ASRockRack Technical Document (Aug/2025)

Q: How to update BIOS remotely via IPMI using ASRock Server Management Utilities when installing a new CPU?

Introduction

This document describes the procedure for updating the motherboard BIOS remotely through ASRock Server Management Utilities when a new CPU is installed but the system cannot boot due to an outdated BIOS version.

This method is applicable in the following scenario:

- A new CPU is installed on the motherboard.
- The current BIOS version does not support the CPU, resulting in boot failure.
- The system cannot enter the BIOS setup screen.
- The IPMI IP address of the server is known and accessible.

Example Case

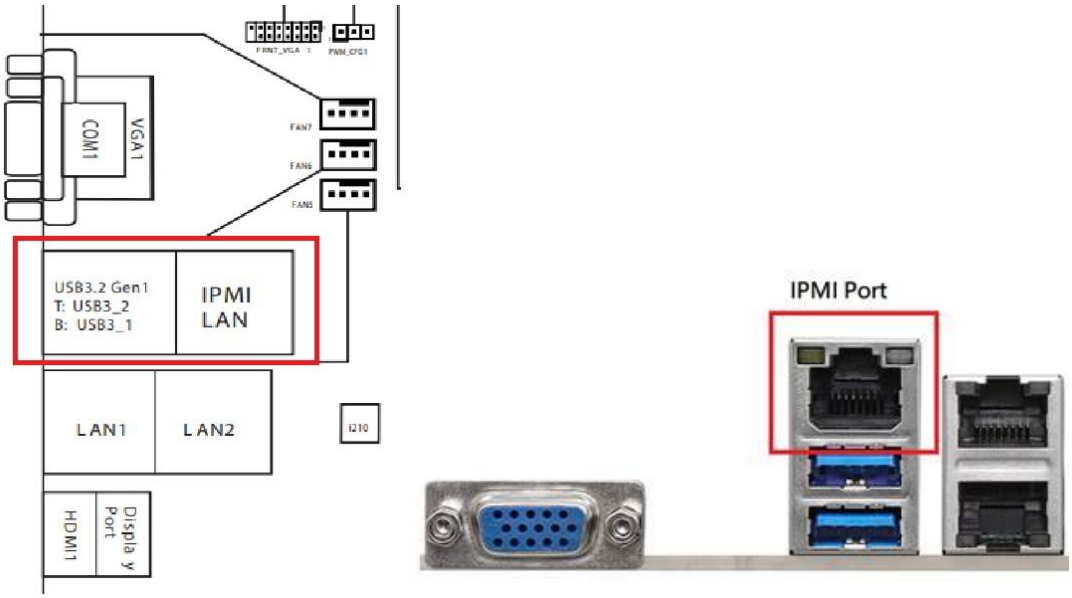
For instance, when installing an AMD EPYC™ 9004 Series CPU (e.g., EPYC 9575F) on a motherboard originally shipped with BIOS version 1.10, the system may fail to boot because that BIOS does not yet include microcode support for this CPU.

To resolve this, the BIOS must be updated to version 1.30 or later (as provided on the ASRock Rack official support page).

By using IPMI together with ASRock Server Management Utilities, administrators can remotely upload and flash the new BIOS, allowing the system to recognize and successfully boot with the new CPU.

Identify the IPMI Port

If you are unsure which port on the motherboard is the IPMI port, refer to the official motherboard User Manual. It usually includes a diagram showing the IPMI port location. For example



Preparation

1. Download the latest BIOS version and related utilities from the official website:
2. Install Management Tools:

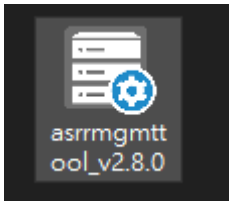
For SMU method: Install Server Management Utility (SMU) from https://www.asrockrack.com/support/SMU.asp

