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# How to Enable and Configure Redundancy for ZyPer Management Platforms

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# Introduction

ZyPer Management Platform (ZMP) is a Linux-based system with an intuitive Graphical User Interface (GUI) and user-friendly Application Programming Interface (API) for the management of the ZyPer family of AV over IP encoders and decoders. It is available from ZeeVee in three hardware options: an embedded ZMP in a ZyPerUHD60-2E encoder, a NUC (Next Unit of Computing), and a 1-RU Rack-mounted Enterprise Appliance. The ZMP is also available as a Virtual Machine to be installed on VMWare ESXi 6.x or greater.

Starting with software version 2.3.1, the ZyPer Management Platforms can be combined in a redundant pair to minimize downtime. This allows users and third-party control systems to access the ZMP via a single virtual IP address shared by both units regardless of which system is running as Primary.

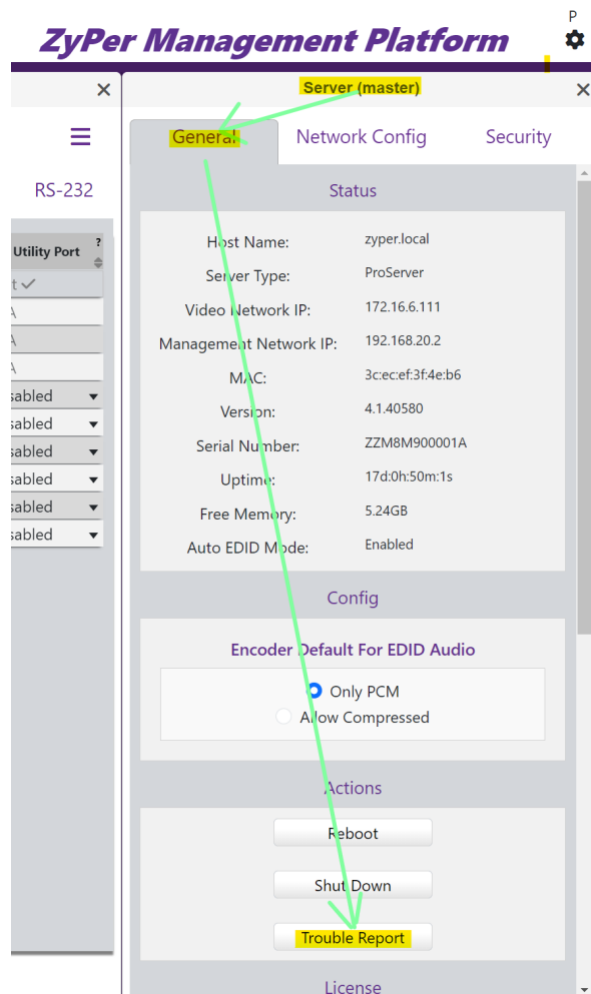
## Requirements for Both ZMP Systems

- Must be on the same version of ZMP software
- Must NOT be a ZyPer Embedded Management Platform (ZUHD60-2EMP)
- Must use the same NTP server (Requires the use of the same DNS server if using a name instead of an IP Address e.g. pool.ntp.org)
- Must be set to the same time zone
- Video Network ports must be on the same IP Subnet/VLAN
- Management Network ports (if used) must be on the same IP Subnet/VLAN, not the video subnet.
- Always backup the system(s) before modifying or upgrading. See the **Preparation** section for details on page 4.

