

HQ-Box Remote Management Guide

Revision 1.1 , April 15 2019

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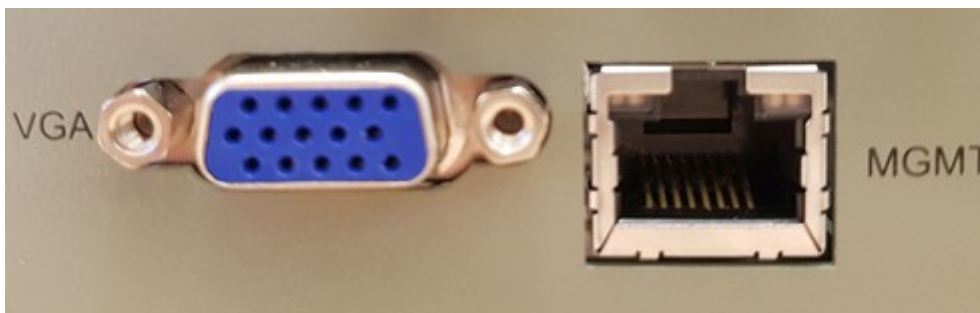
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1. Introduction

The HQ-Box embedded server is equipped with an internal BMC extension card based on Aspeed's AST2400 chip. The BMC provides 2D VGA support, IPMI 2.x, DCMI, iKVM, virtual storage and more.

This document will describe how to access the BMC remote management. It includes power state control and virtual storage. Standard features such as IPMI 2.x will not be covered here as they are well documented and can be easily obtained from the web.

The BMC runs its own Linux OS. It communicates through Web interface. To enable web access please attach an Ethernet cable to the MGMT port located in the bottom right corner of the HQ-Box:

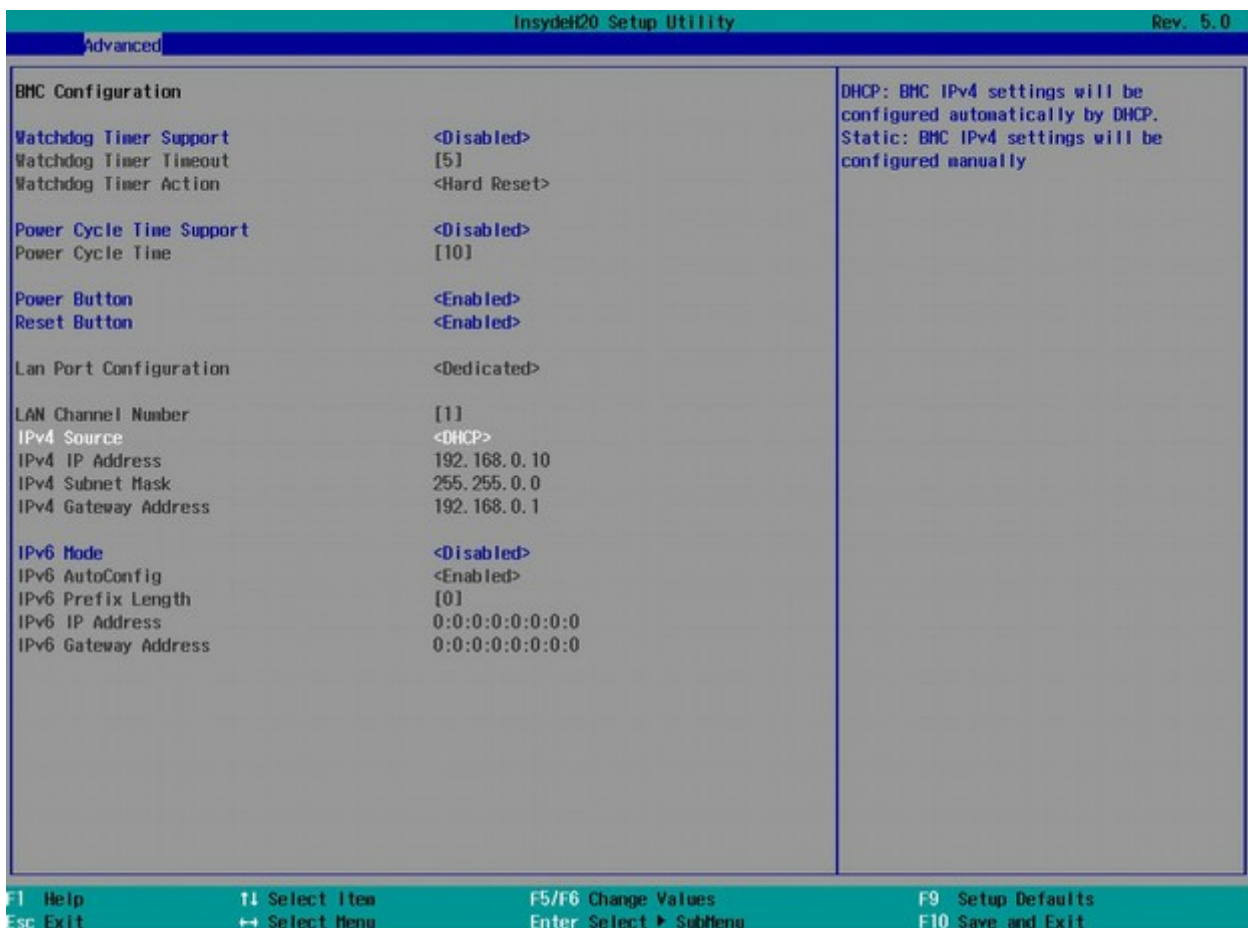
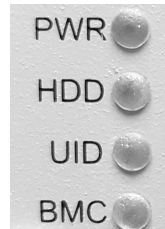


