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Signal Intelligence

ZyPer Management Platform Release Notes

Software 2.2.36791

April 13, 2021

Revision History

Date	Version		Fixes/Changes
April 13, 2021	2.2.36791		General Availability release

Contents

1. Supported platforms

ZyPer Management Platform

- **(New)** VMWare appliance on Ubuntu v16.04 **(Base OVA Image)**
- ProServer on Ubuntu v16.0.4
- Gigabyte NUC on Ubuntu v14.04.2
- Intel NUC (Generation 2) on Ubuntu v16.0.4
- VMWare appliance on Ubuntu v14.04.2

ZyPer Management Platform GUI web interface

- Google Chrome

Encoders and decoders

- **(New)** ZyPerXS HDMI 2.0 encoders and decoders
- **(New)** ZyPerUHD2 encoders and decoders
- **(New)** ZyPerUHD Dante encoders
- ZyPer4K HDMI 2.0 encoders and decoders
- ZyPer4K HDMI 1.4 encoders and decoders
- ZyPer4K Netgear Module encoders
- ZyPerUHD encoders and decoders
- ZyPerHD encoders and decoders

Device Firmware

- **(New)** ZyPerXS HDMI 2.0 – 1.2.0.2
- **(New)** ZyPerUHD2* - 1.1.5
- **(New)** ZyPerUHD Dante Encoder - 2.0.4
- ZyPer4K HDMI 2.0 - 4.1.0.0
- ZyPer Netgear Module Encoders - 4.0.0.6
- ZyPerUHD – 2.0.4

Please note: For second generation UHD devices, use the firmware update file with the ".bin2" file extension. First generation and second-generation hardware can be determined by the device MAC address.

- For MAC addresses that begin with: 34:1b:22 - use the file extension .bin
- For MAC addresses that begin with: 6c:df:fb - use the file extension .bin2

In addition, the "ZyPerUHD Dante encoders" will still use the first-generation firmware updates.

* Warning: Installing the wrong firmware file version on ZyPerUHD2 devices will cause the unit to become inoperative.

2. New features

Some features listed below were also added into the interim 2.1.1 release, these features are marked accordingly.

Alerting

- ZyPer Device Duplicate IP address detection and reporting. (API only) **(Also in 2.1.1)**

API Enhancements:

- Device Diagnostics
- DNS support for MP server and management Interfaces
- Help grouping changes
- Presets and scheduling
- Multiview 19 window support (API Only, GUI limited to 9 windows)
- NTP support
- Save system config
- camelCase API command support **(Also in 2.1.1)**
- Full Device Status and Config information shown for down devices **(Also in 2.1.1)**
- Settable horizontal display resolution maximum active size of 8192 **(Also in 2.1.1)**

MP Server

- Base VM Image is now Ubuntu 16.04
- ZyPerXS Support added
    - o Video, Audio, Video Wall and Multiview available for native and interop w/ ZyPer4K HDMI 2.0 hardware
    - o No IR, RS232 or preview stream options are available for this device
    - o USB limited to native XS units only
    - o Overlay only available on ZyPer4K HDMI 2.0 Encoders
- ZyPerUHD2 Support added
- ZyPer4K Enhanced USB pairing and detection **(Also in 2.1.1)**
- ZyPer Device Corrupted EDID detection and recovery **(Also in 2.1.1)**
- ZyPerUHD device recovery for unresponsive units **(Also in 2.1.1)**
- Changes is logging level, log management and additional logging **(Also in 2.1.1)**

MP GUI

- Preset configuration and Administration
- Preset Scheduling and Administration
- Source Grid for Device Status and Configuration (includes device diagnostic feature)
- Display Grid for Device Status, Configuration and Routing (includes device diagnostic feature)
- Video Wall support 15 X 15 ZyPer4K devices

Preview Stream Design enhancements

- Redesign of the preview stream start up, recovery and reset **(Also in 2.1.1)**

Failover Enhancements

- Primary and secondary server's failover changes (providing a more resilient management platform) **(Also in 2.1.1)**

No longer supported or removed in this release

- ZyPer Management Platform Mobile mode (no longer supported)
- ZyPerUSB no longer supported as a device (removed for this version)

3. Issues resolved

Component	Issue	Other
ZMP GUI	One NUC two browsers - "Server is not available"	Enhancements were made to the multiple sessions to allow additional connections to the server and proper management of the sessions.
ZMP GUI - Preview	Preview streams were restarting and video on the GUI was shown as a pinwheel effect instead of preview video.	This was in since 2.1.1
Server - Memory	After a high amount of Multiview configuration changes to the system config, the memory leak was seen reducing the available memory to under 100 MB	This was in since 2.1.1
Server - Redundancy	During failover the secondary server would fail to take over the primary role.	This was in since 2.1.1
ZyPerUHD	ZyPerUHD devices during Fast switch video, audio and USB joins would fail to respond to control commands.	This was in since 2.1.1
ZyPer4K HDMI 2.0 - Dual HDMI input	During a factory defaults reset, the ZyPer4K Dual HDMI encoder input would be set to "HDMI primary" on the Management Server instead of the "auto detect" which was set on the device.	This was in since 2.1.1
ZyPer4K HDMI 2.0 - USB	A number of USB devices were set to duplicate IP addresses, which the server was not alerting on. In addition, some devices had rouge connections established.	This was in since 2.1.1

4. Issues Outstanding

Component	Issue	Workaround
ZyPer4K HDMI 2.0	Fast Switched joins at 480I/576I displays video in an improper ratio horizontally	No workaround available at this time.
ZyPer4K HDMI 2.0	ZyPer4K Charlie - Encoder - Incorrect FPS status (cosmetic) under 420 color formats	No workaround available at this time.
ZyPer4K HDMI 2.0 Dual HDMI	ZyPer4K Encoder Dual HDMI input - Using an Apple 4K source, I found that UHD 60 YUV 420 8bit video is not seen on the loop out or on the decoder display	No workaround available at this time.
ZyPer4K HDMI 2.0 Analog Expansion	S-video - If there is an active HDMI connection the encoder, when nothing is connected to the S-video port (no cable), cable status shows connected and last S-video resolution.	No workaround available at this time.

ZyPerUHD	ZyPerUHD - HDCP does not report on the UHD encoders, in addition it allows video traffic to flow to devices that do not support the HDCP version	Restart or reboot the encoder to gain the correct information.
ZyPerUHD	ZyPerUHD - Decoder - UHD 60 8 bit 420 - When connecting a UHD60 encoder to a Decoder with a display that has only 1080 support, when rebooting the device, it does not always return video	After about two minutes the video comes back and it works.
ZyPerUHD	There is a known issue with ZyPerUHD video walls above 3X3. Changes to an active video wall of sizes larger than 3X3 cause fluctuations in video under all screens of the wall for up to 5 minutes before stabilizing.	This only happens on a modification to the video wall configurations. Unjoining all screens of the video wall with the disconnect to the video wall clears all the video. Then changes to the wall's config can be made, followed by a rejoin of the encoder to the wall.
ZyPerHD	In the ZMP GUI under the config of the encoder, the ZyPerHD Encoder shows it supports the new compressed audio option for the EDID. This feature is not supported on the ZyPerHD.	Feature if selected will do nothing as the devices have a hard coded EDID.
MP - Server	4K HDMI 2.0 - Some Decoders may not show receiving video set to yes when video is being received and displayed.	A connect to another encoder corrects the issue, connection to the original encoder can then be made and the state is correct.
MP -Server	Encoder videoScaledStream staying enabled when it was not actually used in Multiview mode	By un-join all the other video connections involving the encoder that you are trying to connect with will clear this state. Then re-join the encoder to the same decoder in fast-switched mode.
MP – NUC	Power off via shutdown on the 1st generation NUCs will no longer shutdown the server.	Manual power off on the NUC power button is required to shut it off.
MP -ProServer	Default Route changes or is lost when Ethernet connection is down for either interface.	Rebooting the server will restore the default route.
Multiview	When removing an encoder that is assigned to multiple Multiview windows in the same configuration, the video will not be removed until the encoder is removed from all windows	Deleting of the window will need to be done in the API in order to remove the video from the proper display window.
ZMP GUI - Multiview	Encoder Window, sound, status is not indicated under the ZMP GUI Multiview config. The icon for the sound source of the Multiview does not show active sound if the window is selected for sound source and saved.	Checking the API is required to see the sound source for the Multiview config.
ZMP GUI - Multiview	Edit menu- Pattern button still resizes when you click on the bottom 3rd of the button when in a Multiview single panel	Click the resized button to access the drop down.
ZMP GUI - Source	On occasion the custom config containing "disconnect" actions will be show no actions after saving the config.	Close the browser and restart it if this gets into this state.

ZMP GUI - Upgrade - ZUHD	When you first upgrade from 1.7.4 or 1.8 the ZyPerUHD shows the Join config for Fast switched without the Audio. In 2.0 and 2.1 this is now required in order to get Audio to connect when using the GUI	Edit the Join config for the fast switch and add the audio to the configuration or select to reset to defaults to receive the new join config.
Preview	Preview video has vertical lines in the video on some encoders.	No workaround available at this time.
Save System config	ZyPerXS devices are not saved out of the system config.	No workaround available at this time.
Save System config	Some system configurations like presets are not saved out of the system config.	No workaround available at this time.
Save System config	Some commands are saved out of order like Multiview "create" and "set" commands	No workaround available at this time.
Upgrade	VM: The previousVersion field showed as N/A in server info after upgraded the server from 1.7.4 to 1.8	No workaround available at this time.

5. Known limitations

ZyPerXS HDMI 2.0

Component	Limitation	Workaround
Encoder	No Overlay is available for this product.	Working as Designed
Encoder - Decoder	HID USB available only on this product, USB is not compatible with ZyPer4K HDMI 2.0 units.	Working as Designed
Encoder - Decoder	If the ZyPer encoder or decoder is connected to the MP system network prior the upgrade, the units will show up as decoders after the upgrade to 2.2 and above.	Delete the device and the units will be added back in properly. This is true for Decoders as well in order to gain full functionality.

ZyPer4K HDMI 2.0

Component	Limitation	Workaround
Decoder	When swapping HDMI from ZyPer4K decoders with the HDMI unplugged less than 5 seconds, the decoder fails to read the new EDID.	When power Cycling or unplugging, wait 5 seconds before plugging the unit back in.
Decoder - Display port board variant	- For the Display port connections to a Monitor or TV that are to be shown at 3840 X 2160 60 FPS 8 bit 444. Video has been seen to stop and start again on the screen after a link training has been established. It is not every time and in testing varies depending on particular environment variables as up to 1 out of every 5 link training events. The event itself is specific to a disconnect of Display port connection or power event of the end points.	To work around this problem, the following guidelines must be implemented to obtain reliable 3840 X 2160 60 FPS during these particular instances of fault. For Genlocked connection, sources must be using reduced blanking timing, limiting pixel clock to 550MHz.

