



# Sun StorEdge™ 3900 and 6900 Series 1.1 Site Preparation Guide

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# Site Preparation and Planning

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This manual describes the facility planning requirements for installing a Sun StorEdge™ 3900 or 6900 series system.

To determine the total components and storage systems your shipment will include, consult your local Sun sales representative.

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## Planning Overview

Follow the guidelines as outlined in this document when planning your installation.

- “Customer Obligations” on page 3
- “Local Facility Safety” on page 3
- “Facility Requirements” on page 4
- “Cabling Requirements” on page 9

For a product overview and installation instructions, refer to the *Sun StorEdge 3900 and 6900 Series Version 1.1 Installation Manual*. This document and a broad selection of other Sun system documentation is located at the following web sites:

<http://docs.sun.com/documentation>

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## Preinstallation Worksheet

This worksheet is for gathering and recording the information required to successfully install a Sun StorEdge 3900 or 6900 series. Use this worksheet to preplan the data and Ethernet connections from the data host and Storage Service Processor.

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**Note** – The number of IP addresses necessary for your installation depends on the configurations you select. See the *Sun StorEdge 3900 and 6900 Series 1.1 Reference and Service Manual* for the number of IP addresses necessary for each of the supported configurations.

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| Item                    | Management Host | Application Host | TFTP Host |
|-------------------------|-----------------|------------------|-----------|
| Host ID                 |                 |                  |           |
| Host name               |                 |                  |           |
| Host IP address         |                 |                  |           |
| Gateway IP address      |                 |                  |           |
| Array IP address        |                 |                  |           |
| Array name              |                 |                  |           |
| TFTP host address       |                 |                  |           |
| OS/patch revision level |                 |                  |           |
| Primary application     |                 |                  |           |
| StorTools™ release      |                 |                  |           |

**Legend:**

|                |  |
|----------------|--|
| Required field |  |
| Optional field |  |
| Not applicable |  |

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# Customer Obligations

The customer is obliged to inform Sun Microsystems, Inc. of any and all ordinances and regulations that affect the installation. The customer is responsible for meeting all government codes and regulations concerning facilities. The customer is also responsible for compliance with the following requirements:

1. All local, national, and international codes covered in this specification. The subjects covered include fire and safety, building, and electrical codes.
2. Document and inform Sun Microsystems, Inc. of any deviations from this specification.

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# Local Facility Safety

Install the Sun StorEdge 3900 and 6900 series systems in accordance with the local safety codes and regulations at the facility site. Make sure you read the safety precautions in the *Sun StorEdge 3900 and 6900 Series 1.1 Regulatory and Safety Compliance Manual*. The following sections contain additional safety information for the local facility:

- “Handling Precautions” on page 3
- “Secure Installation Requirements” on page 4
- “Placement of a Sun Product” on page 4

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**Note** – Do not make mechanical or electrical modifications to the equipment. Sun Microsystems, Inc. is not responsible for regulatory compliance of a modified Sun product.

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# Handling Precautions



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**Caution** – A fully configured storage system cabinet can weigh in excess of 1400 pounds (627 kg). Any floor that this system will cross must be able to withstand this load.

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The cabinet is equipped with wheels so that you can move it. Use enough personnel when moving the cabinet, especially on sloping loading docks and ramps, to gain access to a raised computer room floor. Move the cabinet slowly and deliberately, and make sure the floor is free of foreign objects and cables that the cabinet could roll over.

All personnel who are moving the cabinet should wear protective footwear.

## Secure Installation Requirements

To minimize personal injury in the event of a seismic occurrence, you must securely fasten the cabinet to a rigid structure extending from the floor to the ceiling, or from the walls, of the room in which the cabinet is located.

Install the cabinet on a level surface. At each corner, on the base of the cabinet, are adjustable nonskid pads. These must be extended when the cabinet is installed to prevent the cabinet from rolling. These pads are not to be used to level the cabinet.

## Placement of a Sun Product

If you have ordered a Sun StorEdge 3960 or 6960 series without the second cabinet, make sure you allow enough room to install a second cabinet in the event that you want to expand your system.

