



ROAM Camera Cart Setup and Commissioning Guide

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About this guide

This guide covers what the site network needs, setup details for IT teams, connecting the ROAM Camera Cart to a VMS other than VALT, and checking the installation. It is for IVS installers, IVS-certified technicians and customer IT teams.

- To run the setup wizard, follow the ROAM Camera Cart Quick Start. Section 2 of this guide adds the details IT teams need.
- For everyday use and settings, see the ROAM Camera Cart User Manual.

CAUTION Do not open the cart

The ROAM Camera Cart ships fully assembled. Do not open or disassemble any part of the cart. All repairs must be performed by an IVS-certified technician.

1. Site requirements

Confirm these items with the site's IT team before setup begins.

IMPORTANT

Wireless video depends on a solid, reliable Wi-Fi connection. Involve the site's IT team before the cart is installed on a wireless network.

Requirement	Details
Power	A wall outlet for the charger where the cart is stored
Wired connection	A network jack where the cart will be used. Connect it to the Network port on the back of the cart with the supplied Ethernet cable
Wireless connection	A 2.4 GHz or 5 GHz Wi-Fi network. Signal strength of -50 to -67 dBm at every location where the cart records
Bandwidth	At least 50 Mb/s of consistent bandwidth between the cart and the VALT server or VMS

Requirement	Details
IP address	An address that does not change: a DHCP reservation for the cart, or a static IP address with its subnet, gateway and DNS servers. Alternatively a FQDN can be used, but it must be kept current with the address of the ROAM cart.
Firewall	Two-way access between the cart and the VALT server or VMS. See section 6 for the ports the cart uses

Information to collect

- **Wireless networks:** the network name (SSID), the authentication type, and either the shared password (preshared key) or, for enterprise networks, the EAP method, username and password.
- **Static IP address (if used):** the IP address and subnet (CIDR), gateway and two DNS servers.
- **VALT (if used):** the VALT server address, and the username and password of a VALT account with admin access. The name of the VALT room for this cart, if one already exists.
- **Time server (optional):** the address of the site's NTP server, if the site uses its own.

2. Setup details for IT teams

Follow the setup wizard in the Quick Start. This section adds details for the screens that need information from the IT team.

IMPORTANT

Complete every wizard screen in order. Touching **Skip** can leave the network or VMS settings unfinished. Remaining settings can be configured via the on screen settings utility.

Wireless authentication

On the wireless settings screen, **Authentication Type** lists these values:

Network type	Authentication Type	Then enter
Shared password (PSK)	wpa, wpa2-psk or wpa3-psk	Preshared Key
Enterprise sign-in (EAP)	wpa-eap, wpa2-eap or wpa3-eap	EAP Method (peap, tls or ttls), EAP Username , EAP Password

After **Connect** is touched, the cart tests the connection for about 10 seconds. The screen does not respond during the test.

IP address

The IP address screen sets the address the cart uses on the site network, on the wired or wireless connection chosen in the wizard.

- **DHCP:** the network assigns the address. Set up a DHCP reservation for the cart.
- **STATIC:** enter **IP Address/CIDR** and choose the subnet, then enter the **Gateway** and both **DNS Servers**.

IMPORTANT

A VMS reaches the cart at this address. If the address changes, the VMS loses the cart.

To change the address after setup:

1. Open Settings > ROAM Configuration.
2. For a wireless connection, set **ROAM Wifi IP Configuration**. For a wired connection, set **ROAM Wired IP Configuration**.
3. For **Static**, enter the IP address, subnet mask and gateway, and **DNS Server 1** and **DNS Server 2**.

IMPORTANT

Do not change Settings > Network. It sets the control display's address inside the cart, not the cart's address on the site network.

VALT

- Enter the **VALT Address** with `https://` when the VALT server uses HTTPS, for example `https://valt.example.edu`.
- The VALT account must have admin access. Without it, the wizard shows **No Rooms Found**.
- The cart records to one VALT room. While the cart is connected to VALT, the record icon appears only when a room is assigned and the room is available.

Time server

1. Open Settings > Time.
2. Check that **Enable NTP** is on.
3. To use the site's own time server, enter its address in **NTP Server**.

NOTE

If no NTP server is specified, the cart uses `pool.ntp.org`.

3. Use the cart with another VMS

The cart's camera and both encoders provide separate video streams that a VMS can record. The VMS connects to the cart; the cart does not connect to the VMS, and no VMS controls appear on the cart. In the setup wizard, set **Select VMS** to **None**.

