ONE IDENTITY

by **Quest**

syslog-ng Store Box   6.9.0

Installation Guide

SSB Installation Guide
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Contents

Preface

Welcome to the syslog-ng Store Box 6.9.0 Installation Guide.

This document describes how to set up the syslog-ng Store Box (SSB) hardware and install SSB on certified hardware or as a VMware virtual appliance.

NOTE: When setting up a virtual environment, carefully consider the configuration aspects such as CPU, memory availability, I/O subsystem, and network infrastructure to ensure the virtual layer has the necessary resources available. Please consult One Identity's Product Support Policies for more information on environment virtualization.

Summary of contents

Introduction on page 6 provides background information and describes the main purpose of the syslog-ng Store Box Installation Guide.

Package contents inventory on page 7 lists the contents of the package you receive with the syslog-ng Store Box (SSB).

syslog-ng Store Box Hardware Installation Guide on page 8 describes how to set up the SSB hardware.

Hardware specifications on page 13 describes the hardware specifications of the SSB appliance.

syslog-ng Store Box Software Installation Guide on page 19 describes how to install SSB on certified hardware.

syslog-ng Store Box VMware Installation Guide on page 22 describes how to install SSB as a VMware virtual appliance.

Target audience and prerequisites

This guide is intended for system administrators, network administrators, and system integrators responsible for server administration processes within an organization.

The following skills and knowledge are necessary for a successful SSB administrator:

- At least basic system administration knowledge.

- An understanding of networks, TCP/IP protocols, and general network terminology.

- An understanding of system logging and the protocols used in remote system logging.

- Familiarity with the concepts of the syslog-ng and the syslog-ng Agent for Windows applications.

- Working knowledge of the UNIX or Linux operating system is not mandatory but highly useful.

Products covered in this guide

This guide describes how to set up and install the syslog-ng Store Box version 6.9.0.

NOTE: Users of the syslog-ng Store Box are entitled to use the syslog-ng Premium Edition application as a log collector agent for SSB. This guide does not cover the install-ation and configuration of syslog-ng Premium Edition, for details, see the syslog-ng Store Box Documentation page.

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Introduction

The aim of this guide is to provide detailed, step-by-step instructions on how to set up and install syslog-ng Store Box on unpacking it and any subsequent occasions that might require the re-installation of the product.

Note that the contents of this document were previously included in the syslog-ng Store Box Administrator Guide. This standalone guide was created to:

- Improve how information is organized in the syslog-ng Store Box documentation set.
- Make it easier for users to find information relevant to their roles, context, and how they use the product.

Package contents inventory

Carefully unpack all server components from the packing cartons. The following items should be packaged with the syslog-ng Store Box:

- A syslog-ng Store Box appliance, pre-installed with the latest syslog-ng Store Box firmware.
- syslog-ng Store Box accessory kit, including the following:
    - syslog-ng Store Box 6.9.0 Packaging Checklist (this document).
    - GPL v2.0 license.
- Rack mount hardware.
- Power cable.

The default BIOS and IPMI passwords are in the documentation.

syslog-ng Store Box Hardware Installation Guide

This section describes how to set up the syslog-ng Store Box (SSB) hardware. Refer to the following documents for step-by-step instructions:

- *syslog-ng Store Box Appliance 3000*: see the *SC113 Chassis Series User's Manual, Chapter 6: Rack Installation*, available online at https://www.supermicro.com/manuals/chassis/1U/SC113.pdf.

- *syslog-ng Store Box Appliance 3500*: see the *SuperServer 1029U-T Series User's Manual, Chapter 2: Server Installation*, available online at https://www.supermicro.com/manuals/superserver/1U/MNL-1973.pdf.

The manuals are also available online at the syslog-ng Store Box Documentation page. Note that SSB hardware is built to custom specifications: CPU, memory, network card, and storage options differ from the stock chassis. You can find the hardware specifications in Hardware specifications.