Do not block or cover the openings of your Sun product. Never place a Sun product near a radiator or heat register. Failure to follow these guidelines can cause overheating and affect the reliability of your Sun product.

Air cools the Sun StorEdge 3900 and 6900 series cabinets from front to back. Air enters at the front, circulates, and is expelled at both the top and bottom rear of the unit. The front and rear door clearances provide sufficient space for cooling. See TABLE 5 and TABLE 6 for specific clearance specifications.

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## Facility Requirements

These sections contain the following information about the facility requirements for the Sun StorEdge 3900 and 6900 series:

- “Environmental Specifications” on page 5
- “Electrical and Power Specifications” on page 5



- “Physical Specifications” on page 6

## Environmental Specifications

**TABLE 1** Facility Environmental Specifications

| Specifications    | Operating  | Nonoperating  |
|-------------------|--|---|
| Temperature       | 41°F to 95°F (5°C to 35°C)                                     | -41°F to 140°F (-20°C to 60°C)                                  |
| Relative humidity | 20% to 80% RH, noncondensing<br>80.6°F (27°C) maximum wet bulb | 5 to 95% RH noncondensing with<br>maximum gradient 10% per hour |
| Altitude          | -1000 to 10,000 feet<br>(-305 to 3,048 meters)                 | -1000 to 40,000 feet<br>(-305 to 12,192 meters)                 |

Avoid temperature extremes and keep the work area clean. Maintain the operating conditions described the following table. The storage system should be in a computer room environment that provides control over environmental factors such as temperature, humidity, and airborne dust. A computer room installation can also help protect equipment from fire, flood, or other danger originating in the building.

**TABLE 2** Facility Environmental Specifications

| Environmental Factor | Ambient Temperature Range      | Ambient Relative Humidity |
|----------------------|--------------------------------|---------------------------|
| Operating            | 70°F to 73.5° F (21°C to 23°C) | 45% to 50%                |

The operating environmental limits in TABLE 1 reflect what the systems have been tested to, in order to meet all functional requirements. The optimum operating condition in TABLE 2 is the recommended operating environment. Operating computer equipment for extended periods of time at or near the temperature or humidity extremes is known to significantly increase the failure rate of hardware components. In order to minimize any chance of down-time due to component failure, it is strongly recommended that customers plan and use the optimal temperature and humidity ranges.

## Electrical and Power Specifications

All Sun StorEdge 3900 and 6900 series require two independent power sources. Each storage system cabinet has two power conditioners (distribution) for redundancy, which are mounted in the base of the cabinet. To maintain the power redundancy, each conditioner must be connected to independent power sources. TABLE 3 lists the power required for *each* conditioner.

**TABLE 3** Power Specifications for the System Cabinet

| Specification               | Rating         |
|-----------------------------|----------------|
| AC voltage rating           | 200 to 240 VAC |
| AC voltage range            | 180 to 264 VAC |
| Frequency range             | 47 to 63 Hz    |
| Current at 240 VAC          | 32A            |
| Power consumption, maximum: |                |
| • Sun StorEdge 3910 system  | 4.2 kW         |
| • Sun StorEdge 3960 system  | 8.4 kW         |
| • Sun StorEdge 6910 system  | 4.2 kW         |
| • Sun StorEdge 6960 system  | 8.4 kW         |

The following is recommended for all installations:

- All AC mains and supply conductors to power distribution boxes for both the cabinet system and the desktop system must be enclosed in metal conduit or raceway, when specified by local, national, and/or other applicable government codes and regulations. The supply conductors and power distribution boxes (or equivalent metal enclosure) must be grounded at both ends.
- The supplied storage systems require voltages within minimum fluctuation. The facilities voltage supplied by the customer/end user must maintain a voltage of not more than (+/-) 5%.
- The customer facilities must provide suitable surge protection.

## Physical Specifications

This section contains the physical requirements for the Sun StorEdge 3900 and 6900 series systems.

