Release Notes for

ZyPer Management Platform

Software 1.7.3.33736

March 21, 2018

Revision History

Version	Editor	Date	Comments
1.7.3	Jay Morin/Michael Tavares	March 21, 2018	1.7.3 Maintenance release
1.7.1 P1	Jay Morin/Michael Tavares	January 10, 2018	1.7.1 Update patch
1.7.1	Jay Morin/Michael Tavares	December 11, 2017	Initial Draft

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1.7.3.33736

Release 1.7.3.33736 is released for a replacement version to 1.7.1 that includes support for enhanced API commands and ZyPer4K Display port output decoders. It will also contain several major fixes in MaestroZ, including a patch for the Zone panel "create" function. The release contains a full ZMP platform so that direct upgrades can be done from 1.5.2 and 1.6. Along with this patched version, we also released a new Ubuntu OVA file for virtualized machines.

1. Supported Platforms
- ZMP on NUC, Ubuntu, and Ubuntu VM. Redhat is not supported in this release.
- All Current ZyPer4K, ZyPerUHD and ZyPerHD encoders and decoders
- ZyPer4K Decoder – Featured Output: HDMI 2.0, Display Port 1.2a (Video only)
- ZyPer4K Encoder – Featured Inputs: HDMI 2.0, Display Port, SDI and Analog Expansion board, featuring VGA, Component, Composite and S-video Sources.
- MaestroZ running on:
  - Google Chrome version 55.0.2883 or higher
  - Mobile Devices: Android tablet 7.0, MS Surface Windows 10, iPad IOS 10.3.2 and higher

2. New Features
- Display Port 1.4 Decoders (video only)
- New API commands for advanced video manipulation on ZyPer4K decoders.
- Independent analog audio routing for ZyPerUHD
- New API command for ZyPerUHD decoders to accept source resolution instead of scaling to max display resolution. See section 7 below for more information.

3. Issues Resolved
- ZyPerUHD unit stopped receiving RS232 data from server
- Zones cannot be created in the Zone Panel
- Do not display cert message upon MaestroZ login
- ZyPerUHD joins are not scaling properly - 4K source to a 1080 display does not show any video, decoder did not downscale
- ZyPer4K HDMI2.0 - Decoder - Display Port - The device capabilities under the API command output does not show that the device is display port capable.
- After Upgrade, the config file used for join configurations was not being recreated
- AJAX responses to show responses for IR or RS232 don't contain actual response data

4. Issues Still Outstanding
- MaestroZ custom join configurations should not allow settings not supported by the hardware – **No Workaround**
- MaestroZ, Mobile - Zone - tap-tap to add a decoder to a zone – **No Workaround**
- One NUC two browsers - "Server is not available"– **No Workaround**
- When swapping HDMI from ZyPer4K decoders with the HDMI unplugged less than 5 seconds, the decoder fails to read the new EDID. **– Workaround is to keep the cable removed for over 5 seconds before re-connecting it.**
- API lastChangeId not always updated in show device status when join or un-join a video connection**– Workaround is to refresh the browser**
- Tet server timezone not able to change to a new time zone - stays at default - **No workaround**
- ZyPer4K Gen3 - Encoder - Incorrect FPS status under 420 color formats – **No Workaround**

5. Known Limitation

- On ZyPer UHD Encoder/Decoder Joins will experience a short delay of 2 seconds to display video. This will also occur between swapping encoder assignments to the decoder. This is a known limitation of the hardware within the ZyPerUHD devices.

6. ZyPerUHD, ZyPerHD and ZyPer4K Updates

ZyPer4K Firmware 3.4.0 Encoder

- Change to TTL (Time to live) value from 1 to 32 for Video and audio streams

- Corrected an issue where scaled stream (used in Multiview) would not be set if the source was not detected.

- Network data packing for compressed video streams –This change does affect compatibility between new 3.4.0.0 firmware and previous 3.3.x.x firmware when streaming compressed video stream from the encoder to decoders. It is therefore required to update all devices in the same setup to 3.4.0.0 firmware when streaming video resolutions that use compression.

    o 4K60 8-bit RGB and YCbCr 4:4:4
    o 4K60 10-bit YCbCr 4:2:2
    o 4K60 12-bit YCbCr 4:2:2
    o 4K60 12-bit YCbCr 4:2:2
    o 4K30 12-bit RGB and YCbCr 4:4:4

- Corrected an issue where audio would occasionally be lost when disconnecting and reconnecting the source HDMI cable to an encoder.

