Data Sheet

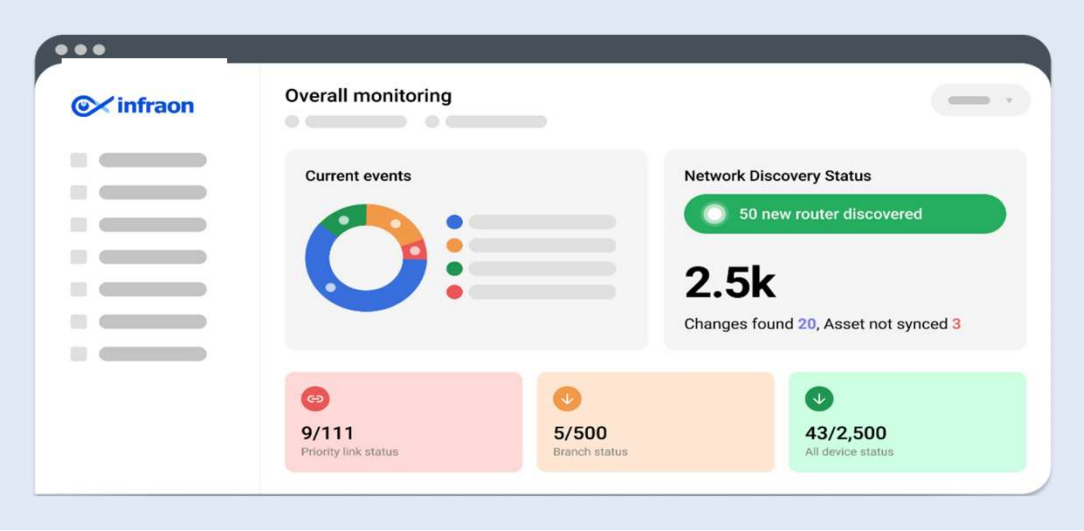
Infraon IMS

A complete Unified Infrastructure Monitoring Suite for IT, Networking, Cloud, App, & IoT Devices

Overview

Infraon IMS provides a complete Network monitoring & Management System (FCAPS), including IT Infrastructure Monitoring (covering heterogenous Network, Server, Storage, Cloud, VM, CCTV, Wireless, UPS, etc.), Network Configuration & Change Management, Traffic Flow Analysis with QoS Monitoring, Reporting & Dashboards with integration capabilities, Syslog Monitoring or Log Management, SDWAN Performance Monitoring, HelpDesk ITSM Tool, Zero Trust Network Access, and Link Monitoring with SLA Calculation.

The solution has a web-based UI and is scalable to monitor & manage over 5000 devices. Infraon is ISO 27001 certified for its internal processes and is capable of running on a Linux platform with an open-source database as the backend. It is available as a Commercial-Off-The-Shelf (COTS) offering.



Key Highlights

- Flexible data retention policy
- Vendor agnostic tool,
- Multi-tenant with multi-browser support,
- No additional supporting software cost,
- Flexible licensing model etc.
- Integrated platform with AIOPs-based automation & analytics which offers:
    - Capacity Planning,
    - Alarm Suppression,
    - Anomaly Detection,
    - Prediction Alarms,
    - Business Services and more.

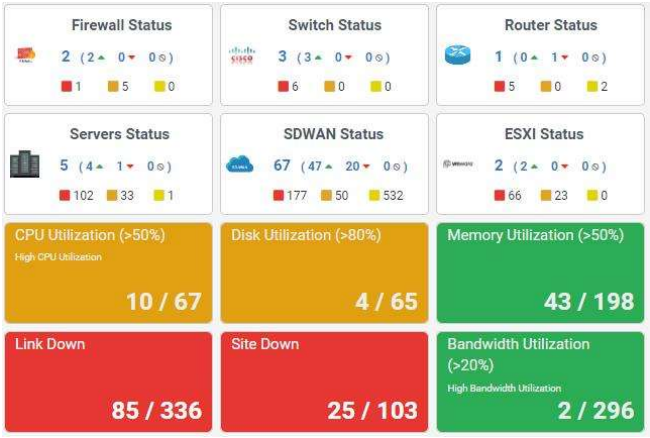
Infraon IMS is flexible in storing the polled data based on the customer's retention period and can discover both IPv4 and IPv6 devices for monitoring. It is a unified system that monitors the health and performance of network devices, servers, applications, databases, and any IT device.

