KVM-over-IP Switch
Raritan Dominion KX IV-101

Manual



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1 History of the Manual

The following editions of the manual have been released:

Version	Comments
06/2025	Setup with RM Shell 6.1

Note

Please use also the following video "Settinig Up a Raritan Connection in VisuNet RM Shell 6.1 and Later Versions" video to get addtional information:
https://www.youtube.com/watch?v=4kylBIwLOyY

Figure 1.1

2 Introduction

2.1 Content of this Document

This document contains information that you need in order to use your product throughout the applicable stages of the product life cycle. These can include the following:

- Product identification
- Delivery, transport, and storage
- Mounting and installation
- Commissioning and operation
- Maintenance and repair
- Troubleshooting
- Dismounting
- Disposal



Note

This document does not substitute the instruction manual.



Note

For full information on the product, refer to the instruction manual and further documentation on the Internet at www.pepperl-fuchs.com.



Note

For specific device information such as the year of construction, scan the QR code on the device. As an alternative, enter the serial number in the serial number search at www.pepperl-fuchs.com.

The documentation consists of the following parts:

- Present document
- Instruction manual
- Datasheet

Additionally, the following parts may belong to the documentation, if applicable:

- EU-type examination certificate
- EU declaration of conformity
- Attestation of conformity
- Certificates
- Control drawings
- Functional safety manual
- Additional documents

2.2 Manufacturer

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Internet: www.pepperl-fuchs.com

2.3 Target Group, Personnel

Responsibility for planning, assembly, commissioning, operation, maintenance, and dismounting lies with the plant operator.

Only appropriately trained and qualified personnel may carry out mounting, installation, commissioning, operation, maintenance, and dismounting of the product. The personnel must have read and understood the instruction manual and the further documentation.

Prior to using the product make yourself familiar with it. Read the document carefully.

2.4 Symbols Used

This document contains symbols for the identification of warning messages and of informative messages.

Warning Messages

You will find warning messages, whenever dangers may arise from your actions. It is mandatory that you observe these warning messages for your personal safety and in order to avoid property damage.

Depending on the risk level, the warning messages are displayed in descending order as follows:



Danger!

This symbol indicates an imminent danger.

Non-observance will result in personal injury or death.



Warning!

This symbol indicates a possible fault or danger.

Non-observance may cause personal injury or serious property damage.



Caution!

This symbol indicates a possible fault.

Non-observance could interrupt the device and any connected systems and plants, or result in their complete failure.

Informative Symbols



Note

This symbol brings important information to your attention.



Tip

This symbol brings an useful tip to your attention.



Example

This symbol provides an example of the issue described.



Action

1. This symbol indicates a paragraph with instructions. You are prompted to perform an action or a sequence of actions.

2025-06

3 Product Description

3.1 Introduction

In this quick installation guide, the configuration of the VisuNet RM Shell 6.1 (or newer) and the Raritan Dominion® KX IV-101 KVM-over-IP switch is described.

The Raritan KX IV-101 #70118493 is available as an accessory and must be ordered separately.

With the VisuNet RM Shell 6.1 (or newer) the embedded software client that allows connection to Raritan® KVM-over-IP switches got further improved and the setup process of the connection highly simplified.

The KVM-over-IP client allows a point-to-point connection between a VisuNet Remote Monitor and a host PC to be set up in the non-explosion-hazardous area.

The local host PC can be shared and remotely operated by a second user on the remote monitor in the explosion-hazardous area.

4 Raritan Dominion KX IV-101

4.1 Device Interfaces

The Raritan Dominion KX IV-101 KVM-over-IP switch has multiple interfaces that are used to connect a VisuNet Remote Monitor (RM) / Box Thin Client (BTC) to a local Host PC:

Front View

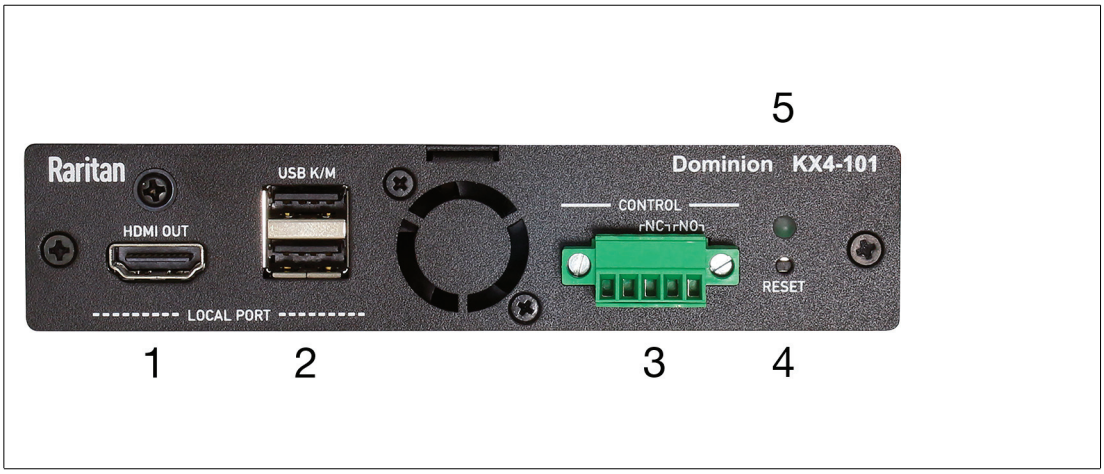


Figure 4.1

(1) Local Port HDMI Out to local monitor

(2) Local Port USB Keyboard/Mouse

(3) Input/Output Ports

(4) Reset

(5) Power Status LED:

- Green ON: Power on
- Green BLINKING: Remote target connection

Rear View



Figure 4.2

(1) Power 5V/4A from power adapter

(2) RJ-45 LAN Network Port with 2 LEDs for network speed and activity:

- Amber OFF/Green OFF: Link Inactive
- Amber ON/Green OFF: 1000 MBps Link/No Activity
- Amber BLINKING/Green OFF: 1000 MBps Link/Activity(RX, TX)
- Amber OFF/Green ON: 100 MBps Link/No Activity
- Amber OFF/Green BLINKING: 100 MBps Link/Activity (RX, TX)
- Amber ON/Green ON: 10 MBps Link/No Activity
- Amber BLINKING/Green BLINKING: 10 MBps Link/Activity (RX, TX)