ZyPer4K Firmware 3.4.0 Decoder (3.4.0.5 for the Display Port output)

- Support for Display Port version of the ZyPer 4K Decoder

- Network data packing for compressed video streams –This change does affect compatibility between new 3.4.0.0 firmware and previous 3.3.x.x firmware when streaming compressed video stream from the encoder to decoders. It is therefore required to update all devices in the same setup to 3.4.0.0 firmware when streaming video resolutions that use compression.

    o 4K60 8-bit RGB and YCbCr 4:4:4
    o 4K60 10-bit YCbCr 4:2:2
    o 4K60 12-bit YCbCr 4:2:2
    o 4K60 12-bit YCbCr 4:2:2
    o 4K30 12-bit RGB and YCbCr 4:4:4

7. API command changes, additions, and deletions.

New API commands (ZyPerUHD)

- join<encoderMac|encoderName>|video-source|none<decoderMac|decoderName> audio

Establishes the independent audio connection between a ZyPerUHD encoder and decoder
Use the set command to define the active audio stream

- set encoder <encoderMac|encoderName> audio-stream source hdmi|analog

Sets the current active audio stream to HDMI or analog

Use the join command to send audio to the specified decoder

- set decoder <decoderMac|decoderName> display-size source

Instructs the decoder to output the same resolution as the input source instead of scaling to the highest resolution supported by the display plugged into the decoder.

8.   Upgrading and downgrading:

Known issues with upgrading and downgrading

- **All 1.3 and 1.4 versions should be upgraded to 1.6 prior upgrading to 1.7.3.** There is reduced support in downgrading due to database changes introduced in the 1.7.x release. The 1.3 and 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.

- **Downgrading from 1.7.3.33736 to either 1.5.2 and 1.6, 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.

- Upon upgrading the system to 1.7.3, 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.

- If downgrading to 1.6. or 1.5.2, 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 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.

Upgrade Paths

Starting Version	IP Assignment type	Offline or Online	Result
1.5.2.32532	DHCP	Online	Passed
1.5.2.32532	DHCP	Offline	Passed
1.5.2.32532	STATIC	Online	Passed
1.5.2.32532	STATIC	Offline	Passed
1.5.2.32532	Link Local	Offline	Passed
1.6.33213	DHCP	Online	Passed
1.6.33213	DHCP	Offline	Passed
1.6.33213	STATIC	Online	Passed
1.6.33213	STATIC	Offline	Passed
1.6.33213	Link Local	Offline	Passed
1.7.1.33493	DHCP	Online	Passed
1.7.1.33493	DHCP	Offline	Passed
1.7.1.33493	STATIC	Online	Passed
1.7.1.33493	STATIC	Offline	Passed
1.7.1.33493	Link Local	Offline	Passed

APPENDIX: Upgrade requirements for redundant ZMPs

In order to properly upgrade the ZMP without losing customer data, joins and configuration, the below requirements must be followed.

- The upgrade must occur on the primary or existing ZMP first. This ensures that the customer data will be migrated to the latest software. Secondary servers must not be online at the time.
- After upgrading the primary ZMP the server must remain up and running on the network where the ZMP endpoints are. This server will remain in standalone mode for now.
- The new ZMP can be placed online and upgraded as needed. After the server is online the redundancy information will be available.
- Login to the master (original) ZMP IP address and configure the redundancy IP and subnet with the appropriate commands
- Check to make sure that the new server is now running as slave and that the configuration is saved.

In order to downgrade back to a prior version, turn the new or secondary server off and then proceed with the downgrade.

1.7.1.33459

Release 1.7.1.33559 is a patched version of 1.7.1.33348 that includes expanded upgrade support and fixes for a Redhat installation. The release contains a full ZMP platform so there is no need to upgrade first to the original 1.7.1. released version. Along with this patched version, we also released a new Redhat version and Ubuntu OVA file for virtualized machines.

Below are the supported upgrade paths.

The following is the supported paths for upgrading and downgrading in this version.