It can create specific views/dashboards for any device, including Network devices, firewalls, servers, applications, IP Cameras, Wi-Fi, VSATs, UPS, etc.

It is entirely multi-tenant, wherein every module and system can be assigned to a specific set of users or a group. The system can retrieve and show fault, performance, inventory, and SLA data in a single dynamic view.

It has the capability to add any additional information about the nodes via custom fields, creating Node Tags for device grouping and resource/ interface tagging for element grouping. Apart from Node Tags, the system also has the option to perform device grouping based on default fields.

Key Feature Sets



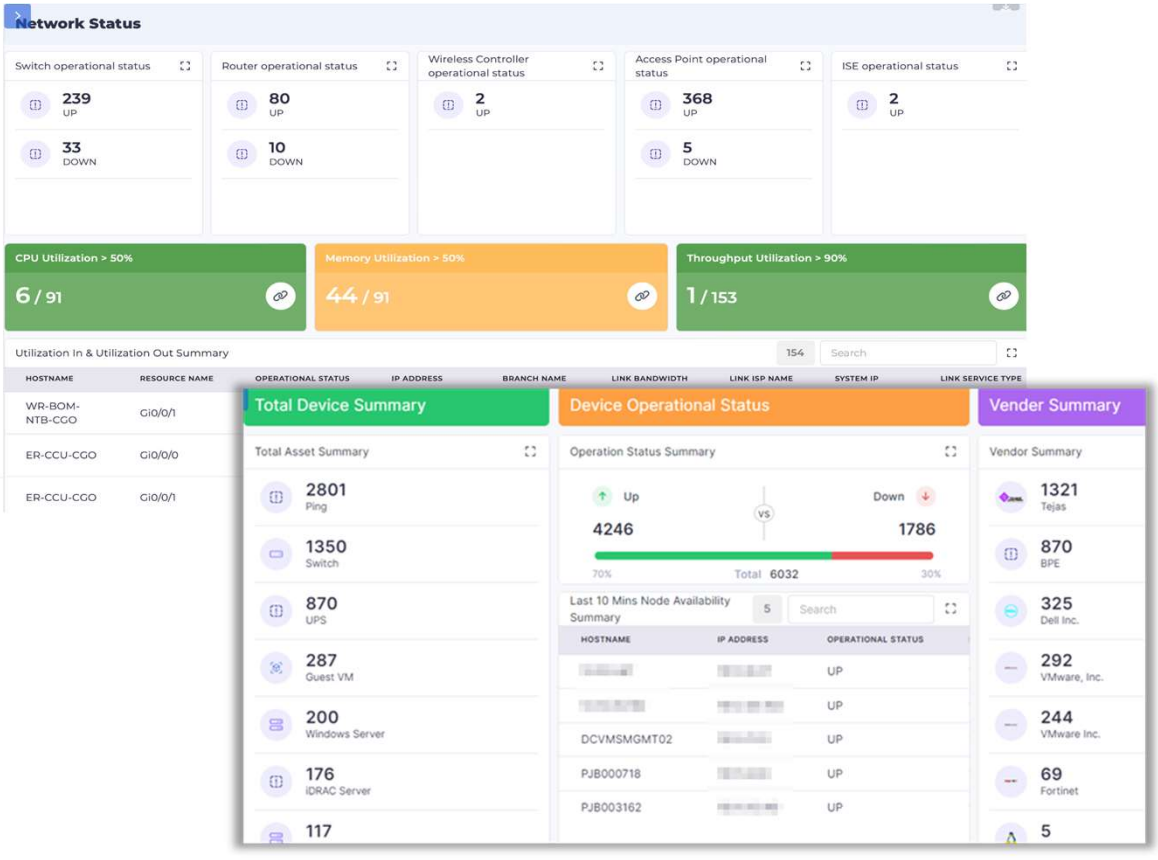
- It provides a mechanism to create multiple thresholds for each parameter that is being monitored. All fault, performance, views, and reports are configurable till the node, component, or parameter level.
- The system supports a granular level of control across the system, with an option to export the views into PDF, Word, Excel, HTML, and other formats depending on the user's needs, allowing each user account to have a specific type of toolbar according to the administrator's requirement.
- Each account can see/manage the list of equipment for which they are authorized.
- It provides a portal account for the end customers with restricted views limited to their specific infrastructure.
- Infraon IMS can be implemented in DMZ and non-DMZ zones with adequate security and segregation of admin users and portal users via separate logins and authentications. Infraon comes with AES 256 encryption support and is ISO 27034 certified.
- Infraon IMS can be integrated with 3rd party authentication applications like RADIUS, TACACS, TACACS-2, Active Directory, LDAP, and PIM, with an option for session-based approvals.
- It offers role-based access control (RBAC), and the administrator can create custom roles and assign module level privileges. It records and maintains an audit trail of all user activities. SSO (single sign-on) is supported across Infrastructure Management, Service Management, and Device Configuration Management functionalities.
- Provides powerful connectivity to other data sources or 3rd party applications for data import and export using REST APIs.
- It provides REST APIs to integrate with IT Infrastructure Management, Configuration Management, Network Management, and CRM tools to automate Events to Tickets. It also has an integrated ITSM module, certified by Pink Verify as ITSM compatible for 14 processes and by PeopleCert as ITIL 4 compatible for 9 practices.
- It offers powerful service management features like incident logging, viewing, assignment, escalation, reporting, SLA management, etc., in the Service Manager tool GUI.
- The integration is bi-directional, with Network Configuration and Change Management tool to use Infraon NCCM features with an additional license. The integration allows assets and topology to sync from the NMS module to the NCCM features, enabling root-cause analysis of faults.

