CAS settings must be provided from the person installing the Lynk server if not using default values.



The screenshot shows the TRIAX TDX Service Tool interface. The top navigation bar includes the TRIAX logo, the title "TDX Service Tool", and links for "ADMIN." and "LOG OUT". Below the navigation bar is a menu with icons for "System", "Input", "CA", "Output", "Network", "Channel list", and "Services". The main content area is titled "SETTINGS FOR TDX SERVICE TOOL" and contains a list of settings categories: Language settings, Country settings, Time settings, Password settings, License handling, IP settings, SNMP settings, and CAS system settings. The "CAS system settings" section is expanded, showing "CAS system 1" with a "CAS system name" field containing "Samsung". Below this are four input fields: "CAS system ID (hex value)" with "0x112", "EMM server port" with "5000", "ECM server IP address" with "192.168.0.155", and "ECM server IP port" with "9999". At the bottom right of the settings area is an "UPDATE" button.

# TDX simulcrypt setup

- The simulcrypt feature operates on TDX digital output modules (ie. QAM, COFDM and IP)
- Here we have slot1:QAM, s3: PAL and s5:QAM

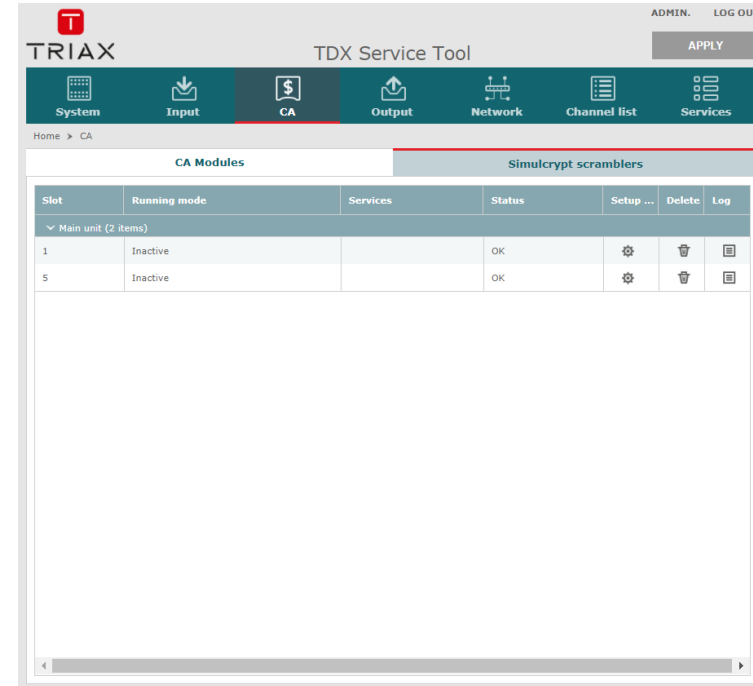


The screenshot shows the TRIAX TDX Service Tool interface. The top navigation bar includes 'System', 'Input', 'CA', 'Output' (selected), 'Network', 'Channel list', and 'Services'. The main content area is titled 'Output modules' and 'IP outputs'. Below this is a table with columns: Slot, Output, HW installed, Channel, Status, Setup, Delete, and Log. The table lists 12 items under 'Main unit (12 items)', all of which are 'Not configured'.

Slot	Output	HW installed	Channel	Status	Setup	Delete	Log
Main unit (12 items)							
1	1	QAM output configured as NONE		Not configured	⚙️	🗑️	📄
1	2	QAM output configured as NONE		Not configured	⚙️	🗑️	📄
1	3	QAM output configured as NONE		Not configured	⚙️	🗑️	📄
1	4	QAM output configured as NONE		Not configured	⚙️	🗑️	📄
3	1	PAL HD->SD output configured as NONE		Not configured	⚙️	🗑️	📄
3	2	PAL HD->SD output configured as NONE		Not configured	⚙️	🗑️	📄
3	3	PAL HD->SD output configured as NONE		Not configured	⚙️	🗑️	📄
3	4	PAL HD->SD output configured as NONE		Not configured	⚙️	🗑️	📄
5	1	QAM output configured as NONE		Not configured	⚙️	🗑️	📄
5	2	QAM output configured as NONE		Not configured	⚙️	🗑️	📄
5	3	QAM output configured as NONE		Not configured	⚙️	🗑️	📄
5	4	QAM output configured as NONE		Not configured	⚙️	🗑️	📄

# TDX simulcrypt setup

- The simulcrypt feature operates on TDX digital output modules (ie. QAM, COFDM and IP)
- Here we have slot1:QAM, s3: PAL and s5:QAM
- The simulcrypt tab shows 2 possible scramblers (slot 1 and 5 – the QAM output modules).