Notice

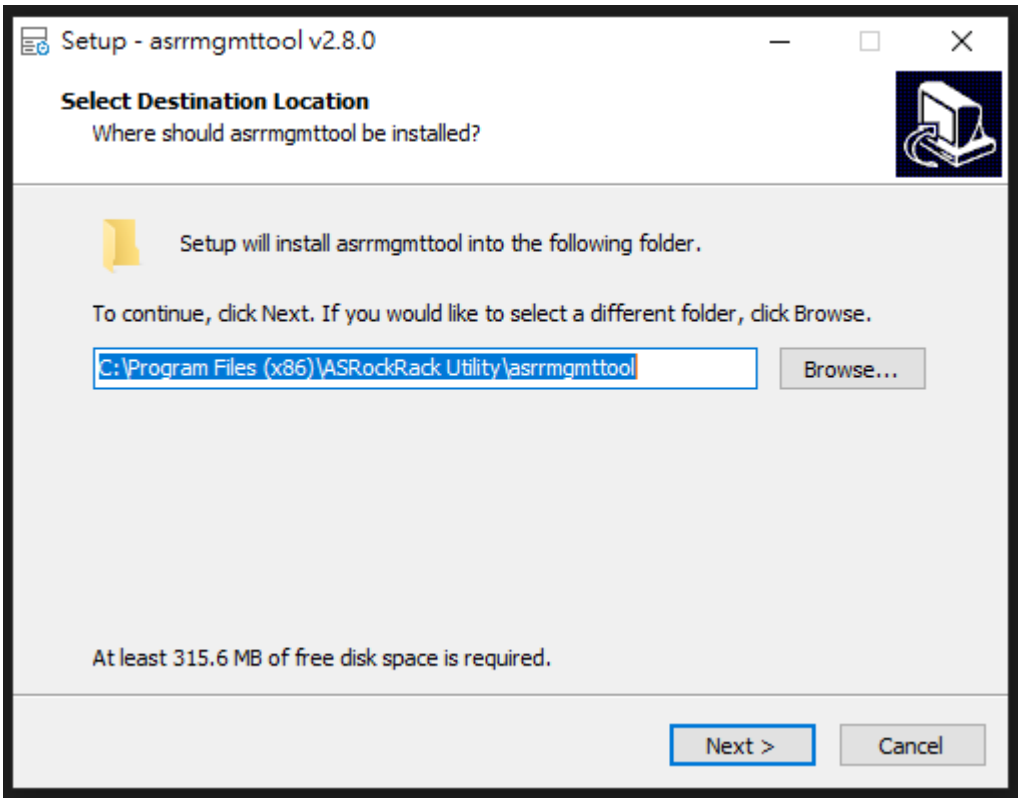
1. Administrator rights are required for installation and usage.
2. Please temporarily disable antivirus/firewall if they block the installation.
3. Ensure your system has stable power during BIOS update or remote operations.