2. Getting the BMC IP address

By default, the BMC is configured to use DHCP for obtaining an IP address. It can be also configured to use a static IP address.

To get the current BMC IP address, you need to reset the HQ-Box and access the BIOS menu:

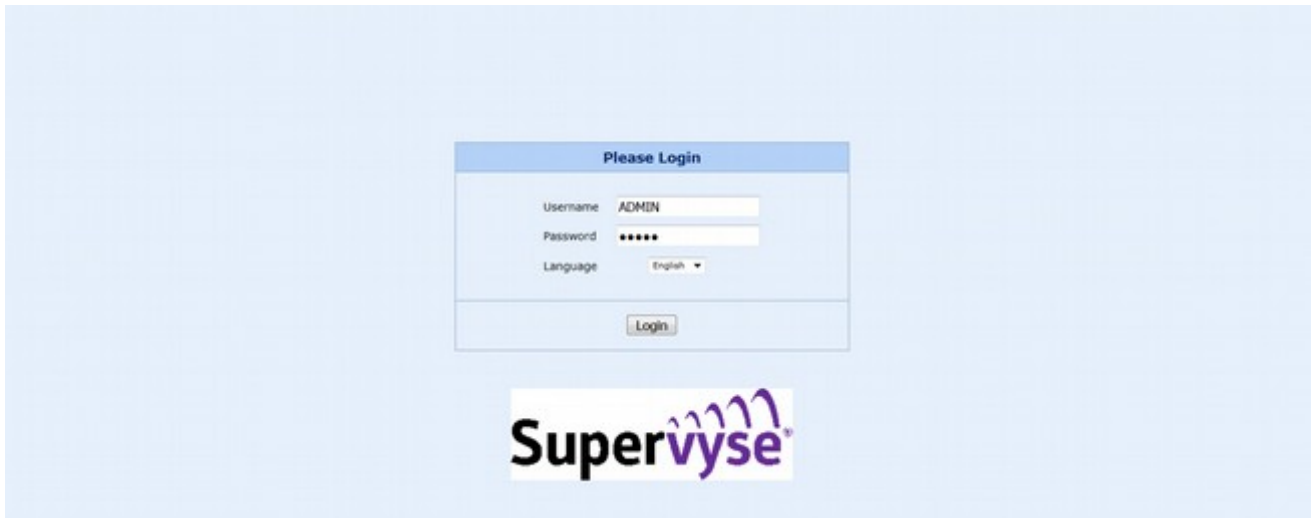
- Connect the BMC to your local network by plugging an Ethernet cable into the MGMT port
- Power on the HQ-Box and then press the "ON" button for four seconds
- Wait until the BMC LED starts to blink (about 10 seconds)
- Press the "ON" button again
- Repeatedly press F2 to enter the BIOS setup
- Select "Advanced" → "H2O IPMI Configuration" → "BMC Configuration":



The current BMC IP address is located to the right of "IPv4 IP Address". Switching the IP addressing mode between "Static" and "DHCP" can be done by changing "IPv4 Source". When finished, press "F10" and accept "Exit Saving Changes".

