EdgeBox *Neo*

Fully Redundant Automatic Remote Playout

EdgeBox Neo makes delivering a TV station, complete with local branding and content, to anywhere in the world an economic reality – even for small audiences. EdgeBox Neo enables the whole operation to be run from an established broadcast centre, at a cost that makes sense.

PlayBox Technology's ability to offer complete, reliable broadcast workflows at IT prices is an essential part of EdgeBox Neo. EdgeBox Neo provides a tapeless file-based operation that has two parts: one integrated with the broadcast centre and the other at the remote site. At the broadcast centre it is fully integrated into the current or preferred systems including traffic, storage, MAM, ingest, transcoding and file transfer systems, or PlayBox Technology can provide these. This connects to the new remote EdgeBox Neo site's playout equipment via the public internet – making a huge cost saving over the traditional dedicated fibre or satellite links.

Workflow

The workflow is highly automated and is designed to provide easy, familiar playout operation. Proceedings start with daily playlists created in the broadcast centre's traffic system, which is integrated with MAM, being sent to the remote EdgeBox Neo. There it checks for the required media and generates a list of missing items that's sent back to the MAM that then generates requests for the media and subtitle files required for playout. Aspects such as ingest requests, the correct TV format, SD or HD, transcoding, etc, are automatically handled and the required material is sent to the remote. Remote playout then proceeds in the normal way, running from the playlist. Also reports, including 'as run logs', are returned to the broadcast centre and finally the EdgeBox Neo playout servers are purged of old material.

EdgeBox Neo enables all the features of normal local operation such as the inclusion of subtitles. Subtitle files can be produced in the normal way. Then SubtitleBox, installed on each EdgeBox Neo server, accepts and checks the files and automatically delivers open subtitles during transmission. PlayBox SubtitlePlus DVB supports DVB subtitles. Multilingual channels are also supported. Operations are monitored with SNMP sending server status alarms. EdgeBox Neo servers are also connected to VPN for access from anywhere. Local monitoring can be added if required.

Remote Media Format

The media format used at the remote location can be decided on a number of factors such as the amount of new media per day, the bit rate chosen for playout and the available internet capacity. MPEG2 IBP at 10Mbps is often chosen, however H.264 at 4Mbps or less is also chosen as a very good alternative. The chosen bit rate is the customer's choice.

Your EdgeBox Neo

No two EdgeBox Neoes are alike. Every broadcaster has its own requirements and PlayBox Technology can design, supply and install each system according to customers' needs. Integration with the existing broadcast systems is essential. One focus is format compatibility where, for the cleanest operation, EdgeBox Neo must be able to work directly with the existing 'house' formats – one of the areas where PlayBox Technology excels.

Customers may consider :

On-air presentation

Graphics makes a big impact on the look of the station. EdgeBox Neo provide basic branding with one of a number of logos presented on the screen at any time. A far wider range of graphics is available when Title is included within the EdgeBox Neo server. This offers animated logos and multi-layered 2D and 3D graphics, character generation, and interactive graphics for SMS to screen, voting, gaming, crawls etc. TitleBox Neo can be scheduled from the traffic system while projects and templates are created with TitleBox Neo Preparation at the broadcast centre.

Enhanced internet performance

A number of steps ensure fast and secure operation over the internet and so each end of the connection includes a file transfer server and a firewall. The transfer speed can be assisted with a file transfer agent and its reliability enhanced with the use of multiple internet paths and data checks. For complete privacy the firewall needs to be quite separate from any others used by the broadcaster.

More reliability

EdgeBox Neo benefits from the inherently reliability of PlayBox Technology products. Depending on needs and budget, two EdgeBox Neo servers can provide full redundancy with automatic switchover should one fail. In addition the servers have triple redundant PSUs.

A further measure is to design-in no single point of failure so, for example, even with the loss of internet, FTP server or firewall playout can continue. Operational planning can add to this with, say, the next seven days of media always stored on the remote server hard drives, allowing plenty of time for fault correction.

Local Content and QC

Provision can be made to ingest local commercials and some content at the remote site. This can be forwarded to the broadcast centre for editing and quality control and the result delivered back to the remote site.