(3) Serial Admin Port

(4) USB In from target server

(5) HDMI In from target server

There are multiple setup options for the KVM switch:

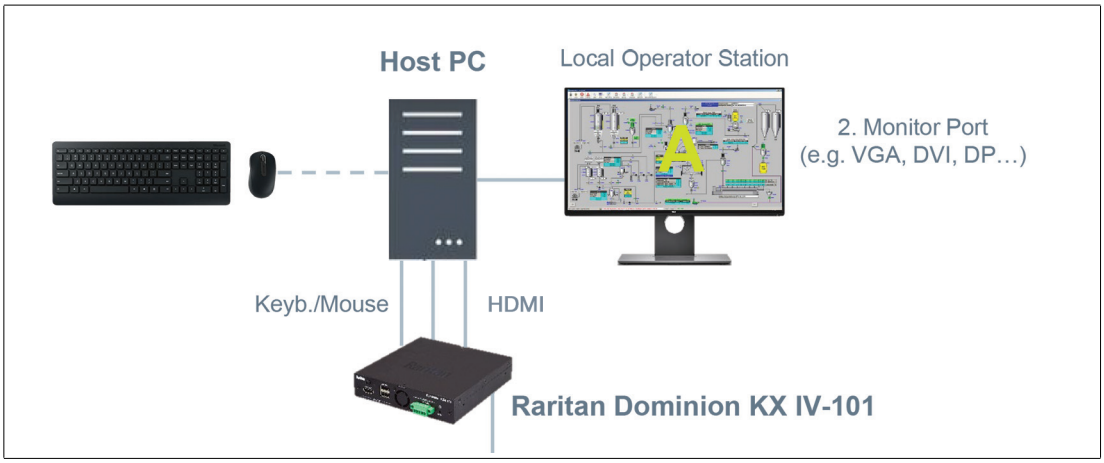


Figure 4.3

Connection with Local Monitor (connected to host PC):

Use this setup if you want to operate the host PC locally and via an RM that is connected via LAN. (recommended setup)

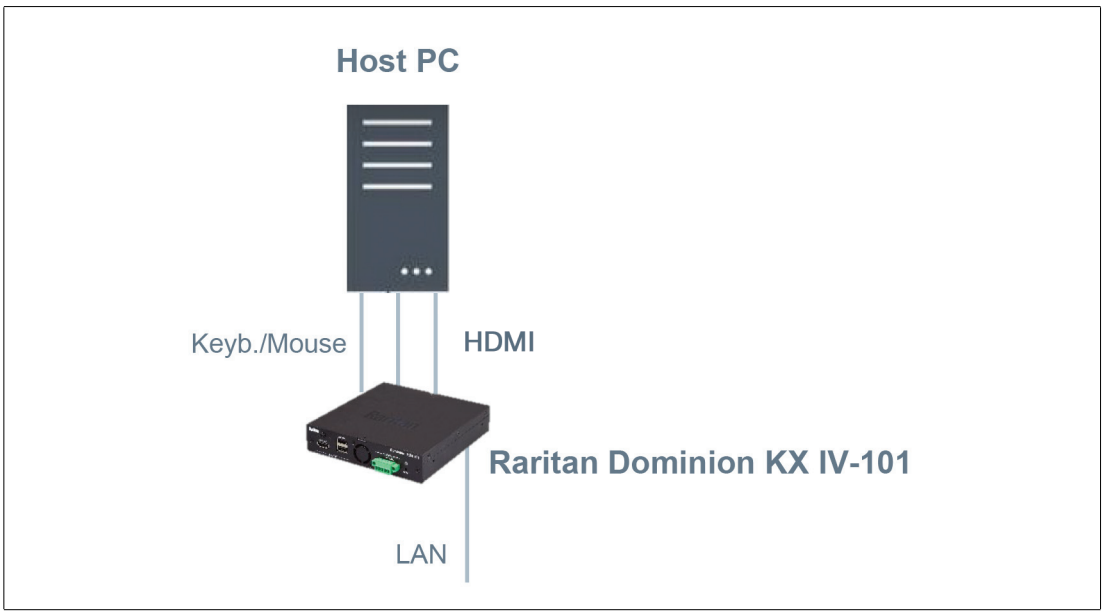


Figure 4.4

Connection without Local Monitor:

Use this setup if you do not want to locally operate the host PC but only want to operate the host PC via an RM that is connected via LAN.

4.2 Application Setup

In addition to the local setup of the KVM switch and the host PC, there are also multiple options for connecting the KVM switch to an RM and integrating the KVM switch into a network:

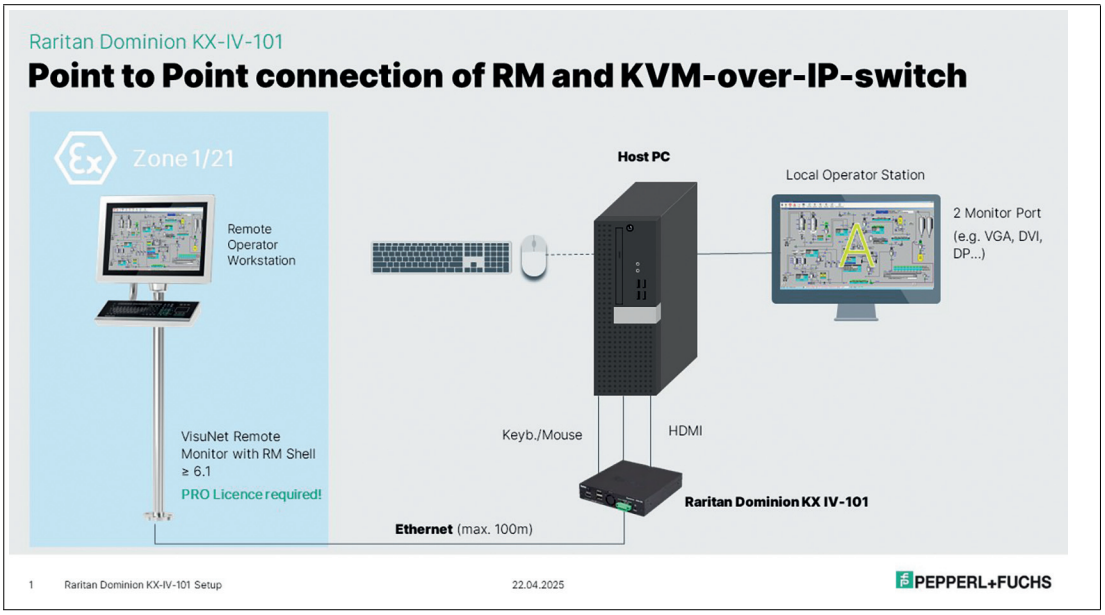


Figure 4.5 Point to Point connection of an RM and a KVM-over-IP switch

The explanation on how to setup the connection of the RM and the KVM-over IP switch is described in this brief instruction.