# Preparation

## Backup the ZyPer Management Platform(s)

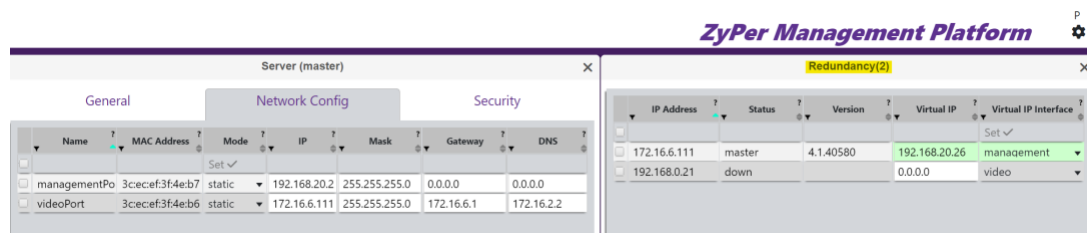
- 1) From the API run:  
save server database <file\_name>  
e.g. save server database 2024\_10\_15\_primary
- 2) Get a troubleshooting report. From the API:  
troubleReport  
From the ZMP GUI:



# Redundancy Scenarios

## Implementing Redundancy with Two New ZyPer Management Platforms

- 1) Be sure the servers meet all the **Requirements** listed on page 3.
- 2) Connect the Primary ZMP to the network and power it on.
  - a. Configure IP addressing on the Video port including the gateway (if needed) and DNS. This interface defaults to DHCP.
  - b. Configure IP addressing on the Management port including the default gateway (if needed) and DNS. This interface defaults to a static IP of 192.168.20.2/24.  
NOTE: Only one gateway is allowed per IP standards.
  - c. Add in your license key if needed.
  - d. Confirm that the network interface(s) are functioning.
  - e. If you do not want to use the default NTP server, change it via the API:  
set server date ntpServer address <domainName|IP Address>
- 3) Connect the Secondary ZMP to the network and turn it on.
  - a. Follow the same steps as the Primary ZMP to assign relevant IP addresses, DNS, NTP, and Gateway as needed.
  - b. Confirm that both Video and Management ports are functioning.
- 4) Configure the Virtual interface on the Primary ZMP.
  - a. Via the GUI:



- b. Via the API:  
set server redundancy allServers virtualIp address <IP Address> networkInterface video|management  
e.g.:  
set server redundancy allServers virtualIp address 192.168.20.26  
networkInterface management
    - c. Confirm that the Virtual IP is reachable.
- 5) Ensure redundancy is working per the Confirm Status section below.
- 6) Start adding the encoders and decoders to the video network.

## Upgrading Software on an Existing Redundant Arrangement

- 1) Be sure the servers meet all the **Requirements** listed on page 3.
- 2) Upgrade the secondary ZMP's software. The secondary server will reboot.
- 3) After the secondary ZMP reboots, promote it to primary by running this command from the API on either system:  
redundancy switchover
- 4) Upgrade the software on the original Primary ZMP (now the Secondary).
- 5) If desired, switch primary back to the original ZMP using "redundancy switchover" again.
- 6) Ensure redundancy is working per the Confirm Status section below.

## Implementing redundancy on a site with an existing MP

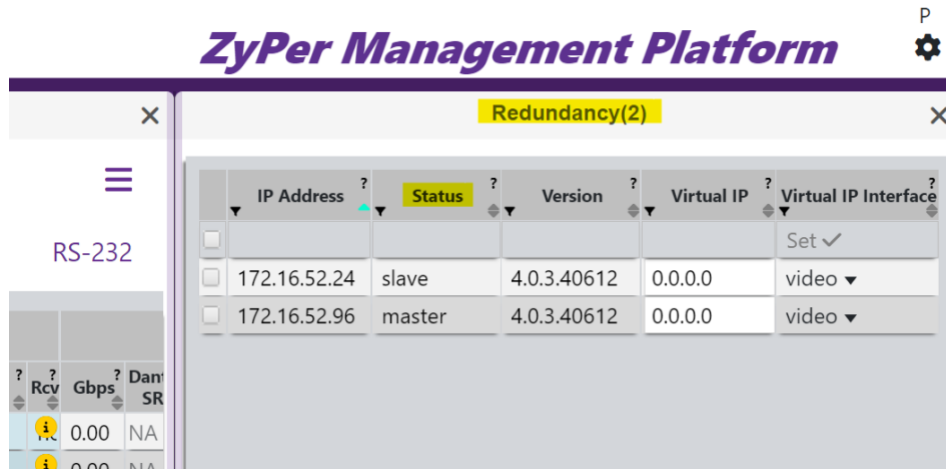
- 1) Be sure the servers meet all the **Requirements** listed on page 3.
- 2) Backup the existing ZyPer Management Platform.
- 3) Re-configure the IP settings, if necessary, per the **Implementing Redundancy with Two New ZyPer Management Platforms** section above
- 4) Bring up the new ZMP.
- 5) Configure the IP settings on the new ZMP per the **Implementing Redundancy with Two New ZyPer Management Platforms** section above.
- 6) Confirm that both ZMP and Management ports are functioning.
- 7) Upgrade the Secondary ZMP to match the version of the Primary ZMP.
- 8) On the Primary ZMP configure the virtual interface.
- 9) Confirm that the Virtual IP is reachable.
- 10) Ensure redundancy is working per the Confirm Status section below.