- For details on how to install a single SSB unit, see Installing the SSB hardware.

- For details on how to install two SSB units in high availability mode, see Installing two SSB units in HA mode.

Installing the SSB hardware

The following section describes how to install a single syslog-ng Store Box (SSB) unit.

To install a single SSB unit

1. Unpack SSB.

2. *Optional step*: Install SSB into a rack with the slide rails. Slide rails are available for all SSB appliances.

3. Connect the cables.

a. **For general networks:**

Connect the Ethernet cable facing your LAN to the Ethernet connector labeled 1. This is the external interface of SSB. This interface is used for the initial configuration of SSB, and for communication between SSB and the clients. (For details on the roles of the different interfaces, see "Network interfaces" in the Administration Guide.)

For 10Gbit-only networks:

Connect the cable facing your LAN to the SFP+ connector labeled 5. This is the external interface of SSB. This interface is used for the initial configuration of SSB, and for communication between SSB and the clients. (For details on the roles of the different interfaces, see "Network interfaces" in the Administration Guide.)

NOTE: Only Intel-based SFP+ transceivers are compatible with the Intel 82599EB host chipset found in SSB.

The following Intel-based optical and Direct Attached Copper (DAC) SFP+ transceivers have been tested successfully with SSB, but in the future, their compatibility with SSB is not guaranteed:

- AOC-E10GSFPSR (optical)
- SFP-10GE-SR (DAC)
- FTLX8571D3BCVIT1 (DAC)

For a list of Intel-based connectors that may be compatible with the Intel 82599EB host chipset found in SSB, see the 82599-BASED ADAPTERS section on the Linux* Base Driver for the Intel(R) Ethernet 10 Gigabit PCI Express Adapters page at 82599-BASED ADAPTERS/Linux* Base Driver for the Intel(R) Ethernet 10 Gigabit PCI Express Adapters.

⚠ **CAUTION:**

Do not leave any unused SFP/SFP+ transceiver in the 10Gbit interface. It may cause network outage.

b. Connect an Ethernet cable that you can use to remotely support the SSB hardware to the `IPMI` interface of SSB. For details, see the following documents:

For syslog-ng Store Box (SSB) Appliance 3000 and 3500, see the Latest IPMI firmware for Syslog-ng Store Box 3000/3500 and One Identity Safeguard for Privileged Sessions 3000/3500 appliances.

For syslog-ng Store Box (SSB) T1 and syslog-ng Store Box (SSB) T4, see the IPMI User's Guide.

⚠ **CAUTION:**

Connect the IPMI before plugging in the power cord. Failing to do so will result in IPMI failure.

> ⚠️ **CAUTION: SECURITY HAZARD!**
>
> **The IPMI interface, like all out-of-band management interfaces, has known vulnerabilities that One Identity cannot fix or have an effect on. To avoid security hazards, One Identity recommends that you only connect the IPMI interface to well-protected, separated management networks with restricted accessibility. Failing to do so may result in an unauthorized access to all data stored on the SSB appliance. Data on the appliance can be unencrypted or encrypted, and can include sensitive information, for example, passwords, decryption keys, private keys, and so on.**
>
> **For more information, see Best Practices for managing servers with IPMI features enabled in Datacenters.**

> NOTE: The administrator of SSB must be authorized and able to access the IPMI interface for support and troubleshooting purposes in case vendor support is needed.

The following ports are used by the IPMI interface:

- Port 623 (UDP): IPMI (cannot be changed)
- Port 5123 (UDP): floppy (cannot be changed)
- Port 5901 (TCP): video display (configurable)
- Port 5900 (TCP): HID (configurable)
- Port 5120 (TCP): CD (configurable)
- Port 80 (TCP): HTTP (configurable)

   c. *Optional step*: Connect the Ethernet cable to be used for managing SSB after its initial configuration to the Ethernet connector labeled 2. This is the management interface of SSB. (For details on the roles of the different interfaces, see "Network interfaces" in the Administration Guide.)

   d. *Optional step*: Connect the Ethernet cable connecting SSB to another SSB node to the Ethernet connector labeled 4. This is the high availability (HA) interface of SSB. (For details on the roles of the different interfaces, see "Network interfaces" in the Administration Guide.)

