



# **Troubleshoot installation (SGF6112)**

StorageGRID 11.7

NetApp

January 09, 2024

This PDF was generated from <https://docs.netapp.com/us-en/storagegrid-117/installconfig/viewing-boot-up-codes-for-sgf6112.html> on January 09, 2024. Always check docs.netapp.com for the latest.

# Table of Contents

- Troubleshoot hardware installation (SGF6112) ..... 1
  - View boot-up codes (SGF6112) ..... 1
  - View error codes (SGF6112) ..... 2
  - Hardware setup appears to hang (SGF6112) ..... 5
  - Troubleshoot connection issues (SGF6112) ..... 5

# Troubleshoot hardware installation (SGF6112)

If you encounter issues during the installation, you might find it helpful to review troubleshooting information related to hardware setup and connectivity issues.

## View boot-up codes (SGF6112)

When you apply power to the appliance, the BMC logs a series of boot-up codes. You can view these codes on a graphical console that is connected to the BMC management port.

### Before you begin

- You know how to access the BMC dashboard.
- If you want to use serial-over-LAN (SOL), you have experience using IPMI SOL console applications.

### Steps

1. Select one of the following methods for viewing the boot-up codes for the appliance controller, and gather the required equipment.

Method	Required equipment
VGA console	<ul style="list-style-type: none"><li>• VGA-capable monitor</li><li>• VGA cable</li></ul>
KVM	<ul style="list-style-type: none"><li>• RJ-45 cable</li></ul>
Serial port	<ul style="list-style-type: none"><li>• DB-9 serial cable</li><li>• Virtual serial terminal</li></ul>
SOL	<ul style="list-style-type: none"><li>• Virtual serial terminal</li></ul>

2. If you are using a VGA console, perform these steps:
  - a. Connect a VGA-capable monitor to the VGA port on the back of the appliance.
  - b. View the codes displayed on the monitor.
3. If you are using BMC KVM, perform these steps:
  - a. Connect to the BMC management port and log in to the BMC web interface.
  - b. Select **Remote Control**.
  - c. Launch the KVM.
  - d. View the codes on the virtual monitor.
4. If you are using a serial port and terminal, perform these steps:
  - a. Connect to the serial USB port on the back of the appliance.
  - b. Use settings 115200 8-N-1.

- c. View the codes printed over the serial terminal.
5. If you are using SOL, perform these steps:
  - a. Connect to the IPMI SOL using the BMC IP address and login credentials.

```
ipmitool -I lanplus -H BMC_Port_IP -U root -P Password sol activate
```

- b. View the codes on the virtual serial terminal.
6. Use the table to look up the codes for your appliance.

Code	Indicates
HI	The master boot script has started.
HP	The system is checking to see if the network interface card (NIC) firmware needs to be updated.
RB	The system is rebooting after applying firmware updates.
FP	The hardware subsystem firmware update checks have been completed. Inter-controller communication services are starting.
HC	The system is checking for existing StorageGRID installation data.
HO	The StorageGRID appliance is running.
HA	StorageGRID is running.

#### Related information

[Access BMC interface](#)

## View error codes (SGF6112)

If a hardware error occurs when the appliance is booting up, the BMC logs an error code. As required, you can view these error codes using the BMC interface, and then work with technical support to resolve the issue.

#### Before you begin

- You know how to access the BMC dashboard.

#### Steps

1. From the BMC dashboard, select **BIOS POST Code**.
2. Review the information displayed for Current Code and the Previous Code.

If any of the following error codes are shown, work with technical support to resolve the issue.

<b>Code</b>	<b>Indicates</b>
0x0E	Microcode not found
0x0F	Microcode not loaded
0x50	Memory initialization error. Invalid memory type or incompatible memory speed.
0x51	Memory initialization error. SPD reading has failed.
0x52	Memory initialization error. Invalid memory size or memory modules don't match.
0x53	Memory initialization error. No usable memory detected.
0x54	Unspecified memory initialization error
0x55	Memory not installed
0x56	Invalid CPU type or speed
0x57	CPU mismatch
0x58	CPU self-test failed, or possible CPU cache error
0x59	CPU micro-code is not found, or micro-code update failed
0x5A	Internal CPU error
0x5B	Reset PPI is not available
0x5C	PEI phase BMC self-test failure
0xD0	CPU initialization error
0xD1	North bridge initialization error
0xD2	South bridge initialization error
0xD3	Some architectural protocols aren't available
0xD4	PCI resource allocation error. Out of resources.
0xD5	No space for legacy option ROM

