



# Intelligent Event Module™ for Cisco® SAN-OS 3.1

## INTELLIGENT EVENT MODULE BASICS

The Cisco SAN-OS 3.1 Intelligent Event Module (IEM) enables you to automate real-time monitoring of Cisco® MDS 9000 switches running on the SAN-OS operating system [versions 2.0 through 3.1(2)] and capture the critical information you need for effective enterprise management.

The Cisco SAN-OS 3.1 IEM provides *ConsoleWorks*® with a watch-list of text messages, including error codes, system warnings, and status alerts, produced by SAN-OS. *ConsoleWorks* watches for these messages, called Events, in the data streams of your managed switches.

### Events

When *ConsoleWorks* detects an Event, it alerts you to the Event as it is happening, records the circumstances surrounding the Event, and automatically performs the default or customer-configured responses associated with that Event.

### Scans

IEMs come with Events pre-arranged in logical groupings, called Scans™. Working with a Scan—or a combination of Scans—instead of hundreds of individual Events simplifies managing Events across your enterprise.

## CISCO SAN-OS 3.1 IEM AT A GLANCE

|                     |  |
|---------------------|--|
| Events:             | 2172                                     |
| Scans:              | 1 Master<br>8 Event Severity             |
| Filename:           | <code>cw_iem-cisco_sanos-0002.bin</code> |
| License Required:   | <code>CONWRKS-DB-SANOS.lic</code>        |
| Connector Required: | Syslog                                   |

## USING THE CISCO SAN-OS 3.1 IEM

To use this IEM, complete the following tasks:

1. Download the IEM from the TDi web site.
2. Import the IEM into *ConsoleWorks*.
3. Associate the Scans from the IEM with the switches you want to manage.

### To Download the IEM

1. Install the license for the Cisco SAN-OS 3.1 IEM. To obtain this license, contact your TDi Solutions Team Manager ([sales@tditx.com](mailto:sales@tditx.com)).
2. Move to the TDi web site ([www.tditx.com/support\\_iemdownloads.asp](http://www.tditx.com/support_iemdownloads.asp)).
3. On the Product Downloads page, locate and click **Cisco SAN-OS**.
4. In the Connect to support2.tditx.com dialog box, enter your User name and Password, and click **OK**. To obtain a User name and Password, contact TDi Support ([support@tditx.com](mailto:support@tditx.com)).
5. Save the file (`cw_iem-cisco_sanos-0002.bin`) to a directory accessible from your client workstation.

### To Import the IEM

1. On the *ConsoleWorks* main menu, click **Admin > Database > Import IEM**.
2. On the Import IEM page, click **Browse**.
3. On the Choose file dialog box, locate and double-click `cw_iem-cisco_sanos-0002.bin`.
4. On the Import IEM page, click **Import IEM**, and wait for the **IEM import completed** message to appear on the page before associating the IEM's Scans.

### To Associate the Scans

Associate the IEM's Scans with the Cisco switches you want *ConsoleWorks* to monitor. When you associate Scans with a switch, you are specifying that *ConsoleWorks* scan the data streams of that switch for the Events contained in the Scans.

### Example: To associate Scan: SANOS\_EMERGENCY

1. On the *ConsoleWorks* main menu, click **Manage > Scans > Show Scans**.
2. On the Show Scans page, in the Scans column, click **SANOS\_EMERGENCY**.
3. On the Scan: SANOS\_EMERGENCY page, in the Unassociated Consoles column, select the check boxes next to the names of the managed switches you want to associate with the Scan.
4. Click **Update Scan**.

For detailed instructions on associating Scans, please refer to the *ConsoleWorks* user's guide.



## SCANS AVAILABLE IN THE CISCO SAN-OS 3.1 IEM

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The Cisco SAN-OS 3.1 IEM contains a Master Scan and eight Event Severity Scans.

### Master Scan

The Master Scan, **SANOS**, is the top-level Scan. It references all the other Scans in the IEM. When you associate the Master Scan with a switch, you are specifying that ConsoleWorks scan the data streams of that switch for any of the IEM's 2,172 Events.

### Event Severity Scans

The Cisco SAN-OS 3.1 IEM contains eight Event Severity Scans. Use one or more of these Scans to monitor Cisco switches for Events based on their Severity level.

The IEM provides the following Event Severity Scans:

|                       |            |
|-----------------------|------------|
| • SANOS_EMERGENCY     | 32 Events  |
| • SANOS_ALERT         | 21 Events  |
| • SANOS_CRITICAL      | 518 Events |
| • SANOS_ERROR         | 506 Events |
| • SANOS_WARNING       | 183 Events |
| • SANOS_NOTIFICATION  | 455 Events |
| • SANOS_INFORMATIONAL | 406 Events |
| • SANOS_DEBUGGING     | 51 Events  |

## SAMPLE CISCO SAN-OS 3.1 IEM EVENTS

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The Cisco SAN-OS 3.1 IEM provides you with names, message texts, Severity ratings, explanations, and recommended responses for Events produced by SAN-OS.

The following section displays samples of the information you receive for each Event in the Cisco SAN-OS 3.1 IEM.

### Sample Event 1

|                     |  |
|---------------------|--|
| <b>Name:</b>        | SANOS_ZON_ZS_ZONE_SET_LIMIT  |
| <b>Message:</b>     | ZONE-2-ZS_ZONE_SET_D   |
| <b>Severity:</b>    | CRITICAL   |
| <b>Explanation:</b> | The number of zone sets configured has exceeded the maximum number of zone sets allowed across all VSANs. Because of this, distribution or merge operation may fail. |
| <b>Response:</b>    | Make sure the number of zone sets is less than the maximum allowed across all VSANs.   |

### Sample Event 2

|                     |   |
|---------------------|---|
| <b>Name:</b>        | SANOS_PLT_FAN_FAIL  |
| <b>Message:</b>     | PLATFORM-1-FAN_FAIL   |
| <b>Severity:</b>    | ALERT   |
| <b>Explanation:</b> | Fan module failed and needs to be replaced. This can lead to overheating and temperature alarms.  |
| <b>Response:</b>    | Enter the show platform internal info CLI command or use a similar Fabric Manager/Device Manager procedure to collect more information. |

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