4. Power on the hardware.

5. Change the BIOS password on the syslog-ng Store Box. The default password is `ADMIN` or `changeme`, depending on your hardware.

6. Change the IPMI password on the syslog-ng Store Box. The default password is `ADMIN` or `changeme`, depending on your hardware.

   > NOTE:Ensure that you have the latest version of IPMI firmware installed. You can download the relevant firmware from the One Identity Knowledge Base:

- IPMI firmware for syslog-ng Store Box Appliance 3000
- IPMI firmware for syslog-ng Store Box Appliance 3500

To change the IPMI password, connect to the IPMI remote console.

NOTE: If you encounter issues when connecting to the IPMI remote console, add the DNS name or the IP address of the IPMI interface to the exception list (whitelist) of the Java console. For details on how to do this, see the Java FAQ entry titled How can I configure the Exception Site List?.

7. Following boot, SSB attempts to receive an IP address automatically via DHCP. If it fails to obtain an automatic IP address, it starts listening for HTTPS connections on the `192.168.1.1` IP address.

   To configure SSB to listen for connections on a custom IP address, complete the following steps:

   a. Access SSB from the local console, and log in with username `root` and password `default`.

   b. In the Console Menu, select **Shells > Core shell**.

   c. Change the IP address of SSB:

   ```
   ip addr add <IP-address>/24 dev eth0
   ```

   Replace `<IP-address>` with an IPv4 address suitable for your environment.

   d. Set the default gateway using the following command:

   ```
   ip route add default via <IP-of-default-gateway>
   ```

   Replace `<IP-of-default-gateway>` with the IP address of the default gateway.

   e. Type `exit`, then select **Logout** from the Console Menu.

8. Connect to the SSB web interface from a client machine and complete the Welcome Wizard as described in "The Welcome Wizard and the first login" in the Administration Guide.

   NOTE: The syslog-ng Store Box Administrator Guide is available on the syslog-ng Store Box Documentation page.

Installing two SSB units in HA mode

The following describes how to install SSB with high availability support.

To install SSB with high availability support

1. For the first SSB unit, complete Installing the SSB hardware on page 8.

2. For the second SSB unit, complete Steps 1-3 of Installing the SSB hardware on page 8.

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3. Connect the two units with an Ethernet cable via the Ethernet connectors labeled as 4.

4. Power on the second unit.

5. Change the BIOS and IPMI passwords on the second unit. The default password is ADMIN or changeme, depending on your hardware.

6. Connect to the SSB web interface of the first unit from a client machine and enable high availability mode. Navigate to **Basic Settings > High Availability** . Click **Convert to Cluster**, then reload the page in your browser.

7. Click **Reboot Cluster**.

8. Wait until the slave unit synchronizes its disk to the master unit. Depending on the size of the hard disks, this may take several hours. You can increase the speed of the synchronization via the SSB web interface at **Basic Settings > High Availability > DRBD sync rate limit**.

Hardware specifications

The syslog-ng Store Box (SSB) appliances are built on high performance, energy efficient, and reliable hardware that are easily mounted into standard rack mounts.

The following sections provide detailed information of SSB appliances.

syslog-ng Store Box (SSB) T1

Unit: 1

Number of disk slots: 2 (internal only)

Redundant PSU: 0

Mainboard: X8SIL-F

Chipset: Intel 3420

NIC:

- 2x Intel® 82574L Gigabit Ethernet Controller
- 1x Supermicro AOC-SG-i2 Dual GbE PCI-Ex4

IPMI: Nuvoton WPCM450, SMT (Latest ver.: 3.16)