Installation Instruction

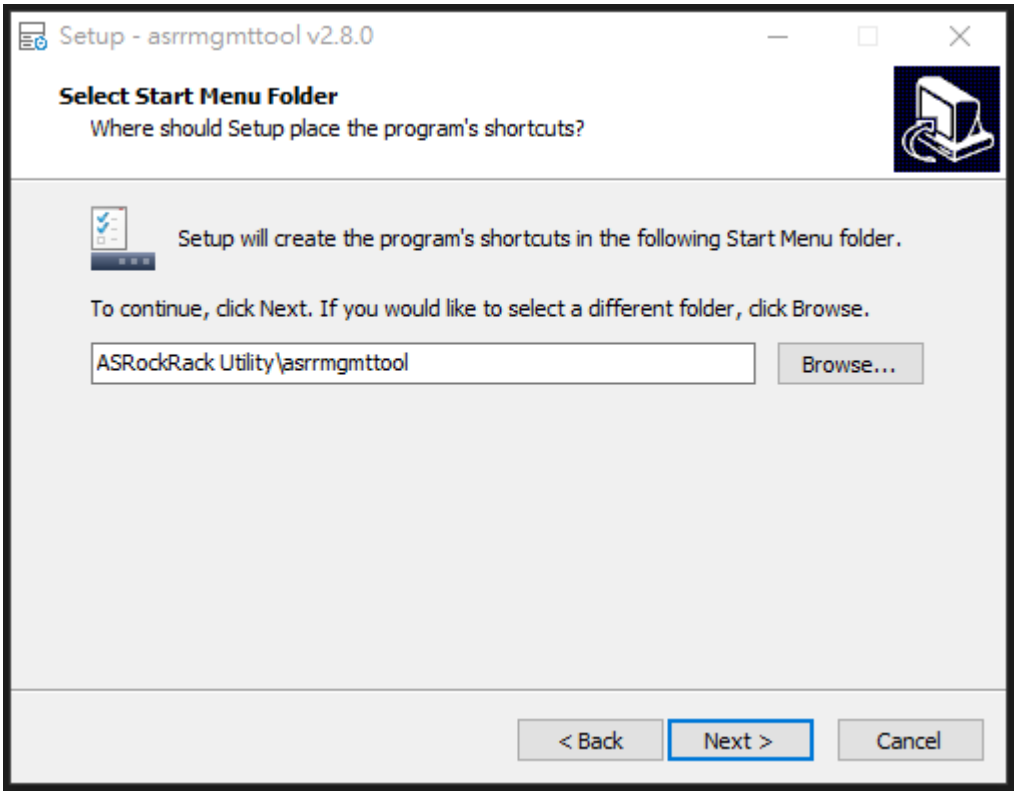
1. Download the SMU Windows version (.zip file) from the official support page.
2. Extract the .zip file into a local folder.
3. Run Setup.exe with Administrator rights.



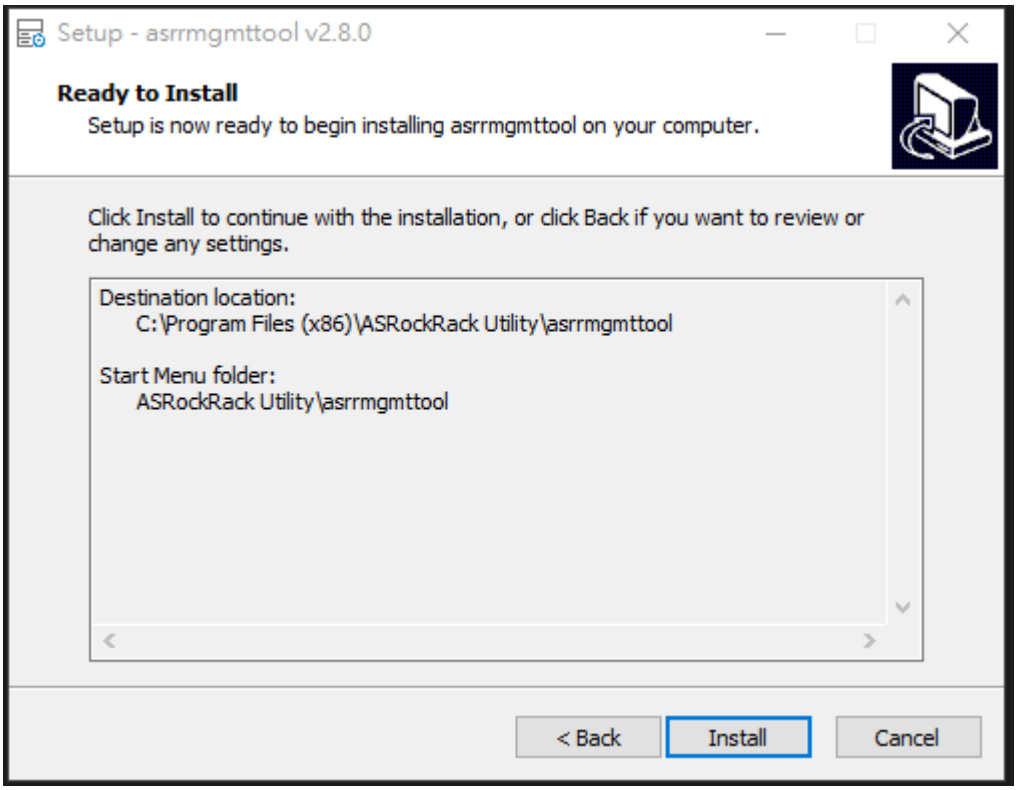
4. Installation Wizard:
   a. Click Next to continue.