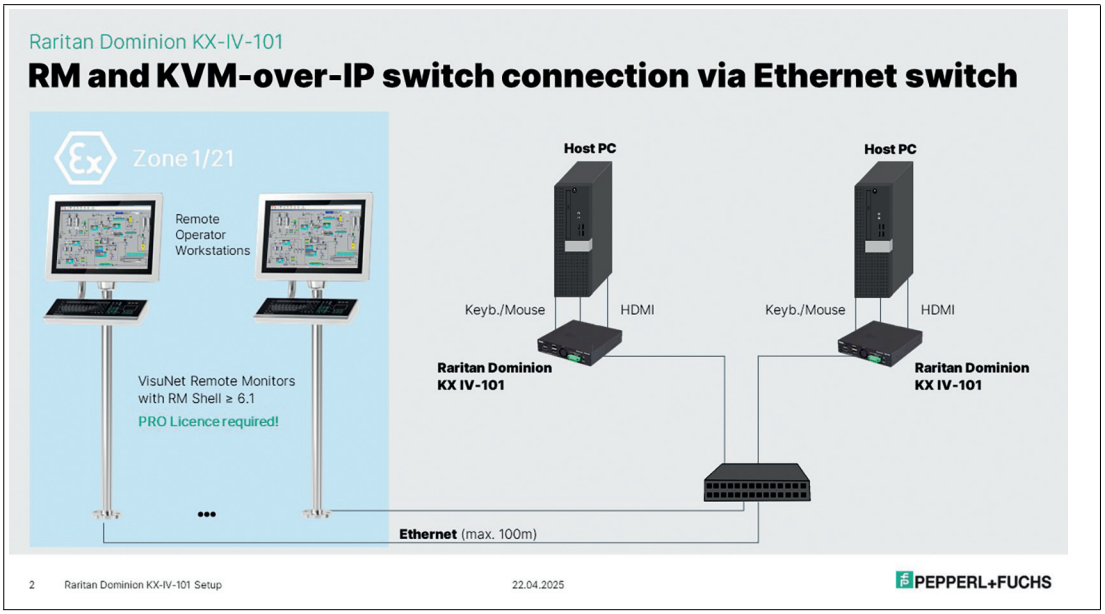


Figure 4.6 RM and KVM-over-IP switch connection via Ethernet switch

If you require further information on how to setup the connection via Ethernet switch, refer to the Raritan and the VisuNet RM Shell manual.

5 Preparing VisuNet RMs

In this section, the steps for a direct connection between an RM and a KVM switch are described. Before you can connect a VisuNet RM Shell KVM profile to a host PC, you must configure the KVM switch.

Note

Note: The following steps describe the configuration of the KVM switch from an RM. The setup can also be performed from a standard PC.

Required Setup:

Connect the Raritan Dominion KX IV-101 KVM's USB and HDMI cables to a host PC.

Connect the LAN cable of the KVM directly to the Remote Monitor or the box thin client from which you want to configure your Raritan Dominion KX IV-101 KVM switch.

5.1 VisuNet RM Shell Settings

Note

The KVM-over-IP client requires an VisuNet RM Shell PRO License to be unlocked. Refer to the VisuNet RM Shell manual for further information.

Enable DHCP

Switch the user role to Administrator. Enable the DHCP Settings in the System Settings (Network) of the RM/BTC.

Create a new profile with the Profile ManagementApp

1. To open the profiles management app, click the appropriate icon on the home screen.
2. To create a new connection profile, click "create".
3. Select your required connection profile type "Raritan KVM" and click "Ok."

   ↳ The selected connection profile has been created. The new profile's main settings open.
4. Configure the new profile with the following parameters:
   Profile Name: Use a meaningful name for the connection (e.g. Raritan KVM)
   KVM Switch Network Name / IP address: kvm.local

Note

After configuring the KVM console the username and password need to be added in a final step. See chapter 6 regarding username and password settings.

5. Save the changes by clicking "Apply" and click "Open" (Open Remote Console).

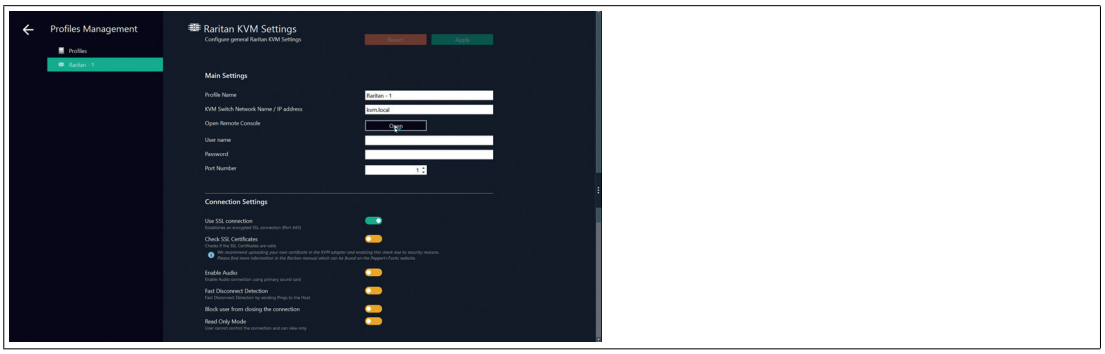


Figure 5.1

Note

When first setting up the kvm.local connection a warning "Your connection isn't private" might appear. Please enter "advanced" and continue to kvm.local.