CPU: 1x Intel Xeon X3430 2.4GHz Quad

RAM: 2x 4GB Samsung DDR3-1600 ECC/Unbuffered STD

HDD: 2x Seagate Constellation ES.3 1TB SATA III

RAID: Software RAID

RAID type: RAID1

Chassis (H x W x D): 43mm x 426mm x 356mm (1U)

Chassis (H x W x D): 1,7" x 16,8" x 14,0" (1U)

Chassis: SuperChassis 512-200B

Weight: 7,7 kg / 17 lbs

Wattage IDLE: 50 Watt

Wattage LOAD: 243 Watt

System MTBF (h): 42216 hours

Electrical: 100 - 240V, 60-50Hz, 4 - 2 Amp

Operating temperature: 10°C to 35°C

Non-operating temperature: -40°C to 70°C

Humidity range: 8% to 90%

Non-operating humidity: 5% to 95%

Compliant to: CE, cCSAus, FCC, VCCI-A

Link to manufacturer documentation

syslog-ng Store Box (SSB) T4

Unit: 1

Number of disk slots: 4

Redundant PSU: 1

Mainboard: X9SPU-F

Chipset: Intel C216 Express PCH

NIC

- 2x Intel® 82574L Gigabit Ethernet Controller
- 1x Supermicro AOC-SG-i2 Dual GbE PCI-Ex4

IPMI: Nuvoton WPCM450RA0BX, SMT (Latest ver.: 3.38)

CPU: 1x Intel Xeon E3-1275v2 3.5GHz Quad

RAM: 2x 4GB Samsung DDR3-1600 ECC/Unbuffered STD

HDD: 4x Seagate Constellation ES.3 2TB SATA III

RAID:

- LSI MegaRAID SAS 9271-4i SGL
- + LSI LSIiBBU09 BBU

RAID type: RAID10

Chassis (H x W x D): 43mm x 437mm x 650mm

Chassis: (H x W x D) 1,7" x 17,2" x 25,6"

Chassis: SuperChassis 815TQ-R500UB

Weight: 16,5 kg / 38 lbs

Wattage IDLE: 60 Watt

Wattage LOAD: 547 Watt

System MTBF (h): 69667 hours

Electrical: 100 - 240V, 60-50Hz, 6.2 - 2.6 Amp

Operating temperature: 10°C to 35°C

Non-operating temperature: -40°C to 70°C

Humidity range: 8% to 90%

Non-operating humidity: 5% to 95%

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Compliant to: CE, cCSAus, FCC, VCCI-A

Link to manufacturer documentation

syslog-ng Store Box (SSB) T10

Unit: 2

Number of disk slots: 12

Redundant PSU: 1

Mainboard: X9DRW-7TPF+

Chipset: Intel® C602J

NIC:

- 1x Intel® 82599 Dual Port 10G SFP+
- 1x Intel® i350 Dual Port Gigabit Ethernet
- 1x Supermicro AOC-SG-i2 Dual GbE PCI-Ex4

IPMI: Nuvoton WPCM450 BMC, SMT (Latest ver.: 3.39)

CPU: 2x Intel Xeon E5-2630v2 2.6GHz

RAM: 8x 4GB Samsung DDR3-1600 ECC/Unbuffered STD

HDD: 13x Seagate Constellation.2 SAS 1TB 2.5"

RAID:

- LSI 2208 (1GB cache)
- + Supermicro BTR-0022L-LSI00279 BBU
- +Chenbro CK22803 Expander

RAID type: RAID50

Chassis (H x W x D): 89mm x 437mm x 684mm

Chassis (H x W x D): 3,5" x 17,2" x 26,93"

Chassis: SuperChassis 219A-R920WB

Weight: 23,6 kg / 52 lbs

Wattage IDLE: 106 Watt

Wattage LOAD: 987 Watt

System MTBF (h): 36683 hours

Electrical: 100 - 240V, 50-60Hz, 11 - 4.5 Amp

Operating temperature: 10°C to 35°C

Non-operating temperature: -40°C to 70°C

Humidity range: 8% to 90%

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Non-operating humidity: 5% to 95%

