



# Sun™ Streaming System Release Notes

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for Software Release 1.8

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# Release Notes

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This document provides information about critical issues with the Sun Streaming System, Release 1.8. Please read this document before operating your system. It includes the following sections:

- [“Introduction”](#) on page 1
- [“New Features”](#) on page 1
- [“Major Fixes”](#) on page 6
- [“Known Issues and Workarounds”](#) on page 8
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## Introduction

The Sun Streaming Software Release 1.8 document contains information on new features, fixed problems, runtime problem details, and installation notes. This document supplements the information contained in the Sun Streaming System User Guide.

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## New Features

The Streaming System includes the following new features:

# Supervisor High Availability Enhancements

## Machine and Node Monitoring

The standby supervisor, after taking over from a primary supervisor, now allows a system administrator to run commands to monitor the status or performance of all non-supervisor nodes. These include the import processor, content controller, session controller, media store, streaming service, and lvs director nodes. Refer to Section 3.5 of the User Guide for instructions on how to install and configure a second supervisor node.

## Machine and Node Configuration

The standby supervisor, after taking over from a primary supervisor, now allows a system administrator to run commands to change the configuration of all non-supervisor nodes. These include the import processor, content controller, session controller, media store, streaming service, and lvs director nodes. Refer to Section 3.5 of the User Guide for instructions on how to install and configure a second supervisor node.

## Automated Session Controller Failover

The system will monitor all active session controller nodes. When a failure is detected, a standby session controller node will automatically become active. This eliminates the need for an external monitoring system to trigger the failover scheme. Refer to Section 4.8 in the User Guide for information on how to configure a Session Controller.

1. The following command is used to make a session controller either an active or standby node:

```
sun(config)# sessionController nodeId config redundancyRole (active|standby)
```

2. The following command allows an administrator to view the redundancy role of session controllers:

```
sun> show sessionController
```

Node	Id	Provision ProvAdmin	Provision State	Config Lscp AdminState	Config Rtsp AdminState	Config OpState	Redundancy Role
0		Start	Started	Enabled	Enabled	Enabled	Active
1		Start	Started	Enabled	Enabled	Enabled	Standby

3. The following command allows an administrator to view the configuration setting of a session controller:

```
sun> show sessionController 0 config
Node Id: 0
Lscp Admin State: Enabled
Rtsp Admin State: Enabled
Op State: Enabled
Corba Configuration: 0
Local Orb Host: mworks07
Local Orb Port: 20800
Max Streams: 0
Redundancy Role: Active
```

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**Note** – The hostname and port number are for illustration purposes only and can vary from network to network.

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4. With the availability of automated session controller failover, the following command will be deprecated in Release 1.8:

```
sun(config)# sessionController nodeId config failoverNode (0|1)
```

## New Interfaces for Cable Operators

The system supports new programmatic interfaces that are required by some cable operators in North America when importing content or transmitting video streams. Refer to Section 4.3 in the User Guide for instructions on how to configure a content controller.

The examples below provide a summary of the new features related to this interface.

1. To use this interface, set the content protocol attribute on a content controller to Ngod:

```
sun(config)# contentController 0 config contentProtocol Ngod
```

2. To set the volume name for the ngod interface:

```
sun(config)# Ngod config volumeName text
```

3. To set the validation server type for RTSP:

```
sun(config)# rtsp validationServer type (NgodR2 | NgodC1)
```

4. To view the current content controller configuration

```
sun(config)# show contentController 0 config  
Node Id: 0  
Op State: Enabled  
Corba Configuration: 0  
Local Orb Host: 10.42.243.29  
Local Orb Port: 11200  
Thread Pool: 71  
Replication Level: 1  
Content Protocol: Ngod  
Import Redundancy: 1
```

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**Note** – The host IP address and port numbers are examples. Yours might vary to reflect your network.

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5. To view the current volume name:

```
sun(config)# show ngod  
Volume Name: SunStreamingSystem
```

6. To view the rtsp validation type:

```
sun(config)# show sessionController 0 rtsp
```

Node Id	Rtsp Port	Validation Name	Timeout	Set Top Box
0	8053	NgodR2	60	Generic

## Ethernet Bonding

Two ethernet physical ports can be bonded together to form a single channel on a Sun Fire X4100, X4500, or X4950 machine. This allows the system to continue operating when a single interface fails. Ethernet bonding is enabled by default. It is not necessary to run any commands to enable it.