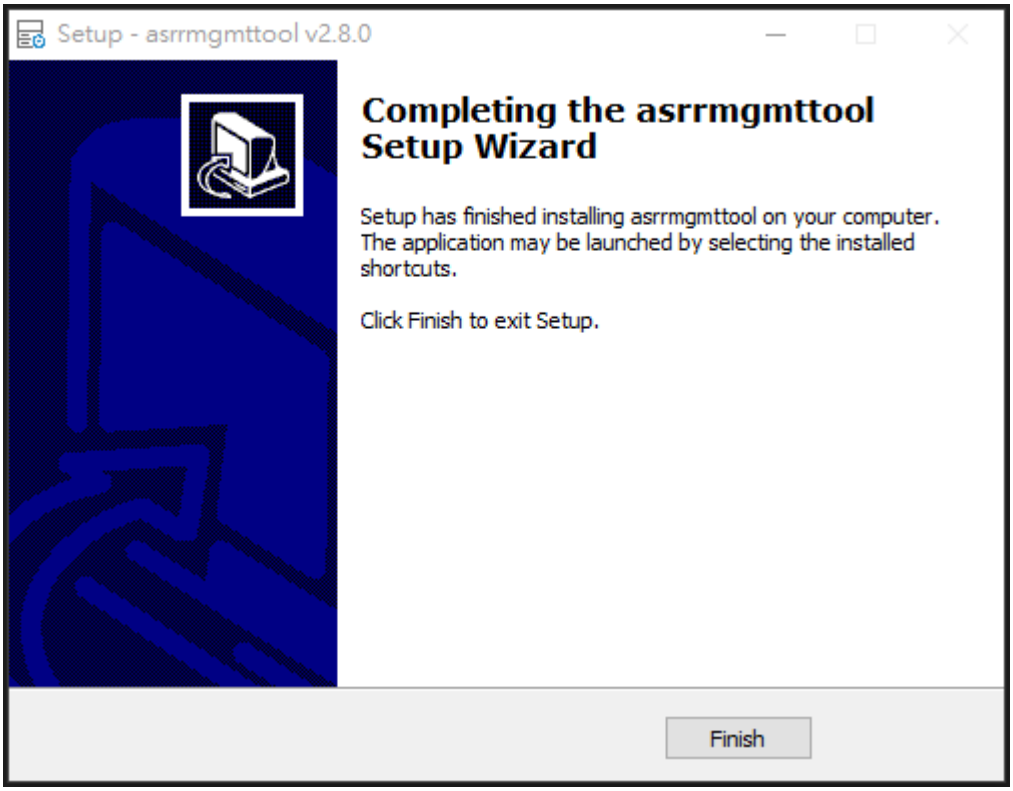
   b. Choose Start Menu folder (default recommended)→ Next.



c. Choose installation path (default recommended) → Install.



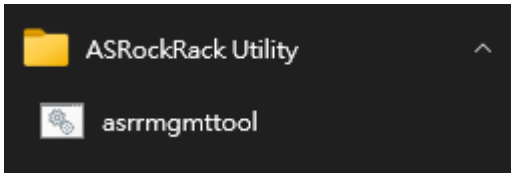
d. Click Finish when completed.



