Application Note

Product Line:	Alarms Management
Product:	IRISnGEN and SEB NET-PATH
Note Number:	AN045ISM
Issue Number:	1

Alarms Management Solution for Toshiba Strata CIX

The Toshiba Strata CIX (Strata CIX) provides Alarm Notification features that support SNMP V2 alarm delivery The MedTel Services Alarms Management Solution for Toshiba Strata CIX utilizes the SEB NET-PATH remote agent appliance and the IRISnGEN application.

Overview

As alarm events occur they are sent from the Strata CIX to the SEB NET-PATH as SNMP traps. The SEB NET-PATH accepts SNMP traps of interest. When an event match occurs in the SEB NET-PATH, the SNMP trap notification is processed and converted into a readable event record. There are 21 alarm codes and each alarm code supports an active state and a clear state, described as alarm rank. Each new NET-PATH event includes user variables for key components of the alarm such as the cabinet and slot where the fault is occurring. This detail is available to the NET-PATH event processor so that failures can be correlated and have a threshold applied based on the specific component that failed. Events that are delivered to IRISnGEN are processed using a Strata CIX message library that has additional detail concerning the alarm code and defined severity.

Toshiba Strata CIX Management Solution Highlights

The Strata CIX Management Solution is implemented using the SEB NET-PATH appliance and the IRISnGEN Client/Server application. The following sections describe each component's role in the monitoring solution.

SEB NET-PATH

The SEB NET-PATH supports the concept of a host, which is any device monitored by the SEB NET-PATH. Each monitored host is assigned a host library that contains the entire configuration details required to monitor the associated host. MedTel Services provides a host library that supports the Strata CIX Management Solution. This library can be shared across any number of monitored hosts, minimizing the programming effort for new host definitions.

The Strata CIX can be programmed to deliver SNMP based alarm events to any number of destinations, including SEB NET-PATH. The majority of alarm events are delivered using SNMP V2 protocol. Some standard SNMP V1 traps are available to report things such as link up, link down, and cold start. All of these events are defined in the NET-PATH Strata CIX host library. One objective of the host library is to deliver concise event messages to the operations staff. Each SNMP V2 alarm event is reformatted into a single event record which has a uniform look when it is received by IRISnGEN.

The NET-PATH Strata CIX host library includes special event match definitions that detect new alarm codes. These new event codes are processed and a generic event is delivered to IRISnGEN which includes the details required to add the new alarm code to the NET-PATH and IRISnGEN libraries.

Strata CIX SNMP V2 Trap Example

The following example shows the SNMP V2 trap content delivered to SEB NET-PATH.

```
1.3.6.1.2.1.1.3.0: 21539
1.3.6.1.6.3.1.1.4.1.0: 1.3.6.1.4.1.186.1.22.6.4 (iso.3.6.1.4.1.186.1.22.6.4)
1.3.6.1.4.1.186.1.22.6.5: 3031303030
1.3.6.1.4.1.186.1.22.6.2.2.1.3: 417072696c2033302c32303131
1.3.6.1.4.1.186.1.22.3.656.1: <MISSING>
1.3.6.1.4.1.186.1.22.6.2.2.1.2: 3031303030302c53442c574e
1.3.6.1.4.1.186.1.22.6.12: 373737373737
```

The resulting SEB NET-PATH alarm message is shown below.

```
CIX_SD_ACTIVE
System     : 777777
Node       :
Cabinet    : 01
Slot       : 00
Port       : 00
Alarm Code: SD
Alarm Rank: WN
Sequence #: 01000
```

Optional Text is included with the alarm message so that non-IRISnGEN delivery destinations will include additional detail about the alarm code. In the example above the optional text is "SYSTEM RESOURCES- SMDI Link Down (LAN only - The SMDI R3232c port is not monitored)".