## Replacing a ZMP

- 1) Be sure the servers meet all the **Requirements** listed on page 3.
- 2) If it is still running, turn off the ZMP being replaced.
- 3) The other ZMP should become primary if was not already.
- 4) Confirm the now single ZMP is running and has its configuration intact.
- 5) Connect the powered-off replacement to the network.
- 6) Turn on the replacement ZMP.
- 7) Configure the IP settings on the new ZMP per the **Implementing Redundancy with Two New ZyPer Management Platforms** section above.
- 8) Confirm that both ZMP and Management ports are functioning.
- 9) Upgrade the new replacement ZMP to the same version as the Primary ZMP.
- 10) Ensure redundancy is working per the Confirm Status section below.

# Confirming Status

You can verify the redundancy is working from the GUI:



Or from the API:

show server redundancy

You will get something like this on the Primary:

```
==== Server Redundancy ====
```

```
server(192.168.26.22);
```

```
server.status; state=master, version=4.0.3.40468, wasMaster=true, wasSlave=true
```

```
server.config; preferredMaster=true, preferredSlave=true
```

```
server.virtualIp; address=192.168.26.30, networkInterface=video
```

```
server(192.168.26.23);
```

```
server.status; state=slave, version=4.0.3.40468, wasMaster=false, wasSlave=false
```

```
server.config; preferredMaster=true, preferredSlave=true
```

```
server.virtualIp; address=192.168.26.30, networkInterface=video
```

```
server.slaveStatus; dbRunning=Yes, dbRunningState=Slave has read all relay log; waiting for the slave I/O thread to update it, GTID=0-4022672482-20386429, dbError=none
```

```
lastChangeldMax(26);
```

You will get something like this on the Secondary:

```
==== Server Redundancy ====
server(192.168.26.23);
server.status; state=slave, version=4.0.3.40468, wasMaster=false, wasSlave=false
server.config; preferredMaster=true, preferredSlave=false
server.virtualIp; address=192.168.26.30, networkInterface=video
server.slaveStatus; dbRunning=Yes, dbRunningState=Slave has read all relay log; waiting for the slave I/O thread to update it,
GTID=0-4022672482-20386429, dbError=none
server(192.168.26.22);
server.status; state=master, version=4.0.3.40468, wasMaster=true, wasSlave=true
server.config; preferredMaster=false, preferredSlave=true
server.virtualIp; address=192.168.26.30, networkInterface=video
lastChangeldMax(25);
```

The server.status can be any of the values below. If it is not “disabled”, “notParticipating”, or “down” the redundancy is working.

<i>disabled</i>	slaveSync	<i>notParticipating</i>
<i>down</i>	slave	slaveWaitingForMaster
initialization	slaveSwitchingOver	slaveVersionMismatch
master	slaveDbUpdating	



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