Compliant to: CE, cCSAus, FCC, VCCI-A

Link to manufacturer documentation

syslog-ng Store Box (SSB) Appliance 3000

Unit: 1 U

Drive Bays: 8 x 2.5

Redundant PSU: Yes

NIC: 4 x 1GBase-T Ethernet ports

IPMI: version 2.0

CPU: Intel Xeon E3-1275 3.60 Ghz 4 Core

Memory: 2x 16GB

HDD: 4x 2TB

RAID: LSI MegaRAID SAS 9361-4i

RAID Type: RAID 5

Usable Storage: 6TB

Chassis (W x H x D): 17.2" x 1.7" x 23.5" (437 x 43 x 650 mm)

Weight: 35 lbs (15.9kg)

Wattage IDLE / LOAD: N/A

Electrical: 500W Redundant AC-DC Power Supplies

Operating Temperature: 5°C to 35°C (41°F to 95°F)

Non-operating Temperature: -40°C to 60°C (-40°F to 140°F)

Humidity Range: 8% to 90% (non-condensing)

Non-operating Humidity: 5% to 95% (non-condensing)

Compliant to: CE, cCSAus, FCC, VCCI-A

Link to manufacturer documentation

List of appliance ports

1. Redundant power supplies
2. Serial port
3. 2x USB ports
4. 2x USB ports
5. 2x RJ45 GbE Ethernet ports
6. VGA port
7. 4 x 1GBase-T Ethernet ports
8. Dedicated IPMI LAN port

syslog-ng Store Box (SSB) Appliance 3500

Unit: 1 U

Drive Bays: 10 x 2.5

Redundant PSU: Yes

NIC:

- 2 x 1GBase-T Ethernet ports
- 2 x 10GBase-T Ethernet ports

IPMI: version 2.0

CPU: 2 x Intel Xeon Silver 4110 2.1 Ghz 8 Core

Memory: 8 x 8GB

HDD: 8 x 2TB + 1 HotSpare

RAID:

- LSI Avago CacheVault Power Module 02 (CVPM02) Kit
- 1 x Broadcom MegaRAID SAS 9361-16i +

RAID Type: RAID 50

Usable Storage: 12 TB

Chassis (W x H x D): 17.2" x 1.7" x 28.5" (437 x 43 x 724 mm)

Weight: 41 lbs (18.6kg)

Wattage IDLE / LOAD: N/A

Electrical: 750W Redundant AC-DC Power Supplies

Operating Temperature: 10°C to 35°C (50°F ~ 95°F)

Non-operating Temperature: -40°C to 60°C (-40°F to 140°F)

Humidity Range: 8% to 90% (non-condensing)

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Non-operating Humidity: 5% to 95% (non-condensing)

Compliant to: CE, cCSAus, FCC, VCCI-A

Link to manufacturer documentation

NOTE: The syslog-ng Store Box (SSB) Appliance 3500 is equipped with a dual-port 10Gbit interface. This interface has SFP+ connectors (not RJ-45) labeled 5 and 6, and can be found right of the label 1 and 2 Ethernet interfaces. If you want faster communication, for example, in case of high data load, you can connect up to two 10G SFP+ transceivers. These transceivers are not shipped with the original package and have to be purchased separately.

List of appliance ports

1. Redundant power supplies
2. 2x RJ45 10GbE Ethernet ports
3. 2x 3.0 USB ports
4. Dedicated IPMI LAN port
5. Serial port
6. VGA port
7. 2 x 1GBase-T Ethernet ports
8. 2x SFP+ 10GbE ports

syslog-ng Store Box Software Installation Guide

This section describes how to install the syslog-ng Store Box (SSB) software on a certified hardware.

Note that installing and reinstalling SSB can take a long time, especially for a HA cluster. There are no supported workarounds for reducing the necessary downtime. One Identity recommends testing SSB in a virtual environment, and using physical hardware only for verifying HA functionality and measuring performance.