		Fast switched connection may also be used as the method of joining the Encoder to the Decoder. The below advanced timing command must be used to configure the decoder for use: set decoder *decoder_name*|*decoder_mac* display-advanced-timing sync-front-porch 48 2 sync-width 32 5 hsync-polarity auto vsync-polarity auto total-size 4000 2222
Encoder – SDI board variant	**Genlocked mode –** Audio is limited to 2 channel support	None
Encoder - Analog Board variant	During connections using VGA port on the expansion board, audio may not be available for the connection. This occurs one out of every 15 to 20 connects using the VGA port on this device.	We have found that resetting port to HDMI and then back to VGA does resolve the issue.
Multiview	Resolution of 2560 X 1440 is not supported for the Multiview window	None
Multiview	Custom Multiview containing two windows above 2048x1080 fails to join window to decoder	None

ZyPerUHD

Component	Limitation	Workaround
Decoders	When the UHD Decoder is downscaling from UHD 3840 X 2160 60 420 8 bit to 1080P 60 on a display, if a reboot (power cycle or restart command) occurs to the Decoder the Display will not return video.	To recover from this state the device needs to be rejoined to display video once more.
Decoders - CEC off|on	It has been found that on some Samsung displays, that the CEC "on" command will not returns the monitor to an active state. One monitor that experienced this issue was a Samsung 4K UN40JU6500. To activate the TV after encountering this event, a power on must be done.	Power Cycle of the TV is required
Decoders - Sleep mode	In addition, when using the sleep mode feature to set the display to sleep (regardless of the decoder connections) displays require a 10 second window if the user wants to disable this mode.	Power Reset of the Decoder will be required
Decoder	Display with standard timing first 2560x1440 showed bad video in source 720p60.The bad video appeared after changed the resolution from 1080p60 to 720p60 or changed resolution from 480p to 720p60 (after switching the resolution back and forth for	None

Component	Limitation	Workaround
	about 1 minute or 2). This is a limitation for the ZyPerUHD device.	
Encoder	HDCP, interlacing state, Bit sample, Color Space and Color Format states may not report correctly on UHD encoders • HDCP status – May not report correctly • Interlacing State – Will always show "no" • Color Space – Will always report 444 • Color Format – Will Always report RGB Color bit depth – Will always report 8 bit	None
Encoder	Under the Encoder information output the EDID used for the encoder may not match the decoder it is joined to. This is part of the design, as the system will load an EDID that it feels is most compatible. This could be an EDID that is either stored in its database or from an active decoder that shares the encoders connection.	Working as designed
Independent Audio routing	Joins of Audio between the encoder and the decoders or changes in the audio to the decoder, will cause a 1 to 2 second video interruption. This is because of an internal reconnect within device in order to modify this connection.	None
Audio Limitation	The audio for the Decoder's HDMI and Analog out port is limited to only one source of the Encoder's audio.	None
Independent IR routing	Due to the implementation of independent IR joins from device to device. We are no longer able to receive IR from the device to the server.	None
Resolution Support	Resolution Support for ZyPerUHD does not support 4096 resolutions and will not produce resolutions at 3840 X 2160 50 FPS/60 FPS. The ZyPerUHD encoder will not recognize any video above 3840 X 2160 60 FPS YUV 420, 8 bit (in either bit rate or color format).	None
RS232 Configuration and routing	Changes to the RS232 configuration to support the endpoint-to-endpoint communication require the devices to be restarted. Changes to the baud rate, connection endpoints and other rs232 communication will restart the device.	No longer requirement to reset the device for device to device, only when going to or from device to server does the device reset. RS232 config changes still reboot the device when made.

ZyPer GUI

Component	Limitation	Workaround

After Upgrade	After upgrading connection tool tips under the Display Panel Icons, show only video connected.	A refresh of the GUI will show all connections on the Display Panel Icons
Thumbnail	When starting Thumbnail videos, sometimes the icons show a pinwheel instead.	A stop and start of the thumbnail video by clicking on the Icon will remedy this issue. Alternatively, a refresh of the GUI will show all the videos enabled.
Video wall	If a name of a Decoder is changed and the video wall that contains said decoder is then opened for editing, the Decoder will no longer be present under the configuration.	After the Decoder name is changed but before the video wall is opened for edit, a refresh can be done. Then the video wall will contain the Decoder with the changed name.
Multiview	Only 9 windows are supported in the GUI while Multiview configurations build in the API can consist of 19 windows. If one of these multiviews is selected for edit in the GUI only 9 windows are shown.	Avoid editing Multiview configurations in the GUI that consist of over 9 windows.

ZMP Redundancy and VMWare

Component	Limitation	Workaround
ZMP with dual NICs	Setting the Management Interface (eth1) on a ProServer or a dual NIC NUC ZMP device to an IP not accessible to the originating ZyPer Management Platform Source machine could cause an inability to access the Management port after it is set. To correct this, the user should enter the ZyPer Management Platform under the "Video-Network" IP from a device on that network and correct the Management NIC interface address.	None
ZyPer Management Platform – VMWare updates	Starting in the upgrading to 1.8, on VM Hosted machines for the ZMP will require use of the update_vm to upgrade to 1.8 and beyond. Reverting to 1.7X and 1.6 versions are possible through use of the standard update_nuc file if needed.	None
VMware Redundancy Support	There is no support for virtual machines hosting the ZMP image under 1.8, only single server deployments are supported.	None

6. Current device firmware

Device	File version
ZyPer4K HDMI2.0	4.1.0.0
ZyPerXS HDMI2.0	1.2.0.2
ZyPer Netgear Encoder Module	4.0.0.6
ZyPer4K HDMI1.4	2.10.x
ZyPerUHD Encoders (MAC addresses that begin with: 34:1b:22)	2.0.4

ZyPerUHD Decoders (MAC addresses that begin with: 34:1b:22)	2.0.4
ZyPerUHD Wallplate Encoders	2.0.4
ZyPerUHD Dante Encoders	2.0.4
ZyPerUHD2 Encoders (For MAC addresses that begin with: 6c:df:fb)	1.1.5
ZyPerUHD2 Decoders (For MAC addresses that begin with: 6c:df:fb)	1.1.5
ZyPerHD Encoders	2.12.3
ZyPerHD Decoders	2.12.4

7. API Additions, changes, and deletions
Additions

- Help All Commands Alphabetical
- create presetNew <newPresetName> commands existing-connections|empty
- create presetSchedule <presetName> schedule <newPresetScheduleName>
- delete preset <presetName>
- delete preset <presetName> runLog
- delete preset <presetName> schedule <presetScheduleName>
- diagnostics device <deviceName|deviceMac>
- help [<helpGroups>]
- help [all] alphabetical
- help [all] byGroup [unique]
- help [search] <keyWord:string>
- run preset <presetName>
- save system config <filename>
- set multiview <multiviewName> windowNumber <int> newEncoderName <encoderName>|none
- set preset <presetName> description <string>
- set preset <presetName> commands auto existingConnections|empty
- set preset <presetName> commands blob <string>
- set preset <presetName> schedule <presetScheduleName> mode enabled|disabled
- set preset <presetName> schedule <presetScheduleName> eventColor <colorNameOrHexval>
- set preset <presetName> schedule <presetScheduleName> month jan|feb|mar|apr|may|jun|jul|aug|sep|oct|nov|dec|all dayOfMonth <int>|all dayOfWeek sunday|monday|tuesday|wednesday|thursday|friday|saturday|weekday|weekend|all hour <int>|all minute <int>
- set server date ntpServer address <domainName>
- set server date manual month <int> day <int> year <int> hour <int> minute <int>
- set server isaac address <domainName>|none
- set server isaac subsystemId <string>|none
- set server api lineWrap <int>
- show device config commands
- show preset <presetName>|all config [since <lastChangeId:lastChangeNumber>] [wait]
- show preset <presetName>|all commands [since <lastChangeId:lastChangeNumber>] [wait]
- show preset <presetName>|all commandBlob [since <lastChangeId:lastChangeNumber>] [wait]
- show preset <presetName>|all schedule <presetScheduleName>|all [since <lastChangeId:lastChangeNumber>] [wait]
- show preset <presetName>|all runLog [since <lastChangeId:lastChangeNumber>] [wait]

- show preset <presetName>|all status [since <lastChangeId:lastChangeNumber>] [wait]
- show values all
- show values encoder status|config
- show values decoder status|config
- show values server info|config|redundancy
- show values multiview status|config

Changes

- dataConnect <deviceName> server rs232|ir [tunnelPort <port:int>]
    - Changed "tcp-port" to "tunnelPort"
- set encoder <encoderMac|encoderName> edid audio onlyPcm|allowCompressed|serverDefault
    - Changed "audio-format force-pcm" to "edid audio onlyPcm"
- set encoder <encoderMac|encoderName> hdcpMode enabled|enabled1.4|disabled
    - Changed "1_4" to a dotted format "1.4"
- set device <deviceMac|deviceName> rs232 2400|9600|19200|38400|57600|115200 7-bits|8-bits 1-stop|2-stop even|odd|none
    - Transposed positions of 2400 and 9600 to ascending order
- set server dataTunnelMode telnet|raw
    - Changed "data-transfer-mode" to "dataTunnelMode"
- set server encoderDefault edid audio onlyPcm|allowCompressed
    - Changed "audio-format force-pcm" to "edid audio onlyPcm"
- show dataTunnels
    - Changed "data-relays" to "dataTunnels"

Misc

Factory Default changes for RS232– Through the versions of ZMP 1.8 to 2.1, when ZyPerUHD devices are reset to default the following default baud rates will be applied.

- In 1.8 it adjusts the default to be 38400
- In 2.0 it adjusts the default to be 9600
- In 2.1 it adjusts the default to be 115200
    -

Deletions

- No API command deletions in this release.

For more information on API command changes introduced in ZMP v2.2 release, please see page 18 of this document.

8. Upgrading and Downgrading

Unique update files required for each platform

Starting with release v1.8, the ZyPer MP update file will be available in three, platform-specific versions. Please use the correct version for the hardware platform being updated.

File name examples:

- ZyPerMP NUC computer: update_nuc_2.2.36791.zyper
- ZyPerMP Proserver: update_proserver_2.2.36791.zyper
- ZyPerMP VMware: update_vm_2.2.36791.zyper

Known issues with upgrading and downgrading

Effected Versions	Issue	Effected Hardware	Workaround
Moving to 1.7.4 from prior versions	The ZMP Generation 2 can only be upgraded through the service rcServer update command	ZMP NUC generation 2	The process is shown below From the ZMP OS command line perform the below commands. sudo service rcServer stop sudo service rcServer update /srv/ftp/files/update_...
Moving back to 1.7.4 after being upgraded	The ZMP Generation 3 comes installed with 1.7.4.33922 pre-installed and is upgradable. However, in a downgrade scenario after upgrade, it cannot be downgraded to anything less than 1.8.34961	ZMP NUC generation 3	If downgrading, you will need to go to 1.8.34961
Downgrading to 1.7.1	Downgrading to 1.7.1X version of the software will require the user to clear the cache in order to see the "Roles or Users" panel.	ZMP NUC generation 1 and 2	Clearing the browser Cache
Upgrading from a version prior to 1.6	There is reduced support in downgrading due to the extensive additions to the newer versions. In particular the 1.3 to 1.4 versions require additional steps to recover from the change in database tables, fields and features that are not present at the time of the original version.	ZMP NUC generation 1 and 2	Due to this all 1.3 and 1.4 versions should be upgraded to 1.6 prior upgrading to the new releases
Upgrading to 1.6 and above	1.5.2 cannot upgrade to releases above 1.7.X through the GUI due to the file size limitations of the new release.	ZMP NUC generation 1 and 2	Upgrading to 1.6 first will allow GUI upgrades. Alternatively upgrading using the API will work as well.
Downgrading to 1.6 or 1.5.2	If downgrading to 1.5.2 or 1.6, you may have to clear the browser cache before logging back in to the MaestroZ – A error may occur in the browser alerting you to a cert error, this was actually due to the login to the REST	ZMP NUC generation 1 and 2	Clearing the browser cache

	server (which is not present on version prior 1.7.X), the browser may maintain this login path on the next login until the cache is cleared.		
Downgrading to 1.6 or 1.5.2	If downgrading to either 1.5.2 and 1.6, the user in MaestroZ will not be able to add zones. This is due to the "datetime" format change in the zone table when Maria DB replaces MySQL. Reverting back keeps Maria DB thus the command sent to create the zone fails because of the format mismatch of the datetime.	ZMP NUC generation 1 and 2	N/A
Upgrading to 2.2	If ZyPerXS units exist on the network and available to the MP prior upgrade to 2.2, these devices will show up as decoders only and not contain all functionality.	All Platforms	Deleting these devices in the API or GUI will allow the system to readd them properly to the configuration
Upgrading to 2.2	When adding ZyPerXS units to an existing system it is necessary to set the Join Config to factory defaults in order to generate a valid Join Config for the XS units.	All Platforms	Resetting the Join config to factory defaults – will need to do this on a ZyPer4K Source Icon.

Other Notes: Beginning in 1.7.4 there is a saved file that includes the export from the database prior update. This can be used to restore the database to the state it was in prior the upgrade. The file is called: zyper.*zyperversion*.sql and resides on the ZMP under the folder: /srv/ftp/files. Where "zyperversion" is the version, the system was on prior the upgrade.