Discovery

- Discovery is automated and continuous.
- The tool offers CSV-based discovery for bulk discovery and allows adding custom fields to support customer-specific data to upload during discovery.
- Enables fetching topology via SNMP for ARP tables from routers, MAC tables from Layer 2 Switches, CISCO Discovery Protocol, Link Layer Discovery Protocol, Foundry Discovery Protocol, or Synoptics Network Management Protocol.
- Offers the option to add any additional Topology in the network manually.
- Provides the option to add Topology via GUI or tabular and enables the downloading of topology connections. Discovery works intelligently by identifying the device in the network by the given IP range and categorizing it into network devices and servers with vendor and model details.
- It automatically learns devices that support SNMP (v1, v2c, v3), HTTP, Ping, SMTP, POP3, WMI, JMX, SOAP, REST API, PDC, SSH, and Telnet, along with any required protocol to communicate to the devices. It discovers the Primary and Secondary lines of each branch connected to DC and monitors the connectivity with the link IP address for fault and performance.

SLA

- The solution stops SLA calculation for every node in case of known downtimes.
- The system has a one-click alarm masking capability.
- The SLA calculation considers the Primary and Secondary links together (for ISP Links) instead of individual links.
- The downtime calculation is measured when both the links are down for internal reporting and link-based for ISP reporting.
- The tool provides a flexible configuration in the UI based on user needs.
- The SLA module is a template-based configuration where each branch measurement will differ for internal and ISP reporting.
- Users can configure multiple templates for different needs and assign the related branches to a template.
- For branch connectivity with Primary and Secondary links, the system provides the flexibility to group multiple resources as a single service. It allows SLA computation against the service instead of individual resource/component-level SLA measurement.