A Sun Fire X4100 has 4 GigE Ports labeled NET 0 through NET 3. The internal network is connected to bond 0 and the external network is connected to bond 1. Bond 0 is made up of the physical ports {NET0, NET2} and bond 1 is made up of



{NET1, NET3}. Thus physical ports {NET0, NET2} should be connected to the internal VLAN and physical ports {NET1, NET3} should be connected to the external VLAN. Bond 0 enslaves eth 0 and eth 2. Bond 1 enslaves eth 1 and eth 3.

A Sun Fire X4500 uses GigE ports for control traffic and a 10 GigE port for transmitting video. The two Gigabit Ethernet ports are labeled NET 0 and NET 2. These correspond to eth 0 and should be connected to the internal network. The video data connection is via a 10 GigE port. This port connects directly to a 10 GigE port on a X4950 Streaming Switch.

A Sun Fire X4950 has two GigE ports labeled NET 0 and NET 1. These ports correspond to eth 0 and should be connected to the internal network VLAN. The X4950 has up to thirty-two 10 GigE ports which connect to the video storage systems.

Please refer to Section 2.5 of the User Guide for a diagram and additional details on how to interconnect all machines in a Sun Streaming System.

## Log History of Operator Commands

Operator commands entered in the CLI and the corresponding CLI output are now logged to a file which is stored on the supervisor node in a database format. This feature reduces the time required to retrace or reproduce problems that might be experienced in a test or production environment. The log file is saved on the supervisor machine in the path `/local/streamstar/log/commandhistory/`.

The CLI also allows a user with admin privileges to query the history of commands entered.

## Bulk Title Retrieval from XML/HTTP Interface

The XML/HTTP programmatic interface now provides a command for retrieving all titles in a single operation. This is a programmatic interface and would be used by a 3rd party asset management system if a full synchronization operation was required. Refer to Appendix B of the User Guide for a complete specification of the XML/HTTP interface including details on this new command.

## Consistent Interface Mapping

The usage of the NET[0-1] physical ports and eth[0-1] interfaces is standardized across the Sun Fire X4100 and X4500 machines. The eth 0 interface maps to physical port NET 0, the eth 1 interface maps to physical port NET 1, and so on. All internal

network connections the eth 0 interfaces and all external network connections use the eth 1 interfaces. This standardization scheme reduces the risk of accidental cabling mistakes.

The NET[0-3] ports are labeled on a Sun Fire X4100 and X4500. The eth interfaces are available when running the ifconfig command on a BASH shell. Refer to the User Guide for additional information on how to interconnect machines in a Sun Streaming System.

## Mixed Booting for Solaris

The supervisor allows a machine to get a Solaris or Linux OS image when it netboots.

## NAT Traversal

The Simple Traversal of UDP Through NATs (STUN) packet reflection mechanism is supported as a NAT traversal scheme. This capability is part of the base system and does not need to be enabled by a user.

## Pause Packets

The session controller can be configured to either send or not send null packets to a STB when the stream is paused. Refer to Section 4.8 of the User Guide for details.

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## Major Fixes

The following table lists the major bugs that were fixed in Release 1.8.

<b>Bug</b>	<b>Description</b>
9201	The streaming service node does not validate its 10 GigE connection with a media store before attempting to start a stream.
8688	Stream underruns when issuing trick-plays on live import streams.
10944	Incorrect machine opstates reported after supervisor failover

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<b>Bug</b>	<b>Description</b>
10432	Primary supervisor does not update the state of secondary supervisor if the secondary supervisor is stopped and subsequently restarted.
10703	Incorrect start times are shown in stream history table
10946	eth0 fails to come up on a X4950 switch that is using a bonded interface
11033	Live stream does not transition from fast-forward to play at live point
11084	Incorrect host name assigned to mswitch01
10421	XML/HTTP interface blocks if the client fails
11047	Inter-node communication failure with primary supervisor node after it is restarted in standby mode

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## Known Issues and Workarounds

Bug	Description	Workaround
7003	Cannot remove directory on X4500 storage array.	The file system repair utility (xfs_repair) must be executed to fix this problem. This fix should only be attempted by a trained system administrator or a qualified Sun service representative.
9530	Media store node stops functioning	In the operator console, the StreamStor machine and media store node will transition to a failed state. The system will generate operator message 100 (node failure) and 200 (machine failure). These messages can be forwarded to an external NMS system in the form of an SNMP trap. To recover from this failure, the Sun Fire X4500 must be rebooted. The service processor on the X4500 can be accessed to do this remotely or this action can be automated using the scripting facilities in an NMS system.
9539	Link failure on a supervisor (SOM) node will result in a log entry in the syslog file under <code>/var/log/messages</code> but not the operator log under <code>/local/e2elog/operator.log</code> file.	The link status of the SOM should be monitored from an external network manager. The polling interval should be frequent and the time between retries should be small. The syslog file will have an entry if a link fails.
9464	X4950 fails to detect an XFP during system startup. No video is transmitted.	Restart the X4950