6. To continue, please see chapter 6.

Check SSL Certificates enabled (recommended)

Note

Important: "Check SSL Certificates" is per default disabled. Therefore there is no check if the SSL Certificate is valid. Due to security reasons we highly recommend to create a self-signed certificate or use a custom certificate on the KVM adapter and enable the "Check SSL Certifcate" function again.

1. Enable the "Check SSL Certifcate" function.

Note

A web service's certificate provides identification of the server or KVM switch. If you enable the "Check SSL Ceertificate" and the certificate names mismatch the address, it might indicate that your connection has been intercepted or that the server is misrepresenting its identity. By default the Raritan KVM switch uses a certificate with the common name "Raritan KVM" and therefore a name mismatch warning occurs. For point-to-point connections or local intranets the risk is low.

2. For higher security needs create or import your own certificate where the common name matches the KVM switch address. Refer to option "Create a self-signed certificate or use a custom certificate on the KVM adapter" (see chapter 5.2).

3. Click "ok" in the occurred warning.

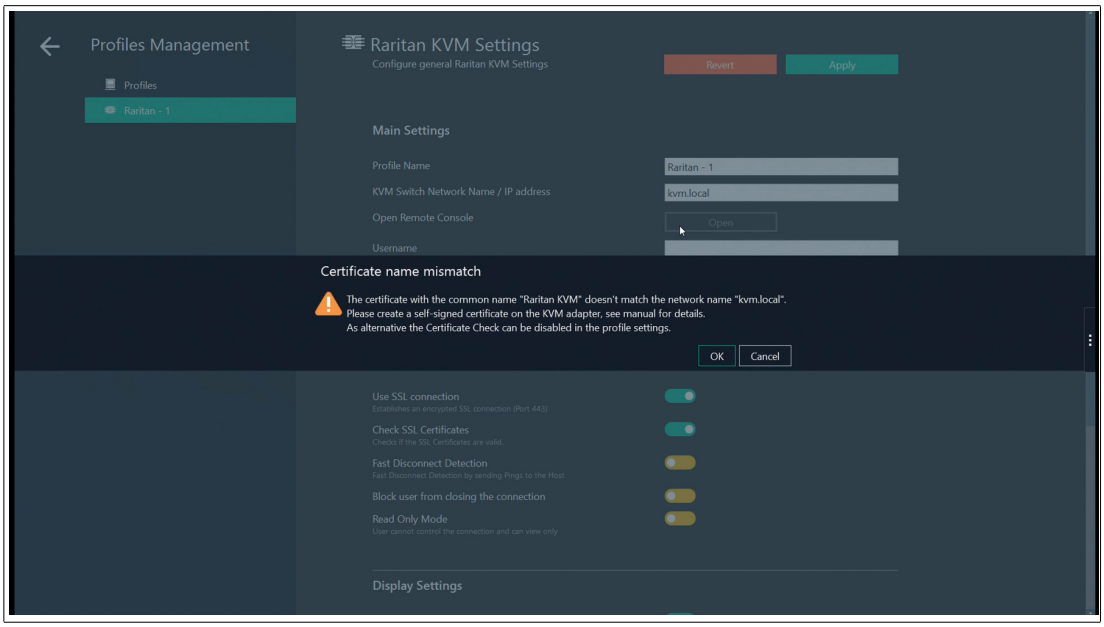


Figure 5.2

4. To proceed further, accept the import of the "Raritan KVM" certificate into the "Trusted People" certificate store. Click "Yes".



Figure 5.3

↳ A notification pops up, that the certificate is successfully imported.

To continue with the configuration, please see chapter 6.

5.2 Create a self-signed certificate or use a custom certificate on the KVM adapter

Procedure

1. Click "OK" in the occurred warning.

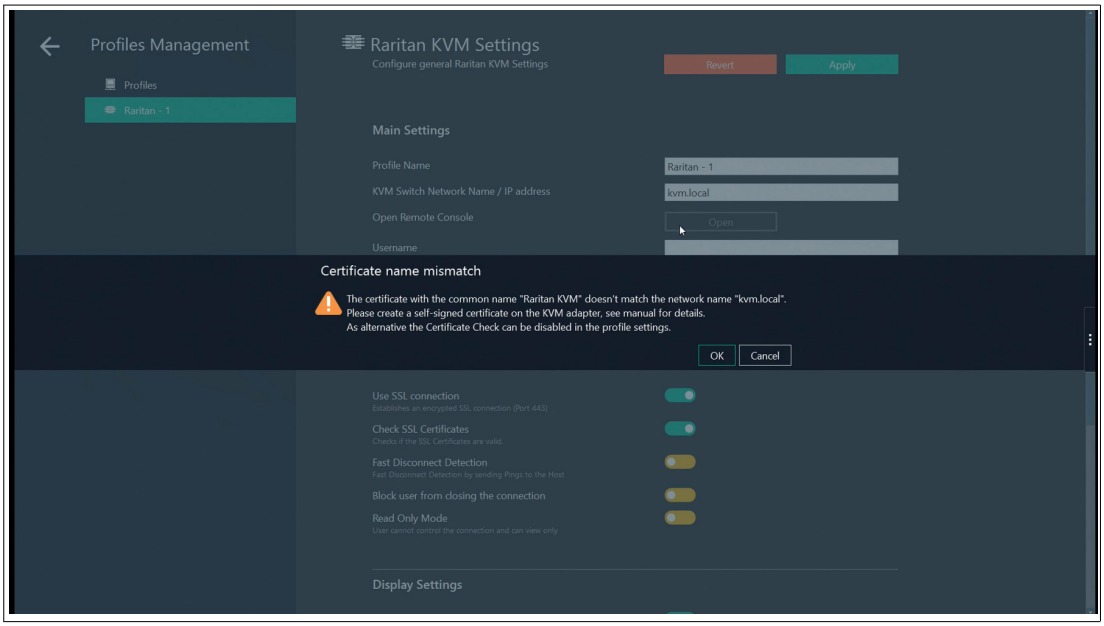


Figure 5.4

2. Another security alert pops up and asks you if you want to import the "Raritan KVM" certificate to the "Trusted People" certificate store.
3. Click "No" and either create a self-signed certificate or import a certificate provided by your IT department.