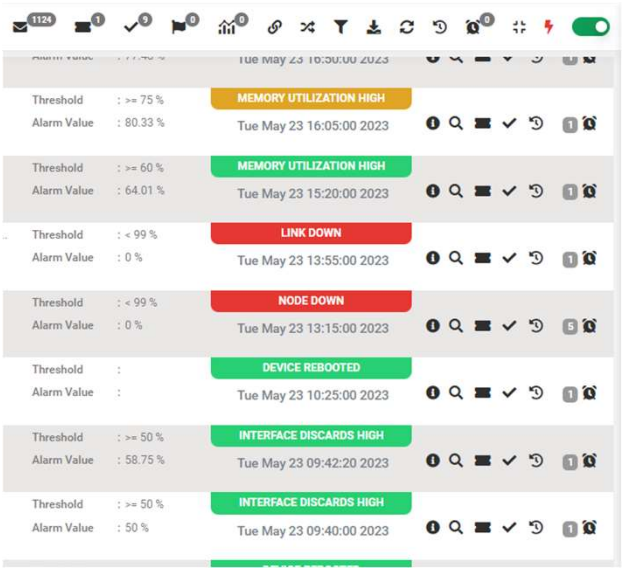


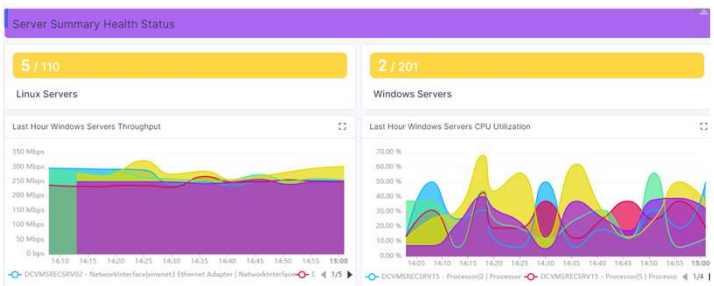
Fault Management

- Infraon IMS detects & highlights faults (abnormal situations) occurring anywhere within the network and provides Filtering, De-duplication, Holding, Suppression, and Correlation capabilities to let the user focus on the critical event affecting business and business processes.
- Provides multi-level (preferably six-level) Severity definition, automatically handles events, raises a ticket and informs the designated person as per operational requirement.
- It also supports separate Rule Engine-based alarms from the generic threshold.
- Infraon IMS has the capability to configure Device group-based, Node-based, Resource/Interface-based, and Aggregation link-based.
- When selecting nodes/resources/Aggregation links, it can filter based on fields available in node information.
- Offers the option to configure rules and repeat counters
- Rules can apply the configuration on top of performance value or based on configured threshold alarms.
- Rules allow configuring the breach based on minimum, maximum, and average values.
- Offers the option to select the custom alarm and clear alarm messages for individual configured rules.
- Offers the option to send severity levels like error, warning, and information.
- Possesses notification support based on configured rules.
- Provides alarm suppression, withholds time, and aids in preventing flooding.
- Provides alarm suppression capabilities to track duplicated events to provide a single event notification.
- Sends alerts via E-mail, SMS, Execute Batch file, SNMP Trap, XML notification, Pop-up window, and Audio alerts.
- Captures the SNMP traps from network devices and converts them to link down alarms automatically.
- Supports high-level status view with drill-down support up to interface level.

Threshold

- Infraon IMS supports global thresholds and can define individual resource/interface statistics level thresholds, with built-in algorithms to start monitoring with zero threshold configuration(s).
- It has self-learning algorithms to perform auto-baselining and automatically calculate the thresholds of components or nodes.
- It supports configurable parameters like frequency, data duration, resolution duration, sigma-based polarity value, and reset points and is available for algorithm fine-tuning.
- All thresholds within the tool have a set point, reset point, polarity, set point message, and reset point message for ease of use.
- Offers an anomaly detection feature and can stop alarm flooding using dynamic thresholds.





Performance Management

- Infraon IMS monitors traffic from all the interfaces of the network device.
- It provides traffic utilization based on the individual interface level, nodes level, or group by location, branch, departments, etc., as an Average, Minimum, and Maximum bandwidth, utilization, throughput, or any custom monitoring parameters.
- The tool can change the polling interval to any frequency depending on the priority until the individual component/resource level, like each interface, might have a different polling interval in the same device based on the criticality and importance of the customer.
- Infraon IMS monitors SDWAN device performance parameters like Latency, Packet Loss, Jitter, BFD Sessions, Control Status, CPU Utilization, Memory Utilization, etc.