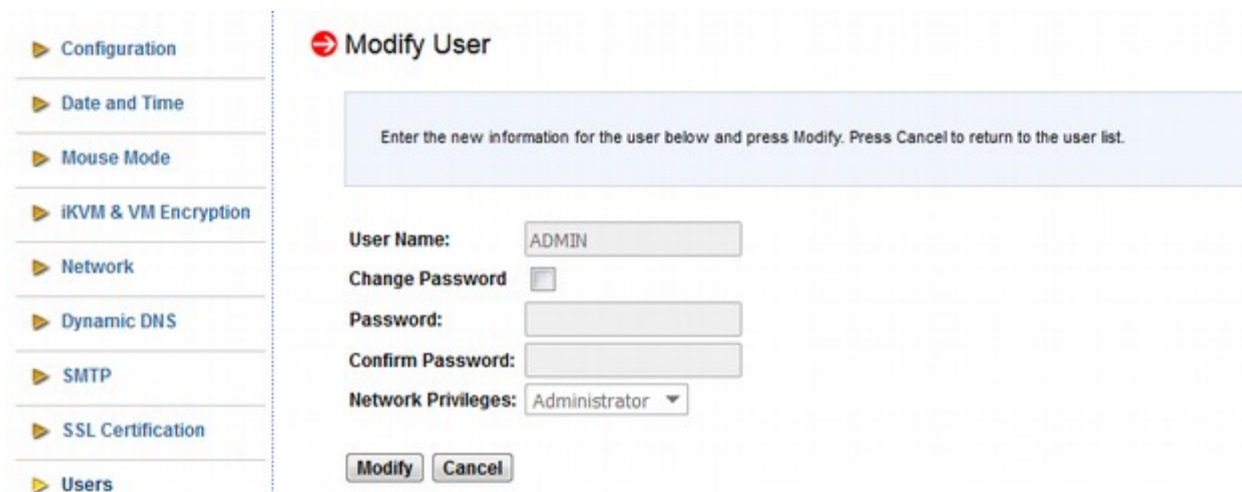
3. Using the web access

The HQ-Box can be remotely accessed using a web interface. Type the BMC IP address (IPA) using your favorite web browser. You should see the Login screen below:



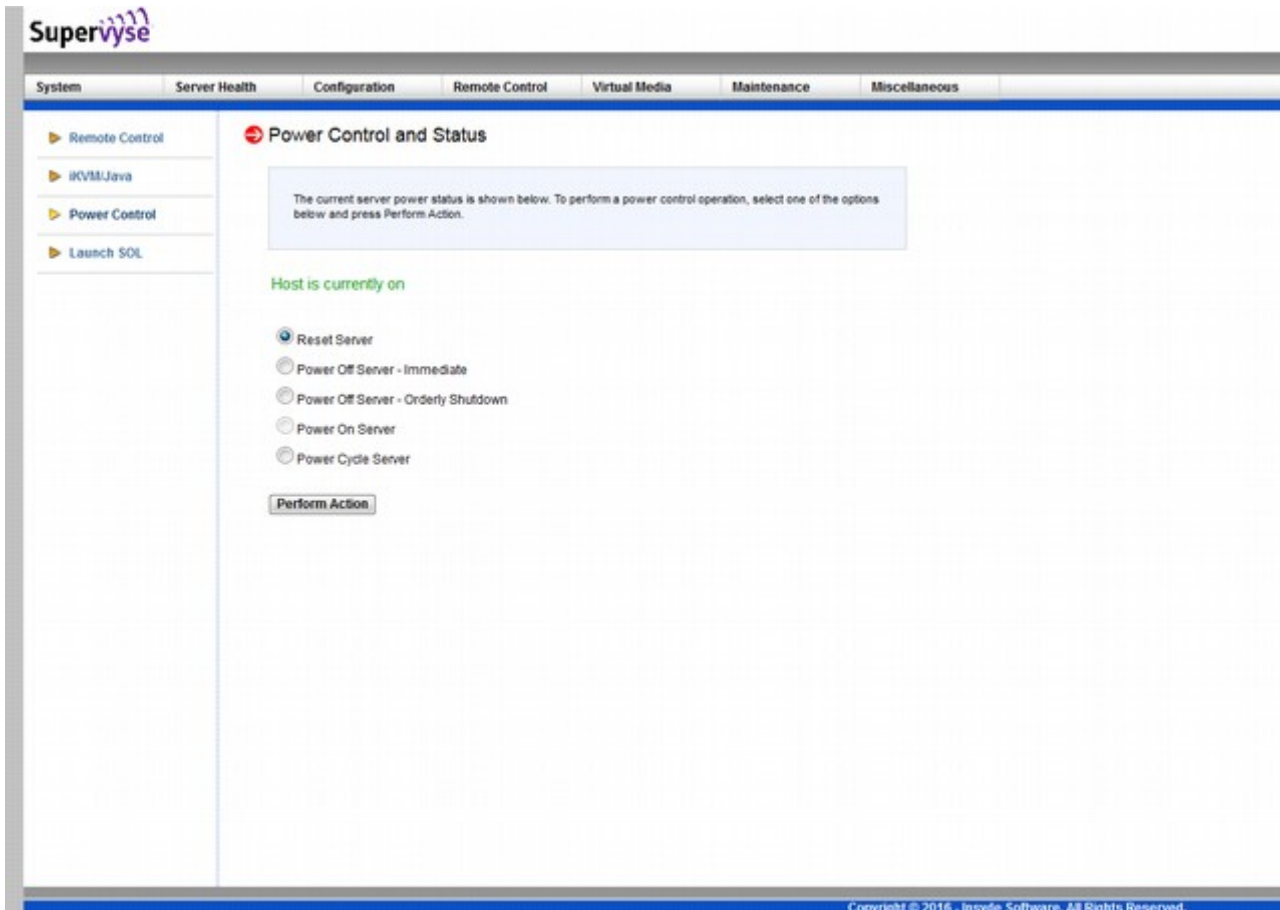
The default user name and password are both ADMIN.