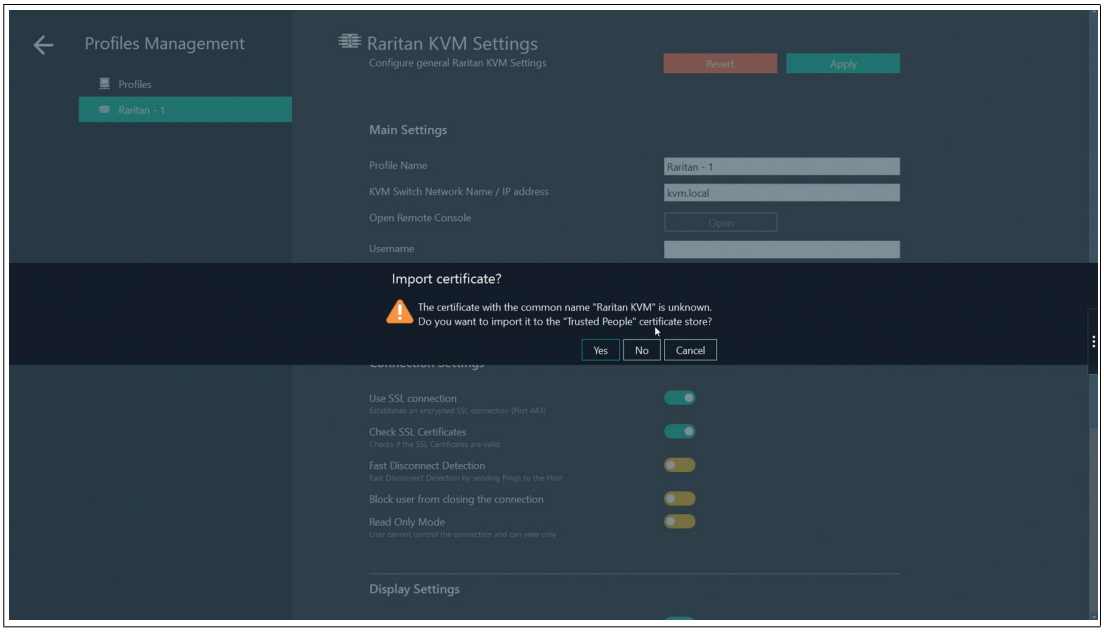


Figure 5.5

Create your own key and certificate

1. Log in to the Remote Console for the KVM as described in chapter 6.

Note

This step is only required if you do not have a valid "company certificate" that can be used on the KVM switch.

2. Navigate to "Security"
3. "SSL Certificate"

Caution!

The times on the RM/BTC and Raritan Dominion KX IV-101 KVM switch must match before creating a self-signed certificate!

Please see chapter 6.2.

4. Fill in the required information of the marked boxes and create a new certificate with your organization information.
5. If all required information is available, you are able to click “Create Self-Signed Certificate”.

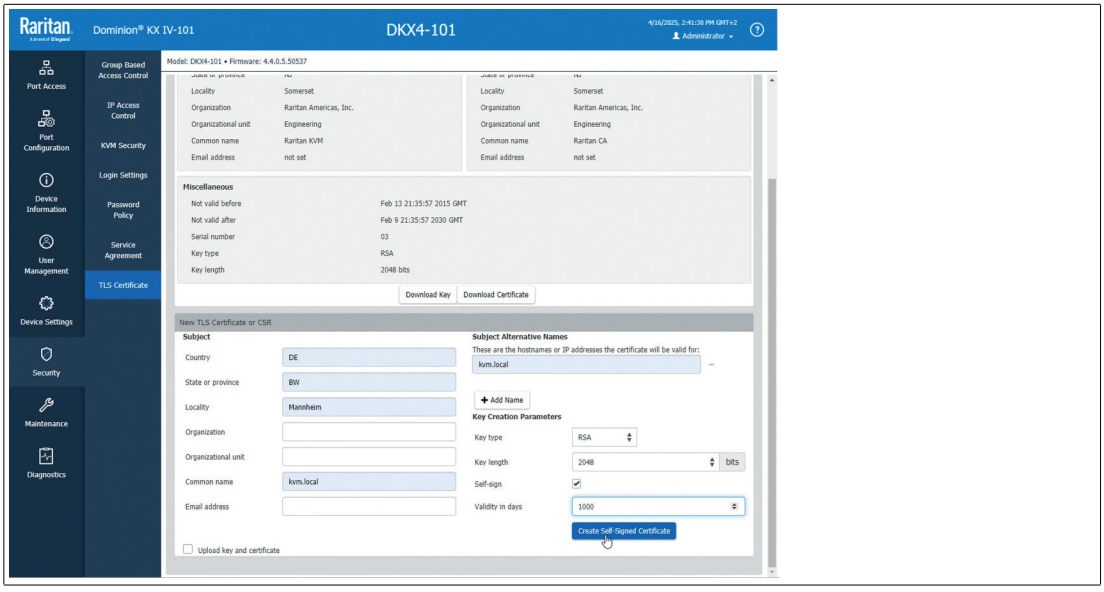


Figure 5.6

Caution!

Important!

The common name must be equivalent to the (future) Network name or IP address.