Polling

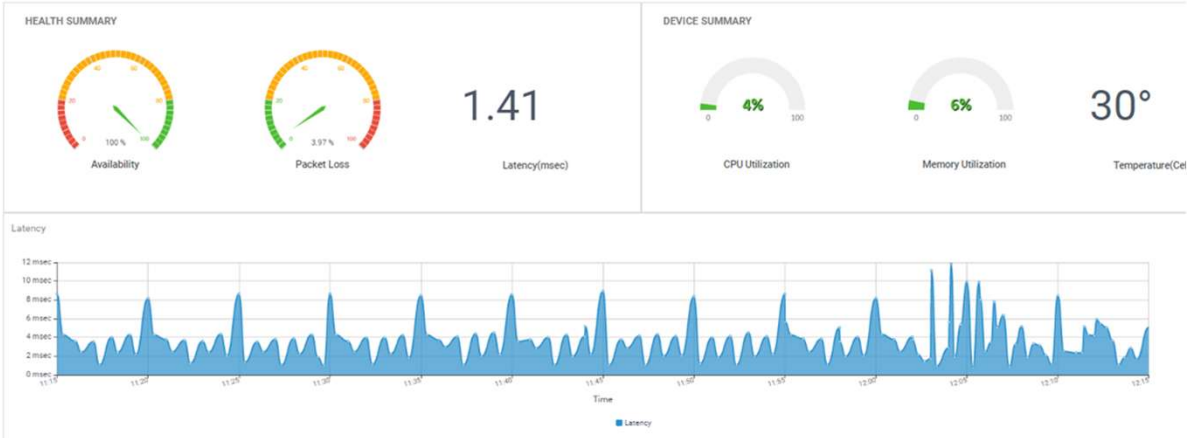
- Infraon IMS has the capability to configure business, non business hours, or custom time polling.
- These configurations are available for every device and every component in the device.
- It can disable and enable the polling of specific types of devices and the capability to configure the maintenance period for any device.
- When a device is in a maintenance period, no polling is done, and the SLA clock on the device can be stopped.

Notification

- Infraon IMS provides a notification mechanism that allows the administrator to define what notification channel will be used at different times.
- Offers the option to trigger multiple notifications to alert multiple persons and actions.
- Possesses an escalation and acknowledgment function to ensure alternative personnel will be alerted when there is a critical situation and an acknowledgment mechanism for generated alerts. The escalation is available for any number of hierarchical sequences.

Diagnostics

- Infraon IMS significantly reduces unwanted, non-business critical alert floods that are symptomatic of many systems management tools.
- It Identifies the root cause of any IT problem and filters out irrelevant information.
- It supports the instant diagnosis of the node status through Ping, Telnet, and SNMP walk and supports real-time report generation for checking the continuous reachability of a target device.
- It can create a user-level repository of all the issues being faced. Users have the right to add data to this repository, and the system automatically retrieves back the same information.
- It offers an option to highlight the top processes consuming server for high utilization of CPU and Memory and can trigger a high alarm with a single mouse click.



Reporting

- Infraon IMS provides standard reports that display the current status of nodes and interfaces.
- Reports can be viewed on a daily graph (5-minute average), weekly graph (1-hour average), monthly graph (1-hour average), and yearly graph (1-day average).
- Offers online and offline reports, allowing users to view their device usage. Reports can be exported in HTML, PDF, Excel, and CSV formats.
- It automatically generates daily reports with a summary of the network. Custom reports can be emailed at a pre-defined schedule to any recipient or saved into any specific folder or drive.
- It allows end-users to browse all reports using all popular web browsers. There is an option to get the required report during business and non-business hours for detailed analysis of single or multiple statistical splits based on the operations.
- It also provides a correlation report between all major network devices to determine if there is any degradation in these devices.