After logging in, change the login password. Under "Configuration" → "Users", select "ADMIN", check "Change Password", enter the new password and click "Modify" as shown below:



Warning: It is essential to not plug the BMC management port into an unprotected network before the default password is replaced. Leaving the default password unchanged is a security hole that will give the offender an unlimited access to the HQ-Box!

4. Power control options



To gain access to the power control menu, choose "Remote Control" and then "Power Control" on the left. One of the following options can be selected:

- **Reset Server:** Asynchronous RESET to the HQ-Box server.
- **Power Off Server – Immediate:** Asynchronous shut down of the HQ-Box server.
- **Power Off Server – Orderly Shutdown:** The BMC will send an orderly shutdown request to HQ-Box OS.
- **Power On Server:** Power-On the HQ-Box.
- **Power Cycle Server:** Power-Off the HQ-Box and then Power-On.

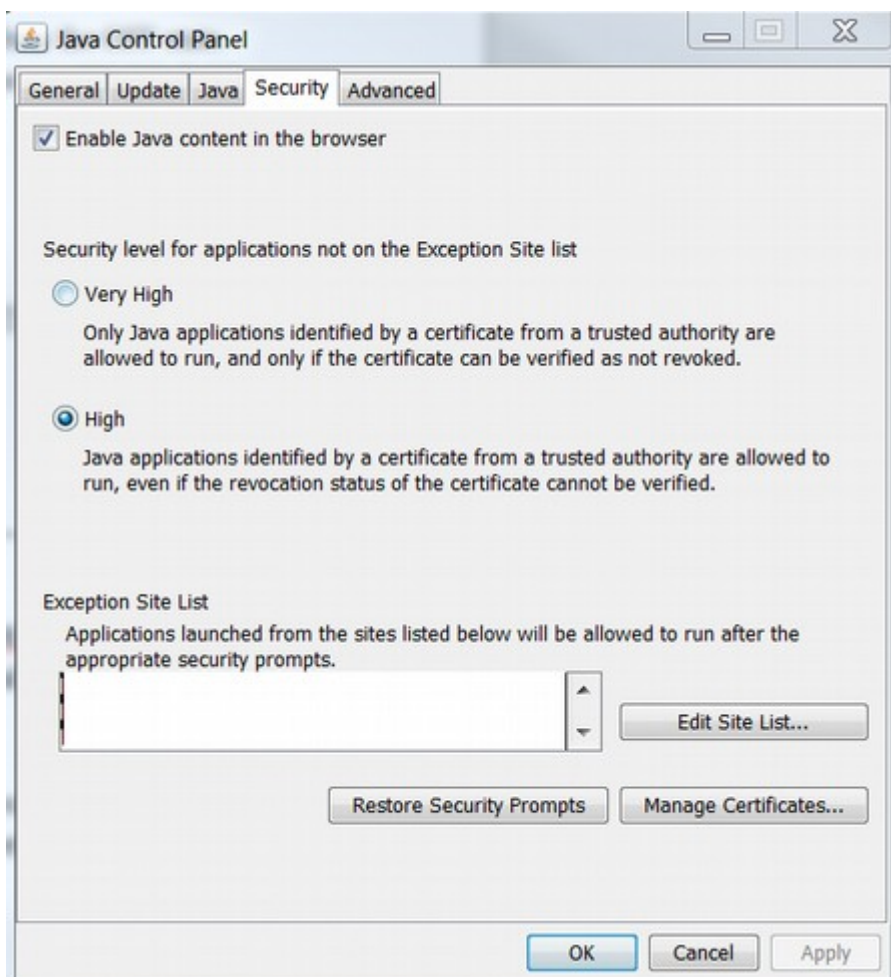
5. iKVM

The iKVM provides remote management of the HQ-Box from a remote host. To enable this functionality, the user should install Oracle® Java virtual machine 8.x from the official Java site below:

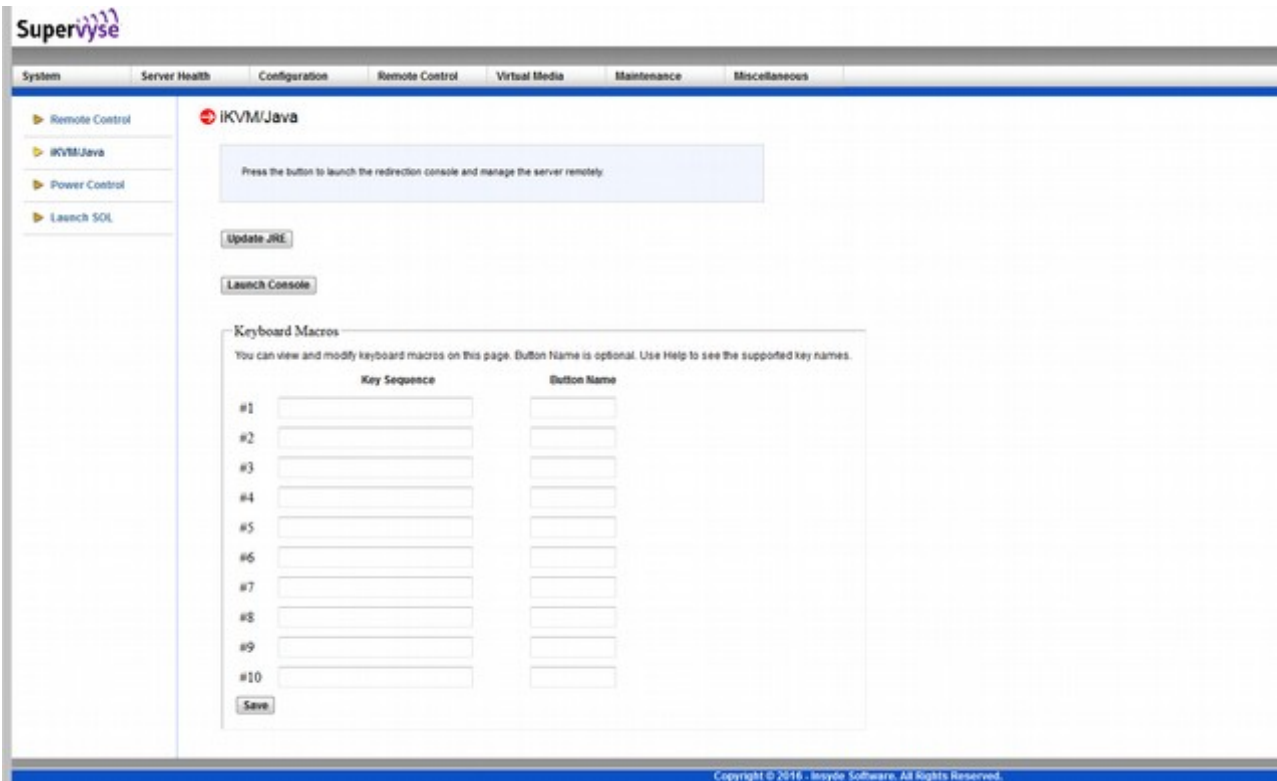
<https://www.java.com/en/download/manual.jsp>

After Java installation, open the “Java control Panel”, select the “Security” tab and set it to “High”. Next, add the BMC IP address (IPA) to the “Exception Site List” as <https://IPA> .

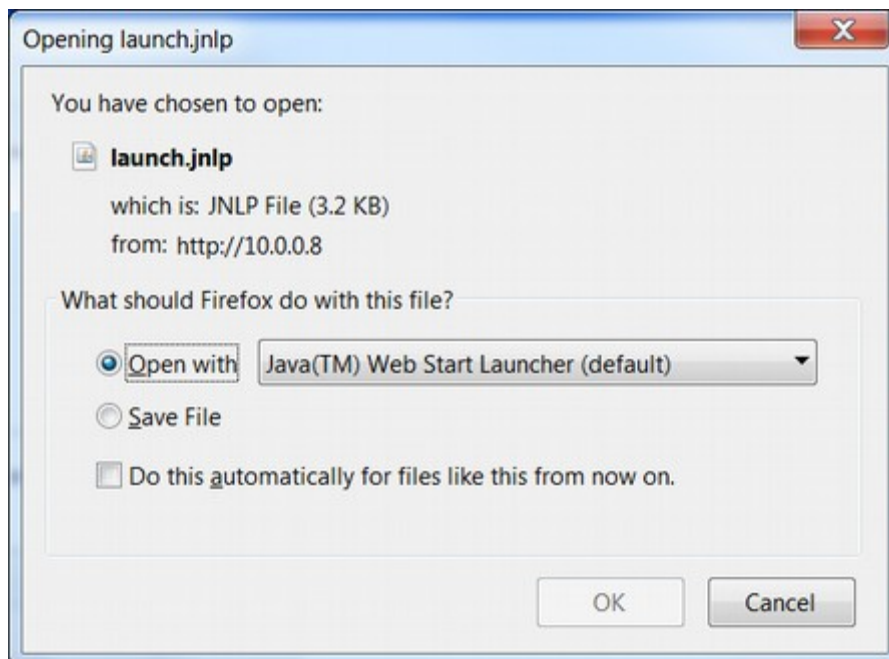
As an example, if your BMC IPA is 192.168.1.32 then the site address will be <https://192.168.1.32>



Return to the BMC web address and log in. Select "Remote Control" → "iKVM/JAVA" as shown below:

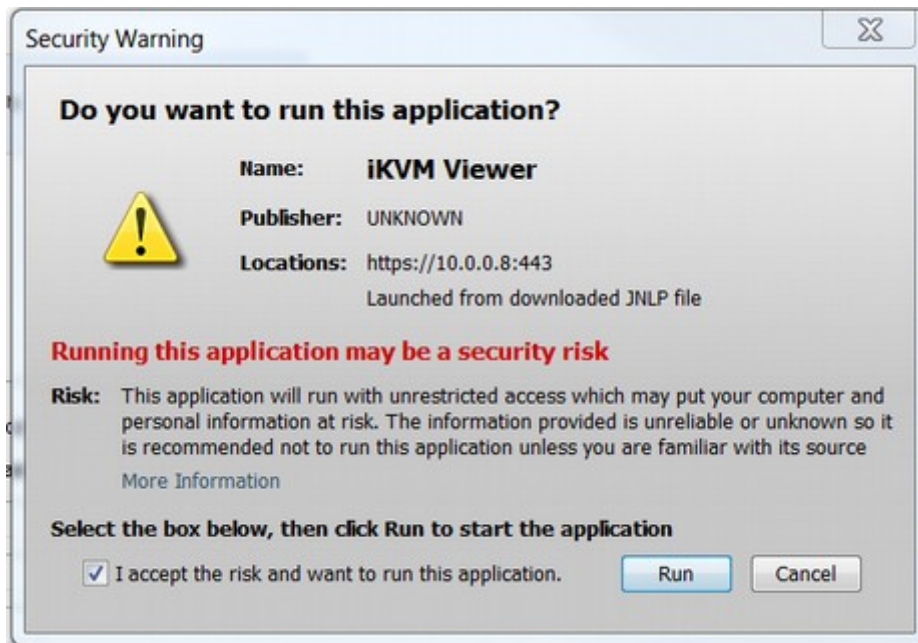


Press "Launch Console". The below window will pop up:

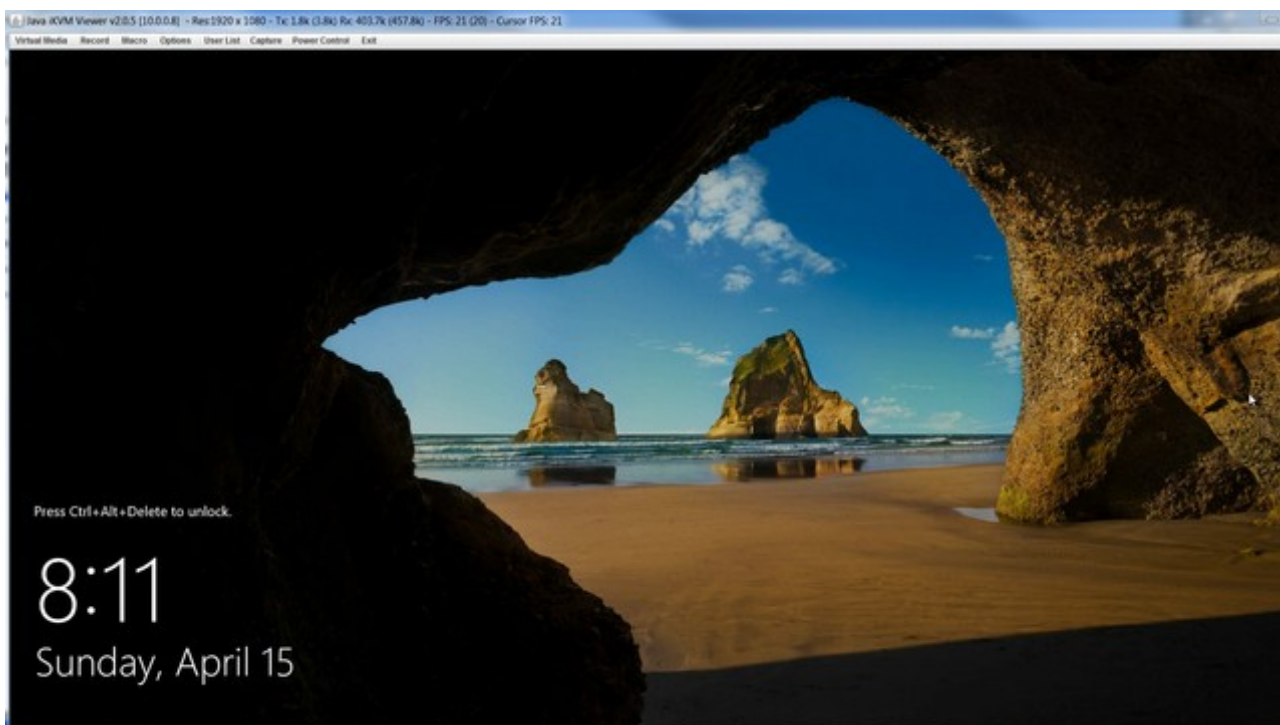


Press "OK".