Offline Upgrade: ZMP Ethernet is connected to a switch with Static, Dynamic or Link Local IP configured but no access to the Internet

Version	Static	Dynamic	Link Local
1.3	Must be on 1.5.2 or upgrade to 1.6 first	Must be on 1.5.2 or upgrade to 1.6 first	Must be on 1.5.2 or upgrade to 1.6 first
1.4	Must be on 1.5.2 or upgrade to 1.6 first	Must be on 1.5.2 or upgrade to 1.6 first	Must be on 1.5.2 or upgrade to 1.6 first
1.5.2	Supported	Supported	Supported
1.6	Supported	Supported	Supported
1.7 Beta	Not Supported	Not Supported	Not Supported

1.7.1.33348

Release 1.7.1 is a major release for the ZyPer Management Platform (ZMP). This release contains the support for Multiview for 1080 displays, advanced video controls through the API, new ZyPer4K, ZyPerHD and ZyPerUHD firmware and ZMP master/slave redundancy. In addition, Users and Roles have now been added to the MaestroZ application. Enhancements to the GUI include: Redundancy controls under the server panel, User Panel for configuring and managing users and a "Roles" Panel for assigning permissions to users.

1. Supported Platforms

- ZMP on NUC, Ubuntu VM, Redhat
- All Current ZyPer4K, ZyPerUHD and ZyPerHD encoders and decoders
- ZyPer4K Decoder – Featured Output: HDMI 2.0
- Zyper4K Encoder – Featured Inputs: HDMI 2.0, Display Port, SDI and Analog Expansion board, featuring VGA, Component, Composite and S-video Sources.
- MaestroZ running on:
  - Google Chrome version 55.0.2883 or higher
  - Safari 10.3.2 for iPad
  - Mobile Devices: Android tablet 7.0, MS Surface Windows 10, iPad IOS 10.3.2 and higher

2.   New Features

- Master/slave ZMP redundancy
- Multiview Support for 1080 Displays on ZyPer4K decoders
- New API commands for advanced video manipulation on ZyPer4K decoders.
- User and Roles assignments available to refine user access **(MaestroZ only)**
- Separate USB joins for ZyPerUHD Encoder and Decoders (no longer automatically joins when video joins)

3.   Issues Resolved

- Can't update ZyPer4K firmware with ZMP
- User isn't prevented from dragging and dropping the same display to multiple video wall locations
- Device IP address isn't displayed in status menu
- Right clicking to display the context menu may not always work
- Configuration changes to an offline ZyPerHD encoder reported success and did not save change
- The MaestroZ source panel did not always report correct HDMI cable connection status
- The flash-leds API command not supported on Charlie units
- ZyPerHD - Cable Status does not change when unplugged on the Encoder
  ZyPer4K Alpha/Bravo – Slow join connection time with new video source in fast-switched and genlocked mode - takes from 6-8 seconds

4.   Issues Still Outstanding

- MaestroZ custom join configurations should not allow settings not supported by the hardware – **No Workaround**
- MaestroZ, Mobile - Zone - tap-tap to add a decoder to a zone – **No Workaround**
- One NUC two browsers - "Server is not available"– **No Workaround**
- When swapping HDMI from ZyPer4K decoders with the HDMI unplugged less than 5 seconds, the decoder fails to read the new EDID. **– Workaround is to keep the cable removed for over 5 seconds before re-connecting it.**
- API lastChangeId not always updated in show device status when join or un-join a video connection**– Workaround is to refresh the browser**
- ZyPerHD - Firmware update issue – Sometimes the firmware filename is saved with the incorrect name on ZyPerHD encoders – **No Workaround**
- Charlie 4K - Encoder - Incorrect FPS status under 420 color formats – **No Workaround**

5.   Known limitations

- On ZyPerUHD Encoder/Decoder Joins will experience a short delay of 2 seconds to display video. This will also occur between swapping encoder assignments to the decoder. This is a known limitation of the hardware with the ZyPerUHD devices.

6.   ZyPerUHD, ZyPerHD and ZyPer4K Updates

- ZyPer4K Firmware 3.3.2 HDMI2.0 Encoder

  - Support for Flash LEDs devices

  - Support for Factory Defaults devices

- ZyPer4K Firmware 3.3.2 HDMI2.0 Decoder

- o   Support for Flash LEDs on devices

- o   Support for Factory Defaults on

- o   Support for Multiview under for 1080p Displays
- o   Power cycle an Encoder that is joined to decoder that is joined in Genlock mode can occasionally cause the decoder decompressor to hang – Fixed
- ZyPerUHD Firmware 0.6.1 Decoder

    - o   Fixed issues with connecting to the Encoder to acquire the image output after reboot or power cycle.

