



Discover Video

# StreamPump

User Guide

Version 2.0

3/8/2018

Discover Video LLC  
[www.discovervideo.com](http://www.discovervideo.com)

## General Description

The Discover Video StreamPump® is a branch office / remote site appliance. StreamPump connects to a DEVOS system to deliver live and Video-on-Demand (VoD) streaming video to viewers that are local to the StreamPump without each viewer consuming Wide Area Network (WAN) bandwidth.

There are three basic StreamPump functions:

- **Live Streaming Reflecting** – When a viewer selects a live video, StreamPump begins to receive the selected live video and delivers it to the local viewers. When the viewers no longer are watching the stream, StreamPump stops receiving it automatically.
- **Intelligent VoD Caching** – When a viewer selects a VoD, StreamPump keeps a local copy of the file. When any next viewer selects that video, it is delivered from the StreamPump. The local file can be configured to expire after a period of time.
- **Channel Caching** – Selected channels (which are each a collection of content) can be automatically downloaded to the StreamPump at a specified time of day (for example, at 1 AM). Channel caching allows the system owner to pre-position content to remote offices, eliminating unpredictable bandwidth use.

Currently, there are three models:

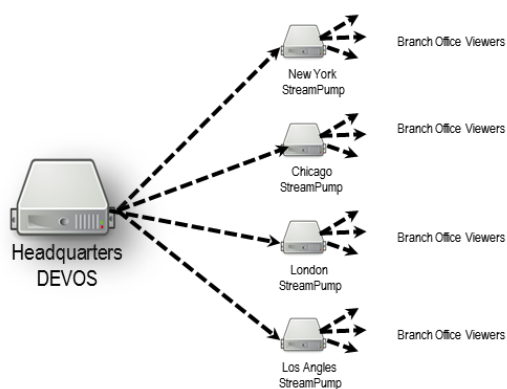
- StreamPump Standard – 1U Rack server, Quad-core Xeon CPU, 1 TB cache storage, GigE port, up to approx. 1000 simultaneous viewers.

- StreamPump Mini – Tabletop Appliance, 240 GB storage, GigE port, up to approx. 100 simultaneous viewers. External storage via USB possible.
- StreamPump Micro – Tabletop Appliance, 120 GB storage, GigE port, up to approx. 25 simultaneous viewers. External storage via USB possible.

StreamPump supports a single GigE network port. NIC Teaming is not supported (although it may be possible to install 3<sup>rd</sup> party NIC drivers to enable Teaming for StreamPump Standard).

## Planning

Generally, you will place a StreamPump on the LAN that it will service and configure it to connect to your DEVOS server wherever that is located. You can configure each StreamPump to service specific networks if desired.



## Installation

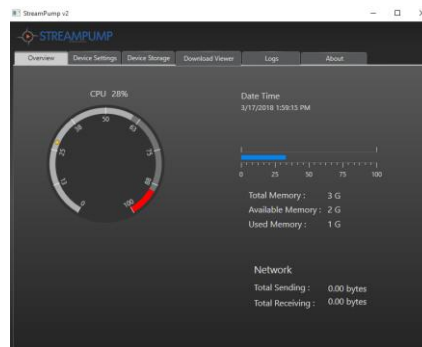
Apply power, Ethernet, and attach keyboard, mouse, and monitor to begin the configuration. The keyboard, mouse, and monitor are not needed after configuration is complete. For StreamPump Standard, use only the first Ethernet port.

## Configuration

### Overview

**The default username is: admin. The default password is: admin.**  
**The Web UI has a different username/password, described below.**

The default overview page shows current CPU and memory usage, and presents a login.



