



VRTY
EDUCATION
THROUGH VR

**GUIDE FOR
VRTY STREAMER BOX**

Introduction



The VRTY Streaming Box helps with faster project streaming in a classroom.

- Create projects on the VRTY platform and download the project to your Streamer Box.
 - The Streamer Box sits locally and connected to your IT system.
 - Up to 30 devices can connect to the Streamer Box via your internal WiFi at a time.
 - Viewers select your project and start viewing.
 - Each Streamer Box comes with an SD card (16G storage standard), so you can hold as many VRTY projects as you want on the Box (dependent on your SD card GB size).
 - Each Streamer Box can be purchased as many additional as you need.
 - Note: Streamer Box hardware components may change from time to time depending on supply and availability.
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Specification

Hardware Specification

The VRTY Streamer box is built on top of third party single-board computer called Raspberry Pi or alternatively Orange Pi. It uses the AllWinner H6 SoC, and has 1GB LPDDR3 (shared with GPU) SDRAM.

Software Specification

The VRTY streamer box uses Ubuntu core as an operating system. Ubuntu Core is a lean, strictly confined and fully transactional operating system. We have designed it from the ground up, to focus on security and simplified maintenance, for appliances and large device networks.

The VRTY streaming server will be pre-installed on each Streamer Box. This streaming server is light yet powerful enough to stream VR contents to up to 30 students concurrently. The VRTY development team will constantly provide new updates and maintenance remotely and streamer box can be automatically updated.

Users will be able to stream VRTY projects from the streamer boxes through device browsers. Supporting browsers include Chrome, Safari and Edge.

CPU	H6 Quad-core 64-bit ARM Cortex™-A53
GPU	<ul style="list-style-type: none">• High-performance multi-core GPU Mali T720• OpenGL ES3.1/3.0/2.0/1.1• Microsoft DirectX 11 FL9_3• ASTC(Adaptive Scalable Texture Compression)• Floating point operation greater than 70 GFLOPS
Memory (SDRAM)	1GB LPDDR3 (shared with GPU)
Onboard Storage	TF card (Max. 32GB) /MMC card slot
Onboard Network	10/100M/1000M Ethernet RJ45
Network Chip	RTL8211
Audio Input	MIC
PMU	AXP805
USB 2.0 Ports	One USB 2.0 Host, one Micro USB 2.0
Low-level peripherals	26 Pins Header
GPIO(1x3) pin	UART, ground.
LED	Power led & Status led
IR Receiver	Yes



Installation

1. Power up streamer box with the provided power cable.
 2. Connect streamer box to the school network with a **CAT6 cable**. There are 2 requirements for the network used by stream box:
 - a. The network must be the same network as the **WIFI network** that the teachers and students can get access to.
 - b. The network must have **access to the internet**.
 3. Stream box will need 5 minutes to initialise all its components and try to connect to VRTY server over the internet.
 4. Log into pro.vrty.io with the approved teacher account and navigate to Streamer page via the Menu on the left.
 5. Click Devices to find out if the stream box is online.
 6. If the stream box is still offline, it means stream box having difficulty to communicate with the VRTY server. The connection to VRTY server may be blocked by the school firewall. Please check [page 5](#) for **whitelisting VRTY platform**.
 7. If stream box is still not online, please go to [page 6](#) for **entering proxy settings**.
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Whitelisting VRTY on the Firewall

This knowledge base session outlines the URLs addresses that need to be unblocked on your organisations firewall.

Most VRTY Services should be accessible from inside your network but on some occasions your IT Staff will need to setup rules on the firewall/proxy server to allow the traffic through.

A number of firewalls allow you to insert a general rule to allow traffic to a whitelisted domain. To whitelist VRTY and all our cloud based services via general rule, please whitelist the following addresses:

- https://*.vrty.io
- <https://vrty.io>

If wildcard character is not accepted in the firewall rules, please whitelisting the following address:

- <https://pro.vrty.io>
 - <https://streamer.vrty.io>
 - <https://learn.vrty.io>
 - <https://vrty.io>
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Setup Education Proxy Settings

This Australian Government (DET) Schools may experience issues when connecting to VRTY servers, connecting to the VRTY Media Store, and downloading projects to streamer box. You will need to have the appropriate proxy settings from your system administrator.

To change your proxy settings, open the streamer box local site. IP address can be found from VRTY platform. Click on the Manage Proxy button on the top right corner of the local site.

The screenshot shows a web form titled "Manage Proxy Settings" with a close button (x) in the top right corner. The form contains the following fields:

- Active:** A checkbox that is checked.
- URL:** A text input field containing "proxy.det.nsw.edu.au".
- Port:** A text input field containing "8080".
- User Name:** A text input field containing "Teacher".
- Password:** A password input field with masked characters ".....".
- Authentication:** A dropdown menu with "NTLM" selected.
- Type:** A dropdown menu with "HTTP" selected.

A "Save" button is located at the bottom right of the form.

A form will be displayed on the screen as shown on the left. Tick active and enter all the details as required for the state education department.

- URL - proxy url, e.g proxy.det.nsw.edu.au for NSW
- Port - proxy port, default value is 8080
- User Name - A valid user account to the education department network
- Password - Credential password of the valid user account
- Authentication - Either Basic or NTLM depends on the education department proxy settings
- Type - Again this depends on the education department proxy settings, default value is HTTP



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THANK YOU FOR CHOOSING US

HOPE YOU HAVE A WONDERFUL JOURNEY WITH VRTY

IF YOU ENCOUNTER ANY ISSUES WHICH CANNOT BE SOLVED, PLEASE
DO NOT HESITATE TO CONTACT US BY SENDING EMAIL TO support@vrtty.io
