COMARCH

FAULT MANAGEMENT

The ultimate requirement of today's networks is to provide continuous availability for the performance of critical tasks required by businesses. However, network equipment, physical and virtualized, has become increasingly complex, leaving more room for failure. Efficiently handling failures is essential for improving the overall system dependability.

Based on modern, advanced technology, **Comarch Fault Management (FM) is a complete product for ongoing fault issues within operators' hybrid physical-virtual networks. This network fault monitoring tool controls all existing elements of the network and receives, displays and tracks alarms efficiently, allowing users to manage potentially debilitating network problems quickly and effectively**. Its flexible and extensive range of features provides sophisticated automation and assists operators in detecting and solving issues that are at the root of network faults.

The Comarch Fault Management system is closely integrated with other products from the Comarch Integrated Assurance family, and supports unified event processing paths via a cutting-edge correlation engine and "single pane of glass" approach, which gives the operator rapid access to all relevant information (correlated alarms, related trouble tickets, outages, details of resources and locations, alarms from the same resource, alarms from the same location, historical alarms, know-how entries, etc.) in one place. Comarch Fault Management software can be extended with the Topological Correlations Module and Machine Learning Module to increase the alarm correlation rate and prediction capabilities.
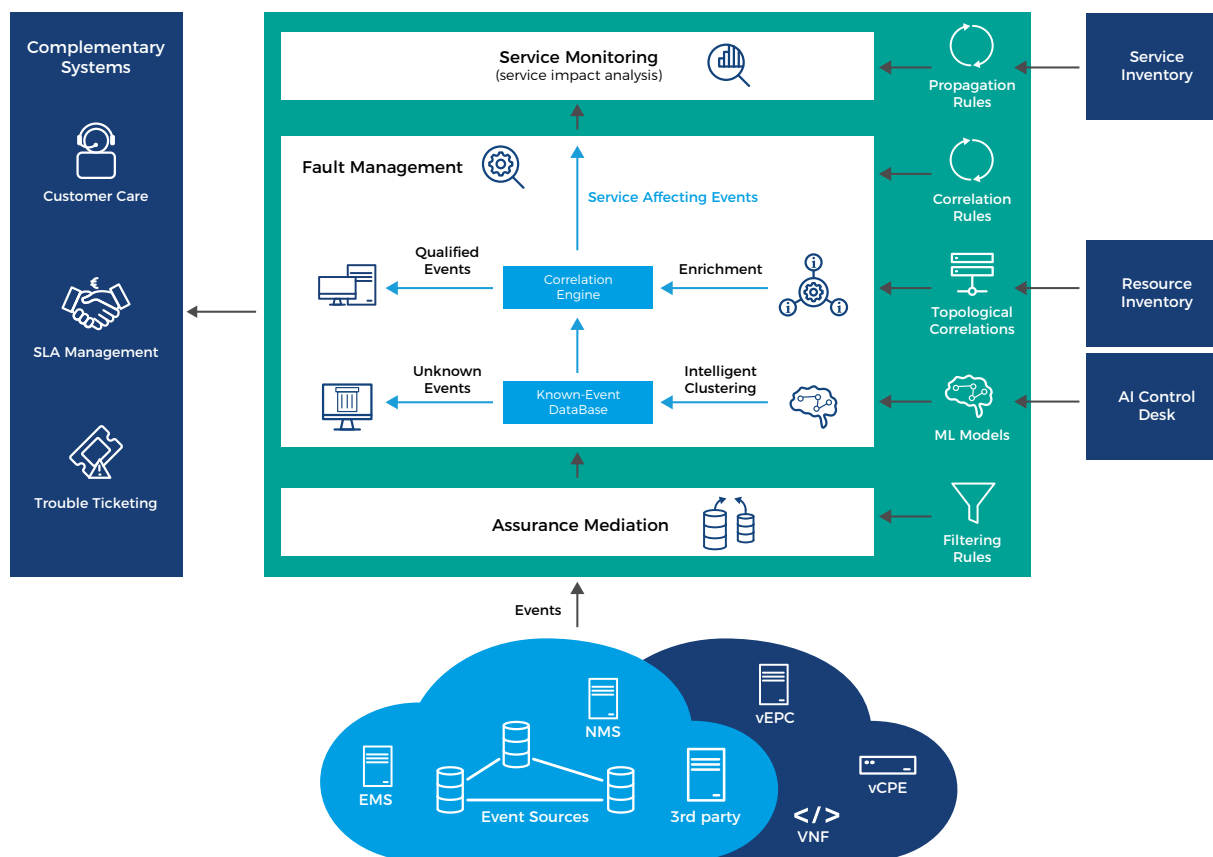

Figure 1. Comarch Fault Management architecture

BENEFITS OF COMARCH FAULT MANAGEMENT PRODUCT:

INTRODUCE INTELLIGENT EVENT PROCESSING

Manage services implemented on heterogeneous multi-vendor, multi-domain networks and delivery platforms serviced by partners.

BUILD AN UMBRELLA SYSTEM TO SUPPORT EFFICIENT ORCHESTRATION

Protect customers from experiencing service quality deterioration, using analytics and prediction features.