## Device Settings

Set the values for the StreamPump operation:

The screenshot shows the 'Device Settings' window of StreamPump v2. The window has a dark theme and a navigation bar at the top with tabs: Overview, Device Settings (active), Device Storage, Download Viewer, Logs, and About. The main content area is divided into several sections:

- Devos Information:** Includes fields for 'Devos Domain/IP' (172.16.1.77), 'StreamPump Name' (ayaad office), and checkboxes for 'Allow Remote' (checked) and 'SSL'. There are 'Turn Off' and 'Save' buttons.
- Intelligent Caching:** A section with a description and a 'Turn Off' button.
- Always Pull Streams:** A section with a description and a 'Turn Off' button.
- Per-Devos channel basis:** A section with a description and a 'Turn On' button.
- Sync Time:** A section with a description and a time selector set to '12:00 AM'.
- Media Expire Days:** A section with a description and a numeric input set to '14'.
- Maximum Simultaneous:** A section with a description and a numeric input set to '10'.
- Media Local Folder:** A section with a description and a folder path input set to 'CA \ media'.
- Local Network Connection:** A section with 'Network Name: Ethernet' and 'IP: 172.16.1.116', and an 'Open Network' button.

- Devos Domain/IP – enter the domain or IP of the host DEVOS server. If using SSL check this box.
- Allow Remote – if checked, then the configuration is under the control of the DEVOS system. If checked (recommended), then the items marked with \* below are set by the DEVOS system.
- StreamPump Name\* – enter a unique name for this StreamPump, such as “Building 1”. This is used to identify the StreamPump within the DEVOS server and may appear to the user in certain cases.
- Intelligent Caching\* – Turn On or Turn Off. When on, any VoD content viewed by someone on the

same network as the StreamPump will be downloaded.

- Per-DEVOS channel basis\* – Turn On or Turn Off. If on, then any DEVOS channel configured for StreamPump will be downloaded at the selected time.
- Sync Time\* – enter the desired time when StreamPump will download channel videos.
- Media Expire Days\* – select the number of days that Intelligent Download content will remain on the StreamPump. This is used to manage disk space by removing unnecessary content. If Intelligent Caching is enabled and a deleted file is selected by a viewer, it will be cached again. Turn this feature on or off.
- Maximum Simultaneous\* – StreamPump can download multiple files simultaneously. Default is 1. More simultaneous downloads will use more bandwidth.
- Media Local Folder – You may set the location where StreamPump saves content, for example change to an external USB drive. For StreamPump Standard, select Drive D which has 1TB drive for content. Enter folder name "media". For StreamPump mini and micro, select Drive C or external storage.
- Local Network Connection – shows StreamPump IP address. StreamPump does not need a fixed IP address. Use network setting to

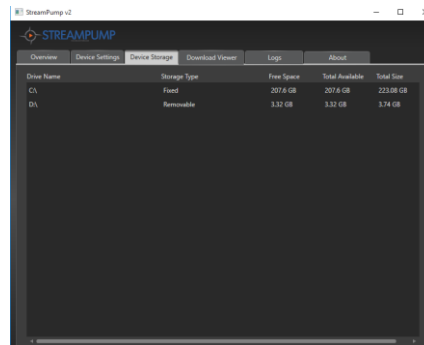
set static IP or other network  
values.

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**After making changes, you must select “Save”.**

## Device Storage

The Device Storage tab shows available storage.



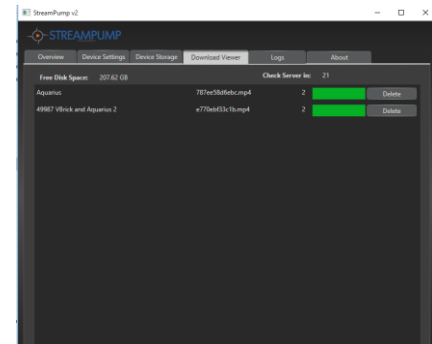
Drive Name	Storage Type	Free Space	Total Available	Total Size
C:\	Fixed	207.6 GB	207.6 GB	223.98 GB
D:\	Removable	3.32 GB	3.32 GB	9.74 GB



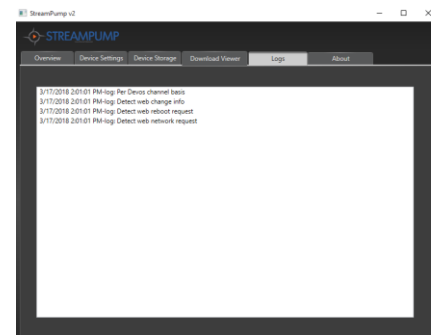
## Download Viewer

The Download Viewer tab shows the videos that StreamPump has downloaded to caches storage. Type 2 indicates the file came from Intelligent Cache, Type 3 indicates the file came from a synchronized channel.