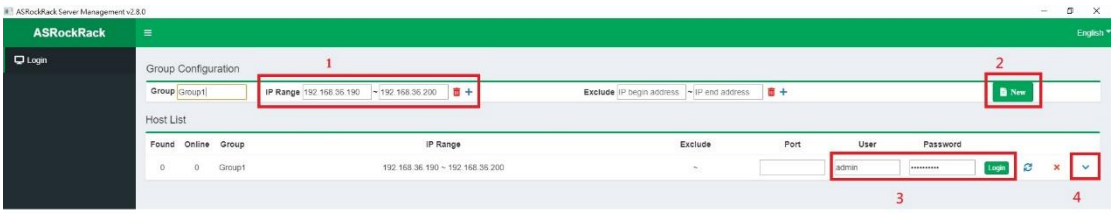
Usage Instruction

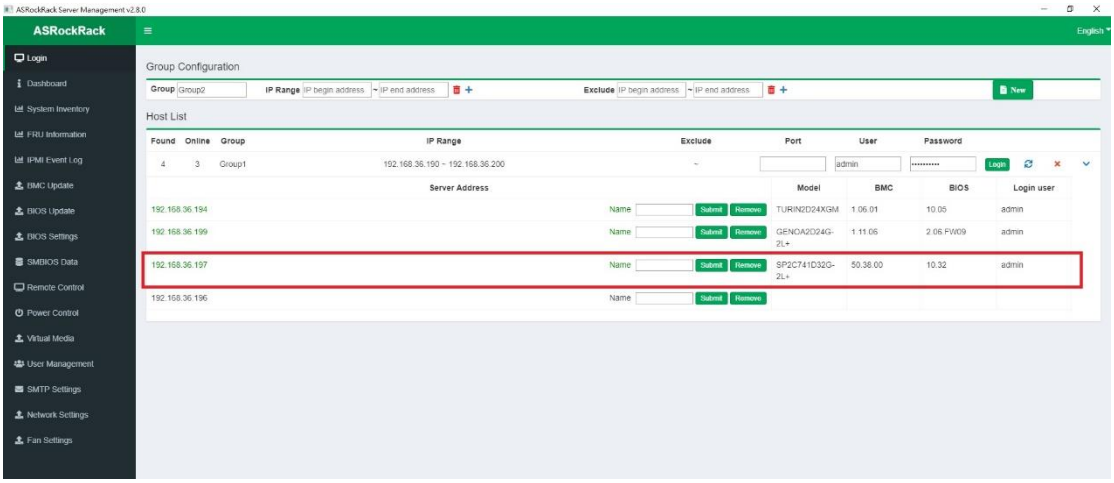
Step 1: Login

1. Launch SMU from Start Menu or Desktop.



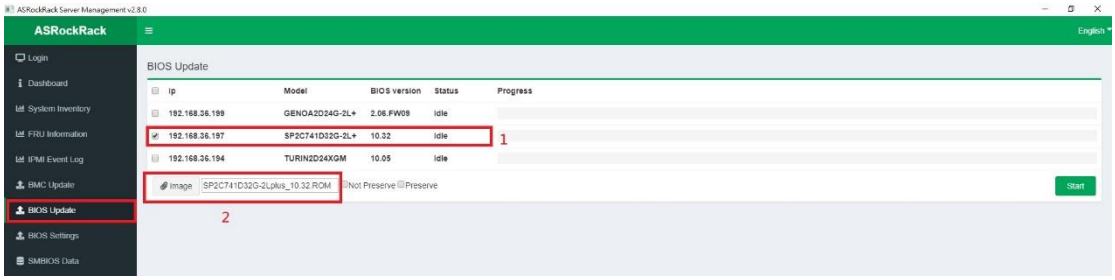
2. 1~2: Key-in the IP address range to search out the host machine where need to do the BIOS update procedure.
   3~4: Key-in BMC login account, then pull-down to check those searched machines.
   (For example: Host machine IP = 192.168.36.197)