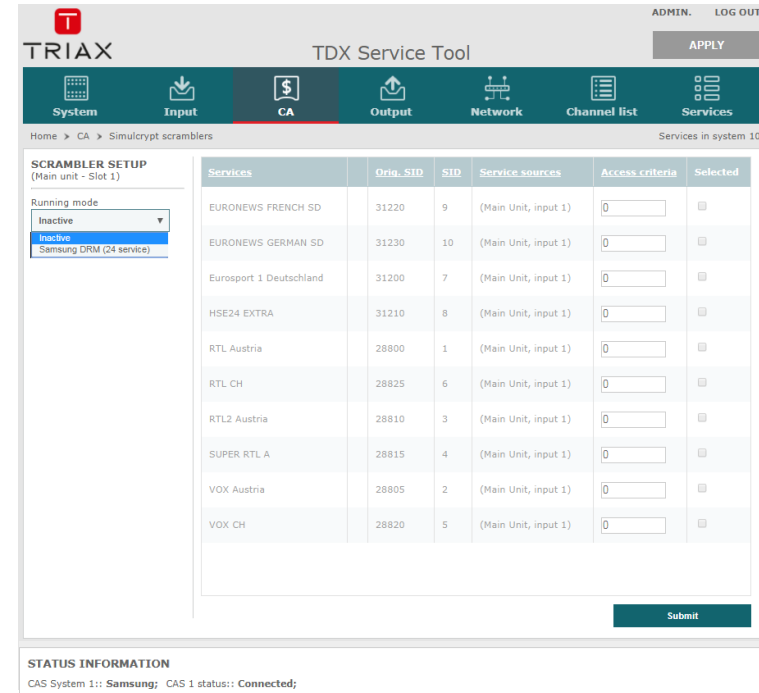


The screenshot shows the TRIAX TDX Service Tool interface. The top navigation bar includes 'System', 'Input', 'CA' (highlighted), 'Output', 'Network', 'Channel list', and 'Services'. The main content area is divided into 'CA Modules' and 'Simulcrypt scramblers'. The 'Simulcrypt scramblers' section contains a table with the following data:

Slot	Running mode	Services	Status	Setup ...	Delete	Log
Main unit (2 items)						
1	Inactive		OK	⚙️	🗑️	📄
5	Inactive		OK	⚙️	🗑️	📄

# TDX simulcrypt setup

- The simulcrypt feature operates on TDX digital output modules (ie. QAM, COFDM and IP)
- Here we have slot1:QAM, s3: PAL and s5:QAM
- The simulcrypt tab shows 2 possible scramblers (slot 1 and 5 – the QAM output modules).
- Select the one to be used and select the "Running mode" to the "Samsung DRM".



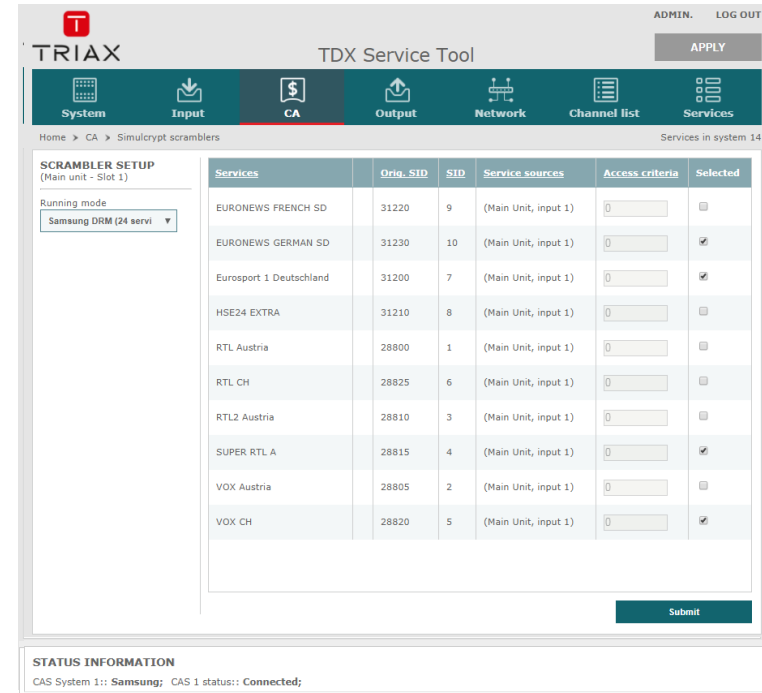
The screenshot shows the TRIAX TDX Service Tool interface. The top navigation bar includes 'System', 'Input', 'CA', 'Output', 'Network', 'Channel list', and 'Services'. The 'CA' tab is selected. The main content area is titled 'SCRAMBLER SETUP (Main unit - Slot 1)'. On the left, there is a 'Running mode' dropdown menu with options: 'Inactive', 'Inactive', and 'Samsung DRM (24 service)'. The 'Samsung DRM (24 service)' option is selected. The main table lists various services with their corresponding parameters and checkboxes for selection.