Check "I accept the risk and want to run this application" and press the "Run" button:



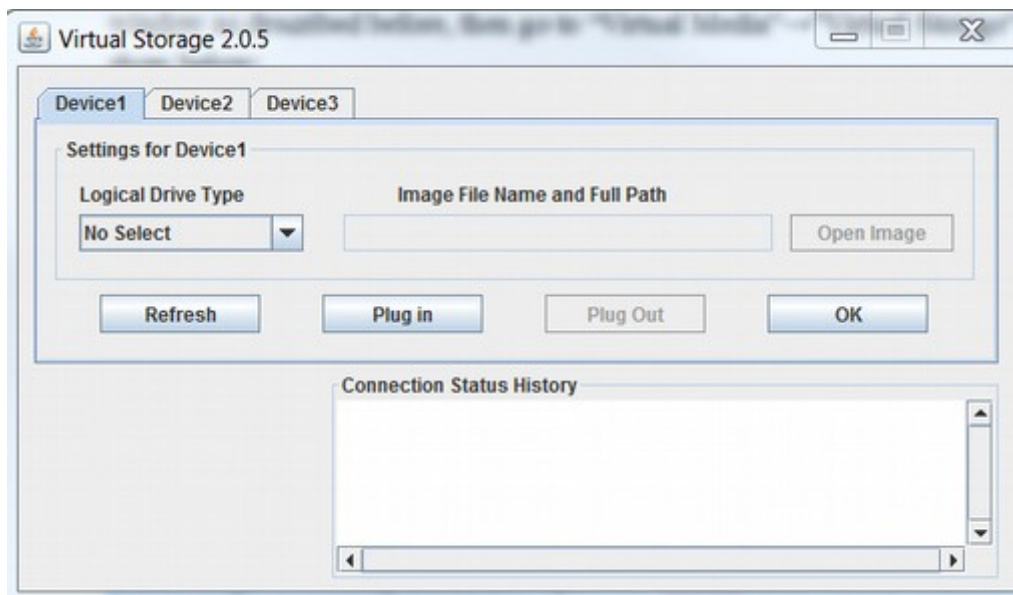
Press "Continue" on the next screen's security warning.
Finally, the remote access window will show up:



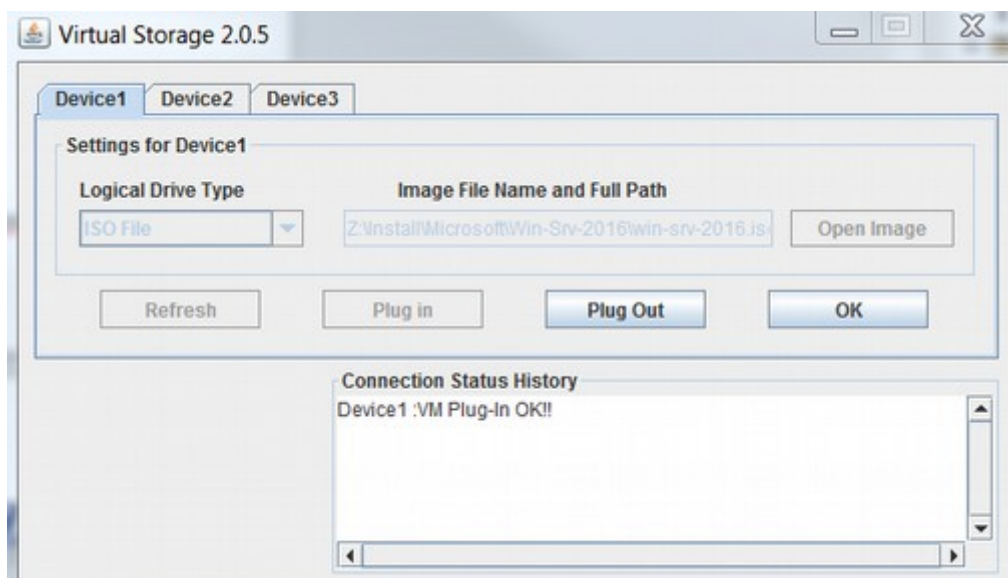
6. Virtual storage

Virtual storage provides the ability to share media found on the local host with the remote HQ-Box. The HQ-Box sees this media as a USB storage device. It can be used for remote OS installation, BIOS updates, out of band data transfer and more.