# Physical Dimensions

**TABLE 4** Storage System Physical Specifications

| Subsystem  | Height             | Width                | Depth           | Weight             |
|--|--------------------|----------------------|-----------------|--------------------|
| Sun StorEdge 3900SL storage system single cabinet  | 75 in.<br>109.5 cm | 23.9 in.<br>60.7 cm  | 37 in.<br>94 cm | 1465 lb<br>665 kg  |
| Sun StorEdge 3900SL storage system with expansion cabinet  | 75 in.<br>109.5 cm | 47.8 in.<br>122 cm   | 37 in.<br>94 cm | 2855 lb<br>1295 kg |
| Sun StorEdge 3910 storage system   | 75 in.<br>109.5 cm | 23.9 in.<br>60.7 cm  | 37 in.<br>94 cm | 1465 lb<br>665 kg  |
| Sun StorEdge 3960 storage system   | 75 in.<br>109.5 cm | 47.8 in.<br>122 cm   | 37 in.<br>94 cm | 2855 lb<br>1295 kg |
| Sun StorEdge 6910 storage system   | 75 in.<br>109.5 cm | 23.9 in.<br>60.7 cm  | 37 in.<br>94 cm | 1210 lb<br>549 kg  |
| Sun StorEdge 6910SL storage system   | 75 in.<br>109.5 cm | 23.9 in.<br>60.7 cm  | 37 in.<br>94 cm | 1210 lb<br>549 kg  |
| Sun StorEdge 6960 storage system   | 75 in.<br>109.5 cm | 47.8 in.<br>121.4 cm | 37 in.<br>94 cm | 2895 lb<br>1314 kg |
| Sun StorEdge 6960SL storage system   | 75 in.<br>109.5 cm | 47.8 in.<br>121.4 cm | 37 in.<br>94 cm | 2895 lb<br>1314 kg |
| <b>Note:</b> The values given in this table are for the maximum hardware configuration available including the Sun StorEdge expansion cabinet in both the Sun StorEdge 3900SL, 3960, 6960, and 6960SL storage systems. |                    |                      |                 |                    |

## Clearance and Service Access

Side access can be required for some service procedures. Refer to the *Sun StorEdge*

*3900 and 6900 Series 1.1 Reference and Service Guide* for specific service procedures.

**TABLE 5** Clearance and Service Access for Sun StorEdge 3910 and 6910 Series

| <b>Location</b> | <b>For Service Access</b> |
|-----------------|---------------------------|
| Front           | 48 in.<br>122 cm          |
| Rear            | 36 in.<br>92 cm           |
| Left            | 36 in.<br>92 cm           |
| Right           | 36 in.<br>92 cm.          |

**TABLE 6** Clearance and Service Access for Sun StorEdge 3960 and 6960 Series

| <b>Location</b> | <b>For Service Access</b> |
|-----------------|---------------------------|
| Front           | 96 in.<br>244 cm          |
| Rear            | 60 in.<br>153 cm          |
| Left            | 60 in.<br>153 cm          |
| Right           | 60 in.<br>153 cm          |

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# Cabling Requirements

This section contains the cabling requirements for the Sun StorEdge 3900 and 6900 series. When cabling the system, make sure you follow these guidelines:

- Keep power and interface cables clear of foot traffic. Route cables inside walls, under the floor, through the ceiling, or in protective channels or raceways. Route interface cables (excluding fiber-optic cables) away from motors and other sources of magnetic or radio frequency interference.
- Do not exceed cable length limitations. The following table gives the cable specifications and lengths.

**TABLE 7** Cable Specifications

| Cable Type   | Connector | Maximum Length      |
|--|-----------|---------------------|
| Shielded Ethernet,<br>10/100BASE-T, category 5                           | RJ-45     | 328.084 ft. (100 m) |
| Serial<br>(available only to qualified field<br>service representatives) | RJ-45     | 82.021 ft. (25 m)   |
| Power (220V)   | Standard  | n/a                 |

The power cables are the standard ones shipped with the Sun StorEdge Expansion Cabinet. The cables that connect the two cabinets together are standard Fibre Channel cables.