Topology

- Displays the status of the connections based on the dependent connections and the utilization of the links by displaying connections with different widths.
- Navigate to the node page or interface page by clicking on the respective node or link.
- The filter topology view is based on a device group, node tag, vendor, model, IP address, hostname, etc.
- The tool displays the distance between devices in Topology Maps, especially for branch gateway devices.
- It has algorithmic auto-arrangement capabilities. It can use standard algorithms like forceAltas2base, repulsion, or Barnes-Hut to ensure the map views are non-cluttered and arranged to the best non-overlapping method.
- It uses an SVG Map view with a drill-down option. It can include any country's views: world > country > region > state > city, and the Country/Region/State/City colour can be changed based on the device status - red for all nodes down and orange for one or more nodes down and green for all node up.

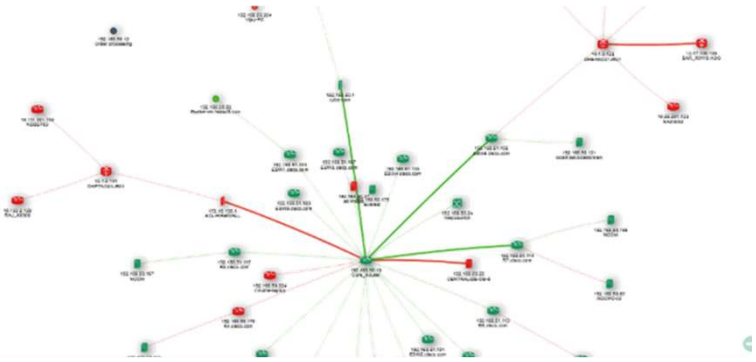
Topology

The tool automatically learns IP Networks and their segments, LANs, hosts, switches, routers, firewalls, etc., to establish the connections.

The different types of topology representations include:

- Display physical connections of the different devices being monitored in the system
- Display flat maps of the entire network or networks in a single view
- Display customer maps based on user configurations
- Display maps based on geo locations

Infraon IMS searches for a specific device or resources in view of the map to the specific background for each network level and uploads appropriate changed icons of devices/ background of the network layers.



Flow

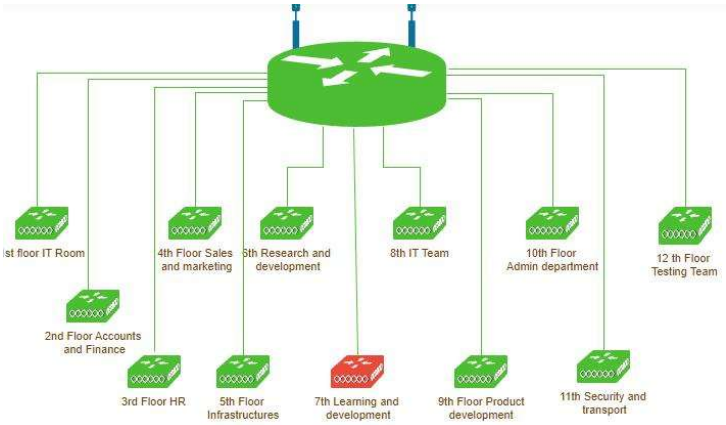
- The solution monitors network traffic by capturing flow data from network devices, including Cisco NetFlow v5 or v9, Juniper J-Flow, IPFIX, sFlow, and Net Stream data, and also sampled NetFlow data.
- The tool is capable of alternatively capturing flow data via packet capture.
- It identifies which users, applications, protocols, countries, AS numbers, top routers, and interfaces consume the most bandwidth.
- It stores ALL flows without any rollups or loss for the retention period - for security and audit purposes.
- It highlights the IP addresses of the top bandwidth consumers on the network and finds out unwanted bandwidth usage.
- It associates traffic from different sources to application names and receives flows from non SNMP-enabled devices like VMware vSwitch.
- It monitors Class-Based Quality of Service (CBQoS) to determine if traffic prioritization policies are effective and if business-critical applications have network traffic priority.
- The tool supports CBQoS Nested policies and monitors Type of Service (ToS), Differentiated Services Codepoint (DSCP), Per-Hop Behavior (PHB), BGP AS, and NEXT HOP.
- The tool provides flow analysis with 1-minute granularity and is able to monitor up to 5 million flows per second and employs advanced optimization methods.
- It provides real-time flow and traffic analysis with 5-second granularity and alerts when traffic to known malicious domains is encountered.
- It can investigate if a security incident caused a breach and provides a way to list all Internal hosts impacted by a security incident. It helps locate infected computers in case of a virus outbreak and to recognize DOS attacks.

