

Advantech AE Technical Share Document

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Category	<input checked="" type="checkbox"/> FAQ <input type="checkbox"/> SOP	Related OS	N/A
Abstract	ASMB-781 BMC initialization will fail on first time recovering from AC power loss, when BIOS version is V1.18 or earlier.		
Keyword	ASMB-781, BMC, Initialization, AC Power Loss		
Related Product	ASMB-781G4, ASMB-BMC		

■ Problem Description:

When using BIOS V1.18 or earlier on ASMB-781, with the BIOS feature “Restore AC Power Loss” set to [Power On], BMC initialization will fail when system powers on after an AC power failure. The system will continue to show the error message and cannot boot up until the user manually presses the F1 or F2 key, or restart the system without turning off AC supply.

***The BMC can successfully initialize after a restart.**



Picture1: Error message on POST screen.

■ Problem Analysis:

We tried to simulate the power on from AC power loss recovery function by pressing the power switch immediately after the AC power is turned on, and observed the same symptoms. By gradually increasing the time between AC power on and pressing the power switch, we found out that when the time frame is larger than approx. 5 seconds, the first initialization will be successful.

The BMC module is designed to draw power from the +5V standby power on the motherboard, and will start initializing once the AC power is turned on. If the system powers on too soon after AC power on, the BMC chip may not have enough time to fully initialize before POST.

On newer versions of BIOS developed for server boards, the Wait for BMC function is modified to dynamically increase the wait time, so this issue is unlikely to happen on newer products.

■ **Brief Solution - Step by Step:**

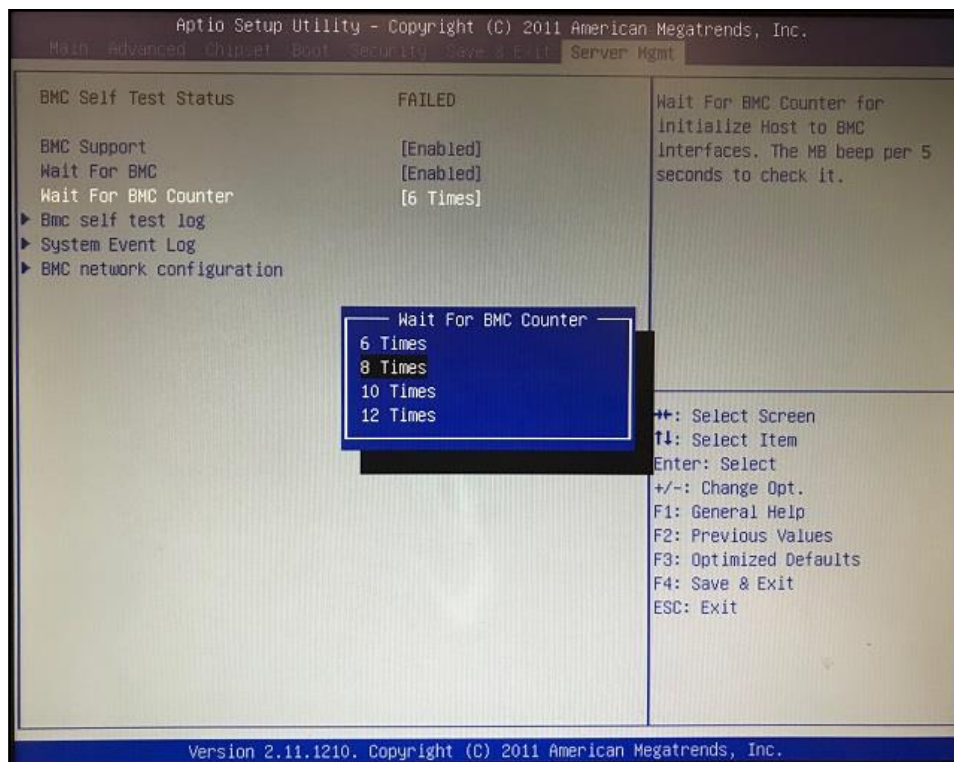
Here are two solutions to avoid this problem:

Updating to BIOS V2.00 or newer can solve the problem. But the customer in this case has been experiencing compatibility issues with V2.XX, so it may not always be an option.

A second method is to increase the time system waits for BMC before POST by adjusting the BMC wait counter in BIOS. Since this method does not involve modification of the firmware structure, it can be implemented without compromising the stability of the system.

Wait For BMC Counter

BIOS -> Server Mgmt -> Wait For BMC Counter -> [8 Times] (Default is 6 Times)



Picture2: Adjusting the Wait For BMC Counter in BIOS

■ **Contact Window and File Link:**

If you have any questions, please contact Josh.Chu #1438