Installing the SSB software

The following describes how to install a new SSB on a server.

To install a new SSB on a server

1. Log in to your support portal account and download the latest syslog-ng Store Box installation ISO file. Note that you need to have partner access to download syslog-ng Store Box ISO files. If you are a partner but do not see the ISO files, you can request partner access within the support portal.

2. Mount the ISO image, or burn it to a CD-ROM.

3. Connect your computer to the IPMI interface of SSB. For details, see the following documents:

   For syslog-ng Store Box (SSB) Appliance 3000 and 3500, see the Latest IPMI firmware for Syslog-ng Store Box 3000/3500 and One Identity Safeguard for Privileged Sessions 3000/3500 appliances.

   For syslog-ng Store Box (SSB) T1 and syslog-ng Store Box (SSB) T4, see the IPMI User's Guide.

4. Power on the server.

5. Log in to the IPMI web interface, and boot the syslog-ng Store Box installation CD on the server using a virtual CD-ROM. For details, see the following documents:

For syslog-ng Store Box (SSB) Appliance 3000 and 3500, see the Latest IPMI firmware for Syslog-ng Store Box 3000/3500 and One Identity Safeguard for Privileged Sessions 3000/3500 appliances.

For syslog-ng Store Box (SSB) T1 and syslog-ng Store Box (SSB) T4, see the IPMI User's Guide.

6. When the syslog-ng Store Box installer starts, select **Installer**, press Enter, and wait until the server finishes the boot process.

7. Select **Install a new SSB** and press Enter to start the installation process. Depending on the size of the disks, the installation process takes from a few minutes to an hour to complete. The progress of the installation is indicated in the **Installation Steps** window.

8. The installer displays the following question: **Warning, all data on the hard drive (s) will be erased. Are you sure?** Select **Yes** and press Enter.

9. The installer displays the MAC addresses of the network interfaces found in the SSB unit. Record these addresses.

10. The installer displays the product name (the SSB configuration that was installed). If the product name displayed does not match the product you wanted to install, complete the following steps:

    a. Check that the hardware configuration of the appliance matches the specifications provided by One Identity.

    b. If the configuration matches the specifications but the installer displays a different product name, contact our Support Team.

11. During the **Finishing the Setup** step, the installer performs RAID synchronization.

    - Select **Yes** to perform the RAID synchronization. RAID synchronization is a two-step process, the progress of the active step is indicated on the progress bar. Wait until both steps are completed. Note that this synchronization takes several hours (about 8 hours on average).

    - Select **No** to skip the RAID synchronization. Note that the system will automatically perform the synchronization after the first boot, but in this case the process will take several days.

12. After the installation is finished, press Enter to return to the main menu.

13. Select **Reboot** and press Enter to restart the system. Wait until the system reboots.

14. Connect your computer to the EXT interface of SSB. Create an alias IP address for your computer that falls into the 192.168.1.0/24 subnet (for example, 192.168.1.10). For details, see "The initial connection to SSB" in the Administration Guide.

15. Open the http://192.168.1.1 URL in your web browser and verify that the Welcome Wizard of the syslog-ng Store Box is available.

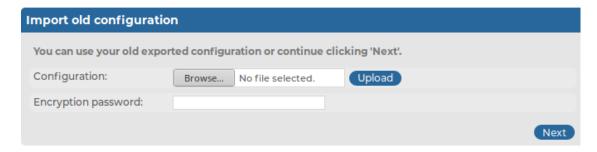   NOTE: For details on the supported web browsers and operating systems, see "Supported web browsers" in the Administration Guide.

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Figure 1: The Welcome Wizard

16. Power off the system.

syslog-ng Store Box VMware Installation Guide

This tutorial describes the possibilities and limitations of installing syslog-ng Store Box (SSB) 6.9.0 as a virtual appliance under a VMware ESXi server.