SUPPORT YOUR SDN/NFV INFRASTRUCTURE

A comprehensive fault management system is the key to efficient orchestration of the virtualized environment. The Comarch Fault Management system supports modern NFV interfaces so they get the current status of the network and steer other processes realized by E2E Orchestrator.
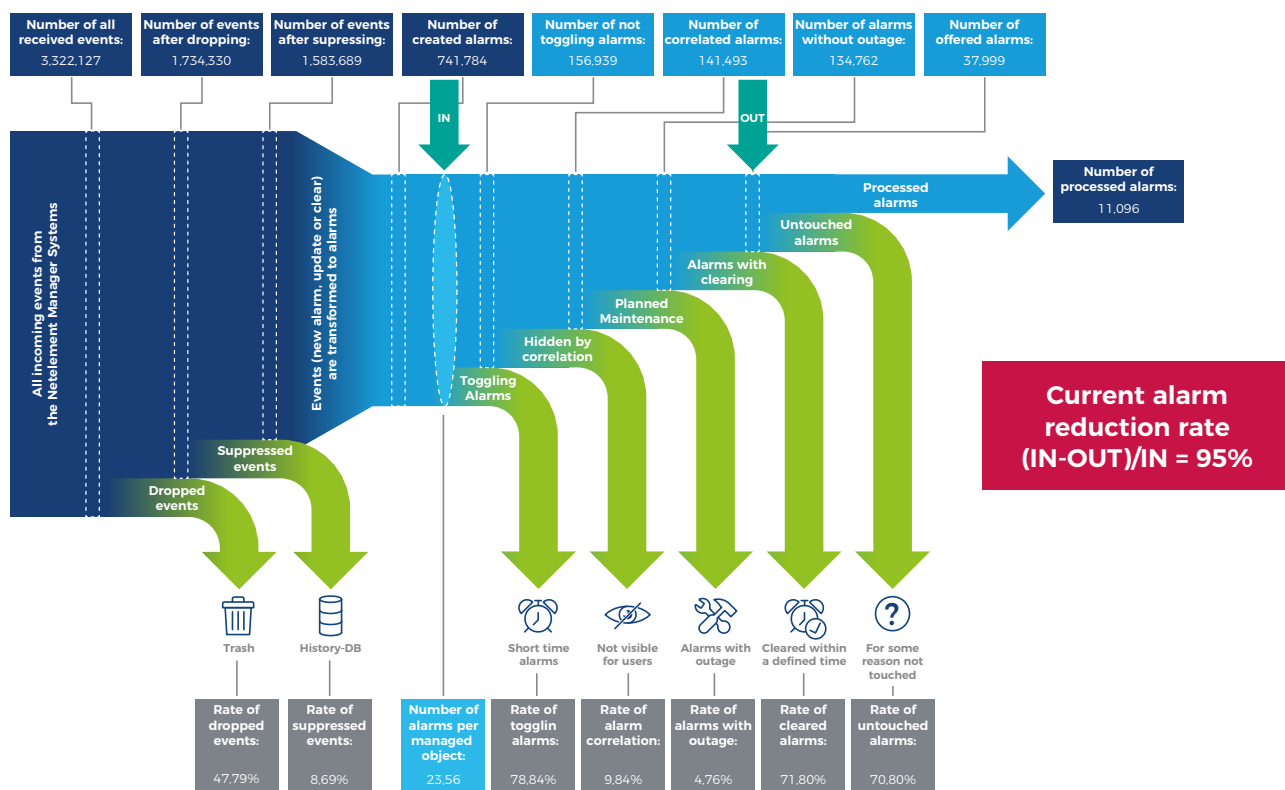
Figure 2. Alarm reduction rate achieved with IA&A Fault Management functionalities

The diagram contains the following labeled values:

- Number of all received events: 3,322,127
- Number of events after dropping: 1,734,330
- Number of events after supressing: 1,583,689
- Number of created alarms: 741,784
- Number of not toggling alarms: 156,939
- Number of correlated alarms: 141,493
- Number of alarms without outage: 134,762
- Number of offered alarms: 37,999
- Number of processed alarms: 11,096

All incoming events from the Netelement Manager Systems

Events (new alarm, update or clear) are transformed to alarms

IN

OUT

Processed alarms

Untouched alarms

Alarms with clearing

Planned Maintenance

Hidden by correlation

Toggling Alarms

Suppressed events

Dropped events

Current alarm reduction rate (IN-OUT)/IN = 95%

Trash — Rate of dropped events: 47,79%

History-DB — Rate of suppressed events: 8,69%

Number of alarms per managed object: 23,56

Short time alarms — Rate of togglin alarms: 78,84%

Not visible for users — Rate of alarm correlation: 9,84%

Alarms with outage — Rate of alarms with outage: 4,76%

Cleared within a defined time — Rate of cleared alarms: 71,80%

For some reason not touched — Rate of untouched alarms: 70,80%

ABOUT COMARCH

Since 1993, Comarch's specialist telecommunications business unit has worked with some of the biggest telecoms companies in the world to transform their business operations. Our industry-recognized telco OSS and BSS products help telecoms companies streamline their business processes and simplify their systems to increase business efficiency and revenue, as well as to improve the customer experience and help telcos bring innovative services to market. Comarch's customers in telecommunications include Telefónica, Deutsche Telekom, Vodafone, KPN and Orange.

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