You can delete any video. If you delete a video that is sync'd to a channel, then it will be downloaded again. If you delete other videos, they will be downloaded again when needed if Intelligent Cache is enabled.

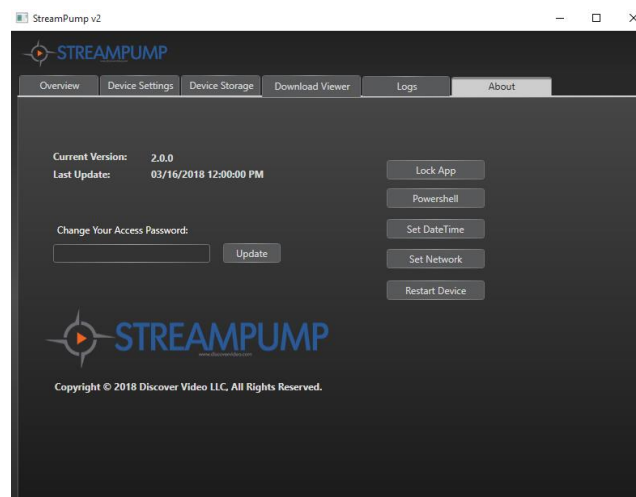


Logs shows actions useful for Discover Video diagnostics



## About

The About tab shows you the current version and date of last update.



You can change your password by simply entering it and selecting “Update”.

You can change the computer Date/Time, and you can Restart the StreamPump. “Lock App” logs you out of the StreamPump.

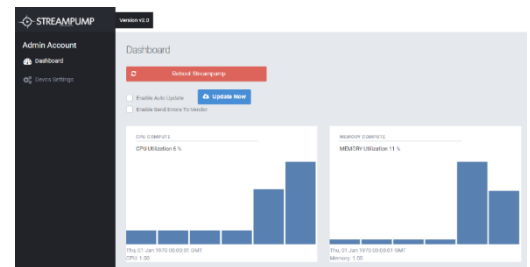
## StreamPump Web UI

The StreamPump supports a simple Web UI. Enter the StreamPump IP address to access the UI<sup>1</sup>.

Username: discovervideo

Password: admin\$2033

The Dashboard shows StreamPump performance.



- Enable Auto Update allows StreamPump to update automatically when updates are available.
- Update Now checks for update now and installs it if available.
- Enable Send Errors To Vendor allows StreamPump to report errors to Discover Video so we may proactively address any issues via bug and crash reports.

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<sup>1</sup> You can obtain the StreamPump’s address from the local UI. Note that once StreamPump is configured to point to your DEVOS server, you can obtain the StreamPump’s IP address from the DEVOS StreamPump Info page.

## StreamPump Devos Settings

- Set address of the DEVOS server, IP or domain
- Set the name of the StreamPump (use a meaningful name for the viewer as in some cases this will be shown to user's in dropdown list box)
- Network Settings
  - DHCP
    - StreamPump will obtain an IP address automatically and the values obtained will be shown
  - Static
    - Enter desired IP address values

The screenshot displays the 'Devos Settings' interface within the StreamPump Admin Account. The interface includes a sidebar with 'Admin Account', 'Dashboard', and 'Devos Settings' options. The main content area contains the following settings:

- Devos Server:** 172.16.1.77
- StreamPump Name or Location:** mj@office
- Network Settings:**
  - DHCP:** Selected (checked).
  - Static:** Unselected (unchecked).
  - IP Address:** 172.16.1.116
  - Subnet Mask:** 255.255.255.0
  - Gateway:** 172.16.1.1
  - DNS Primary:** 172.16.1.1
  - DNS Secondary:** (empty)
- Save:** A blue button at the bottom right.

## DEVOS Settings

Once a StreamPump is set to communicate with DEVOS, the DEVOS server will list all StreamPumps. For any StreamPump set to allow Remote configuration, you may change the settings. Refer to the DEVOS manual.