For versions prior 1.8, please follow the below upgrade path

Starting Version	Jump 1	Jump 2	Jump 3	Jump 4	Jump 5
1.1.X	1.3	1.6	1.7.4	2.1	2.2
1.2.X	1.3	1.6	1.7.4	2.1	2.2
1.3.X	1.6	1.7.4	2.1	2.2	
1.4.X	1.6	1.7.4	2.1	2.2	
1.5.2.X	1.6	1.7.4	2.1	2.2	
1.6.X	1.7.4	2.1	2.2		
1.7.4.X	2.1	2.2			
1.8	2.1	2.2			
2.0	2.2				
2.1	2.2				
2.1.1	2.2				

Upgrade and downgrade support for the following platforms of the management server

- ZMP Generation 1
- ZMP new Generation 2 and 3
- VMware
- ProServer

Interface IP type and internet state

- Interface IP Mode: Defines how the interface acquired it's IP
- Internet Access Available? Defines whether the server can reach the outside internet
- **ZMP GigByte NUC (Generation 1)**

Version Prior Upgrade	Interface IP Mode	Internet Access available?	Result of upgrade and downgrade to and from this release
2.0.35268	DHCP	Yes	Passed
2.0.35268	DHCP	No	Passed
2.0.35268	STATIC	Yes	Passed
2.0.35268	STATIC	No	Passed
2.0.35268	Link Local	No	Passed
2.1.35919	DHCP	Yes	Passed
2.1.35919	DHCP	No	Passed
2.1.35919	STATIC	Yes	Passed
2.1.35919	STATIC	No	Passed
2.1.35919	Link Local	No	Passed
2.1.1.36550	DHCP	Yes	Passed
2.1.1.36550	DHCP	No	Passed
2.1.1.36550	STATIC	Yes	Passed
2.1.1.36550	STATIC	No	Passed
2.1.1.36550	Link Local	No	Passed

- **INTEL NUC Celeron ZMP (Base Installed Version is 1.7.4.33922) Generation 2**
(In the prior release notes this generation 2 was labeled Pentium, this was a type-o as this generation was a Celeron processor)

Version prior upgrade	Interface IP Mode	Internet Access Available?	Result of upgrade and downgrade to and from this release
2.0.35268	DHCP	Yes	Passed
2.0.35268	DHCP	No	Passed
2.0.35268	STATIC	Yes	Passed
2.0.35268	STATIC	No	Passed
2.0.35268	Link Local	No	Passed
2.1.35919	DHCP	Yes	Passed
2.1.35919	DHCP	No	Passed
2.1.35919	STATIC	Yes	Passed
2.1.35919	STATIC	No	Passed
2.1.35919	Link Local	No	Passed
2.1.1.36550	DHCP	Yes	Passed
2.1.1.36550	DHCP	No	Passed
2.1.1.36550	STATIC	Yes	Passed
2.1.1.36550	STATIC	No	Passed
2.1.1.36550	Link Local	No	Passed

- **INTEL NUC Pentium ZMP (Base Installed Version is 1.7.4.33922) Generation 3**

Version prior upgrade	Interface IP Mode	Internet Access Available?	Result of upgrade and downgrade to and from this release
2.0.35268	DHCP	Yes	Passed
2.0.35268	DHCP	No	Passed
2.0.35268	STATIC	Yes	Passed
2.0.35268	STATIC	No	Passed
2.0.35268	Link Local	No	Passed
2.1.35919	DHCP	Yes	Passed
2.1.35919	DHCP	No	Passed
2.1.35919	STATIC	Yes	Passed
2.1.35919	STATIC	No	Passed
2.1.35919	Link Local	No	Passed
2.1.1.36550	DHCP	Yes	Passed
2.1.1.36550	DHCP	No	Passed
2.1.1.36550	STATIC	Yes	Passed
2.1.1.36550	STATIC	No	Passed
2.1.1.36550	Link Local	No	Passed

- **VMWARE 14.04**

Version prior upgrade	Interface IP Mode	Internet Access available?	Result of upgrade and downgrade to and from this release
2.0.35268	DHCP	Yes	Passed
2.0.35268	STATIC	Yes	Passed
2.1.35919	DHCP	Yes	Passed
2.1.35919	STATIC	Yes	Passed
2.1.1.36550	DHCP	Yes	Passed
2.1.1.36550	STATIC	Yes	Passed

- **VM Rev2 for 16.04 - 2.2 (Initial Release)**
- **ProServer (Base Installed Version is 1.8.34703)**

Version prior upgrade	Interface IP Mode	Internet Access available?	Result of upgrade and downgrade to and from this release
2.0.35268	DHCP	Yes	Passed
2.0.35268	DHCP	No	Passed
2.0.35268	STATIC	Yes	Passed
2.0.35268	STATIC	No	Passed
2.0.35268	Link Local	No	Passed
2.1.35919	DHCP	Yes	Passed
2.1.35919	DHCP	No	Passed
2.1.35919	STATIC	Yes	Passed
2.1.35919	STATIC	No	Passed
2.1.35919	Link Local	No	Passed

2.1.1.36550	DHCP	Yes	Passed
2.1.1.36550	DHCP	No	Passed
2.1.1.36550	STATIC	Yes	Passed
2.1.1.36550	STATIC	No	Passed
2.1.1.36550	Link Local	No	Passed

Appendix A New Features

The following new features were added to 2.2.36791 release to enhances several areas valued to our customers.

This Appendix provides a basic overview of the new features for this release, there is an explanation of most of the command set for each newly added item(s). However, for further details of these new features and a full listing of the command's subset, please reference the "ZyPer Management Platform User Manual" for 2.2.36791 GA release.

Alerting

ZyPer Device Duplicate IP address detection and reporting

Components: ZyPer Management Platform API

Overview:

Under the ZyPer management platform, we now detect duplicate IP configurations between device endpoints that are either have set IPs or have IPs provided via a DHCP server. After detecting the duplicate IP in its configuration, an alert will be issued upon every command execution under the API. This alert will stop once the IP conflict is resolved.

Changes :

- Changes to the server were made to detect duplicate IPs

Appearance and States

- The Error below is seen after the IP conflict is detected.

```
Zyper$  show device config 5E
device(d8:80:39:eb:25:5e);
 device.gen; model=Zyper4K, type=decoder, name=d8:80:39:eb:25:5e, state=Up, lastChangeId=132
 device.gen; firmware=4.0.1.0
 device.gen; ethernetManagementPortMode=disabled
 device.hdmi; hdcpMode=auto
 device.ports; videoPort=auto
 device.ip; mode=static, address=10.10.0.24, mask=255.255.255.0, gateway=10.10.0.1
 device.rs232; sendingToMacOrIp=none(0.0.0.0), terminationChars=\x0A\x0D,  baudrate=57600, dataBit=8, stop_Bit=1, parity=none
 device.ir; sendingToMacOrIp=none(0.0.0.0)
 device.edid; preferMode=max
 device.display; iconImageName=GenericDisplay, manufacturer=, model=, location=, serialNumber=
 device.display; mode=stretch
 device.displaySize; allParameters=auto
 device.displayTiming; allParameters=auto
 device.connectedEncoder; macAddr=d8:80:39:eb:52:73, name=d8:80:39:eb:52:73, connectionMode=fast-switched
 device.audioConnections; analogStreamMac=none, analogSourceName=none, hdmiAudioStreamMac=d8:80:39:eb:52:73,
hdmiAudioSourceName=d8:80:39:eb:52:73
 device.autoAudioConnections; hdmiAudioFollowVideo=true
 device.audioOutSourceType; analogOutSourceType=analog-audio, hdmiOutSourceType=hdmi-audio
 device.usb; filter=none
 device.usbUplink; macAddr=none, name=none
lastChangeIdMax(172);
```

rcServer.log message

Wed Nov 4 16:45:49 2020 (0x486f2e;0x522fe1;0x519469;0x51928a;0x7f4b5708a6ba;)Warning:(62) Duplicate IP addresses exist
Wed Nov 4 16:45:49 2020 (0x486f2e;0x522fe1;0x519469;0x51928a;0x7f4b5708a6ba;)Warning:(62) Duplicate IP addresses exist

API Enhancements

Device Diagnostics

Components: ZyPer Management Platform API

Overview: In this version there is an option to perform diagnostics which can show any outstanding states on a particular device. The output will be presented in the two sections; a listing of Errors, Warnings and Info messages found for the device and the message counter line showing the number of each category of message. When the command is run, the device is checked for anything that could hinder or effect the operation of the endpoint, this includes custom settings that are not default configurations.

Changes:

- The command diagnostics was added to the API for use of any endpoint device ZyPer4K, ZyPerUHD and ZyPerHD

Operation:

- **Displaying diagnostics**

<diagnostics device deviceName|MAC>

Appearance and states:

The messages that can be shown under the diagnostic output are as follows.

Decoder/Encoder:

    error,   Device is down
    warning, Device has no HDMI link
    warning, Device rebooted %d times in the last minute
    warning, Device rebooted %d times in the last hour
    warning, Device rebooted %d times in the last day

Decoder:

    error,   HDMI Audio stream connection without video connection.
    error,   Decoder has never received a valid EDID
    error,   Encoder down
    error,   Encoder has multiview conflict with genlock
    warning, HDCP is forced on, but may not be supported by display device (however it is unlikely)
    warning, Decoder resolution exceeds display EDID maximum -- very likely this will not work
    warning, Decoder using encoder resolution, which may not be display's preferred based on its EDID

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warning, Decoder using encoder resolution AND ignoring display EDID, which may allow resolution to exceed display capability
warning, Decoder using user-defined resolution, which may allow resolution to exceed display capability
warning, Encoder hdmi down
warning, Encoder stream disabled
warning, Video stream interrupted %d times in the last minute, indicating likely network problem
warning, Video stream interrupted %d times in the last hour, indicating likely network problem
warning, Video stream interrupted %d times in the last day, indicating possible network problem
warning, Encoder and decoder fps are not equal -- will result in very bad video
warning, Encoder and decoder fps are not equal -- will result in very bad video
warning, Encoder and decoder fps are not equal, but multiple of 2; this may still produce bad video
warning, Encoder and decoder HDCP versions are not the same
info,   Encoder HDCP is disabled; this will prevent copyrighted material from display
info,   Encoder HDCP is set to version 1.4; this may prevent copyrighted material from display

Encoder:

info,   HDCP is disabled; this will prevent copyrighted material from display
info,   HDCP is set to version 1.4; this may prevent copyrighted material from display

Running the below command will generate diagnostic output for the given device.

Zyper$ diagnostics device DD7-PRO

device(d8:80:39:eb:23:d7);

device.diags.warning.1; message=Decoder using user-defined resolution, which may allow resolution to exceed display capability
device.diags.summary; status=complete, error=0, warning=1, info=0
Success

DNS support for MP server and management Interfaces

Components: ZyPer Management Platform Server

Overview: In this version we added the ability to add a DNS entry for the MP server for either Server or Management interfaces through our API. This entry is added to the server's interfaces file and will allow DNS resolution for the server accordingly.

Changes: Under the "set server ip" API command, there is an additional field that can be added that allows the user to add the DNS server IP.

Operation:

Note: reboot will be required for changes to take effect, so plan accordingly with your system administrator.

set server ip management static <address:ip> <mask:ip> <gateway:ip>|none <**dns-server:domainName>|none** reboot

set server ip server static <address:ip> <mask:ip> <gateway:ip>|none <**dns-server:domainName>|none** reboot

Options for this additional field were added after the "gateway" entry are either the DNS Server/domainName or "none" if no DNS server is needed.

Example

set server ip server static 172.16.5.21 255.255.255.0 172.16.5.1 172.16.5.5 reboot

Appearance and States

The configuration will show up under the output of the "show server config" will show the DNS under the interface it is set to.

Zyper$ show server config
server(172.16.5.21);
  server.gen; autoEdidMode=enabled, redundancy=enabled
  server.ipServerAddress; mode=static, address=172.16.5.21, mask=255.255.255.0, gateway=172.16.5.1, dns=172.16.5.5
  server.ipManagementAddress; mode=static, address=192.168.20.2, mask=255.255.255.0, gateway=none, dns=none
  server.ntpServer; address=ntp.ubuntu.com
  server.telnetAccess; mode=enabled
  server.encoderDefault.edid; audio=onlyPcm
  server.dataTunnelMode; telnet=rawTransferMode
  server.logging; level=1
  server.isaac; address=none, subsystemId=none

Help grouping changes

Components: ZyPer Management Platform API

Overview: In this version of MP API, we have changed the way the API displays help for its commands. We now offer the command "help <group>", "help all alphabetical" or "help all byGroup" commands.

Operation:

- help <group> - If you know the group you want help with you can just type help <groupname> and the command output will only be for this group. To get a listing of these groups there is an auto complete. Showing all the groups, just enter the "tab" key after help.
- help all alphabetical – This command will display all the commands syntaxes for the API and is closet to the prior versions output.
- help all byGroup – This command will display all the syntax for API commands broken out per group.