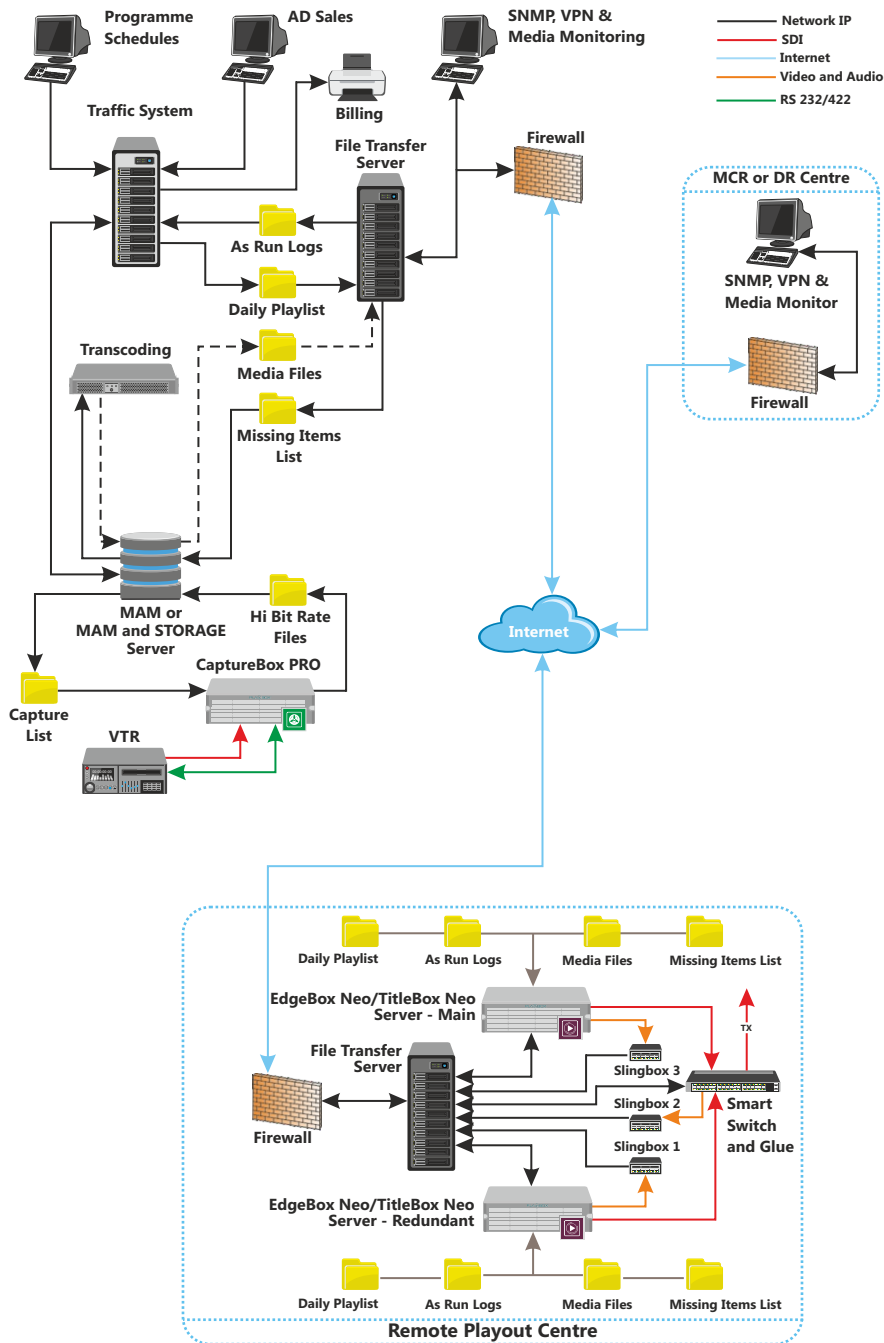**Compliance Recording**

This is mandatory in many countries and provides important evidence in programme or advertising disputes. It is also a good aid for fault finding with remote playout systems. CaptureBox Compliance can record 30, 60, 90 or more days with time stamp at low bit rate. These files are recorded in one hour blocks that are easily retrievable over the internet for viewing.

NEO

EdgeBox Neo Workflow

Fully Automated Remote Redundant Playout with SNMP, VPN and Video and Audio Remote Monitoring

Programme Schedules

AD Sales

SNMP, VPN & Media Monitoring

Traffic System

Billing

File Transfer Server

Firewall

As Run Logs

Daily Playlist

Transcoding

Media Files

Missing Items List

MAM or MAM and STORAGE Server

Hi Bit Rate Files

CaptureBox PRO

Capture List

VTR

Internet

MCR or DR Centre

SNMP, VPN & Media Monitor

Firewall

Legend:
- Network IP
- SDI
- Internet
- Video and Audio
- RS 232/422

Remote Playout Centre

Daily Playlist — As Run Logs — Media Files — Missing Items List

EdgeBox Neo/TitleBox Neo Server - Main

File Transfer Server

Firewall

Slingbox 3

Slingbox 2

Slingbox 1

Smart Switch and Glue

TX

EdgeBox Neo/TitleBox Neo Server - Redundant

Daily Playlist — As Run Logs — Media Files — Missing Items List

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Rev.: February 2017

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