Services	Orig. SID	SID	Service sources	Access criteria	Selected
EURONEWS FRENCH SD	31220	9	(Main Unit, input 1)	<input type="text" value="0"/>	<input type="checkbox"/>
EURONEWS GERMAN SD	31230	10	(Main Unit, input 1)	<input type="text" value="0"/>	<input type="checkbox"/>
Eurosport 1 Deutschland	31200	7	(Main Unit, input 1)	<input type="text" value="0"/>	<input type="checkbox"/>
HSE24 EXTRA	31210	8	(Main Unit, input 1)	<input type="text" value="0"/>	<input type="checkbox"/>
RTL Austria	28800	1	(Main Unit, input 1)	<input type="text" value="0"/>	<input type="checkbox"/>
RTL CH	28825	6	(Main Unit, input 1)	<input type="text" value="0"/>	<input type="checkbox"/>
RTL2 Austria	28810	3	(Main Unit, input 1)	<input type="text" value="0"/>	<input type="checkbox"/>
SUPER RTL A	28815	4	(Main Unit, input 1)	<input type="text" value="0"/>	<input type="checkbox"/>
VOX Austria	28805	2	(Main Unit, input 1)	<input type="text" value="0"/>	<input type="checkbox"/>
VOX CH	28820	5	(Main Unit, input 1)	<input type="text" value="0"/>	<input type="checkbox"/>

At the bottom right of the table area is a 'Submit' button. Below the table is a 'STATUS INFORMATION' section with the text: 'CAS System 1:: Samsung; CAS 1 status:: Connected;'. The top right corner of the interface has 'ADMIN.' and 'LOG OUT' links, and an 'APPLY' button.

# TDX simulcrypt setup

- The simulcrypt feature operates on TDX digital output modules (ie. QAM, COFDM and IP)
- Here we have slot1:QAM, s3: PAL and s5:QAM
- The simulcrypt tab shows 2 possible scramblers (slot 1 and 5 – the QAM output modules).
- Select the one to be used and select the "Running mode" to the "Samsung DRM".
- Select the services to be scrambled (note the Samsung DRM does not use "access criteria")



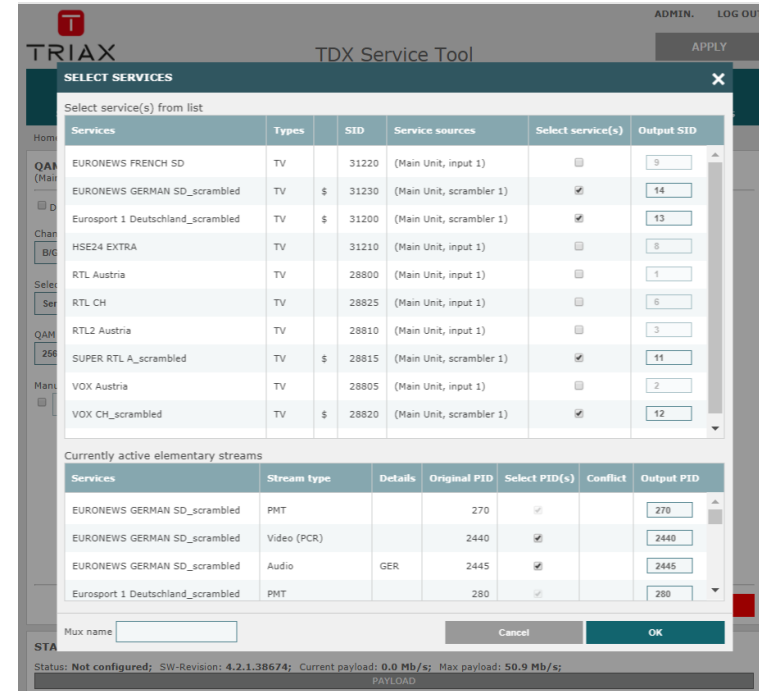
The screenshot shows the TRIAX TDX Service Tool interface. The top navigation bar includes 'System', 'Input', 'CA', 'Output', 'Network', 'Channel list', and 'Services'. The 'CA' tab is active. The main content area is titled 'SCRAMBLER SETUP (Main unit - Slot 1)'. It features a 'Running mode' dropdown menu set to 'Samsung DRM (24 servi)'. Below this is a table with columns: Services, Orig\_SID, SID, Service sources, Access criteria, and Selected. The table lists various services with their corresponding IDs and sources. A 'Submit' button is located at the bottom right of the table area. At the bottom of the interface, a 'STATUS INFORMATION' section shows 'CAS System 1:: Samsung; CAS 1 status:: Connected;'. The top right corner of the interface has 'ADMIN.' and 'LOG OUT' links, and an 'APPLY' button.