Appearance and stats

Zyper$ help
  all
  Audio
  CEC
  Data
  Decoder/Display
  Device
  Diagnostics
  EDID
  Encoder/Source
  Events
  HDCP
  Join
  Multicast

Multiview
Preset
PreviewStreams
Redundancy
Script
search
Serial/IR
Server
SNMP
Status/Config
USB
Video
VideoWall
Zone

Zyper$ help Zone

 Help For Group Zone
    add zoneDisplay <zoneName[.zoneName]> <decoderMac|decoderName|wallName>
    create zone <[zoneName.]newZoneName>
    delete zone <zoneName[.zoneName]>
    delete zoneDisplay <zoneName[.zoneName]> <decoderMac|decoderName|wallName>
    show values all
    show values encoder status|config
    show values decoder status|config
    show values server info|config|redundancy
    show values multiview status|config
    show zones

Zyper$ help all byGroup

 Help All Commands By Group

 Audio
    join <encoderMac|encoderName>|none <decoderMac|decoderName|zoneName[.zoneName]> analogAudio
    join <encoderMac|encoderName>|videoSource|none <decoderMac|decoderName|zoneName[.zoneName]> hdmiAudio
    set encoder <encoderMac|encoderName> analogAudioOut source none|hdmiAudioDownmix
    set encoder <encoderMac|encoderName> edid audio onlyPcm|allowCompressed|serverDefault
    set decoder <decoderMac|decoderName> analogAudioOut source analogAudio|hdmiAudioDownmix
    set decoder <decoderMac|decoderName> hdmiAudioOut source analogAudio|hdmiPassthroughAudio|hdmiAudio|hdmiAudioDownmix
    set multiview <multiviewName> audioSource windowNumber <int>|none
    set server encoderDefault edid audio onlyPcm|allowCompressed
    start encoder <encoderMac|encoderName> stream video|videoScaled|hdmiAudio|analogAudio
    stop encoder <encoderMac|encoderName> stream video|videoScaled|hdmiAudio|analogAudio

 CEC
    send <deviceMac|decoderName> cec on|off
    send <deviceMac|decoderName> cec hexString <hexString>

```
  Data
    set server date ntpServer address <domainName>
    set server date manual month <int> day <int> year <int> hour <int> minute <int>
```

…………

Above is not the full output

Zyper$ help all alphabetical

```
 Help All Commands Alphabetical
    add device ipAddress <ip>
    add snmp trapServer v2cTrap ipAddress <address:ip> community <string>
    add snmp user v2c accessLevel readOnly community <newSnmpCommunity>
    add snmp user v3 accessLevel readOnly auth MD5 encrypted no username <newSnmpUser> password <string>
    add zoneDisplay <zoneName[.zoneName]> <decoderMac|decoderName|wallName>
    create multiview <newMultiviewName>
    create presetNew <newPresetName> commands existingConnections|empty
    create presetSchedule <presetName> schedule <newPresetScheduleName>
    create videoWall <newWallName>
```

……….

Above is not the full output

Presets and scheduling

Components: API management, ZyPerUHD and ZyPer4K/XS endpoint devices.

Overview: In this release we now have the ability to save of and schedule preset configurations. The Preset can also be kicked off manually at any time. The save preset command can save an empty container to be filled with connections later or it can be saved with the existing device connections at the time of command execution . The information saved by the presets consist of the following connections between endpoint devices.

- Video (genlocked, genlockedScaled and fastSwtiched)
- Audio (hdmiPassthrough, hdmiAudio, downmixed and analog)
- Multiview
- Video Wall

Once saved off, a schedule or multiple schedules can be configured to run the preset at a certain time. When run the preset execution will restore all endpoint device connections from this particular config.

Multiview presets can be used with multiple schedules to create an automated device connection schedule to be followed.

Schedules can be set to run by the minute, hour, day, day of the month, weekend day or weekday day or specific time for any day.

The API additional commands were added to allow the user to view the existing preset and schedule configurations, run presets manually, view the preset log and edit/delete presets and preset schedules.

API Changes: The following commands were added to support the preset feature.

```
create presetNew <newPresetName> commands existingConnections|empty
create presetSchedule <presetName> schedule <newPresetScheduleName>
delete preset <presetName>
delete preset <presetName> runLog
delete preset <presetName> schedule <presetScheduleName>
run preset <presetName>
set preset <presetName> description <string>
set preset <presetName> commands auto existingConnections|empty
set preset <presetName> commands blob <string>
set preset <presetName> schedule <presetScheduleName> mode enabled|disabled
set preset <presetName> schedule <presetScheduleName> eventColor <colorNameOrHexval>
set preset <presetName> schedule <presetScheduleName> month
jan|feb|mar|apr|may|jun|jul|aug|sep|oct|nov|dec|all dayOfMonth <int>|all  dayOfWeek
sunday|monday|tuesday|wednesday|thursday|friday|saturday|weekday|weekend|all hour <int>|all minute <int>
show preset <presetName>|all config [since <lastChangeId:lastChangeNumber>] [wait]
show preset <presetName>|all commands [since <lastChangeId:lastChangeNumber>] [wait]
show preset <presetName>|all commandBlob [since <lastChangeId:lastChangeNumber>] [wait]
show preset <presetName>|all schedule <presetScheduleName>|all [since <lastChangeId:lastChangeNumber>] [wait]
show preset <presetName>|all runLog [since <lastChangeId:lastChangeNumber>] [wait]
show preset <presetName>|all status [since <lastChangeId:lastChangeNumber>] [wait]
```

Operation:

Below is a basic walkthrough of functions, not all functions are shown, please see the ZMP user guide for 2.2 for more details.

- **Creating a Preset**

Using the following command create a preset with existing device connections

Zyper$ create presetNew DayTimeConfig commands existingConnections
Success

- **Setting a preset description**

Set the description of the preset to identify the preset further.

Zyper$ set preset DayTimeConfig description "Day Time configuration"
Success

- **Viewing a preset config**

Confirm the preset details are correct via the show preset config command.

Zyper$ show preset DayTimeConfig config
preset(DayTimeConfig);
  preset.gen; description=Day Time configuration
lastDeleteIdMax(1);

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lastChangeIdMax(4);
Success

Checking the preset connections created

Zyper$ show preset DayTimeConfig commands
preset(DayTimeConfig);
  preset.line1; cmd=join 80:1f:12:4b:a9:a6 0:16:c0:4d:c3:28 fastSwitched
  preset.line2; cmd=join none 0:16:c0:4d:c3:28 analogAudio
  preset.line3; cmd=join videoSource 0:16:c0:4d:c3:28 hdmiAudio
  preset.line4; cmd=join none 34:1b:22:80:64:89 video
  preset.line5; cmd=join none 34:1b:22:80:64:89 analogAudio
  preset.line6; cmd=join videoSource 34:1b:22:80:64:89 hdmiAudio

- **Creating a Preset Schedule**

Now to setup a schedule for the preset to be run. This is a Day Time preset so it will need to be kicked off for the beginning of the day each day.

Zyper$ create presetSchedule DayTimeConfig schedule DayTimeKickOff
Success

- **Setting the Preset Schedule date/time**

Zyper$ set preset DayTimeConfig schedule DayTimeKickOff month all dayOfMonth all dayOfWeek all hour 6 minute 30
Success

- **Showing the Preset Schedule to make sure it is set correctly**

Zyper$ show preset DayTimeConfig schedule DayTimeKickOff
preset(DayTimeConfig);
  preset.schedule.DayTimeKickOff; mode=enabled, color=#652d90, month=all, dayOfMonth=all, dayOfWeek=all, hour=6, minute=30
lastChangeIdMax(6);
Success

- **Running a Preset Manually (can be done to test a preset**

Zyper$ run preset DayTimeConfig
Success

- **Checking the run log of a preset.**

Shown below the preset.log.1 ← The 1 is the instance of the preset, the next time the preset will be run, the log will show the entries for 1 for the 1st time it was run and then followed by the next instance 2.

The second number after the instance number is the line number of the output. You can also delete the runlog if you want to clear it. This is done with the delete runlog command.

Zyper$ show preset DayTimeConfig runLog
preset(DayTimeConfig);

preset.log.1.1; runningSchedule=commandLine, startTime=04-07-2021:23:34
preset.log.1.2; cmd="join 80:1f:12:4b:a9:a6 0:16:c0:4d:c3:28 fastSwitched"
preset.log.1.3; resp="Success"
preset.log.1.4; cmd="join none 0:16:c0:4d:c3:28 analogAudio"
preset.log.1.5; resp="Success"
preset.log.1.6; cmd="join videoSource 0:16:c0:4d:c3:28 hdmiAudio"
preset.log.1.7; resp="Success"
preset.log.1.8; cmd="join none 34:1b:22:80:64:89 video"
preset.log.1.9; resp="Success"
preset.log.1.10; cmd="join none 34:1b:22:80:64:89 analogAudio"
preset.log.1.11; resp="Success"
preset.log.1.12; cmd="join videoSource 34:1b:22:80:64:89 hdmiAudio"
preset.log.1.13; resp="Success"

Checking the status of the preset.

Checking status of the preset will show the last time it was run, errors and warnings for the preset.

Zyper$ show preset DayTimeConfig status
preset(DayTimeConfig);
  preset.run; state=idle, lastRunTime=04-07-2021:23:34, errorCount=0, warningCount=0
lastChangeIdMax(8);

Deleting Preset and Preset Schedule

Use the following commands to delete the preset and schedule.

Zyper$ delete preset DayTimeConfig schedule DayTimeKickOff
Success
Zyper$ delete preset DayTimeConfig
Success
Limitations: Saving existing connections will save the state of the decoder connections, this includes audio or video streams set to none. Meaning if a decoder has video but no video configured. The decoder state will restore without the audio connection, regardless of the audio being connected after the preset configuration was captured.

Multiview 19 window support (API Only, GUI limited to 9 windows)

Components: ZyPer Management Server API

Overview: In this release we have added the ability to have 19 multiview windows supported. This feature allows the user through the API to add up to the 19 windows in a single Multiview configuration. The GUI however does not have support yet in this version, so only 9 of these configured windows will show up under the GUI. Creation and modification are explicitly through the Server API for any multivew consisting over 9 windows.

Changes to API: Additional window designations 10 to 19 were added to the possible configuration. Additions support the standard Pixel or Percentage size and position. Overlay for these additional windows are also supported.

Operation:

Using the standard set Multiview commands, simply increment the windowNumber to the 10 to 19 values and adjust the position and sizes accordingly

set multiview JMV windowNumber 10 encoderName d8:80:39:9a:b0:62 percentPositionX 80 percentPositionY 20 percentSizeX 20 percentSizeY 20 layer 1
set multiview JMV windowNumber 11 encoderName 80:1f:12:4b:a9:a6 percentPositionX 0 percentPositionY 40 percentSizeX 20 percentSizeY 20 layer 1
set multiview JMV windowNumber 12 encoderName 80:1f:12:4b:e2:b4 percentPositionX 20 percentPositionY 40 percentSizeX 20 percentSizeY 20 layer 1
set multiview JMV windowNumber 13 encoderName d8:80:39:ea:ce:8d percentPositionX 40 percentPositionY 40 percentSizeX 20 percentSizeY 20 layer 1
set multiview JMV windowNumber 14 encoderName 80:1f:12:4c:1f:1e percentPositionX 60 percentPositionY 40 percentSizeX 20 percentSizeY 20 layer 1
set multiview JMV windowNumber 15 encoderName 80:1f:12:49:89:5b percentPositionX 80 percentPositionY 40 percentSizeX 20 percentSizeY 20 layer 1
set multiview JMV windowNumber 16 encoderName d8:80:39:eb:2a:3f percentPositionX 0 percentPositionY 60 percentSizeX 20 percentSizeY layer 1
set multiview JMV windowNumber 17 encoderName 80:1f:12:4d:ea:df percentPositionX 20 percentPositionY 60 percentSizeX 20 percentSizeY 20 layer 1
set multiview JMV windowNumber 18 encoderName d8:80:39:9a:ac:9a percentPositionX 40 percentPositionY 60 percentSizeX 20 percentSizeY 20 layer 1
set multiview JMV windowNumber 19 encoderName 80:1f:12:4c:1f:1e percentPositionX 60 percentPositionY 60 percentSizeX 20 percentSizeY 20 layer 1