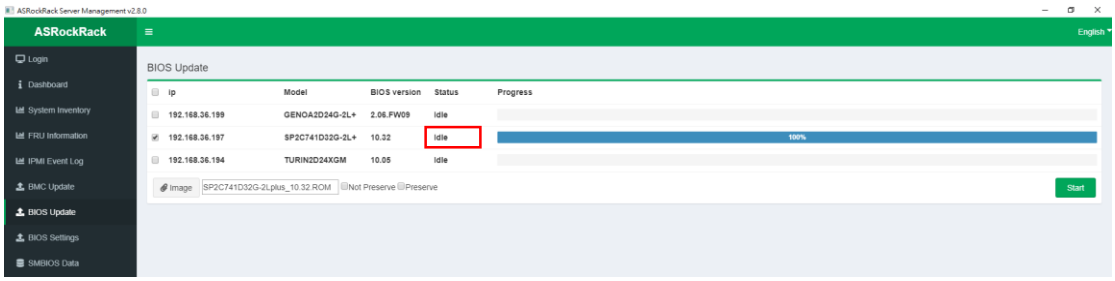


Step 2: BIOS Update

1. Tick to select the host machine (ex. 192.168.36.197)
2. Import the host machine BIOS image file
3. Click “Start” button to start the BIOS update process

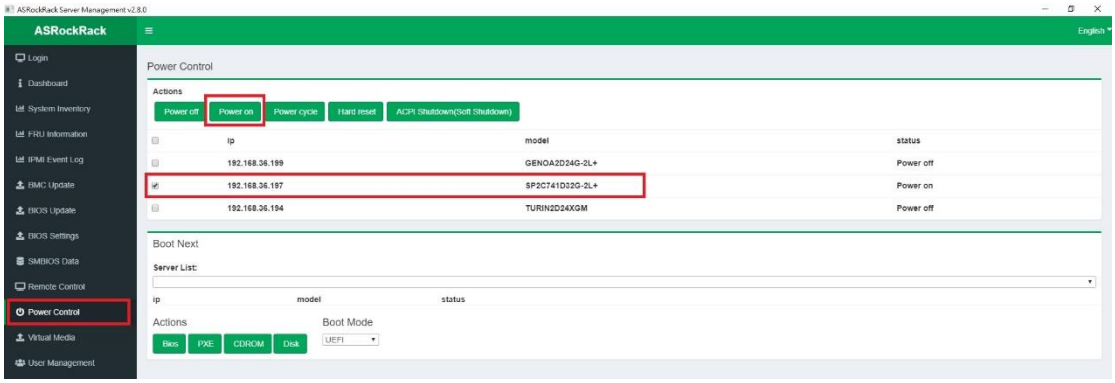


BIOS update is processing with procedures [Upload --> Upgrading --> Idle]



Step 3: Power ON/Reboot system remotely

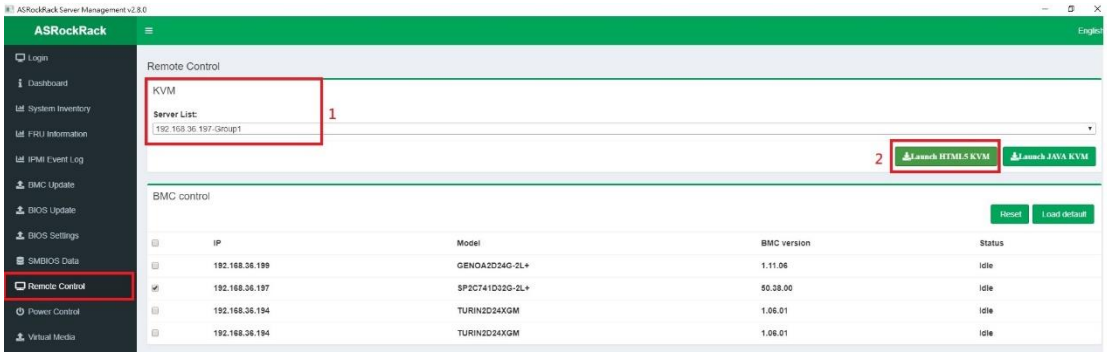
1. Tick to select the host machine IP (ex. 192.168.36.197)
2. Click “Power on” (“Hard reset” if for reboot)