Services	Orig_SID	SID	Service sources	Access criteria	Selected
EURONEWS FRENCH SD	31220	9	(Main Unit, input 1)	<input type="text"/>	<input type="checkbox"/>
EURONEWS GERMAN SD	31230	10	(Main Unit, input 1)	<input type="text"/>	<input checked="" type="checkbox"/>
Eurosport 1 Deutschland	31200	7	(Main Unit, input 1)	<input type="text"/>	<input checked="" type="checkbox"/>
HSE24 EXTRA	31210	8	(Main Unit, input 1)	<input type="text"/>	<input type="checkbox"/>
RTL Austria	28800	1	(Main Unit, input 1)	<input type="text"/>	<input type="checkbox"/>
RTL CH	28825	6	(Main Unit, input 1)	<input type="text"/>	<input type="checkbox"/>
RTL2 Austria	28810	3	(Main Unit, input 1)	<input type="text"/>	<input type="checkbox"/>
SUPER RTL A	28815	4	(Main Unit, input 1)	<input type="text"/>	<input checked="" type="checkbox"/>
VOX Austria	28805	2	(Main Unit, input 1)	<input type="text"/>	<input type="checkbox"/>
VOX CH	28820	5	(Main Unit, input 1)	<input type="text"/>	<input checked="" type="checkbox"/>

# TDX simulcrypt setup

- The simulcrypt feature operates on TDX digital output modules (ie. QAM, COFDM and IP)
- Here we have slot1:QAM, s3: PAL and s5:QAM
- The simulcrypt tab shows 2 possible scramblers (slot 1 and 5 – the QAM output modules).
- Select the one to be used and select the "Running mode" to the "Samsung DRM".
- Select the services to be scrambled (note the Samsung DRM does not use "access criteria")
- Configure the output as normal using the services "\_scrambled"

**NOTE:** You must scramble and output the service(s) on the same output module !



**SELECT SERVICES**

Select service(s) from list

Services	Types	SID	Service sources	Select service(s)	Output SID
EURONEWS FRENCH SD	TV	31220	(Main Unit, input 1)	<input type="checkbox"/>	9
EURONEWS GERMAN SD_scrambled	TV	\$ 31230	(Main Unit, scrambler 1)	<input checked="" type="checkbox"/>	14
Eurosport 1 Deutschland_scrambled	TV	\$ 31200	(Main Unit, scrambler 1)	<input checked="" type="checkbox"/>	13
HSE24 EXTRA	TV	31210	(Main Unit, input 1)	<input type="checkbox"/>	8
RTL Austria	TV	28800	(Main Unit, input 1)	<input type="checkbox"/>	1
RTL CH	TV	28825	(Main Unit, input 1)	<input type="checkbox"/>	6
RTL2 Austria	TV	28810	(Main Unit, input 1)	<input type="checkbox"/>	3
SUPER RTL A_scrambled	TV	\$ 28815	(Main Unit, scrambler 1)	<input checked="" type="checkbox"/>	11
VOX Austria	TV	28805	(Main Unit, input 1)	<input type="checkbox"/>	2
VOX CH_scrambled	TV	\$ 28820	(Main Unit, scrambler 1)	<input checked="" type="checkbox"/>	12

Currently active elementary streams

Services	Stream type	Details	Original PID	Select PID(s)	Conflict	Output PID
EURONEWS GERMAN SD_scrambled	PMT		270	<input checked="" type="checkbox"/>		270
EURONEWS GERMAN SD_scrambled	Video (PCR)		2440	<input checked="" type="checkbox"/>		2440
EURONEWS GERMAN SD_scrambled	Audio	GER	2445	<input checked="" type="checkbox"/>		2445
Eurosport 1 Deutschland_scrambled	PMT		280	<input checked="" type="checkbox"/>		280

Mux name:

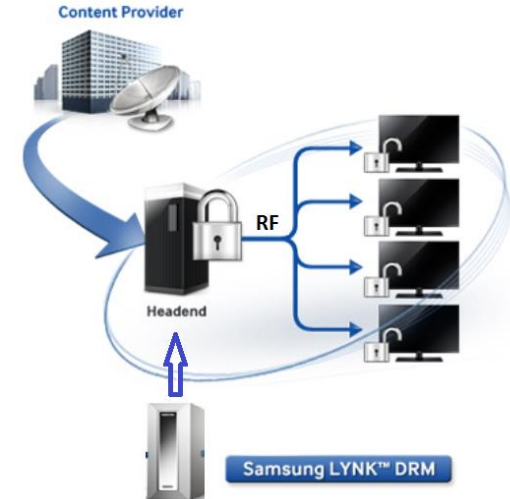
Cancel OK

Status: Not configured; SW-Revision: 4.2.1.38674; Current payload: 0.0 Mb/s; Max payload: 50.9 Mb/s; PAYLOAD

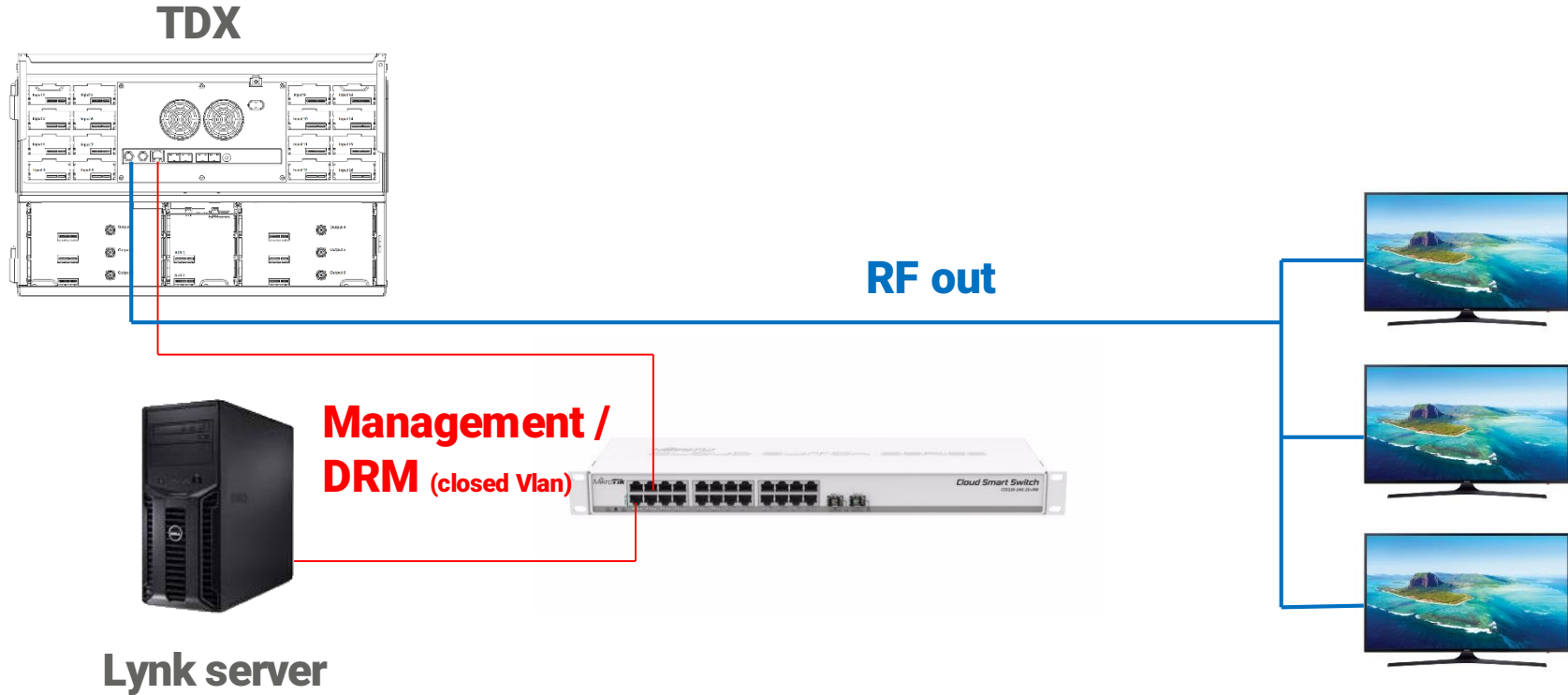


# Lynk server (which role in the system)

- The DRM (Digital Rights Management) server
- Provides the:
  - ECM (Entitled Control Message)
  - EMM (Entitled Management Message)
- Only works with TDX RF output (DVB-T and DVB-C).
  - IP-out requires additional Sinc server



# Principle diagram RF-out



**THANK YOU FOR ATTENDING**