



# Assure1

## Fault Management

### CHALLENGES OF MANAGING COMPLEX, CONVERGING TECHNOLOGIES

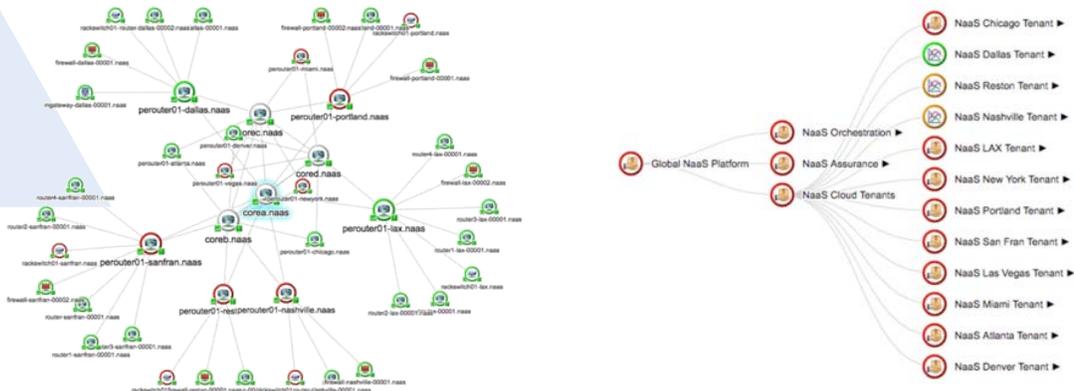
Assure1's Fault Management system has several distinct advantages that allow operations to manage what is actionable and cut through the sea of noise to focus on what matters most to your business.

### THE ASSURE1 FAULT MANAGEMENT ADVANTAGE

The art of Fault Management comes down to Root Cause Analysis (RCA). And RCA's biggest dependency is topology. In today's world; networks have become hyper-converged, and changes occur faster than humans can track, especially in light of dynamic software-defined hybrid networks.

### ASSURE1 DISCOVERS TOPOLOGY THREE DIFFERENT WAYS:

1. We have a cross domain network topology discovery component that travels the network to learn how devices are connected, providing typical layer 2-3 connectivity maps.
2. We connect to element management systems and inventory systems that manage things like your optical network, allowing us to "discover" additional topologies.
3. We interconnect and monitor provisioning orchestration systems to learn about dynamic software defined network changes, provisions and SD-WAN service turn-ups.



By discovering your network in each of these ways, the Federos Assure1 solution maintains the best and most accurate picture of your complex environment and can identify dynamic changes as they occur. For example, Assure1 will detect when changes are made to router configurations and will "auto-rediscover" any topology changes based on the device change.

Because we discover both physical and virtual topologies, our RCA provides a deeper level of understanding around connectivity. This means we topologically connect hierarchal, cross-domain services and correctly determine impact and cause from surrounding noise.



Assure1 creates both logical and physical maps of your network. The system overlays alarm information on top of the maps and allows the RCA system to find core drivers. It provides users the ability to drill down into current alarms to quickly pinpoint the source of an outage.

Regardless of technology or abstraction, Federos topology modeling aligns to your technology to ensure visibility for how your network is connected. This allows our RCA engine to correctly remove noise and escalate what is actionable. Meaning your operations team can focus first on what matters most to the business.

## ASSURE1 FAULT MANAGEMENT OVERVIEW

Assure1 provides comprehensive monitoring, correlation and consolidation of event information across any sort of infrastructure using a variety of protocols. It automatically synchronizes active alarms with all devices, detecting missed alarm raises or missed clears which can occur when an outage affects connectivity to part of the network.

Assure1 allows network operators to quickly configure views of network alarms, topology maps and reports to meet their current needs. The solution's highly intuitive user interface allows users to be productive with minimal training and to process and act on large volumes of information quickly and easily.

