# Add DL360 Gen9 to Zabbix (IPMI iLO)

## Prerequisites

As per the following:

https://www.zabbix.com/documentation/3.2/manual/installation/known_issues#ipmi_checks

https://support.zabbix.com/browse/ZBX-7190

the openipmi package that comes with Debian is compiled without the SSL support, hence IPMI interface in Zabbix will not work. To remedy the issue we need to install openipmi with SSL support. The solution is listed in the link above:

```
# apt-get install debhelper libpopt-dev libncurses5-dev chrpath autotools-dev
# cd /tmp
# apt-get source openipmi
# cd openipmi-2.0.16
# vim debian/rules
```

Modify the file replacing **--without-openssl** with **--with-openssl** for the **./configure** command, then build the new package:

```
# dpkg-buildpackage
# cd ..
# dpkg -i openipmi*.deb libopenipmi*.deb
# apt-mark hold libopenipmi-dev libopenipmi0 openipmi
```

We'll also need freeipmi but the one supplied with Debian 8 is rather stale (1.4.5 from 2014) and does not support DDR4 modules. We shall therefore install the latest version manually:

```
# cd /root/bin
# wget http://ftp.gnu.org/gnu/freeipmi/freeipmi-1.5.5.tar.gz

# tar xvzf freeipmi-1.5.5.tar.gz
# cd freeipmi-1.5.5
# ./configure
# make
# make install

# apt-get install ipmitool
```

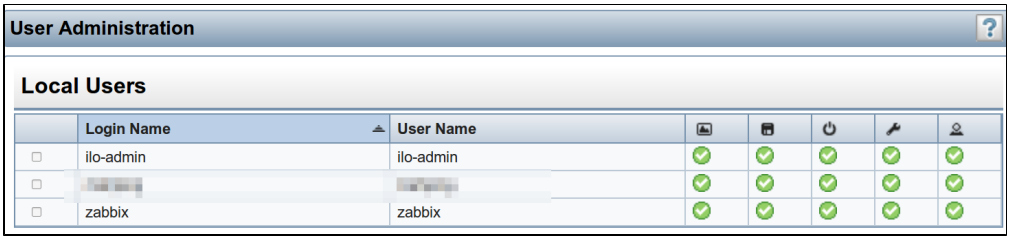
We don't want these packages updated automatically:

```
# apt-mark hold libopenipmi-dev libopenipmi0 openipmi
```

Restart the Zabbix server.

## Prepare iLO user

Make sure the iLO user for zabbix exists and has full permissions (it should work with read-only permissions only, but doesn't). Perhaps when the new version of **freeipmi** is available for debian, it will get better.



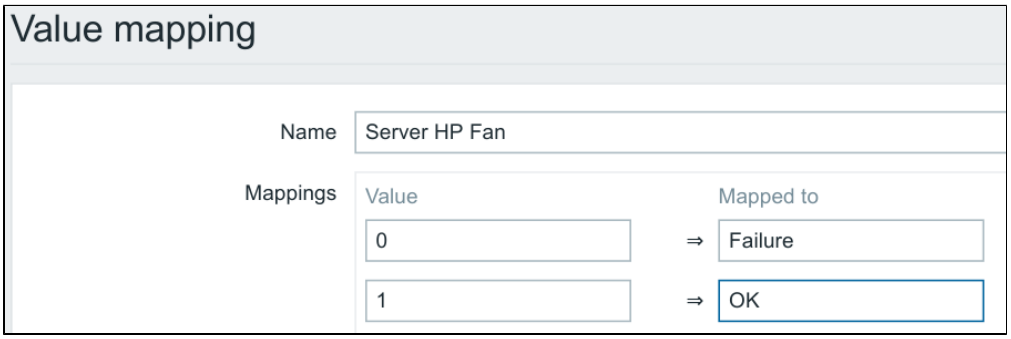

You can check successful connectivity with:

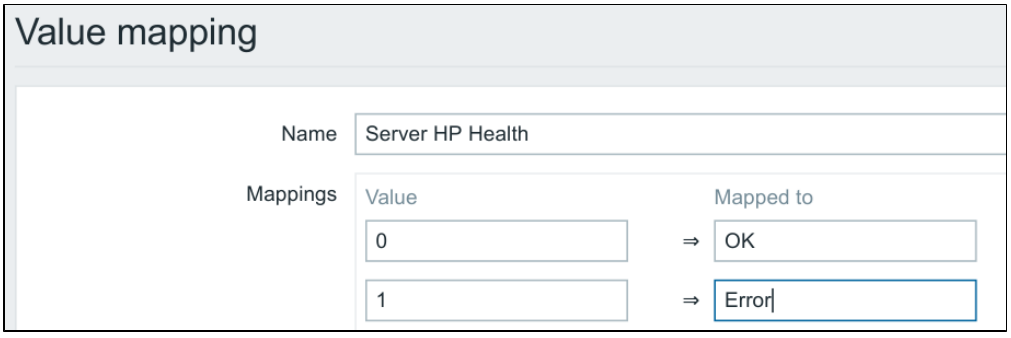
```
# ipmitool -I lanplus -H <hostIP> -U zabbix -P ************** -L USER sensor
```

# Install the IPMI template

Under **Administration -> General -> Value mapping** add the following two value maps as described in:

https://www.zabbix.com/forum/showthread.php?t=43952

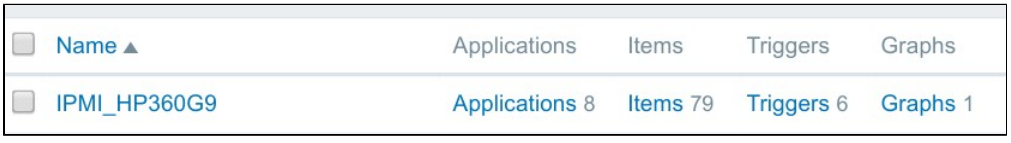




Download Alexsey Ignatiev's modified template from

https://share.zabbix.com/cat-server-hardware/hp/hp-dl360-gen9-ipmi

and add it to Zabbix:



# Configure Zabbix server

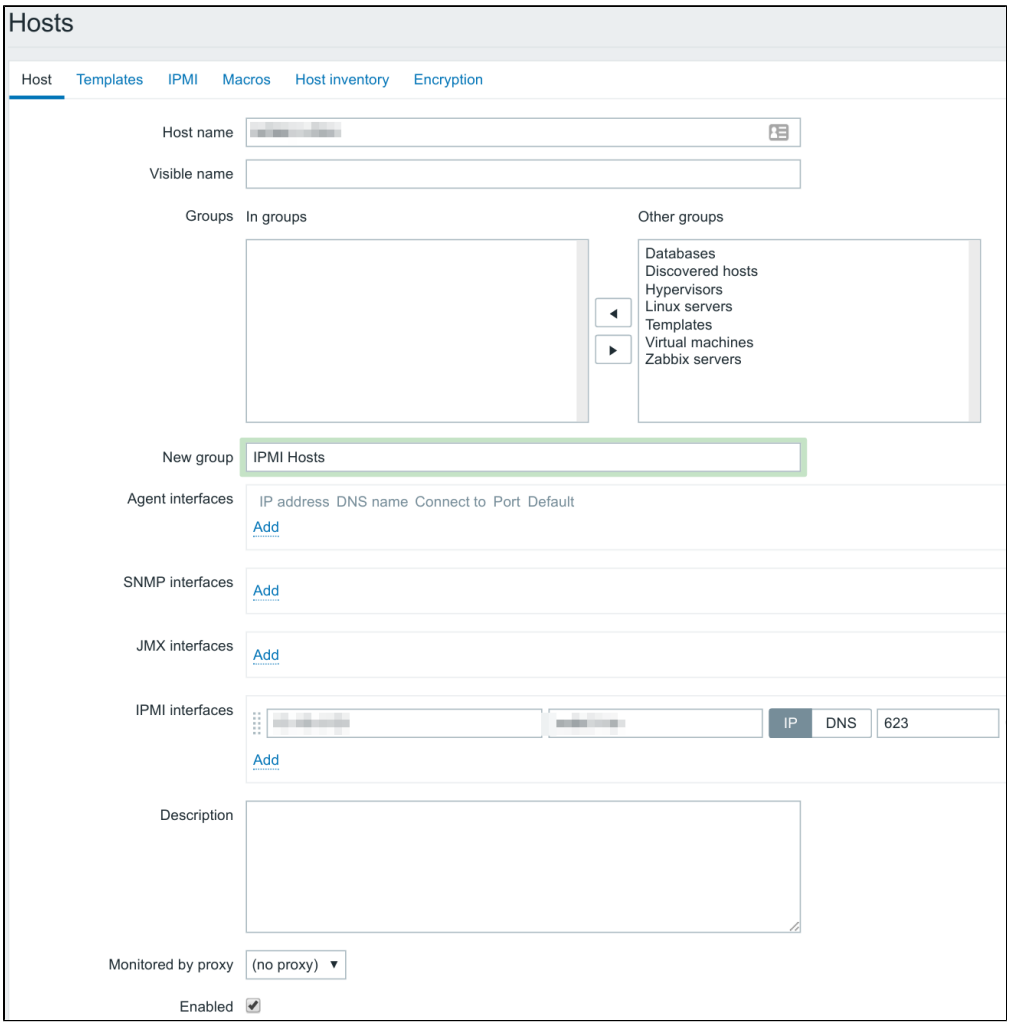
It looks like with only 1 IPMI poller running Zabbix server is having trouble getting all data from the host and thus marks it as Unreachable. To remedy the situation make sure we start enough pollers in **/usr/local/etc/zabbix_server.conf**:

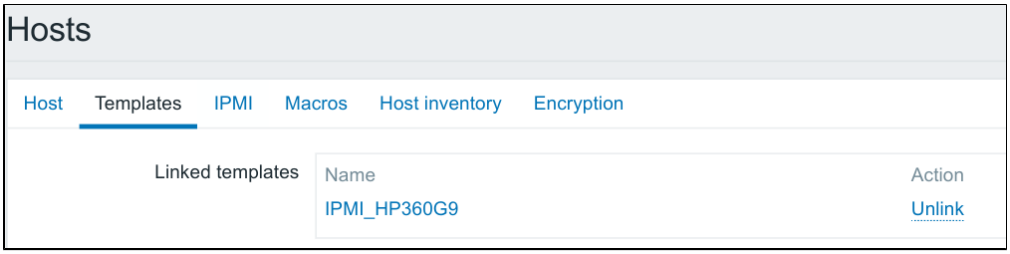
**/usr/local/etc/zabbix_server.conf**

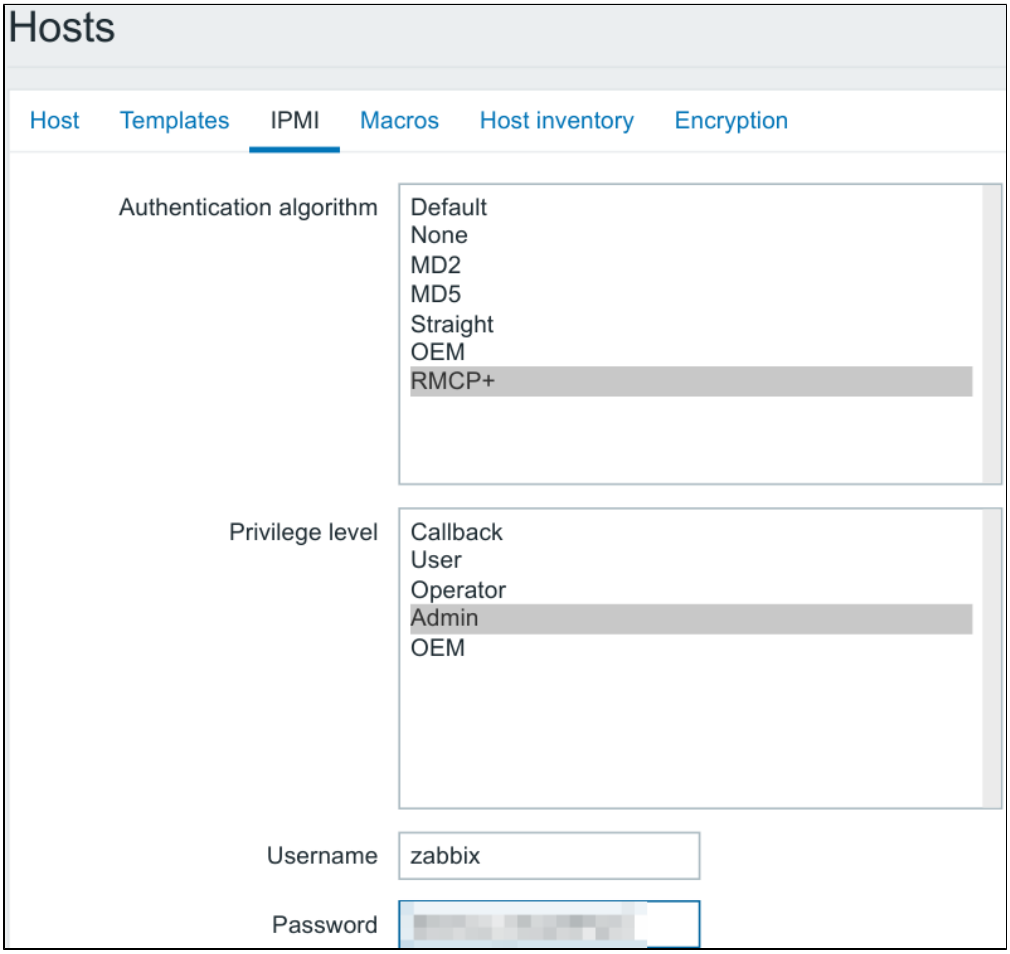
```
### Option: StartIPMIPollers
# Number of pre-forked instances of IPMI pollers.
#
# Mandatory: no
# Range: 0-1000
# Default:
StartIPMIPollers=5
```