6. Click "Install" to finalize the installation.

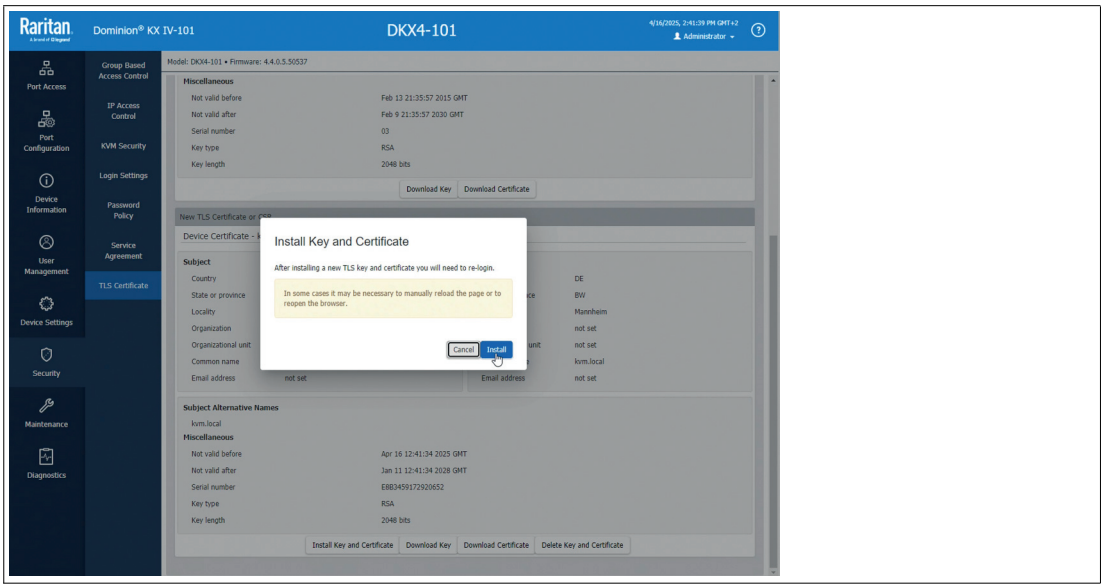


Figure 5.7

7. Ignore the popping up Windows® warning and continue with the configuring steps in chapter 6.
8. Reboot the Raritan KVM Switch to integrate the certificate.

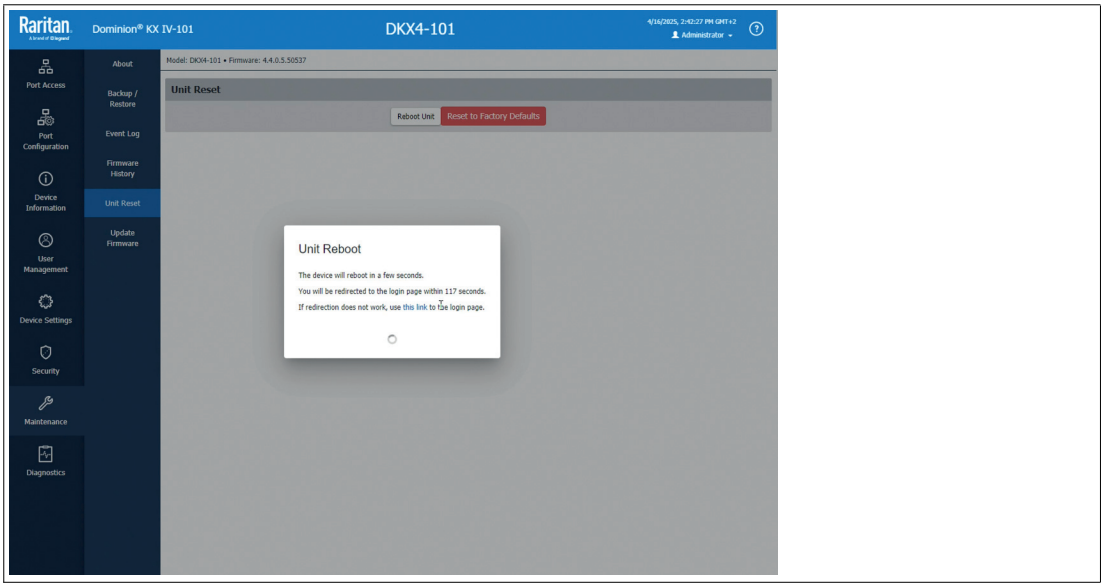


Figure 5.8

9. Enable "Check SSL certificate" in the Raritan KVM Settings.
10. Open the console once to import Certificate (Dialogue must appear).

6 Configuring the KVM Switch

Log in to Remote Console for the KVM

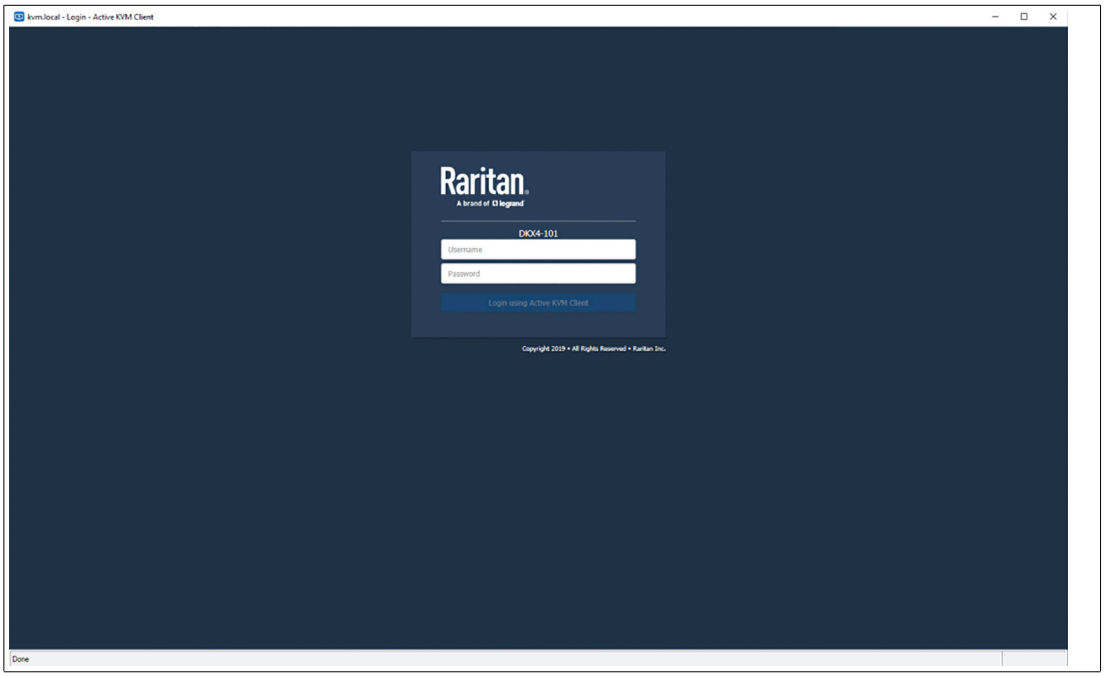


Figure 6.1

Use the following default Login:

Username: admin

Password: raritan

6.1 Adjust the login password

As Administrator you are immediately forced to change the default login password.



Figure 6.2

6.2 Setup Time and Date

Check the KVM switch time.

Navigate to "Device Settings Date/Time" and update the date and time.