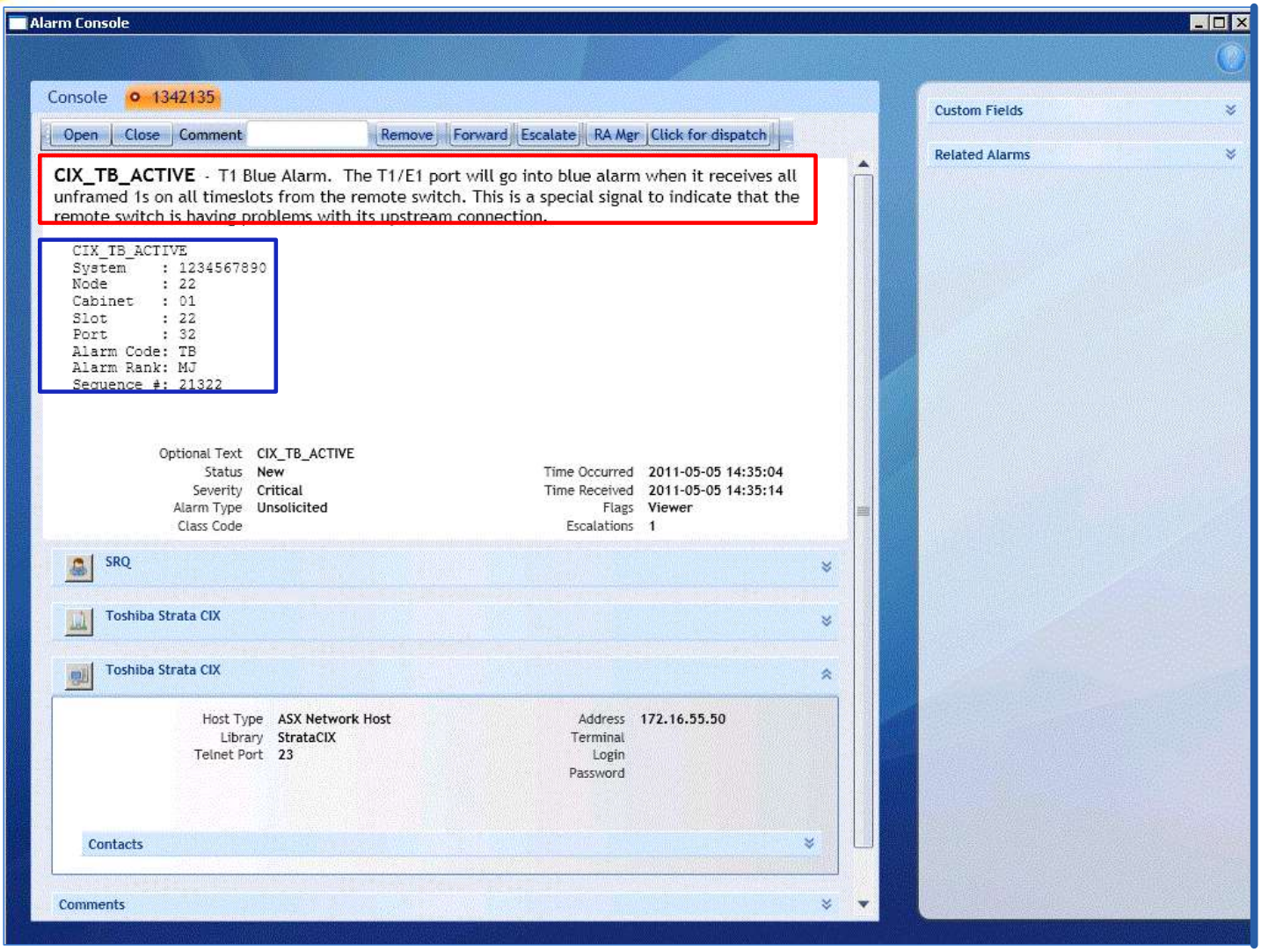
IRISnGEN

A new Strata CIX Alarm Message Library is available for IRISnGEN that complements the events reported by the SEB NET-PATH. Reported events include a preamble that includes the alarm code, and the current state of the event (active or cleared). IRISnGEN uses this detail to match the incoming event, assign a severity, and add detail to the event message. Strata CIX alarms have a severity included in the alarm detail. The following table shows how the Strata CIX severities are mapped in the IRISnGEN message library.

Toshiba Strata CIX Severity	**IRISnGEN Severity**
MJ (major)	Critical
MN (minor)	Major
WN (warning)	Minor
CL (clear)	Info

Sample IRISnGEN Viewer Alarm Display

The following graphic is an actual Strata CIX alarm that has been processed by SEB NET-PATH and delivered to IRISnGEN. The Alarm Console display includes two main components for the reported event color-coded in red and blue. The box outlined in red is detail contained in the IRISnGEN Message Library. The text in bold is the event preamble that is formulated by the SEB NET-PATH and serves as the IRISnGEN keyword. The supporting technical detail is from the description field in the message library.



The box that is outlined in blue is the alarm event as formatted and reported by the SEB NET-PATH. This event detail includes the preamble that is utilized by the IRISnGEN Message Library. Following the preamble is the translation of the alarm detail that was extracted from the V2 trap that includes the system ID, Node, Cabinet, Slot, Port, Alarm Code, Alarm Rank, and Alarm Sequence number.

END OF APPLICATION NOTE

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