

TV CONTENT CAPTURE – CLOUD DVR

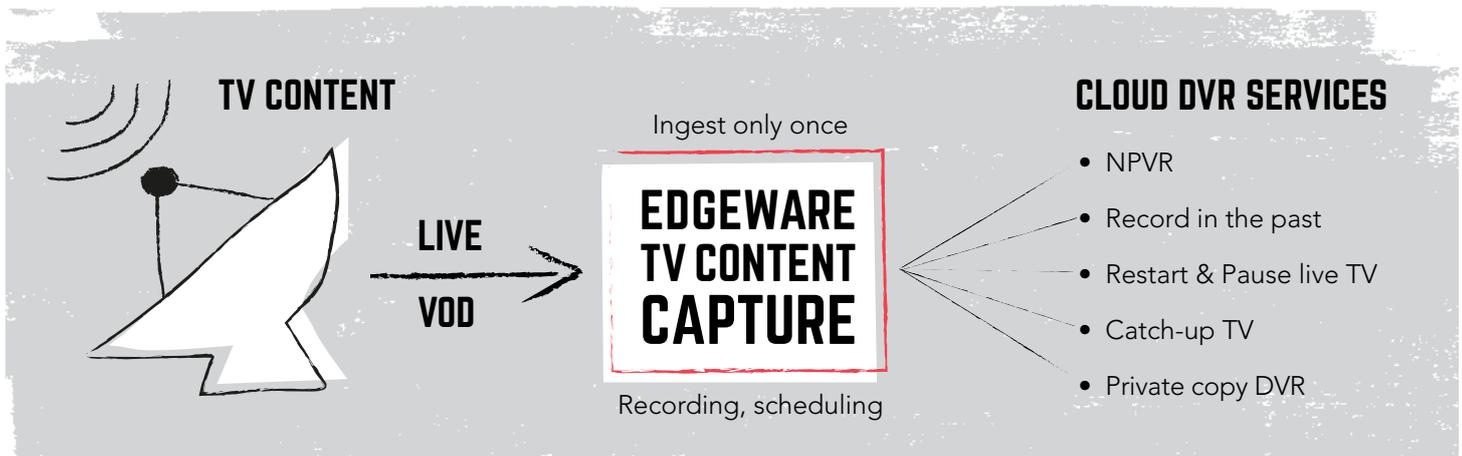
Converting live TV into an on-demand experience has always been an attractive option for viewers. The traditional solution for consumers has been to buy a personal Digital Video Recorder (DVR) for the home. But distributing TV over an IP network allows a whole

new approach to the on-demand experience – often referred to as Cloud DVR.

With Edgware TV Content Capture technology, you can record the live TV content in the network instead of on a physical device in every home. You can let users access

the recorded shows just like any other on-demand content. Multiple users can access recordings of the same program, but it only needs to be recorded once, resulting in a huge reduction in storage space.

Edgware TV Content Capture also supports VOD content ingest.



DIFFERENT FLAVORS OF CLOUD DVR

NETWORK PERSONAL

VIDEO RECORDER (NPVR)

NPVR emulates the service offered by a traditional recording device in the home. Recordings are initiated by each user from a program guide and the user only gets access to content that they have explicitly recorded. And the recordings are available to be played back on multiple devices, regardless of the physical location of the TV set or device.

RECORD IN THE PAST

A combination of NPVR and Catch-up TV allows the viewer to effectively 'record in the past.' They can select programs that were transmitted days earlier and add them to their personal viewing list.

RESTART & PAUSE-LIVE TV

Restart and Pause-live TV are two additional services based on operator initiated recordings. Restart allows a viewer to return to the start of an

ongoing program, and Pause-live allows temporary pausing of playback from a live stream.

CATCH-UP TV

Instead of requiring users to program their own recordings, they can be done automatically for every program, and placed in a library which the viewer can pick and choose from. This is called Catch-up TV and is based on the operator automatically initiating recordings from the program guide.

PRIVATE COPY DVR

Due to legal requirements and rights issues in some markets, a special variant of NPVR may be required, called Private copy NPVR, where each user needs an individual copy of the recorded content, significantly increasing the storage requirements. Since the private copy

requirements may vary across different markets, content owners, or even programs, we allow service providers to simultaneously record both private and shared copy content, and to mix these content types on a channel or program level. We also offer a variety of configurable optimization techniques for added flexibility.

EDGEWARE CLOUD DVR

Edgware provides a complete range of DVR solutions to operators and broadcasters in over 50 countries. Combined with Edgware's TV CDN technology, this allows you to build a TV delivery system that scales more cost-effectively than any other architecture, creates a common

platform for multiple TV services – including Cloud DVR – and gives you unique visibility into how your viewers are experiencing your content. And most important of all, your TV CDN will deliver your viewers an amazing viewing experience.

Benefits of Cloud DVR to the viewer

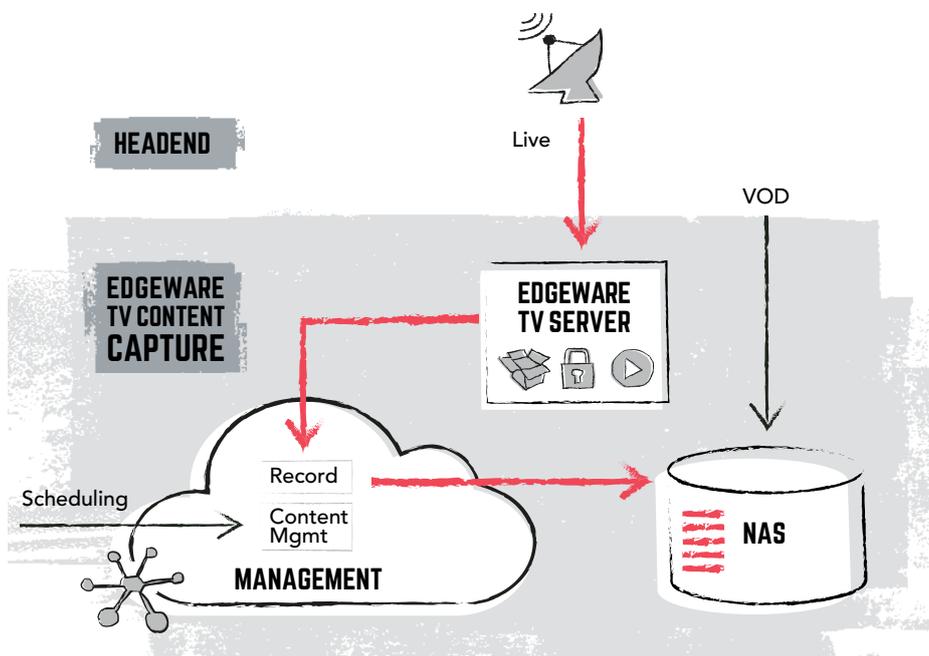
- ✓ No more expensive set-top boxes or PVRs
- ✓ Efficient and flexible access to storage
- ✓ Rich set of services including start-over, pause live, catch-up and record-in-the-past
- ✓ Watch the same recordings from multiple TV sets and devices.

Cloud DVR Case study

A national operator in Europe uses Edgware technology to deliver TV to over a million subscribers.

As well as delivering over 200 channels of live TV, it also offers Cloud DVR services, including start over, catch-up and network PVR. Viewing statistics show these are amongst its most popular services.

The operator uses Edgware's purpose-built TV servers, distributed at the edge of its network, to decrease its network costs and provide a high quality viewing experience.



PERFORMANCE

- ✓ Total ingest bandwidth up to 3 Gbps
- ✓ Up to 1024 channels/profiles