Appearance and States
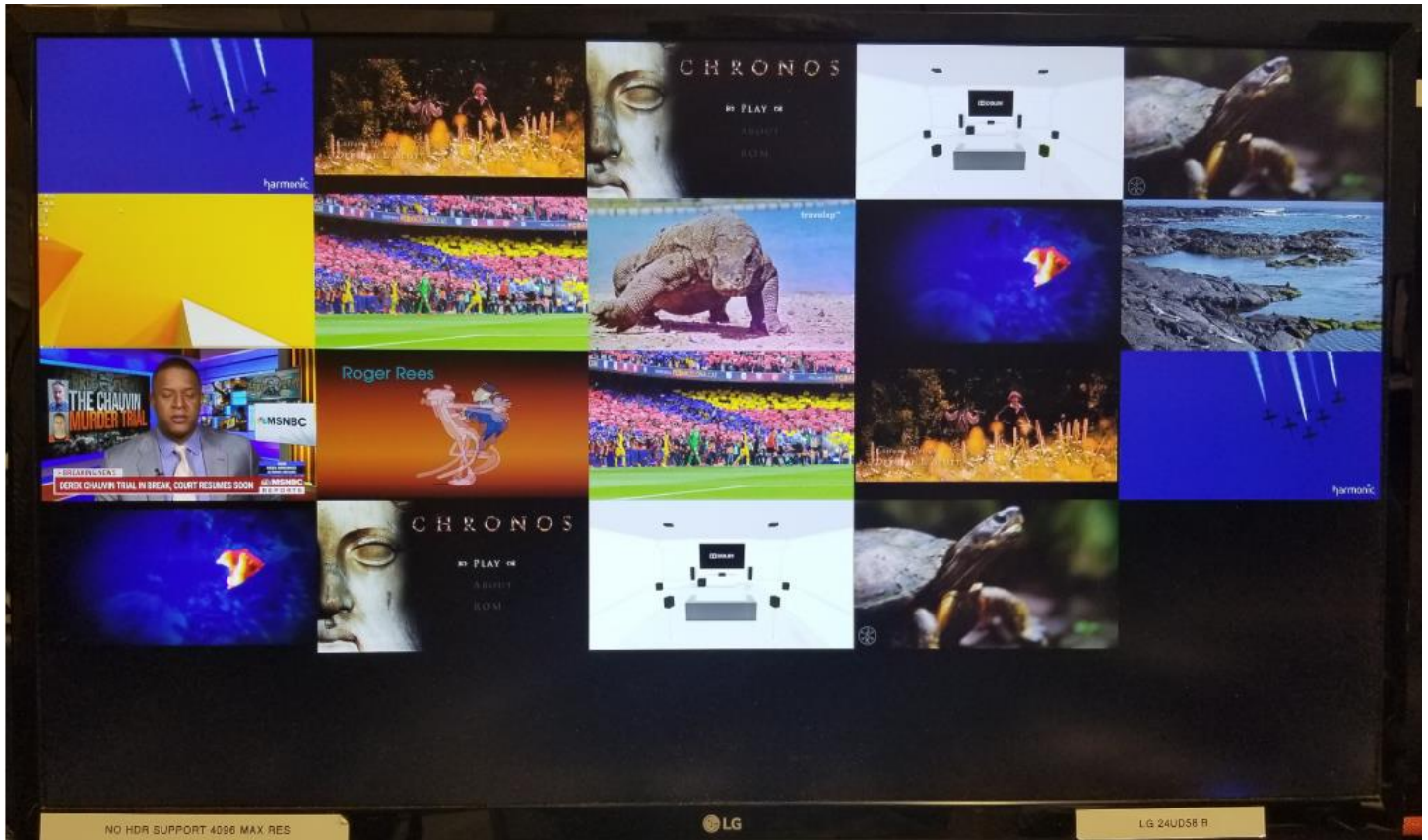
Limitations: Configuration and Management through API only.

NTP support

Components: ZyPer Management Platform API

Overview: In this release we have added the ability to add and manage NTP entries for the MP server through the API. This includes support for NTP DNS name and IP designations.

Changes to API: Under the "set server date" command we have added the ntp option to identify a NTP server that the user wants to reference for network time. After adding the NTP server DNS name or IP to the configuration the server will time sync to the identified source.

Operation:

Important Note: The network for the MP should have access to the internet. If using a NTP FQDN you may require a DNS entry on the server interfaces in order to resolve the name.

If you have a PC or laptop on the same network and network switch you can test access to the server via pinging the server from the command prompt.

```
C:\Windows\System32>ping time.google.com

Pinging time.google.com [216.239.35.0] with 32 bytes of data:
Reply from 216.239.35.0: bytes=32 time=26ms TTL=48
Reply from 216.239.35.0: bytes=32 time=26ms TTL=48

Ping statistics for 216.239.35.0:
    Packets: Sent = 2, Received = 2, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 26ms, Maximum = 26ms, Average = 26ms
```

```
C:\Windows\System32>ping 216.239.35.0

Pinging 216.239.35.0 with 32 bytes of data:
Reply from 216.239.35.0: bytes=32 time=26ms TTL=48
Reply from 216.239.35.0: bytes=32 time=26ms TTL=48
Reply from 216.239.35.0: bytes=32 time=26ms TTL=48

Ping statistics for 216.239.35.0:
    Packets: Sent = 3, Received = 3, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 26ms, Maximum = 26ms, Average = 26ms
```

Again, this may require DNS configured if using FQDN

In the API use the following command to configure the NTP server for the MP.

Zyper$ set server date ntpServer address time.google.com
Success

Appearance and States

After running the command, the NTP server config is shown under the "show server config"

Zyper$ show server config

server(172.16.5.21);
  server.gen; autoEdidMode=enabled, redundancy=enabled
  server.ipServerAddress; mode=static, address=172.16.5.21, mask=255.255.255.0, gateway=172.16.5.1, dns=none
  server.ipManagementAddress; mode=static, address=10.30.0.5, mask=255.255.255.0, gateway=10.30.0.1, dns=none
  server.ntpServer; address=time.google.com
  server.telnetAccess; mode=enabled
  server.encoderDefault.edid; audio=onlyPcm
  server.dataTunnelMode; telnet=rawTransferMode
  server.logging; level=1
  server.isaac; address=none, subsystemId=none

Save system config support

Components: ZyPer Management Platform API

Overview: In this release we support saving system configuration to a flat file on the MP server, under the folder "/srv/ftp/files/". This is different than the presets and does not include preset information.. The "save system config" command will save off endpoint device information and device connections including; Multiview, Video Wall configurations.

Changes to API: The API now has a "save system config" command.

Operation:

Running the below command will config of your system

Zyper$ save system config SavedConfig040121
Saved config to /srv/ftp/files/SavedConfig040121

Limitations: This command will not save off zone, user roles or presets from the system.

Full Device Status and Config information shown for down devices

Components: API management, ZyPerUHD and ZyPer4K endpoint devices.

Overview: In this release we report once again on Devices that are not online, in the prior version of this application we removed the full string of status and config information when a device is down.

Changes:

- Show full status fields on a down device
- Show full config fields on a down device

Appearance and States:

Output of the config command of a down device in base 2.1.

```
Zyper$ show device config 5e
device(d8:80:39:eb:25:5e);
  device.gen; model=Zyper4K, type=decoder, name=d8:80:39:eb:25:5e, state=Down, lastChangeId=59
  device.gen; firmware=4.0.1.0
  device.edid; preferMode=max
  device.display; iconImageName=GenericDisplay, manufacturer=, model=, location=, serialNumber=
  device.usbUplink; macAddr=d8:80:39:eb:52:73, name=d8:80:39:eb:52:73
lastChangeIdMax(249);
```

Output of the status command of a down device in base 2.1.

```
Zyper$ show device status 5e
device(d8:80:39:eb:25:5e);
  device.gen; model=Zyper4K, type=decoder, name=d8:80:39:eb:25:5e, state=Down, uptime=0d:0h:0m:0s, lastChangeId=34
lastChangeIdMax(71);
Success
```

Output of the config command in this release

```
Zyper$ show device config 5e
```

```
device(d8:80:39:eb:25:5e);
  device.gen; model=Zyper4K, type=decoder, name=d8:80:39:eb:25:5e, state=Down, lastChangeId=60
  device.gen; firmware=4.0.1.0
  device.gen; ethernetManagementPortMode=disabled
  device.hdmi; hdcpMode=auto
  device.ports; videoPort=auto
  device.ip; mode=dhcp, address=10.10.0.45, mask=255.255.255.0, gateway=10.10.0.1
  device.rs232; sendingToMacOrIp=none(0.0.0.0), terminationChars=\x0A\x0D,  baudrate=57600, dataBit=8, stop_Bit=1, parity=none
  device.ir; sendingToMacOrIp=none(0.0.0.0)
  device.edid; preferMode=max
  device.display; iconImageName=GenericDisplay, manufacturer=, model=, location=, serialNumber=
  device.display; mode=stretch
  device.displaySize; allParameters=auto
  device.displayTiming; allParameters=auto
  device.connectedEncoder; macAddr=multiview, name=JAM, connectionMode=multiview
  device.audioConnections; analogStreamMac=none, analogSourceName=none, hdmiAudioStreamMac=none, hdmiAudioSourceName=none
  device.autoAudioConnections; hdmiAudioFollowVideo=true
  device.audioOutSourceType; analogOutSourceType=analog-audio, hdmiOutSourceType=hdmi-audio
  device.usbUplink; macAddr=d8:80:39:eb:52:73, name=d8:80:39:eb:52:73
lastChangeIdMax(541);
Success
```

Output of the status command in this release

```
Zyper$ show device status 5e
device(d8:80:39:eb:25:5e);
  device.gen; model=Zyper4K, type=decoder, name=d8:80:39:eb:25:5e, state=Down, uptime=0d:0h:0m:0s, lastChangeId=34
  device.temperature; main=0C
  device.firmwareUpdate; status=idle, loadingFile=none, percentComplete=0
  device.hdmiOutput; video-timing-source=display-edid-max-resolution
  device.hdmiOutput; cableConnected=disconnected, hdcp=NA, hdcpVersion=NA, hdmi2.0=NA, horizontalSize=NA, verticalSize=NA, fps=NA, interlaced=NA
  device.hdmiOutput; hTot=NA, hBlank=NA, hFront=NA, hSync=NA, hPol=NA
  device.hdmiOutput; vTot=NA, vBlank=NA, vFront=NA, vSync=NA, vPol=NA
  device.hdmiOutput; pixelClock=NA, colorEncoding=NA, colorDepth=NA, colorSpace=NA, colorQuantRange=NA, timingStandard=NA
  device.hdmiOutput; streamDatarate=4896Mbps
  device.edid; sourceType=decoder
  device.edid; edidStatus=valid, edidMonitorName=DELL P2715Q
  device.edid; firstDescriptorPreferredResolution=yes
  device.edid; maxFps=75.00, maxPixelClockMhz=300.00, maxDeepColorPixelClockMhz=300.00, rgbColorDepth=8, yuv420ColorDepth=0
  device.edid; only420=none, also420=none, yuvQuantRange=default, rgbQuantRange=default
  device.edid.audio.PCM; channels=2, sampleRates=96hz-88.2hz-48hz-44.1hz-32hz, sampleBits=16-20
  device.edid.preferredResolution; pixelClockMhz=297.00, sizeX=3840, sizeY=2160, fps=30.00
  device.edid.maxResolution; pixelClockMhz=297.00, sizeX=3840, sizeY=2160, fps=30.00
  device.connectedEncoder; mac=multiview, name=JAM, receivingVideoFromEncoder=no, reason=decoder not joined
  device.multiviewUpWindows; [window=1, encoder=80:1f:12:4d:44:41], [window=2, encoder=80:1f:12:4d:44:41], [window=3, encoder=80:1f:12:4d:44:41]
  device.multiviewDownWindows; [window=4, encoder=d8:80:39:eb:52:73]
  device.connectedEncoderAnalogAudio; mac=none, name=N/A, receivingAudioFromEncoder=no
  device.connectedEncoderHdmiAudio; mac=none, name=N/A, receivingAudioFromEncoder=no
  device.activeVideoWall; name=none
lastChangeIdMax(76);
```

Settable horizontal display resolution maximum active size of 8192

Components: Zyper Management API

Overview: In this release we have increased the settable horizontal resolution to be 8192 on ZyPer4K Decoders.

This applies to the user settable "active-size" parameter in the set device display-resolution command which is active in a fast-switched video mode.

Operation:

Setting the active size

Zyper$ set decoder d8:80:39:eb:25:5e display-resolution active-size
   pixelsHoriz   Integer range from 64 to 8192
Zyper$ set decoder d8:80:39:eb:25:5e display-resolution active-size 8192
   pixelsVert   Integer range from 480 to 2160

Note: fps options remain as a specific rate or source, which uses the encoders fps rate.