To attach an image or media, open the “iKVM Java Viewer” remote window (as described in the previous chapter). Next, select “Virtual Media” → “Virtual Storage” as shown below:

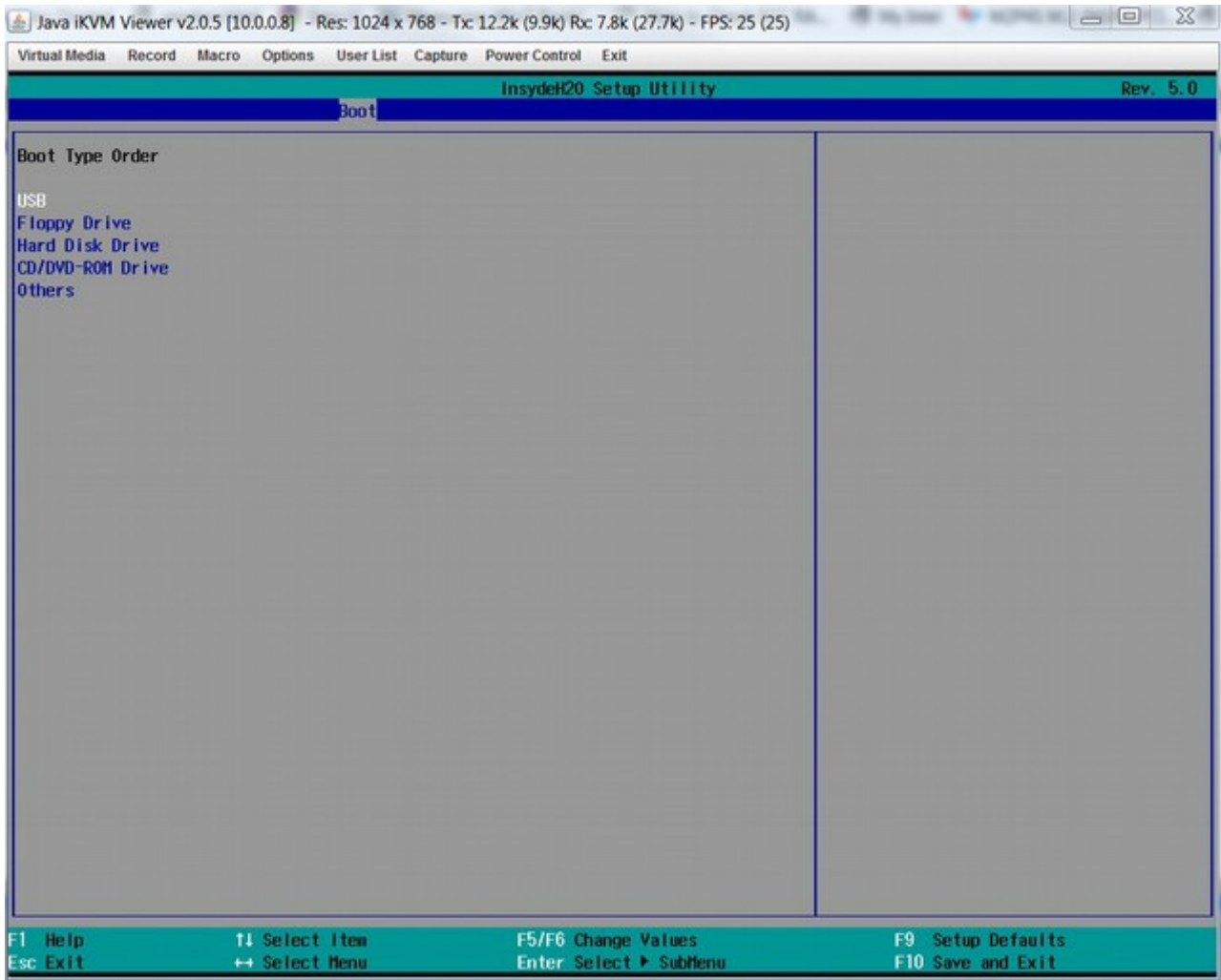


Under “Logical Drive Type” select the appropriate media or ISO image and press “Plug in”. In the example below, an ISO file with Win 2016 Server installation was chosen as the media:



After establishing the connection, the remote HQ-Box OS will identify the media as USB Generic Virtual CDROM.

The -ser may use this media as a boot device by remotely rebooting the HQ-Box, entering the BIOS and selecting the boot device:

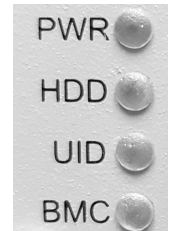


Press "F10" when done and accept the changes.

7. Unit ID (UID)

Unit ID (UID) provides the ability to spot a specific HQ-Box among multiple HQ-Box servers. When active, the BMC and UID LEDs will temporarily turn red, identifying the selected HQ-Box.

To enable this feature, connect to the BMC web interface and select "Miscellaneous" → "UID Control".



Check "TURN ON" and then click "Save". The UID and BMC LEDs will turn RED for some time before returning back to their previous state.



8. Revision notes

Revision	Date	Revision notes
0.9	2018-Apr-18	Preliminary release
1.0	2018-Apr-24	Reviewed
1.1	2019-Apr-15	Minor corrections

9. Copyright Notice

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