Limitations of SSB under VMware

The following limitations apply to running version 6.9.0 of SSB under VMware:

- SSB can be installed under the following VMware versions:
    - VMware ESXi 4.0 or later.
    - VMware ESX 4.0 or later.
- SSB can only use fixed disk space assigned to the virtual host, it is not possible to use on-demand disk allocation scenarios. To increase the size of the virtual disk, see Increasing the virtual disk size of SSB under a virtual machine.
- If High Availability (HA) operation mode is required in a virtual environment, use the HA function provided by the virtual environment.
- Hardware-related alerts and status indicators of SSB may display inaccurate information, for example, display degraded RAID status.
- Creating Quiesced snapshots is not supported. Disable this option when taking a snapshot of your SSB appliance, otherwise the boot firmware of the appliance becomes tainted.

Installing SSB under VMware ESXi/ESX

The following describes how to install a new SSB under VMware ESXi or ESX.

To install a new SSB under VMware ESXi or ESX

1. Create the virtual machine for SSB using the following settings:

   - Guest operating system: *Linux/Ubuntu 64-bit*.

   - Allocate memory for the virtual machine. SSB requires a minimum of 1 GiB of memory, in addition to the memory limit of the indexed logspaces. The recommended size for the memory depends on the exact environment, but consider the following:

     - The base system requires 256 MiB.

     - The syslog-ng server running on SSB requires between 128 MiB and 1 GiB of memory, depending on the message load and on the configuration of SSB.

     - For every logspace, SSB requires additional memory to index the incoming messages. The amount of memory allocated for the indexer can be set individually for every logspace.

   - The hard disk controller must be *LSI Logic Parallel*.

   - Do not use RAID for the hard disk, use the data duplication features of your virtual environment instead. That way, a single hard disk is sufficient for the system. If you need to use the built-in RAID support of SSB for some reason, use two hard disks, and SSB will automatically use them in software RAID.

     > ⚠ **CAUTION:**
     >
     > **Hazard of data loss When you install or reinstall SSB in a virtual environment, always create new hard disks. Using existing hard disks can cause unexpected behavior and operational problems.**

   - Configure a fixed size disk with at least 8 GiB space.

     About 5 GB is required for the base system, the remaining disk space is used to store data. To increase the initial disk size, see Increasing the virtual disk size of SSB under a virtual machine.

   - SSB requires that you use either 1 network card or 4 network cards, all of them must be *VMXNET3*.

2. After creating the virtual machine, edit the settings of the machine. Set the following options:

   a. Under **Options > VMware Tools**, enable the **Shutdown, Suspend, Reset** options, otherwise the SSB administrator will not be able to access these functions from the SSB web interface.

   b. Under **Options > Boot options**, enable the **Force BIOS Setup** option. This is required to be able to check the system time (and modify it if needed) before installing SSB.

3. Log in to the support portal and download the latest syslog-ng Store Box installation ISO file. Note that you need to have purchased SSB as a virtual appliance or have partner access to download syslog-ng Store Box ISO files. If you are a partner but do not see the ISO files, you can request partner access within the support portal.

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4. Mount the ISO image and boot the virtual machine. Follow the on-screen instructions to install SSB.

   Once installation successfully completes, the virtual machine will restart automatically.

   In case installation fails, a message will be displayed instructing you to press `Ctrl+Alt+Delete` to reboot the virtual machine.

syslog-ng Store Box Hyper-V Installation Guide

This tutorial describes the possibilities and limitations of installing syslog-ng Store Box (SSB) 6.9.0 as a virtual appliance under a Hyper-V server.

Limitations of SSB under Hyper-V

Version 6.9.0 of SSB has no special support for running under Hyper-V. While the basic functionality of SSB is not affected by running as a virtual appliance, the following limitations apply:

- If High Availability (HA) operation mode is required in a virtual environment, use the HA function provided by the virtual environment.

- Hardware-related alerts and status indicators of SSB may display inaccurate information, for example, display degraded RAID status.