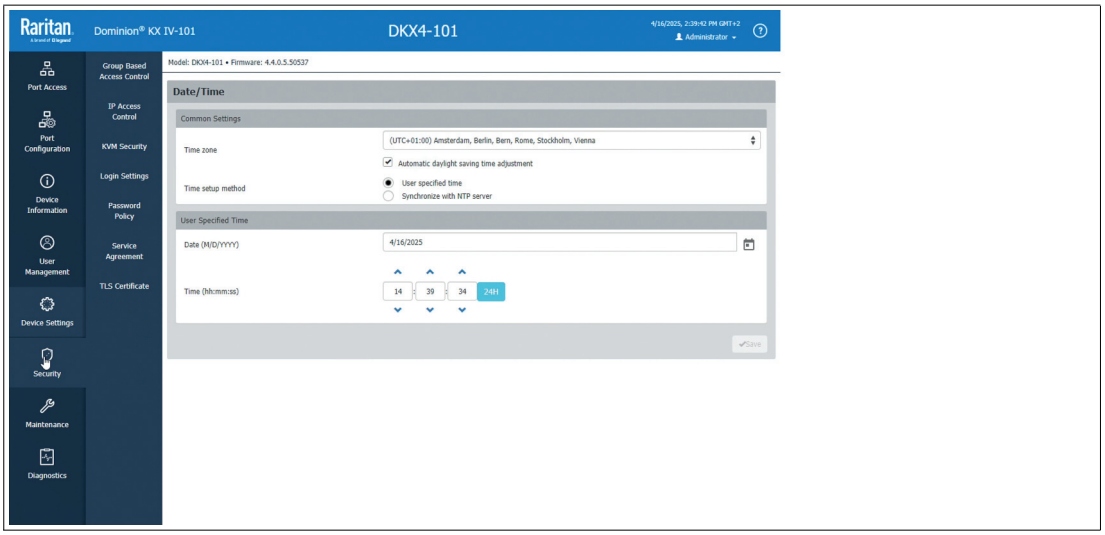


Figure 6.3

Caution!

The times on the RM/BTC and Raritan Dominion KX IV-101 KVM switch must match.

6.3 Enable Direct Port Access (DPA)

The VisuNet RM Shell requires DPA to be activated on the KVM switch.

Enable DPA

1. Navigate to "Security -> KVM Security and enable "Enable Direct Port Access via URL."
2. Save the Settings.

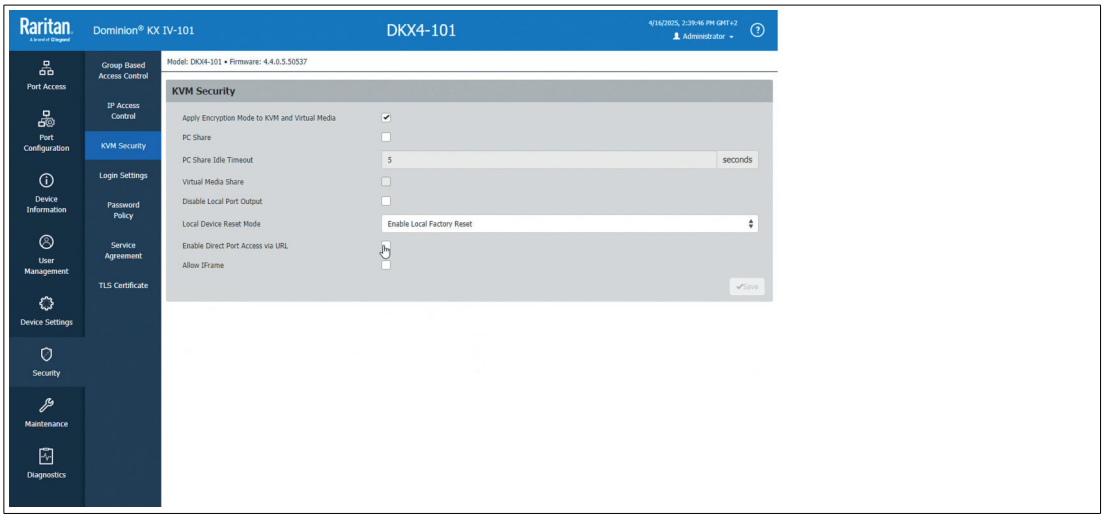


Figure 6.4

Note

The DHCP is enabled per default. If a static IP address is required,refer to the Raritan's manual as well as the VisuNet RM Shell manual to set the static IP address there as well.

Note

For further information regarding the configuration of the Dominion KX IV-101 and the entire Raritan refer to the Raritan's website (www.raritan.com).

6.4 Set the Idle Timout Period

Procedure

1. Navigate to "Security" -> "Login Settings" and set the Idle timeout period to infinite.
2. Save the Settings.

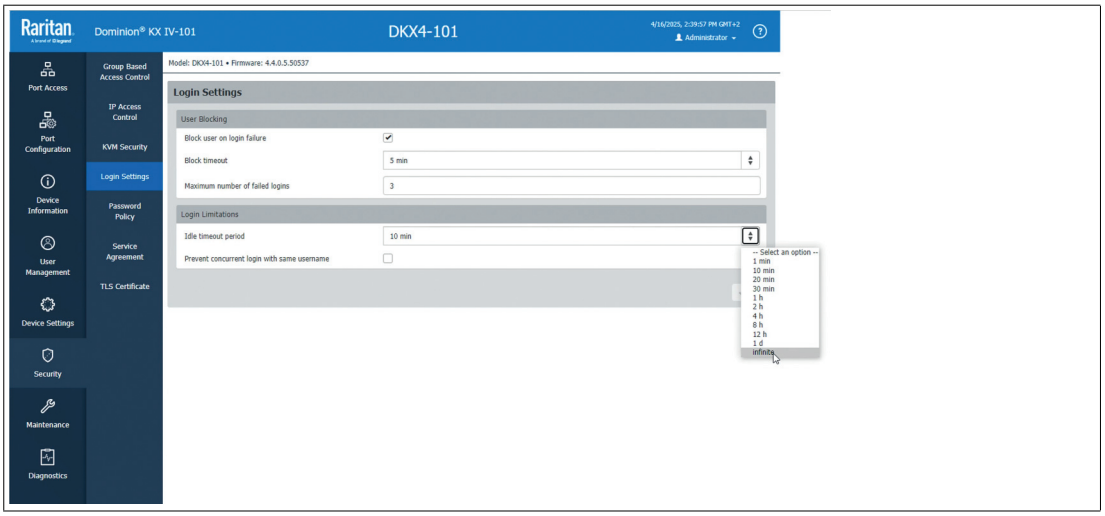


Figure 6.5

7 Establish the Connection

Setting Username and Password in the VisuNet RM Shell Raritan KVM Settings

Note

It is recommended to create a user within the Raritan Dominion KX IV-101 KVM console with limited rights. Refer to the Raritan documentation.