1. On the control display, touch the info icon.
The Information screen shows the full address of each stream, with the cart's current IP address.
2. Add each stream to the VMS using the addresses below.
3. Enter the device username and password in the VMS. The defaults are `root` and `admin51` for the camera and both encoders.

Device	Video stream	Web interface
Camera	<code>rtsp://username:password@<cart IP>/axis-media/media.amp</code>	<code>http://<cart IP></code>
Encoder 1	<code>rtsp://<cart IP>:8554/live/0</code>	<code>http://<cart IP>:8080</code>
Encoder 2	<code>rtsp://<cart IP>:9554/live/0</code>	<code>http://<cart IP>:9080</code>

The Information screen shows addresses in the form `rtsp://username:password@<cart IP>/...`

IMPORTANT

The cart ships with default device passwords. IVS recommends that they be changed. Changing a device password in the VMS does not change it on the cart.

4. Verify the installation

Complete these checks before handing the cart over.

- ☐ The live camera view appears. Touching the view points the camera, and pinch and spread zoom it.
- ☐ Each connected HDMI source appears in the camera icon list and shows a picture.
- ☐ The Wi-Fi icon shows connected (wireless installations).
- ☐ The Information screen shows the cart's site network address, and it matches the DHCP reservation or static IP address.
- ☐ The date, time and time zone on the screen are correct.
- **With VALT:**
 - ☐ The VALT icon appears in the bottom-left corner.
 - ☐ A test recording started from the cart appears in the assigned room in VALT, with video and audio.
 - ☐ The cart appears as a camera in the assigned room in VALT.
- **With another VMS:**
 - ☐ The VMS shows live video from the camera and each encoder in use.
- **On its own:**
 - ☐ A test recording appears on the Recordings screen and plays back.
 - ☐ The download page opens from a computer on the site network.
- ☐ Delete test recordings from the cart.
- ☐ Record the cart's address and settings for the site's IT team. Do not record passwords in shared documents.

5. Troubleshooting setup

For problems during everyday use, see the User Manual.

Problem	Solution
Provisioning Failed after Get Started	Turn the cart off and on again, then run the wizard again. If the message returns, this indicates an issue with the internal router, contact IVS support.
Wireless Connection Failed	Check the SSID, authentication type and password with the IT team. In Settings > ROAM Configuration, check that Radio Frequency matches the network's band. Some Cisco networks require Management Protection to be off.
Error: No WAN IP found on ROAM bridge	The cart has no address on the site network. Wired: check the cable and the network jack. Wireless: check the wireless connection. Static: check the address, subnet and gateway.
Failed to connect to VALT	Check the VALT address, including <code>https://</code> when the server uses HTTPS. Check the username and password, and that the account has admin access. Check that the cart can reach the VALT server on port 80 or 443.
No Rooms Found	Check that the VALT account has admin access. Create the room in VALT, then select it.
The record icon does not appear with VALT	No VALT room is assigned. Assign one in Settings > VALT, or run the wizard again.
A VMS cannot reach the cart	The cart's IP address may have changed. Set up a DHCP reservation or a static IP address. Check the firewall for the ports in section 6.
The clock is wrong	Check the time zone and NTP server in Settings > Time, and that the cart can reach the NTP server.

If a problem is not listed, contact IVS support. Support may ask for Settings > System > **View Logs**.

6. Network reference

Ports on the cart

These ports are reached at the cart's IP address on the site network.

Port	Use
80, 443	Camera web interface
554	Camera video stream (RTSP)
8080 / 8554	Encoder 1 web interface / video stream
9080 / 9554	Encoder 2 web interface / video stream
10443	Video download page
22	Control display access, for troubleshooting by IVS support only. Not required for normal operation

- **With VALT:** the VALT server connects to the cart's streams, and the cart connects to the VALT server on port 80 and/or 443 to start recordings, list rooms and upload.
- **With another VMS:** the VMS connects to the cart. The cart does not connect to the VMS.

IVS does not prescribe firewall rules; open the ports the site's use requires.

Internal network

The cart's devices use fixed addresses on an internal network, 192.168.20.0/28. This network stays inside the cart and does not need to be routed on the site network.

Address	Device
192.168.20.1	Router
192.168.20.2	Camera
192.168.20.3	Encoder 1
192.168.20.4	Encoder 2
192.168.20.5	Control display

7. Support

- Web: www.ivs.help
- Phone: 262-746-9290, option 2
- Email: support@ipivs.com