Code	Indicates
0xD6	No console output devices are found
0xD7	No console input devices are found
0xD8	Invalid password
0xD9	Error loading boot option (LoadImage returned error)
0xDA	Boot option failed (StartImage returned error)
0xDB	Flash update failed
0xDC	Reset protocol is not available
0xDD	DXE phase BMC self-test failure
0xE8	MRC: ERR_NO_MEMORY
0xE9	MRC: ERR_LT_LOCK
0xEA	MRC: ERR_DDR_INIT
0xEB	MRC: ERR_MEM_TEST
0xEC	MRC: ERR_VENDOR_SPECIFIC
0xED	MRC: ERR_DIMM_COMPAT
0xEE	MRC: ERR_MRC_COMPATIBILITY
0xEF	MRC: ERR_MRC_STRUCT
0xF0	MRC: ERR_SET_VDD
0xF1	MRC: ERR_IOT_MEM_BUFFER
0xF2	MRC: ERR_RC_INTERNAL
0xF3	MRC: ERR_INVALID_REG_ACCESS
0xF4	MRC: ERR_SET_MC_FREQ
0xF5	MRC: ERR_READ_MC_FREQ

Code	Indicates
0x70	MRC: ERR_DIMM_CHANNEL
0x74	MRC: ERR_BIST_CHECK
0xF6	MRC: ERR_SMBUS
0xF7	MRC: ERR_PCU
0xF8	MRC: ERR_NGN
0xF9	MRC: ERR_INTERLEAVE_FAILURE

## Hardware setup appears to hang (SGF6112)

The StorageGRID Appliance Installer might not be available if hardware faults or cabling errors prevent the appliance from completing its boot-up processing.

### Steps

1. Review the LEDs on the appliance and the boot-up and error codes displayed in the BMC.
2. If you need help resolving an issue, contact technical support.

### Related information

- [View boot-up codes \(SGF6112\)](#)
- [View error codes \(SGF6112\)](#)

## Troubleshoot connection issues (SGF6112)

If you encounter connection issues during the StorageGRID appliance installation, you should perform the corrective action steps listed.

### Unable to connect to appliance

If you can't connect to the services appliance, there might be a network issue, or the hardware installation might not have been completed successfully.

### Steps

1. Try to ping the appliance using the IP address for the appliance :  
**ping appliance\_IP**
2. If you receive no response from the ping, confirm you are using the correct IP address.

You can use the IP address of the appliance on the Grid Network, the Admin Network, or the Client Network.

3. If the IP address is correct, check appliance cabling, QSFP or SFP transceivers, and the network setup.

4. If physical access to the appliance is available, you can use a direct connection to the permanent link-local IP `169.254.0.1` to check controller networking configuration and update if necessary. For detailed instructions, see step 2 in [Access StorageGRID Appliance Installer](#).

If that does not resolve the issue, contact technical support.

5. If the ping was successful, open a web browser.
6. Enter the URL for the StorageGRID Appliance Installer:  
**`https://appliances_controller_IP:8443`**

The Home page appears.



## Copyright information

Copyright © 2024 NetApp, Inc. All Rights Reserved. Printed in the U.S. No part of this document covered by copyright may be reproduced in any form or by any means—graphic, electronic, or mechanical, including photocopying, recording, taping, or storage in an electronic retrieval system—without prior written permission of the copyright owner.

Software derived from copyrighted NetApp material is subject to the following license and disclaimer:

THIS SOFTWARE IS PROVIDED BY NETAPP “AS IS” AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE HEREBY DISCLAIMED. IN NO EVENT SHALL NETAPP BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

NetApp reserves the right to change any products described herein at any time, and without notice. NetApp assumes no responsibility or liability arising from the use of products described herein, except as expressly agreed to in writing by NetApp. The use or purchase of this product does not convey a license under any patent rights, trademark rights, or any other intellectual property rights of NetApp.

The product described in this manual may be protected by one or more U.S. patents, foreign patents, or pending applications.

LIMITED RIGHTS LEGEND: Use, duplication, or disclosure by the government is subject to restrictions as set forth in subparagraph (b)(3) of the Rights in Technical Data -Noncommercial Items at DFARS 252.227-7013 (FEB 2014) and FAR 52.227-19 (DEC 2007).

Data contained herein pertains to a commercial product and/or commercial service (as defined in FAR 2.101) and is proprietary to NetApp, Inc. All NetApp technical data and computer software provided under this Agreement is commercial in nature and developed solely at private expense. The U.S. Government has a non-exclusive, non-transferrable, nonsublicensable, worldwide, limited irrevocable license to use the Data only in connection with and in support of the U.S. Government contract under which the Data was delivered. Except as provided herein, the Data may not be used, disclosed, reproduced, modified, performed, or displayed without the prior written approval of NetApp, Inc. United States Government license rights for the Department of Defense are limited to those rights identified in DFARS clause 252.227-7015(b) (FEB 2014).

## Trademark information

NETAPP, the NETAPP logo, and the marks listed at <http://www.netapp.com/TM> are trademarks of NetApp, Inc. Other company and product names may be trademarks of their respective owners.