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## System Requirements

The following minimum system requirements are recommended for running the 1.8.0 release:

- The supervisor, import processor, content controller, and session controller nodes must run on Sun Fire X4100 servers. Each server must have two CPUs and 4GB of RAM. The server running the supervisor must be equipped with one CDROM/DVDROM drive and two 73GB hard disk drives.
- The media store node must run on an Sun Fire X4500 storage array with 48 hard disk drives. The storage array must have 2 CPU, 8GB of RAM and a 10GigE NIC.
- The streaming service node must run on an Sun Fire X4950 switch with one controller card, one linecard, and one optical card.

Please consult the *Sun Streaming System User Guide for Release 1.8* (820-3170) for information on interconnection requirements between nodes.

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## Instructions for Upgrading the System

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**Note** – IMPORTANT! Release 1.8 reverses the Ethernet port mapping for the X4100 machines that run the import processor, content controller, and session controller nodes. To upgrade the system, you must switch the cables in NET 0 and NET 1 in these X4100 machines. No other machines are affected. You should not switch the cables in the X4100 server that is running the supervisor node. You also do not need to switch the cables in the X4500 storage array or the X4950 streaming switch. Refer to Section 2.5 in the User Guide for more details. This change is necessary to ensure that all X4100 servers have a consistent mapping between the physical Ethernet ports and the interfaces that connect to the internal and external networks.

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**Note** – These examples show release candidate (RC) RC 3. Your upgrade might use a latter release candidate.

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1. Log into the Sun Streaming System operator CLI.
2. Enter the following commands:

```
sun> enable
sun# config
sun(config) streamingSystem commit
Note - This might return an error message if the previous version is already committed.
Execute this command anyway to make sure.
sun(config) savecfg
```

```
sun(config)# streamingSystem upgrade imageLocation
/mnt/cdrom/SunStreamingSystem-1.8.0-3.iso
Upgrading Sun Streaming Software will cause an interruption of service
for about 15 minutes.
Do you wish to continue? (y or n): y
```

3. Wait for approximately 15 minutes for the new files to be written to disk and for the msom01 machine to be restarted.
4. Log into the msom01 machine as root.

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**Note** – This is the Unix BASH shell on the X4100 server running the SOM (supervisor).

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5. Stop the supervisor by executing the following instruction:

```
[root@msom01 root]# service supervisor stop
```

6. Reboot all the nodes other than the supervisor to ensure they get the latest OS image:

```
[root@msom01 root]# rsh mworks01 reboot
[root@msom01 root]# rsh mworks08 reboot
[root@msom01 root]# rsh mworks09 reboot
[root@msom01 root]# rsh mstor01 reboot
[root@msom01 root]# rsh mswitch01 reboot
```

7. Wait approximately 5 minutes for these nodes to finish booting.
8. Restart the supervisor.

```
[root@msom01 root]# service supervisor start
```

9. Log into the Sun Streaming System operator CLI.
10. Make sure all nodes are started.

```
sun> show node
```

Type	Id	Machine Name	Provision ProvAdmin	Provision State
Supervisor	0	msom01	Start	Started
StreamingService	0	mswitch01	Start	Started
MediaStore	0	mstor01	Start	Started

ImportProcessor	0	mworks01	Start	Started
ContentController	0	mworks08	Start	Started
SessionController	0	mworks07	Start	Started

11. If any of the nodes are not started then start them by issuing the command:

```
sun> nodename nodeId provision provadmin start
```

where *nodename* is one of the following: {streamingService, mediaStore, sessionController, importProcessor, contentController}

12. Enter the following command to make sure all nodes are running RC 3:

```
sun> show version
Machine      Machine
Type         Index  Os Version          Rpm Versions
-----
Supervisor   1      1.8.0-3             supervisor-1.8.0-3
StreamSwitch 1      1.8.0-3             streamingService-1.8.0-3
StreamStor   1      1.8.0-3             mediaStore-1.8.0-3
StreamWorks  1      1.8.0-3             importProcessor-1.8.0-3
StreamWorks  7      1.8.0-3             sessionController-1.8.0-3
StreamWorks  8      1.8.0-3             contentController-1.8.0-3
```

13. Commit the changes:

```
sun> enable
sun# config
sun(config)# streamingSystem commit
```

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## Technical Support and Feedback

If you have a problem, contact customer support using the telephone dispatch number associated with your maintenance contract. If you do not have a support contract, you must contact your Sun account manager or system engineer for additional instructions.