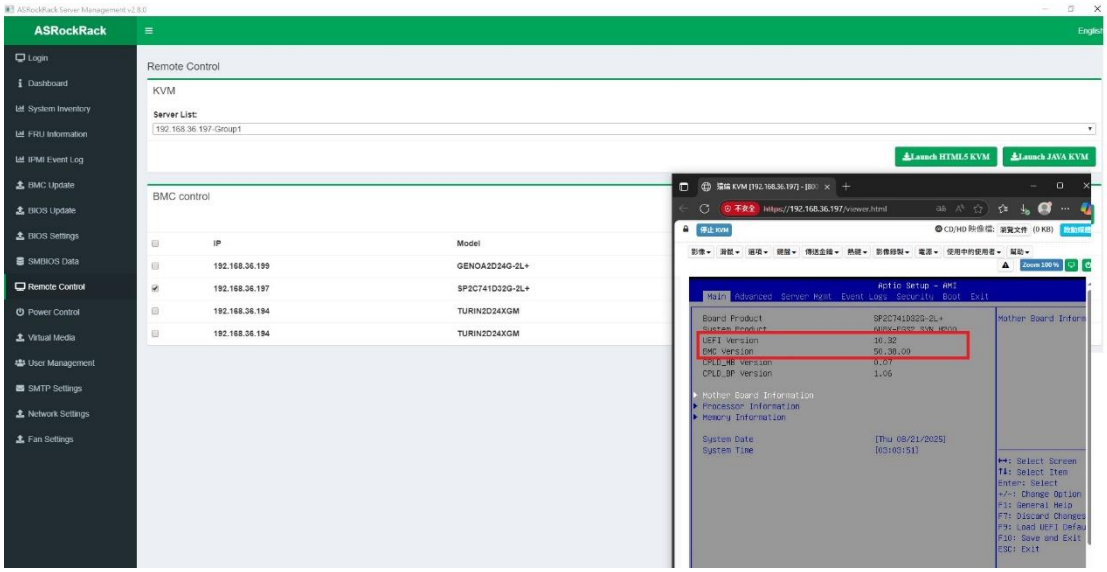
Power off: To immediately power off the server.
Power up: To power on the server.
Power cycle: To first power off, and then reboot the server (cold boot).
Hard reset: To reboot the server without powering off (warm boot).
ACPI Shutdown(Soft Shutdown): To initiate operating system shutdown prior to the shutdown (actual behavior may depend on OS settings).

Step 4: Remote control system

1. Select the host machine (ex. 192.168.36.197)
2. Click “Launch HTML5 KVM”

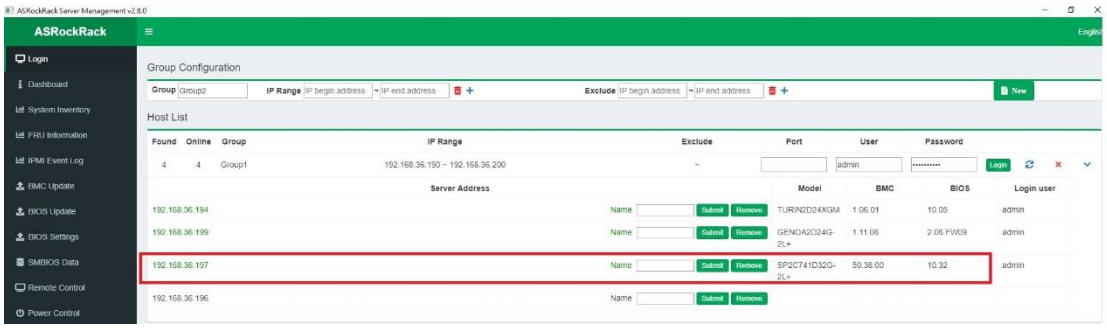


3. Remote the host machine by HTML5. And check to whether the BIOS update process is success or fail.



Step 5: Back to Step 1: Login

Check to the latest BIOS version of the host machine.
(For example: Host machine IP = 192.168.36.197)



Done