- ZyPerHD Firmware 2.12.3 Encoder

    - o   Latest firmware supported on Encoder

- ZyPerHD Firmware 2.12.4 Decoder

    - o   Fix provided for "RGB limited" resolutions using the 16 to 235 color range

7.   Upgrading and downgrading

Known issues with upgrading and downgrading
1) During the upgrading there are certain instances of the MaestroZ Custom Join config information is not copied over to the 1.7.1 release. This is seen in 1.3 to 1.7.1 upgrades and a particular case going from 1.4 to 1.7.1. Any upgrades from 1.3 to any higher release require that all MaestroZ sessions should be closed prior upgrade to prevent the "Join Configuration" from being overwritten on reconnect.
2) There is reduced support in downgrading due to the extensive additions to 1.7.1. In particular, the 1.3 and 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. Due to this all 1.3 and 1.4 versions should be upgraded to 1.6 prior upgrading to 1.7.1
3) Upon upgrading the system to 1.7.1 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.

The following is the supported paths for upgrading and downgrading in this version.

Offline Upgrade: ZMP Ethernet is connected to a switch with Static, DHCP or Link Local IP configured but no access to the Internet.

Version	Static IP Address	DHCP	Link Local
1.3	Not Supported	Must upgrade to 1.6	Not Supported
1.4	Not Supported	Must upgrade to 1.6	Not Supported
1.5.2	Not Supported	Supported	Not Supported
1.6	Not Supported	Supported	Not Supported
1.7 Beta	Not Supported	Not Supported	Not Supported

Online Upgrade: ZMP Ethernet is connected to a switch with Static, DHCP or Link Local IP configured with access to the Internet.

Version	Static IP Address	DHCP	Link Local
1.3	Must upgrade to 1.6 in order to support backing rev to 1.7.1	Must upgrade to 1.6 in order to support backing rev to 1.7.1	Not Supported
1.4	Must upgrade to 1.6 in order to support backing rev to 1.7.1	Must upgrade to 1.6 in order to support backing rev to 1.7.1	Not Supported
1.5.2	Supported	Supported	Not Supported
1.6	Supported	Supported	Not Supported
1.7 Beta	Not Supported	Not Supported	Not Supported

Downgrade Support

Upgrade was done Offline

Version	Upgrade was Offline (no internet access)
1.3	Supported (must revert to 1.6 first)
1.4	Supported (must revert to 1.6 first)
1.5.2	Supported
1.6	Supported
1.7 Beta	Not Supported

Upgrade was done Online

Version	Upgrade was Online (internet access)
1.3	Supported (must revert to 1.6 first)
1.4	Supported (must revert to 1.6 first)
1.5.2	Supported
1.6	Supported
1.7 Beta	Not Supported

Upgrading ZMPs in a standalone single server environment on this version will remain the same as prior versions.

Online Upgrade: ZMP Ethernet is connected to a switch with Static, Dynamic or Link Local IP configured with Internet access available.

Version	Static	Dynamic	Link Local
1.3	Must be on 1.5.2 or upgrade to 1.6 first	Must be on 1.5.2 or upgrade to 1.6 first	Must be on 1.5.2 or upgrade to 1.6 first
1.4	Must be on 1.5.2 or upgrade to 1.6 first	Must be on 1.5.2 or upgrade to 1.6 first	Must be on 1.5.2 or upgrade to 1.6 first
1.5.2	Supported	Supported	Supported
1.6	Supported	Supported	Supported
1.7 Beta	Not Supported	Not Supported	Not Supported

Downgrade Support

Orginal Version	
1.3	Supported reverting back to 1.6
1.4	Supported reverting back to 1.6
1.5.2	Supported
1.6	Supported
1.7 Beta	Not Supported

Upgrade requirements for redundant ZMPs

In order to properly upgrade the ZMP without losing customer data, joins and configuration, the below requirements must be followed.

- The upgrade must occur on the primary or existing ZMP first. This ensures that the customer data will be migrated to the latest software. Secondary servers must not be online at the time.
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- Login to the master (original) ZMP IP address and configure the redundancy IP and subnet with the appropriate commands
- Check to make sure that the new server is now running as slave and that the configuration is saved.

In order to downgrade back to a prior version, turn the new or secondary server off and then proceed with the downgrade.