Enter the Raritan KVM Settings again via profiles management. Add the username (factory default: admin) and Password (factory default: raritan) to the Raritan KVM Settings of the VisuNet RM Shell and apply the settings.

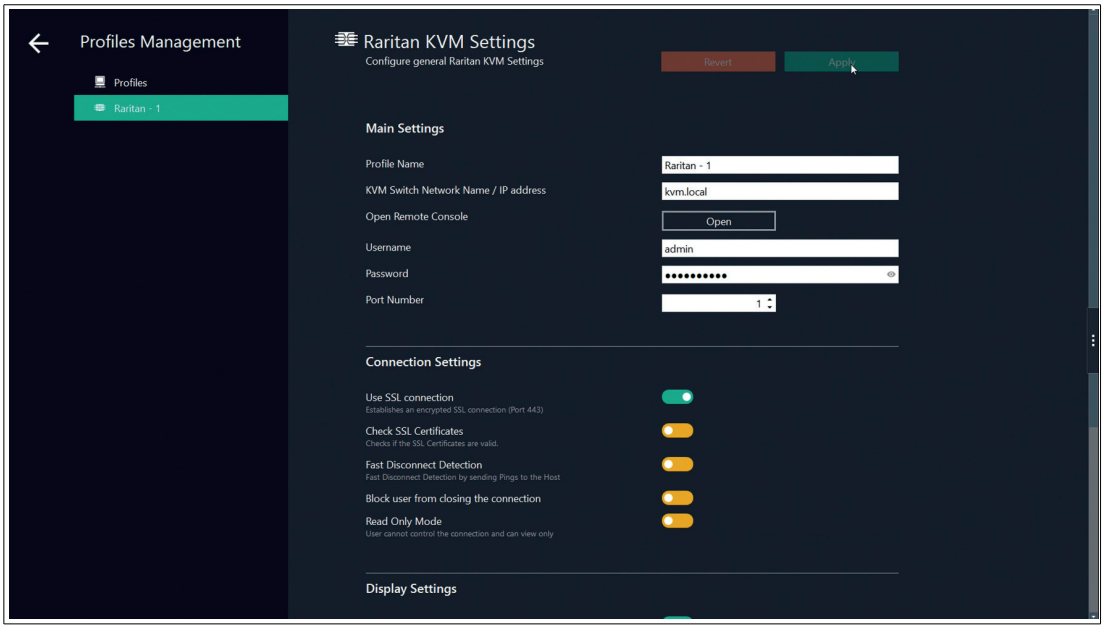


Figure 7.1

The KVM switch and KVM profile are now configured, and operators can start them by clicking the profile on the home screen of the VisuNet RM Shell.

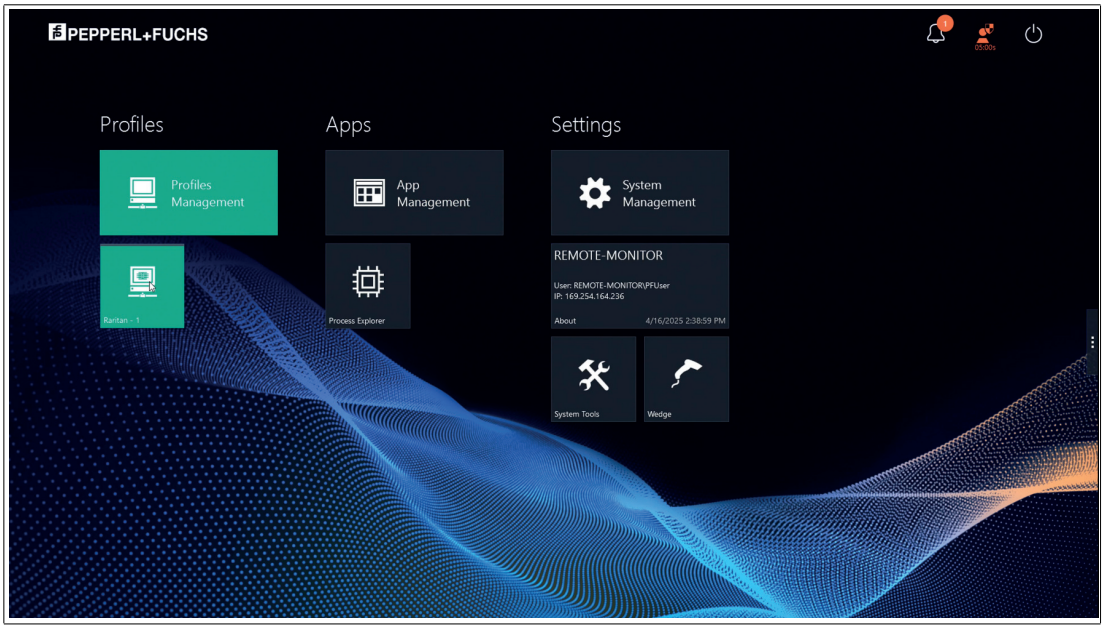


Figure 7.2

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Explosion Protection

- Intrinsic Safety Barriers
- Signal Conditioners
- FieldConnex® Fieldbus
- Remote I/O Systems
- Electrical Ex Equipment
- Purge and Pressurization
- Industrial HMI
- Mobile Computing and Communications
- HART Interface Solutions
- Surge Protection
- Wireless Solutions
- Level Measurement

Industrial Sensors

- Proximity Sensors
- Photoelectric Sensors
- Industrial Vision
- Ultrasonic Sensors
- Rotary Encoders
- Positioning Systems
- Inclination and Acceleration Sensors
- Fieldbus Modules
- AS-Interface
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