Stream Pump

CURRENT VIEWERS	NAME	MACHINE KEY	PUBLIC IP	PRIVATE IP	ACTION
0	sysnet office	F40C08417D8	172.16.1.118	172.16.1.118	<a href="#">Get IP</a> <a href="#">View Channels</a> <a href="#">Refresh</a>

Stream Pump Information

StreamPump Name Enter StreamPump Name  
sysnet office

Enable StreamPump  
☒

Always get all Live Streams from System (Recommended for Live HLS on Browser)  
☒

Intelligent Caching  
☒

Per-Devos channel basis  
☒

Media Expire Days  
☒  
Set number of days Enter number of media expire days  
14

Maximum Simultaneous Enter number of simultaneous streampumps  
10

[Save Changes](#)

When configured and online, StreamPumps show up the DEVOS Super Portal - > StreamPump -> Stream Pumps Info list. ("Current Viewers" is not currently supported and may always show 0).

### Settings (when StreamPump Allow Remote is enabled)

- Set StreamPump Name
- Enable
  - On/Off
- Always get Live Streams
  - Must be On for HTML5
- Intelligent Caching
  - Caches VoD on-the-fly
- Per-Devos channel basis
  - Caches all channel content if channel has StreamPump checked
- Media Expire Days
  - On/Off
  - Number of days cached content will be retained
- Maximum Simultaneous

- Sets the number of simultaneous downloads that StreamPump will perform

Change to a lower number if performance is affected

## Set IPs

The DEVOS Super Portal -> Devos Setting -> StreamPump -> Set IPs allows you to enter the range of public network addresses that will be engaged by the StreamPump. The illustration shows a case where the StreamPump will be used by all users on the 172.16.1.X network, and all users on the 162.246.5.66 network.

IP	ACTION
172.16.1.2-172.16.1.254	<a href="#">+ Add</a> <a href="#">✖ Remove</a>
162.246.5.66-162.246.5.66	<a href="#">+ Add</a> <a href="#">✖ Remove</a>

[✓ Save](#) [✖ Cancel](#)

1

## Downloads

Downloads shows the files StreamPump as cached. You may delete any or all.

Stream Pump

CURRENT VIEWERS	NAME	MACHINE KEY	PUBLIC IP	PRIVATE IP	ACTION
0	ayasad office	F44D300417D8	172.16.1.118	172.16.1.118	<a href="#">Get IPs</a> <a href="#">View Downloads</a> <a href="#">Settings</a>

1

MEDIA TITLE	ACTION
49987 VBrick and Aquarius 2	<a href="#">Delete</a>
Aquarius	<a href="#">Delete</a>

Delete all files

## How To Know StreamPump is Working

StreamPump is being used when the viewer's player shows a solid line under the video.



Without StreamPump



With StreamPump

## Operation Details

When StreamPump is connected to a network and configured, it reports its local IP address to the DEVOS server. The StreamPump public address is determined by the server (by seeing where the report is coming from). If the public and private address is the same, then it means the StreamPump is reaching the server without going through a router/ NAT. If the local and public addresses are different, then the StreamPump is reaching the server through a router / NAT.

DEVOS, or any server, can only know the apparent IP address of the user. In a network with NAT, the IP address of a client can only be resolved to the router making the request, not the local client IP address.

StreamPump is engaged to deliver content to a user when:

- The public address of the StreamPump and the public address of the user are the same (i.e. the user is at a remote location and has a StreamPump sharing the same router).
- The public address and the private address of the StreamPump are the same (i.e. the StreamPump is not going through a router /

NAT). In this case, the client will be served by the StreamPump based on the IP address range (where the client's IP is within the ranges set for that StreamPump).

- If the public address and the private address are different and there is only one StreamPump at this private address, then the system knows to use that StreamPump for any user coming to DEVOS from the same public address.
- Where there are more than one StreamPumps coming from the same public address (i.e. they are behind the same router or routers), then the system cannot know which StreamPump a user coming from, so the user is given a choice in a dropdown list. This dropdown list shows the name of the StreamPump (e.g. "Building One", "Building Two", etc.).

When using HTML5, the StreamPump must be set to Always Get Live Streams so that the HTML5 video is available. When using Flash (only), it is not necessary to enable this option.

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