- When running SSB under Microsoft Hyper-V, ensure that the network interfaces are actually connected to the network. When running under Hyper-V, SSB indicates on the **Basic Settings > Network > Ethernet links** page that there is a link, even if the network interface is configured and enabled, but not connected to the network.

- When rebooting SSB in Hyper-V, the following critical error message may appear in the event log of the Hyper-V host:

  ```
  <Virtual machine name> was reset because an unrecoverable error occurred
  on a virtual processor that caused a triple fault.
  ```

  This is normal, there is no problem with SSB. For details, see Triple fault in event log shows reset of Linux virtual machines.

Installing SSB under Hyper-V

The following describes how to install a new SSB under Hyper-V.

To install a new SSB under Hyper-V

1. Create the virtual machine for SSB using the following settings:

   - Choose **Generation 1** for the virtual machine.

   - Allocate memory for the virtual machine. SSB requires a minimum of 1 GiB of memory, in addition to the memory limit of the indexed logspaces. The recommended size for the memory depends on the exact environment, but consider the following:

     - The base system requires 256 MiB.

     - The syslog-ng server running on SSB requires between 128 MiB and 1 GiB of memory, depending on the message load and on the configuration of SSB.

     - For every logspace, SSB requires additional memory to index the incoming messages. The amount of memory allocated for the indexer can be set individually for every logspace.

   - Configure a fixed size disk with at least 8 GiB space.

     About 5 GB is required for the base system, the remaining disk space is used to store data.

   - Do not use RAID for the hard disk, use the data duplication features of your virtual environment instead. That way, a single hard disk is sufficient for the system. If you need to use the built-in RAID support of SSB for some reason, use two hard disks, and SSB will automatically use them in software RAID.

     ⚠ **CAUTION:**

     Hazard of data loss When you install or reinstall SSB in a virtual environment, always create new hard disks. Using existing hard disks can cause unexpected behavior and operational problems.

   - SSB requires that you use either 1 network card or 4 network cards. If you wish to use more than one network card, then after completing the steps of the **New Virtual Machine Wizard**, add the additional network cards in the **Settings** of the virtual machine.

     ⚠ **CAUTION:**

     Hyper-V offers two kinds of virtual Network Adapters (NICs): Legacy and Synthetic. Due to a known issue (Hyper-V network adapters are mapped to a different eth on every boot), using Legacy and Synthetic NICs within the same configuration will result in improper network setup. If you have to use more than one NICs, we recommend using only Legacy NICs.

2. Log in to your support portal account and download the latest syslog-ng Store Box installation ISO file. Note that you need to have purchased SSB as a virtual appliance or have partner access to download syslog-ng Store Box ISO files. If you are a partner but do not see the ISO files, you can request partner access within the support portal.

3. Mount the ISO image and boot the virtual machine. Follow the on-screen instructions to install SSB.

   Once installation successfully completes, the virtual machine will restart automatically.

   In case installation fails, a message will be displayed instructing you to press `Ctrl+Alt+Delete` to reboot the virtual machine.

Increasing the virtual disk size of SSB under a virtual machine

Increasing the virtual disk size of SSB version 4.9 or later under a virtual machine

SSB can only use fixed disk space assigned to the virtual host. If you must increase the size of the virtual disk, complete the following steps.

Prerequisites:

The following prerequisites are essential for the resize procedure to work:

- The machine that SSB is running on has to be a virtual machine. This procedure will not work on a physical machine.

- The version running on the virtual machine must be a newly installed SSB version 4.9 or later. This procedure will not work in case of an SSB that was upgraded from an earlier version.

- No software RAID.

To increase the size of the virtual disk

1. To ensure that no data is lost in case of an error, create a full system backup (configuration and data backup). For detailed instructions, see "Data and configuration backups" in the Administration Guide.

2. Power down the virtual machine.

3. Increase the storage size.

4. Restart SSB.

   If you have encountered any errors, contact our Support Team.

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