# Create IPMI hosts

Create new hosts to be monitored over IPMI and link the newly imported template to them:






# Configure hosts

Not all sensors from the template apply to us. Missing disks, CPUs, memory, cards, etc. should be removed from monitoring.

Under **Configuration -> Hosts -> <hostname> -> Items** disable the items that are not supported or do not apply:

| Wizard | Name | Triggers | Key | Interval | History | Trends | Type | Applications | Status |
|---|---|---|---|---|---|---|---|---|---|
| | IPMI_HP360G9: 01-Inlet Ambient | | 01-InletAmbient | 300 | 90 | 365 | IPMI agent | Temp | Enabled |
| | IPMI_HP360G9: 02-CPU 1 | Triggers (1) | 02-CPU1 | 300 | 90 | 365 | IPMI agent | Temp | Enabled |
| | IPMI_HP360G9: 03-CPU 2 | Triggers (1) | 03-CPU2 | 300 | 90 | 365 | IPMI agent | Temp | Disabled |
| | IPMI_HP360G9: 04-P1 DIMM 1-6 | | 04-P1DIMM1-6 | 300 | 90 | 365 | IPMI agent | Temp | Enabled |
| | IPMI_HP360G9: 05-P1 DIMM 7-12 | | 05-P1DIMM7-12 | 300 | 90 | 365 | IPMI agent | Temp | Enabled |
| | IPMI_HP360G9: 06-P2 DIMM 1-6 | | 06-P2DIMM1-6 | 300 | 90 | 365 | IPMI agent | Temp | Disabled |
| | IPMI_HP360G9: 07-P2 DIMM 7-12 | | 07-P2DIMM7-12 | 300 | 90 | 365 | IPMI agent | Temp | Disabled |
| | IPMI_HP360G9: 08-HD Max | | 08-HDMax | 300 | 90 | 365 | IPMI agent | Temp | Enabled |
| | IPMI_HP360G9: 10-Chipset | | 10-Chipset | 300 | 90 | 365 | IPMI agent | Temp | Enabled |
| | IPMI_HP360G9: 11-PS 1 Inlet | | 11-PS1Inlet | 300 | 90 | 365 | IPMI agent | Temp | Enabled |
| | IPMI_HP360G9: 12-PS 2 Inlet | | 12-PS2Inlet | 300 | 90 | 365 | IPMI agent | Temp | Enabled |
| | IPMI_HP360G9: 13-VR P1 | | 13-VRP1 | 300 | 90 | 365 | IPMI agent | Temp | Enabled |
| | IPMI_HP360G9: 14-VR P2 | | 14-VRP2 | 300 | 90 | 365 | IPMI agent | Temp | Disabled |