Device	AlarmGroup	Summary	Count	First Reported
RDNTX-S10	DoorAlarmEscalation	Door Alarm UNACK in 15 mins. CALL Police Now!	289198	2018-02-21 08:04:30
server02.demosite.com	ADGuardDown	Active Directory Cluster Down	436885	2018-02-21 09:14:40
server01.demosite.com	LinkUpDown	(VCore-Transit-01) Link Down (Backup Problem)	15004	2018-09-21 17:00:03
server02.demosite.com	ServerUpDown	ICMP Ping Failure - Device Availability	5	2018-02-21 09:10:03
server01.L2	ServerUpDown	ICMP Ping Failure - Device Availability	1	2018-04-11 17:11:11
server01.demosite.com	ServerUpDown	ICMP Ping Failure - Device Availability	5	2018-02-21 09:09:06
device01.demosite.com	ServerUpDown	ICMP Ping Failure - Device Availability	1	2018-03-15 17:17:42
router01.demosite.com	InterfaceFlapping	Detected Interface Flapping Threshold Crossing: Interface Down (FastEthernet...	389353	2018-02-21 08:00:49
demo-a	ComponentUp/Down	Component Log (HealthCheckComponentLog) checked, issue at the top of...	1	2018-08-03 03:09:40
demo-b	ComponentErrorMajor	Component Log (ServiceManagerCSLog) experienced a recoverable em...	1	2018-07-05 09:14:14
demo-c	ComponentErrorMajor	Component Log (VCenterPerformanceLog) experienced a recoverable em...	2	2018-07-05 08:59:02
demo-d	ComponentErrorMajor	Component Log (MainCDiffServerCollectorLog) experienced a recoverable...	1	2018-07-05 09:05:00
demo-e	Event-SCM	Event SCM	25604	2018-09-21 17:00:04
demo-f	Event-SCM	Event SCM	25604	2018-09-21 17:00:04
demo-g	Event-SCM	Event SCM	25604	2018-09-21 17:00:04
demo-h	Event-SCM	Event SCM	25604	2018-09-21 17:00:04
demo-i	Event-SCM	Event SCM	25604	2018-09-21 17:00:04
demo-j	Event-SCM	Event SCM	25604	2018-09-21 17:00:04
demo-k	Event-SCM	Event SCM	25604	2018-09-21 17:00:04
demo-l	Event-SCM	Event SCM	25604	2018-09-21 17:00:04
demo-m	Event-SCM	Event SCM	25604	2018-09-21 17:00:04
demo-n	Event-SCM	Event SCM	25604	2018-09-21 17:00:04
demo-o	Event-SCM	Event SCM	25604	2018-09-21 17:00:04
demo-p	Event-SCM	Event SCM	25604	2018-09-21 17:00:04
demo-q	Event-SCM	Event SCM	25604	2018-09-21 17:00:04
demo-r	Event-SCM	Event SCM	25604	2018-09-21 17:00:04
demo-s	Event-SCM	Event SCM	25604	2018-09-21 17:00:04
demo-t	Event-SCM	Event SCM	25604	2018-09-21 17:00:04
demo-u	Event-SCM	Event SCM	25604	2018-09-21 17:00:04
demo-v	Event-SCM	Event SCM	25604	2018-09-21 17:00:04
demo-w	Event-SCM	Event SCM	25604	2018-09-21 17:00:04
demo-x	Event-SCM	Event SCM	25604	2018-09-21 17:00:04
demo-y	Event-SCM	Event SCM	25604	2018-09-21 17:00:04
demo-z	Event-SCM	Event SCM	25604	2018-09-21 17:00:04

### BENEFITS INCLUDE:

- Comprehensive service visualization regardless of vendor, technology, or protocol
- Provides views of impacted services and customers in real-time
- Dramatically speeds troubleshooting to improve customer experience

Assure1 also maps "business impact" based on the value of a service, and the topology that supports that service. When business impact scoring is applied to an alarm set, users are more easily able to correctly react to situations based on BUSINESS IMPACT versus COLOR of an alarm.

## FAULT ANALYSIS

Key Quality Indicators of services are highly technical and unique to each type of service. Technical expertise is required to understand the quality indicators that make it challenging for non-technical people to determine service health.

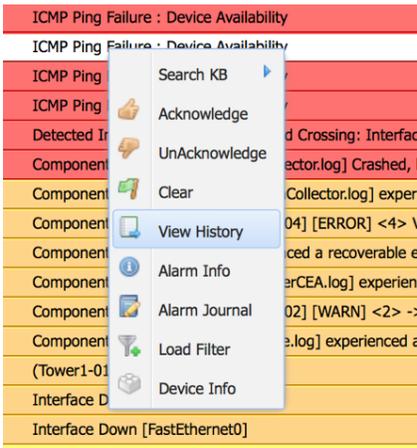
Assure1 defines simple, straightforward grades from key quality indicators. Service quality health is then displayed graphically enabling anyone to understand which services, customers, markets or regions are performing poorly and how this is changing over time.

### BENEFITS INCLUDE:

- Understand quality of any service in an easy to understand, straightforward way
- Determine which services, customers, markets or regions are performing poorly

## DRILL DOWN TOOLING

Assure1 Fault Management provides extensive drill-down tooling. A built-in extensible knowledgebase allows the creation of run book methods and procedures to be developed against all actionable events. New operations team members can easily click from an event into the knowledgebase to see what the correct procedure is for handling the event.



### BENEFITS INCLUDE:

- Operations team members can click into the solution of every actionable event
- Team members can help document best practices - eliminating sticky notes and verbal best practices
- Knowledge continuously improves as it is used over time

## ENRICHMENT AND AUTOMATION

Assure1 contains a built-in automation system that allows automated actions against specific events. These actions can enable the enrichment of events, the opening of trouble tickets and the ability to automate actions and remedies against known problems. Now your team can centralize their "automated action" scripts and best practices and connect them directly to incoming events to allow automated remediation actions.



### BENEFITS INCLUDE:

- Reporting allows you to find which faults occur the most
- Develop automated actions to enrich or repair problems
- Associating automated actions to events allows the operations team to speed up problem remediation and focus on other problems
- The operations team shift from fire-fighting to more proactive remediation through automated actions
- Improved service levels and more effective operations

## ABOUT

### Federos

Federos provides a next generation, service assurance solution that unifies fault, performance, topology and service level management in a single scalable platform. With the product suite from Federos, you can drive IT and OSS transformation to service-oriented operations and accelerate delivery of new services to increase revenue, while consolidating disparate and legacy tools to significantly reduce operations costs.

