

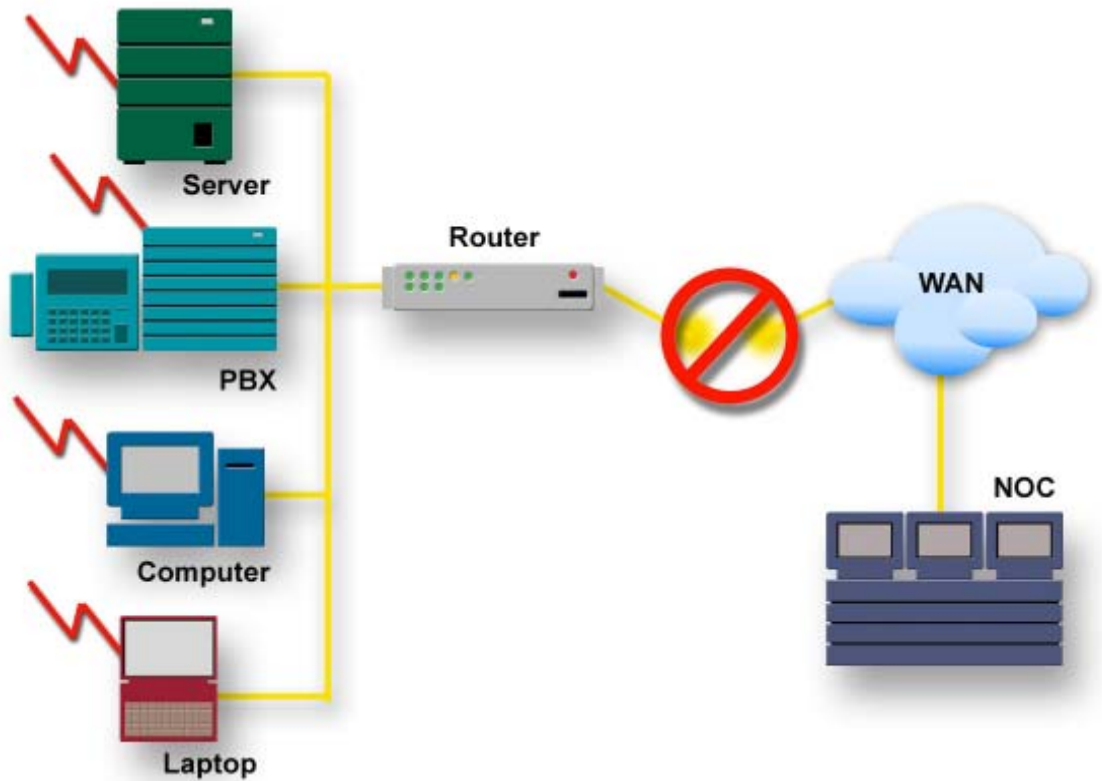
Less Stress...Faster Reaction...Improved Efficiency.

As networks grow in size and complexity, network management system technicians find it increasingly difficult to cope with the volume of alarm messages produced - even from a single point of failure. In many voice and data networks, failure of a key link can cause a storm of alarms that inundates the Network Operations Center (NOC). This makes the task of monitoring the network and diagnosing faults more difficult. The technicians in the NOC face several problems.

- Handling of several alarms in a short period of time
- Separating critical alarms from less important alarms
- Identifying the original failure in order to prioritize alarms

This can produce stressed technicians whose reaction time to faults increases, and may result in important alarms being misinterpreted or overlooked.

IRISnGEN's Alarm Correlation module plays an important role in providing critical information to identify the root cause of a large number of alarms. Whether it is an alarm storm due to a single critical failure or an annoying repetitive condition, Alarm Correlation reduces the total number of alarms presented to your technicians. This means less stress, faster reaction time to critical alarms and more efficient operation of the NOC.



Alarm Storm

Types of Alarm Correlation:

Event Pairs - Alarm Correlation is used to associate event pairs and determine if their occurrence falls inside of a pre-defined window of time. Specifications may be taken for event pairs that fall within the window and for those that don't.

Multiple Events - Alarm Correlation may also be used to associate more than two events. These events may originate from one monitored network element or several. This powerful tool may be used to reduce the number of alarms by focusing on the root cause and not secondary events that are spawned.

Example 1

Bit or frame slippage on a T1 link is a common alarm condition that occurs, then often clears quickly. The initial alarm signaling a problem is reported, followed by an informational alarm indicating the problem has cleared. With IRISnGEN, Alarm Correlation can group these two alarms together and process them as a single event rather than multiple unrelated events. Upon receiving the initial alarm, IRISnGEN will look for the clear event within a specified period of time. If the clear event does not occur, IRISnGEN can trigger an alarm indicating that a more serious condition may exist and can route the alarm to the Viewer for the technician's attention. If the clear event occurs within the specified time frame, the condition is ignored, or IRISnGEN can trigger an informational alarm. This informational alarm is directed to the Viewer or stored for historical reporting and analysis purposes.

Example 2

Alarm Storm: Some incidents in a telecommunication network may generate large numbers of events. This is often referred to as an alarm storm. When a WAN port on a router goes down, each device "behind" the router would lose connectivity or visibility and begin reporting alarms. This results in a storm of event messages and overloads the NOC technicians with so much information that it is difficult to identify what has happened. IRISnGEN Alarm Correlation can help to solve this problem by recognizing that a simultaneous occurrence of alarms from multiple systems could indicate that a common communications path has failed. Using rules-based event correlation, IRISnGEN reports the root cause via a single triggered alarm indicating that the router connection to the WAN has failed. Superfluous alarms caused by the devices affected by the outage are not presented to the technicians but are stored for historical reporting and analysis purposes. IRISnGEN Alarm Correlation identifies the root cause of the problem and reduces the number of alarms generated by the failure so the technicians are not overwhelmed by alarms of less importance.

Ideas that
Communicate



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