Zyper$ set decoder d8:80:39:eb:25:5e display-resolution active-size 8192 2160 fps 60
Hit CR
Zyper$ set decoder d8:80:39:eb:25:5e display-resolution active-size 8192 2160 fps source
Hit CR

Appearance and States

Under the device config and status, you will be able to see this being applied.

```
Zyper$ show device config 5e
device(d8:80:39:eb:25:5e);
  device.gen; model=Zyper4K, type=decoder, name=d8:80:39:eb:25:5e, state=Up, lastChangeId=3085
  device.gen; firmware=4.0.1.0
  device.gen; ethernetManagementPortMode=disabled
  device.hdmi; hdcpMode=auto
  device.ports; videoPort=auto
  device.ip; mode=dhcp, address=10.10.0.45, mask=255.255.255.0, gateway=10.10.0.1
  device.rs232; sendingToMacOrIp=none(0.0.0.0), terminationChars=\x0A\x0D,  baudrate=57600, dataBit=8, stop_Bit=1, parity=none
  device.ir; sendingToMacOrIp=none(0.0.0.0)
  device.edid; preferMode=max
  device.display; iconImageName=GenericDisplay, manufacturer=, model=, location=, serialNumber=
  device.display; mode=stretch
  device.displaySize; width=8192, height=2160, fps=24.00
  device.displayTiming; totalWidth=8352, totalHeight=2191, hsyncFronPorch=48, vsyncFronPorch=3, hsyncWidth=32, vsyncWidth=10, hSyncPolarity=positive,
vSyncPolarity=negative
  device.connectedEncoder; macAddr=d8:80:39:eb:52:73, name=d8:80:39:eb:52:73, connectionMode=fast-switched
  device.audioConnections; analogStreamMac=none, analogSourceName=none, hdmiAudioStreamMac=d8:80:39:eb:52:73,
hdmiAudioSourceName=d8:80:39:eb:52:73
  device.autoAudioConnections; hdmiAudioFollowVideo=true
  device.audioOutSourceType; analogOutSourceType=hdmi-audio-downmix, hdmiOutSourceType=hdmi-audio
  device.usb; filter=none
  device.usbUplink; macAddr=d8:80:39:eb:52:73, name=d8:80:39:eb:52:73
lastChangeIdMax(3093);

Zyper$ show device status 5e
device(d8:80:39:eb:25:5e);
  device.gen; model=Zyper4K, type=decoder, name=d8:80:39:eb:25:5e, state=Up, uptime=0d:0h:12m:5s, lastChangeId=185
  device.temperature; main=0C
  device.firmwareUpdate; status=idle, loadingFile=none, percentComplete=0
  device.hdmiOutput; video-timing-source=user-configuration
  device.hdmiOutput; cableConnected=connected, hdcp=inactive, hdcpVersion=NONE, hdmi2.0=yes, horizontalSize=8192, verticalSize=2160, fps=24.000,
interlaced=no
  device.hdmiOutput; hTot=8352, hBlank=160, hFront=48, hSync=32, hSyncPol=positive
  device.hdmiOutput; vTot=2191, vBlank=31, vFront=3, vSync=10, vSyncPol=negative
  device.hdmiOutput; pixelClock=439.182, colorEncoding=RGB, colorDepth=8, colorSpace=sRGB, colorQuantRange=full, timingStandard=unknown timing
  device.hdmiOutput; streamDatarate=6531Mbps
  device.edid; sourceType=decoder
  device.edid; edidStatus=valid, edidMonitorName=DELL P2715Q
  device.edid; firstDescriptorPreferredResolution=yes
  device.edid; maxFps=75.00, maxPixelClockMhz=300.00, maxDeepColorPixelClockMhz=300.00, rgbColorDepth=8, yuv420ColorDepth=0
  device.edid; only420=none, also420=none, yuvQuantRange=default, rgbQuantRange=default
  device.edid.audio.PCM; channels=2, sampleRates=96hz-88.2hz-48hz-44.1hz-32hz, sampleBits=16-20
  device.edid.preferredResolution; pixelClockMhz=297.00, sizeX=3840, sizeY=2160, fps=30.00
  device.edid.maxResolution; pixelClockMhz=297.00, sizeX=3840, sizeY=2160, fps=30.00
  device.connectedEncoder; mac=d8:80:39:eb:52:73, name=d8:80:39:eb:52:73, receivingVideoFromEncoder=yes-with-warning,  warning=Video exceeds display EDID
```

```
    device.connectedEncoderAnalogAudio; mac=none, name=N/A, receivingAudioFromEncoder=no
    device.connectedEncoderHdmiAudio; mac=d8:80:39:eb:52:73, name=d8:80:39:eb:52:73, receivingAudioFromEncoder=yes
    device.activeVideoWall; name=none
lastChangeIdMax(187);
```

MP

Base VM Image is now Ubuntu 16.04

Components: VM ZyPer Management platform

Overview: In this release we have created a new OVA file for VM deployment which runs on Ubuntu 16.04. This is a clean image of the VM ZyPer Management Platform and although it cannot be used to upgrade the existing VM OS version, we still offer our standard VM upgrade for 14.04 and 16.04 VM versions.

Operation: Deployment through the Vcenter or Proper VM tools to deploy OVA files as system images.

ZyPerXS support added

The ZyperXS is the latest Video over IP Encoder and Decoder devices, incorporating the ability to send video and audio across a complex network environments. The devices have capabilities to send most major resolutions up to 4096 X 2160 60 FPS Bandwidths (With HDCP 2.2 support). The devices contain Analog in/out on the encoder and Analog out on the decoders. There is also USB 2.0 support for HID devices between TX and RX units. A management port exists as well like the ZyPer4K standard devices. The device is designed for use with its slim design and passive colling properties.

Components: ZyPer Management Platform API, GUI and Server.

Overview: In this release we have support for the new ZyPerXS product line, these are slim fan less units that offer interoperable support with existing ZyPer4K HDMI 2.0 units in the following areas.

- o Video
- o Audio
- o Video Wall
- o Multiview

Changes to API: New Product model and product code for the ZyPerXS. In addition, new Firmware support for the XS specifically needed to be added to allow the unit the upgrade functionality. There is also Native Support between XS units for USB inputs.

```
device(0:16:c0:4d:e3:21);
  device.gen; model=Zyper4KXS, type=encoder, virtualType=none, name=0:16:c0:4d:e3:21, state=Up, lastChangeId=452
  device.gen; productCode=Z4KENCCXS, productDescription=Copper Encoder - HDMI 2.0
  device.gen; firmware=1.2.0.2
```

Changes to GUI: New Icon Tooltip for the XS, new Join Config, Support for the device for use in Joins, Video Wall, Presets, Zones and Multiview.

Appearance and States:

Encoder

Decoder
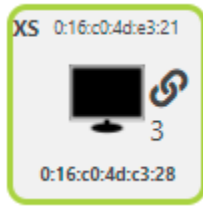
- **Operation:**

Limitations:

- No IR, RS232 or preview stream options are available for this device
- USB limited to native XS units only
- Multiview Overlay will be shown on ZyPerXS decoder display for overlays configured on ZyPer4K Encoders – ZyPerXS encoders do not have this support.
- If units existing on the network and the MP prior upgrade to 2.2, these devices will need to be deleted in order to show up properly under the GUI. Encoder units will show up under the Displays panel and Grid and Decoders will have limited functionality.
- When adding XS units to an existing system it is necessary to set the Join Config to factory defaults in order to generate a valid Join Config for the XS units

ZyPer4K Enhanced USB pairing and detection

Components : Server, API, ZyPer4K Endpoint Devices with USB

Overview: In this release we have enhanced the pairing mechanism for the ZyPer4K devices, which pairs the USB component to the Device.

Operation: Operation is automatic in this release.

Appearance and states:

Upon startup of the Server the USB components obtain an IP and present a MAC address that the server will pair to the ZyPer4K device it is embedded in. Devices that are not initially paired will be continuously tried, ensuring that the USB will eventually be paired to a ZyPer4K device.

ZyPer Device Corrupted EDID detection and recovery

Components : Server, API Endpoint devices

Overview: In this release we now detect if a loaded EDID is corrupted, upon a bad checksum being detected the device will be sent a restart command which will then cause the EDID to be reloaded. This will allow the device or display a chance to resend the EDID correctly.

Operation: Operation is automatic in this release.

Appearance and states:

When this event is experienced, the below message will appear in the rcServer.log

Wed Oct 28 15:18:10 2020 (0x5770ee;0x435e25;0x435a8b;0x4c9928;0x4c6451;)EVENT for device
80:1f:12:4b:c3:8d(80:1f:12:4b:c3:8d); EdidInvalidExtensionChecksum -- checksum=invalid
Wed Oct 28 15:18:10 2020 (0x448798;0x435ec4;0x435a8b;0x4c9928;0x4c6451;)RcEncoder::EdidChanged – entered
Wed Oct 28 15:18:15 2020 RcServer -- commandLine: "restart device 80:1f:12:4b:c3:8d"
Wed Oct 28 15:18:15 2020 (0x56e253;0x439b61;0x52117b;0x5454f9;0x545072;)deviceCmd: device
80:1f:12:4b:c3:8d(80:1f:12:4b:c3:8d), rebooting

Limitations: During the restart of the device, the device will be unavailable for approximately 10 seconds. During this time the device will turn red in the GUI. The API will show the device as down until the reset is complete.

ZyPerUHD device recovery for unresponsive units

Components : Server, API Endpoint Devices

Overview: In this release we also detect if ZyPerUHD endpoints fail to respond to control requests. When this event occurs, the server will issue a restart command to the device, this will return the device back to operational status.

Operation: Operation is automatic in this release.

Appearance and states:

When this issue occurs, the below message will appear in the rcServer.log
Thu Oct 15 09:51:06 2020 (0x4cd05f;0x4cc4af;0x4a4c37;0x4e578a;0x4e3608)DecoderUpdateDevice -- Decoder
34:1b:22:80:57:ce(34:1b:22:80:57:ce), using server config, connecting to encoder 34:1b:22:80:51:53(34:1b:22:80:51:53)
REBOOTING DECODER

Limitations: During the restart of the device, the device will be unavailable for approximately 40 seconds. During this time the device will turn red in the GUI. The API will show the device as down until the reset is complete.

Changes is logging level, log management and additional logging

Components : Server

Overview: In this release there are a few changes to the logging to allow better management and information for troubleshooting purposes.

Operation: Operation is automatic in this release, however the following command was changed when setting logging level to expand the range to accommodate for the new rcServer debug level for USB information.

Changes:

- rcServerNN.log files are now 10 times smaller as they are compressed with gzip.
- rcServerNN.log files are 10MB is size uncompressed (up from the 5MB previously)
- rcServerNN.log files now have 30 files in total (up from 10 previously)
- System_state.log now logs cpu and OS type in the log.
- Logging level 4 now shows USB packet information
- What was logging level 4 prior this release is now level 5

Note: Active rcServer.log is not compressed to allow it to be read without uncompressed.

The storage of these log files should still be about 50 percent smaller than on previous versions even with the logging changes.

Appearance and states:

rcServer.log management

```
-rw-r--r--  1 root        root     328161 Nov  4 16:46 rcServer12.log.gz
-rw-r--r--  1 root        root     125697 Nov  4 17:11 rcServer11.log.gz
-rw-r--r--  1 root        root     120660 Nov  4 17:35 rcServer10.log.gz
-rw-r--r--  1 root        root     180246 Nov  4 18:28 rcServer9.log.gz
-rw-r--r--  1 root        root     347071 Nov  4 20:41 rcServer8.log.gz
-rw-r--r--  1 root        root     354270 Nov  4 22:52 rcServer7.log.gz
-rw-r--r--  1 root        root     349127 Nov  5 01:05 rcServer6.log.gz
-rw-r--r--  1 root        root     360863 Nov  5 03:16 rcServer5.log.gz
-rw-r--r--  1 root        root     353845 Nov  5 05:28 rcServer4.log.gz
-rw-r--r--  1 root        root     351723 Nov  5 07:39 rcServer3.log.gz
-rw-r--r--  1 root        root     355919 Nov  5 09:51 rcServer2.log.gz
-rw-r--r--  1 root        root     368817 Nov  5 12:01 rcServer1.log.gz
-rw-r--r--  1 root        root     105501 Nov  5 13:30 rcServer.err
-rw-r--r--  1 root        root    9505078 Nov  5 14:01 rcServer.log
```

Syslog changes

CPU info
Nov 4 15:29:31 zyper kernel: [0.036072] smpboot: CPU0: Intel(R) Core(TM) i3-7100 CPU @ 3.90GHz (family: 0x6, model: 0x9e, stepping: 0x9)

OS Info
Nov 4 15:29:31 zyper kernel: [0.000000] Linux version 4.15.0-122-generic (buildd@lcy01-amd64-010) (gcc version 5.4.0 20160609 (Ubuntu 5.4.0-6ubuntu1~16.04.12)) #124~16.04.1-Ubuntu SMP Thu Oct 15 16:08:36 UTC 2020 (Ubuntu 4.15.0-122.124~16.04.1-generic 4.15.18)

Nov 4 15:29:31 zyper snapd[787]: daemon.go:343: started snapd/2.45.1ubuntu0.2 (series 16; classic) ubuntu/16.04 (amd64) linux/4.15.0-122-generic.
Nov 4 15:30:00 zyper systemd-timesyncd[421]: Synchronized to time server 91.189.91.157:123 (ntp.ubuntu.com).

