

HQ-Box Remote Management Guide

Revision 1.1, April 15 2019



Table of Contents

1. Introduction	3
2. Getting the BMC IP address	4
3. Using the web access	5
4. Power control options	6
5. iKVM	
6. Virtual storage	
7. Unit ID (UID)	
8. Revision notes	
9. Copyright Notice	
9. Copyright Notice	



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.×, 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"→"H20 IPMI Configuration"→"BMC Configuration":

		InsydeH20 Setup Utility	Rev. 5.0
Advanced			
BMC Configuration			DHCP: BHC IPv4 settings will be configured automatically by DHCP.
Watchdog Timer Support		<disabled></disabled>	Static: BHC IPv4 settings will be
Watchdog Timer Timeout		[5]	configured manually
Watchdog Timer Action		<hard reset=""></hard>	
Power Cycle Time Suppor	t	<d i="" led="" sab=""></d>	
Power Cycle Time		[10]	
Power Button		<enabled></enabled>	
Reset Button		<enabled></enabled>	
Lan Port Configuration		<dedicated></dedicated>	
LAN Channel Number		[1]	
IPv4 Source		<dhcp></dhcp>	
IPv4 IP Address		192. 168. 0. 10	
IPv4 Subnet Mask		255, 255, 0, 0	
IPv4 Gateway Address		192. 168. 0. 1	
IPv6 Mode		<d i="" led="" sab=""></d>	
IPv6 AutoConfig		<enab1ed></enab1ed>	
IPv6 Prefix Length		[0]	
IPv6 IP Address		0:0:0:0:0:0:0:0	
1Pv6 Gateway Address		0:0:0:0:0:0:0	
F1 Help	11 Select Item	F5/F6 Change Values	F9 Setup Defaults
	Solect Henn	Enter Solect & SubBoon	E10 Save and Exit

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:

Usemanne Password Language	ADMIN ADMIN Trajen •
	Login)
Sup	ervyse

The default user name and password are both ADMIN.

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

Configuration	S Modify User
Date and Time	
Mouse Mode	Enter the new information for the user below and press Modify. Press Cancel to return to the user list.
iKVM & VM Encryption	
Network	User Name: ADMIN Change Password
> Dynamic DNS	Password:
SMTP	Confirm Password:
SSL Certification	Network Privileges: Administrator
> Users	Modify Cancel

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

stem Ser	ver Health Con	figuration	Remote Control	Virtual Media	Maintenance	Miscellaneous	
Remote Control	Power C	control and	Status				
iKVM/Java							
Power Control	The curr below a	ent server power nd press Perform	status is shown below. To Action.	perform a power control	operation, select one of the	e options	
Launch SOL							
	Host is cu	urrently on					
	Reset	Ratures					
		Off Server - Imn	nediate				
		Off Server - Ord					
	Power						
	Power	Cycle Server					
	Perform A	effice					
	Penorma	coon					

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

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 <u>https://IPA</u>.

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

ineral opuate Java occan	ity Advanced	
Enable Java content in the	browser	
Security level for applications	not on the Exception Site I	list
O Very High		
	entified by a certificate from if the certificate can be ver	
High		
	ed by a certificate from a tr on status of the certificate o	rusted authority are allowed to cannot be verified.
Exception Site List		
		be allowed to run after the
		be allowed to run after the
Applications launched from		Edit Site List
Applications launched from	ots.	Edit Site List



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

stem Serv	er Health Configuration Remote Control	Virtual Media Maintenance	Miscellaneous	
Remote Control	iKVM/Java			
NVIII Java				
Power Control	Press the button to launch the redirection console and	I manage the server remotely		
Launch SOL				
	Update JRE			
	Launch Console			
	Keyboard Macros			
	You can view and modify keyboard macros on the Key Sequence	s page. Button Name is optional. Use Help 1 Button Name	see the supported key names.	
	-1			
	#2			
	#3			
	#4			
	#5			
	#6			
	#7			
	#8			
	#9			
	#10			
	Save			

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

You have chosen to	open:
🛯 launch.jnlp	
which is: JNL	P File (3.2 KB)
from: http://1	0.0.0.8
What should Firef	ox do with this file?
Open with	Java(TM) Web Start Launcher (default)
Save File	
Do this auto	matically for files like this from now on.
	OK Cancel

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" \rightarrow "Virtual Storage" as shown below:

Settings for Device1	Image File	Name and Full Path		
No Select	inagerie	Name and Full Path	Open Imag	е
Refresh	Plug in	Plug Out	ОК]
	Connection Statu	is History		

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:

Settings for Device1		
Logical Drive Type	Image File Name and Full Path Z.InstallMicrosoftWin-Srv-2016/win-srv-2016.is	Open Image
Refresh	Plug in Plug Out	ОК
	Connection Status History	
	Device1 :VM Plug-In OK!!	



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:

Java iKVM Viewer v2 Virtual Media Record			11000	ower Control	Exit	
		Boot		InsydeH20	Setup Utility	Rev. 5.
Boot Type Order						
USB Floppy Drive Hard Disk Drive CD/DVD-ROM Drive Others						
1 Help isc Exit	14 Select ↔ Select				hange Values elect⊧SubMenu	F9 Setup Defaults F10 Save and Exit

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" \rightarrow "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.

Itiscetaneous OUD Control UD Control	
100 Candred	
You can turn only ff UID on this page.	
Current UID status : OFF	
TURN ON	
TURN OFF	



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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