Logging Level 4 and 5

Zyper$ logging level
    level   Integer range from 1 to 5

Warning:(48) Logging level 4 can output network trace data -- lots of it (should normally stay at 3 or lower)
Warning:(48) Going to or from logging level 5 requires server restart to take effect (should normally stay at 3 or lower)

MP GUI

Preset configuration, Schedule configuration and Administration

Components: ZyPer Management Platform GUI

Overview: In this release Preset configs and Preset Scheduling is now available in the ZMP GUI. Added to the GUI is a Preset Panel to allow the user to create, manage and schedule presets for device video and audio connections. A Calendar view is available to allow the user to see the scheduled presets at the month, week or day level. Filtering options are available at the Preset name, schedule name under both the List view or Calendar view.

Changes to GUI: New Preset Panel Added, List and Calendar views along with filtering support.

Operation:

After creating a preset the below functions are available

Running man – Run preset manually – Will apply the preset config
Edit – Allows user to edit the specific preset config to remove or add config commands.
Schedule – Opens the Schedule config to allow the user to create a schedule for the Preset.
Log – Displays the run log from the Preset.
Trash Can – Deletes the Preset.
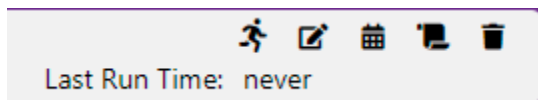
Below is a simple walk though of this feature.

Main Preset Panel

Available subpanels
- **List View**
- **Add new**
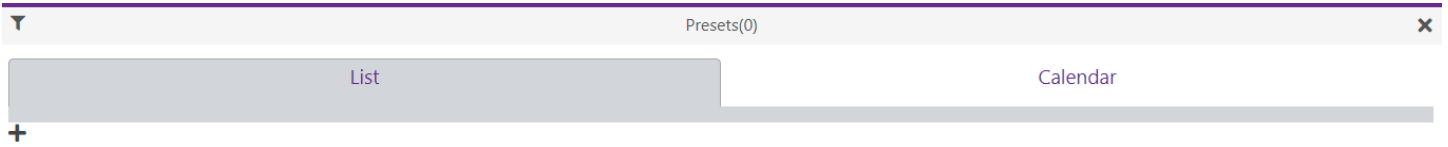
To add a new Preset click the plus sign under the "List" View. This will bring up the below menu.
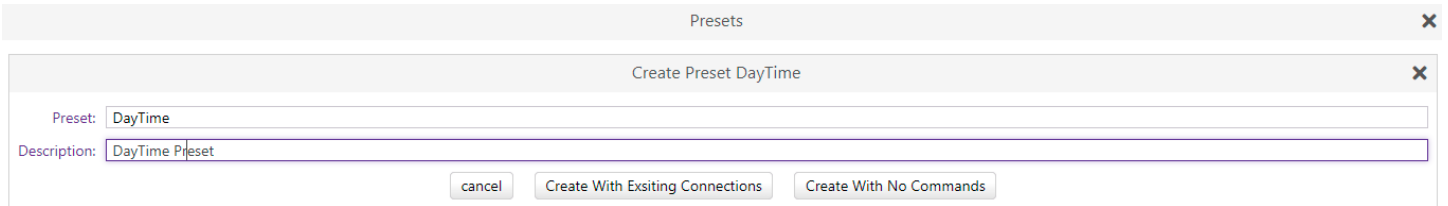
After naming the Preset and entering a description click on either "create with no commands" or "create with existing connections"

Creating with existing connections will bring up the below menu.
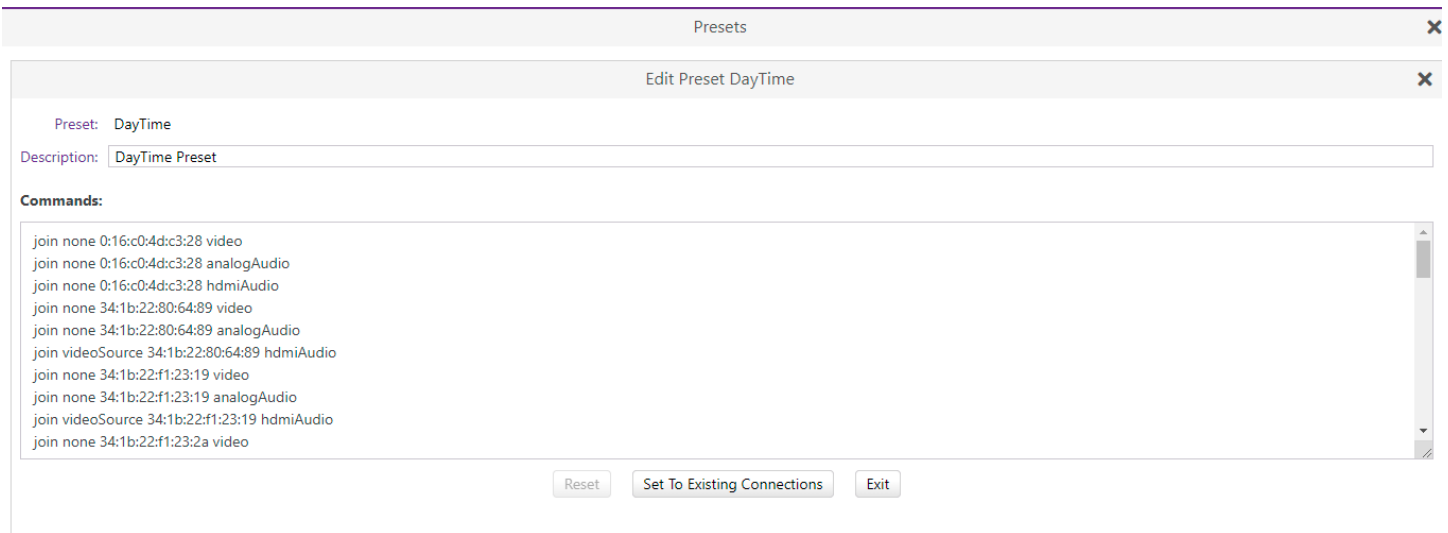
Save Preset or edit the Preset manually here. Clicking on exit will bring you back to the main "List" menu.
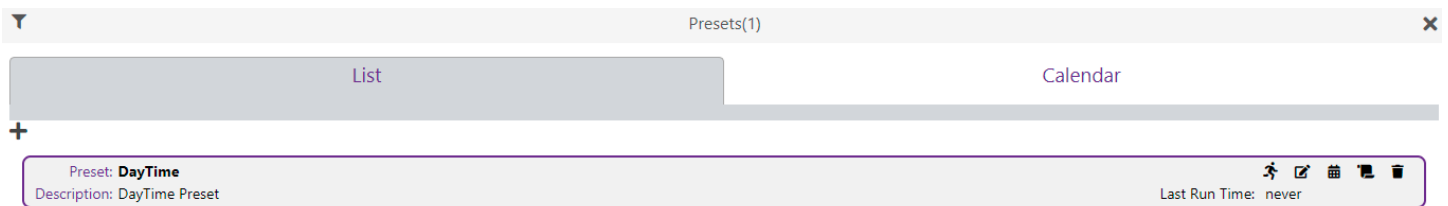
Filter Function: If you create a second Preset, you can use the filter function if you want to filter on a specific Preset, this of course is useful when having many Presets for the system.
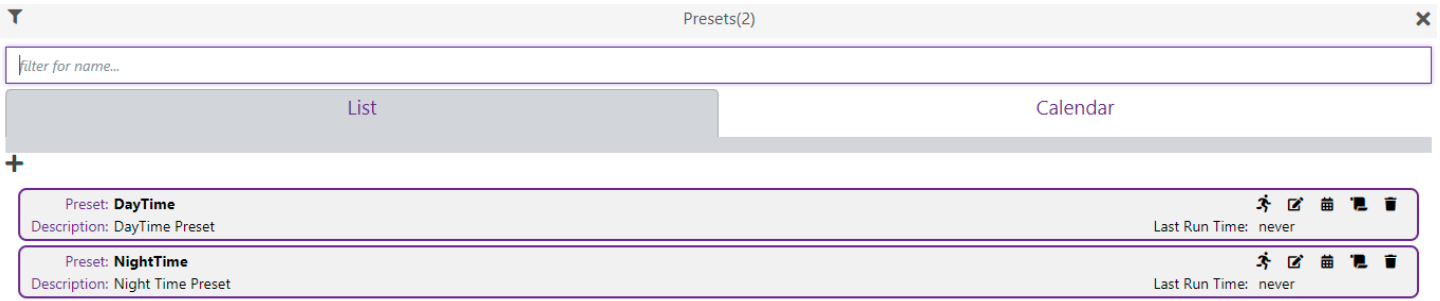
Filter on Day
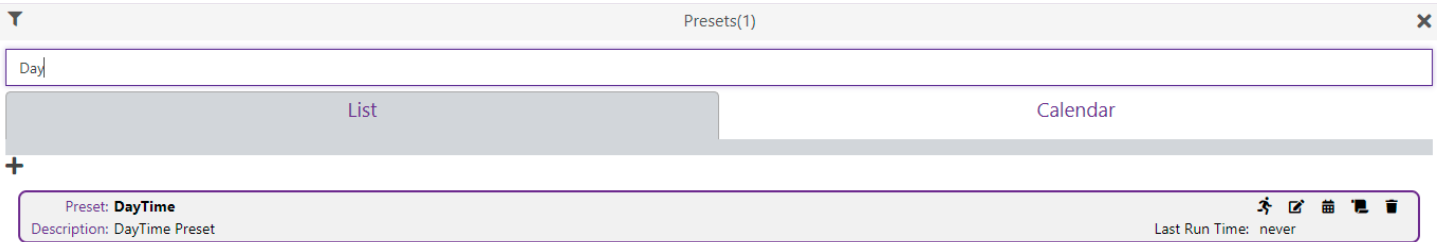
Schedule creation: Creating a Schedule for the Preset is done by clicking the "Schedule" tooltip on the Preset entry under the "List" view.
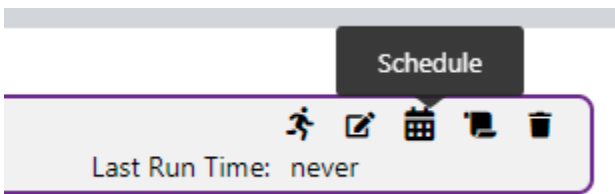
This will open the Schedule listing menu, clicking on the Add sign will open the Schedule edit menu to allow you to configure the schedule.
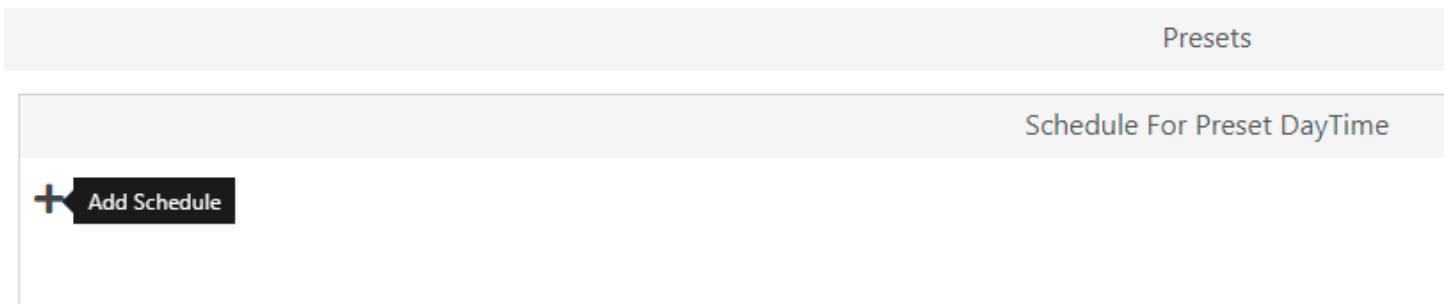
After setting the values for the date and time, click on "Create" to create a schedule.
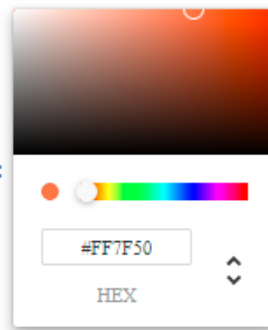
Calendar View: After a schedule(s) is created, clicking on the Calendar view allow the user to see the schedules for the presets, using the filtering options on this view allows the using to specify a particular Preset, Month, Week, Day.

Source and Display Grid for Device Status and Configuration (includes device diagnostic feature)

Components: ZyPer Management Platform GUI

Overview: In this release there is the ability to manage device settings and connections under a Grid View for sources and Displays. The device Diagnostic feature in the API is also accessible here in the grid views of both source and display devices. Filtering, help, Edid file management, device firmware updates and device routing is configurable in these Grids. Multiple device selection for modification is also available in these device grids. In addition to this there is added the ability to export and import a limited amount of device settings via CSV file through the Export/Impot menu.

Changes to GUI: Source Grid and Display Grid Panels were added to the ZMP GUI to allow the user to manage the devices. I "Hamburger" (https://en.wikipedia.org/wiki/Hamburger_button) menu was added to the left side of these panels to allow the following:

- Show/Hide Columns
- Export/Import
- Help

Operation:

Appearance and States

Source Grid

			Name		Model	Uptime D:H:M:S	Diag	Resolution/ Status	Gbps
	Status	Routing	Config	VideoIn	Network	EDID	Firmware		RS-232
●		80:1f:12:49:89:5b			Zyper4K	0:3:21:40	Diag	1280x720p60.00	1.7
●		80:1f:12:4b:e2:b4			Zyper4K	0:3:7:40	Diag	1920x1080i30.00	1.9
●		80:1f:12:4c:1f:1e			Zyper4K	0:3:22:40	Diag	1920x1080p60.00	0.3
●		80:1f:12:4c:20:e8			Zyper4K	0:3:21:40	Diag	3840x2160p60.00	0.3
●		80:1f:12:4d:ea:df			Zyper4K	0:3:21:40	Diag	1280x720p60.00	0.3
●		d8:80:39:59:aa:bf			Zyper4K	0:3:22:40	Diag	1920x1080p60.00	0.3
●		E9A-M10-APPL			Zyper4K	0:3:21:40	Diag	3840x2160p60.00	0.3
●		E62-APPLE			Zyper4K	0:3:21:40	Diag	1920x1080p60.00	0.3
●		d8:80:39:eb:2a:3f			Zyper4K	0:3:22:40	Diag	1920x1080p60.00	0.3
●		E73			Zyper4K	0:3:21:40	Diag	1280x720p60.00	1.7
●		0:16:c0:4d:e3:21			Zyper4KXS	0:3:10:40	Diag	no link	0.0
●		34:1b:22:80:51:4d			ZyperUHD	0:3:21:40	Diag	no link	0.0
●		34:1b:22:80:51:55			ZyperUHD	0:3:21:40	Diag	no link	0.0

Display Grid

Device Diagnostics

Error:
    Decoder has never received a valid EDID
Warning:
    Device has no HDMI link
    HDCP is forced on
Info:
    No video connection
Summary
    Error: 1
    Warning: 2
    Info: 1

Export and Import

Importing Custom Configurations

For a full review of the Device Grids, please reference the "ZyPer Management Platform User Manual" for this 2.2 release.

Video Wall support 15 X 15 ZyPer4K devices

Components: ZyPer Management Platform API and GUI

Overview: In this release we now support the ability to create 15 X 15 video walls in the API or through the GUI. The command set was expanded to include support for these addition video wall designations.

Changes to API: Video wall rows now are available to 15, Video wall columns are now are available to 15.

Changes to GUI: In the GUI, the video wall create/edit menu is now expanded to allow up to 15 rows and 15 column wall decoder designations.

Appearance and States

API

videoWall(MegaWall);
  videoWall.gen; videoSourceMac=none, numDisplayRows=15, numDisplayCols=15
  videoWall.bezel; top=0, bottom=0, left=0, right=0
  videoWall.decodersRow1; col1=80:1f:12:49:8f:20, col2=none, col3=none, col4=none, col5=none, col6=none, col7=none, col8=none, col9=none, col10=none, col11=none, col12=none, col13=none, col14=none, col15=none
  videoWall.decodersRow2; col1=none, col2=80:1f:12:4d:4b:50, col3=none, col4=none, col5=none, col6=none, col7=none, col8=none, col9=none, col10=none, col11=none, col12=none, col13=none, col14=none, col15=none
  videoWall.decodersRow3; col1=none, col2=none, col3=d8:80:39:aa:35:70, col4=none, col5=none, col6=none, col7=none, col8=none, col9=none, col10=none, col11=none, col12=none, col13=none, col14=none, col15=none
  videoWall.decodersRow4; col1=none, col2=none, col3=none, col4=0:16:c0:4d:c3:28, col5=none, col6=none, col7=none, col8=none, col9=none, col10=none, col11=none, col12=none, col13=none, col14=none, col15=none
  videoWall.decodersRow5; col1=none, col2=none, col3=none, col4=none, col5=D5E-Berkbox-LG2, col6=none, col7=none, col8=none, col9=none, col10=none, col11=none, col12=none, col13=none, col14=none, col15=none
  videoWall.decodersRow6; col1=none, col2=none, col3=none, col4=none, col5=none, col6=d8:80:39:ea:cc:e2, col7=none, col8=none, col9=none, col10=none, col11=none, col12=none, col13=none, col14=none, col15=none
  videoWall.decodersRow7; col1=none, col2=none, col3=none, col4=none, col5=none, col6=none, col7=d8:80:39:eb:23:d7, col8=none, col9=none, col10=none, col11=none, col12=none, col13=none, col14=none, col15=none
  videoWall.decodersRow8; col1=none, col2=none, col3=none, col4=none, col5=none, col6=none, col7=none, col8=d8:80:39:eb:3a:10, col9=none, col10=none, col11=none, col12=none, col13=none, col14=none, col15=none
  videoWall.decodersRow9; col1=none, col2=none, col3=none, col4=none, col5=none, col6=none, col7=none, col8=none, col9=DCB-DISP-SPLIT, col10=none, col11=none, col12=none, col13=none, col14=none, col15=none
  videoWall.decodersRow10; col1=none, col2=none, col3=none, col4=none, col5=none, col6=none, col7=none, col8=none, col9=none, col10=DF5-TL, col11=none, col12=none, col13=none, col14=none, col15=none
  videoWall.decodersRow11; col1=none, col2=none, col3=none, col4=none, col5=none, col6=none, col7=none, col8=none, col9=none, col10=none, col11=none, col12=none, col13=none, col14=none, col15=none
  videoWall.decodersRow12; col1=none, col2=none, col3=none, col4=none, col5=none, col6=none, col7=none, col8=none, col9=none, col10=none, col11=none, col12=none, col13=none, col14=none, col15=none
 videoWall.decodersRow13; col1=none, col2=none, col3=none, col4=none, col5=none, col6=none, col7=none, col8=none, col9=none, col10=none, col11=none, col12=none, col13=none, col14=none, col15=none
  videoWall.decodersRow14; col1=none, col2=none, col3=none, col4=none, col5=none, col6=none, col7=none, col8=none, col9=none, col10=none, col11=none, col12=none, col13=none, col14=none, col15=none
  videoWall.decodersRow15; col1=none, col2=none, col3=none, col4=none, col5=none, col6=none, col7=none, col8=none, col9=none, col10=none, col11=none, col12=none, col13=none, col14=none, col15=none

GUI

Name

MegaWall

Create

Rows

15

0

0

Bezel

0

Columns

0

15
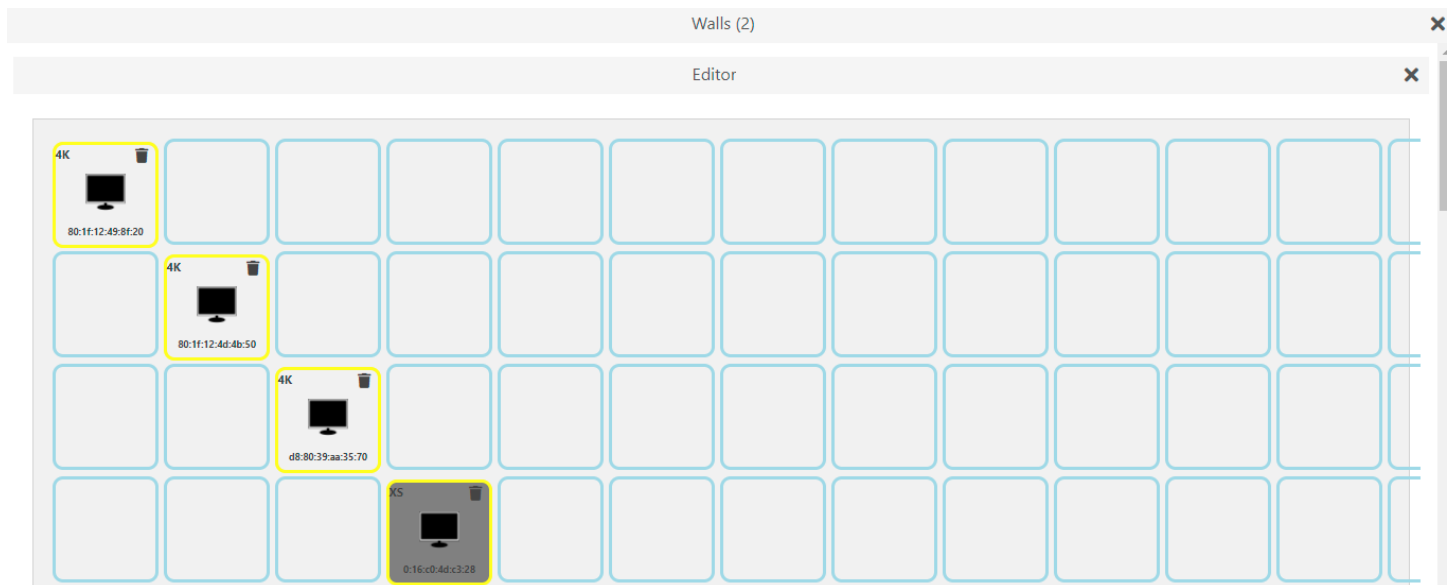
Additional Enhancements

Preview redesign

Overview: Preview video received an overhaul under the base functionality to handle stops and restarts of the stream more gracefully. These changes are automatic upon upgrade and require no settings to take advantage of these improvements.

Failover Enhancements

Overview: Similar to the preview stream functions, Server Redundancy also received enhancements for the failover and operation after server interruptions. Among these are certain failed conditions like failure of the Video port to obtain dhcp addresses, sometimes the primary and secondary servers both remain master on recovery. These changes are automatic upon upgrade and require no settings to take advantage of these improvements.

Appendix B New CamelCase Replaces Hyphenated Formatting

Overview

A major effort has been made in 2.2 to make the API more consistent, both input commands and resulting output.
Backward compatibility was a critical goal of this effort whenever possible. There are two main mechanisms implemented to assist with backward compatibility:

- Deprecated commands: they will continue to work in 2.2 but will not be included in help or auto-complete.
- CamelCase or hyphenated commands: all commands can be entered either as camelCase or hyphenated. Only camelCase are in help and auto-complete.

The result is that all but a very few commands (e.g. *load encoderEdid* and audio-related parameters) from 2.1 will work in 2.2. However, there is some API output that has changed. While this is minimal, it may require some changes to third-party applications processing the output.

CamelCase Commands – 100% Backward Compatible

Commands in 2.1 are mostly hyphenated. A major change in 2.2 is to "default" all command tokens to camelCase. *However, all commands changed to camelCase are 100% backwardly compatible*:

- API Help will show only camelCase command syntax
- API autocompletion will only complete to camelCase syntax
- But: API input will still accept the hyphenated commands as defined in 2.1

For example, the following versions of the same command are accepted in 2.2:
```
set decoder dec1 display-size auto set decoder dec1 displaySize auto
```

CamelCase Show Output

Most of the output in 2.1 is already camelCase. However, to make the interface as consistent as possible, there are a few tokens that changed to camelCase in 2.2. In most cases they are fairly obscure output but may require changes in third-party applications.

For more information on the updated CamelCase formatting, please reference the latest version of the ***ZyPer Management Platform User Guide*** found on our website's documentation page.

https://www.zeevee.com/documentation/