Self-Monitoring Capability

- Infraon health check covering resource & process availability and load
- Tracks Infraon license usage
- Thread Status view to monitor Infraon internal threads

Network Diagram Builder

- Infraon IMS provisions drawing & mapping user-specific network diagrams.
- It has an integrated Web-based feature to build Network Diagrams.
- The builder is a Visio-like system with pre-loaded shapes and icons.
- It supports drag-and-drop-based Network Diagram building and can dynamically upload images; it has customizable objects to support multiple vendors, with the capability to export maps in an XML format and upload to any other system.
- Any graph or network diagram configured has functions to associate every component in the diagram to an existing node or resource.
- Additionally, the system allows for the association of any parameter monitored to the specific element in the diagram.
- All network diagrams are user-controlled and viewable to only specific users. The tool defines primary & backup line connections.



Panel View

- Panel view looks like the device's front panel.
- It automatically detects the device model and displays the right panel without additional configuration.
- The Panel shows all the monitored interfaces with status
- It also shows Fan status with a live fan icon and LED status for power.

Virtualization

- The tool supports VM, Hypervisor, and Cluster monitoring from multiple vendors like VMWare, Citrix, Nutanix, Linux, etc.
- The tool licensing is based only on Physical Hosts and does not charge separately for individual guest VMs running on VM Hosts.

Application

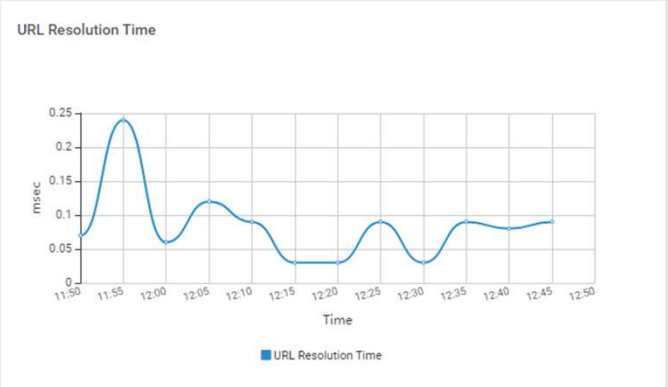
- IMS has the capability to monitor industry-standard web servers like IIS, Tomcat, Weblogic, etc.
- It monitors HTTP service, HTTPS service, FTP server statistics, POP/SMTP services, ICMP services, or any customer-specific port-based systems.
- It monitors various critical Relational Database Management. The tool (RDBMS) parameters include database tables/table spaces, logs, etc.

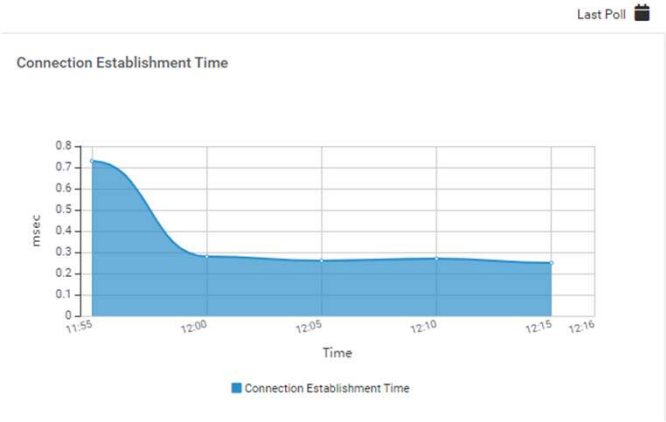
Syslog

- The tool collects and stores system logs from target devices, including firewalls, routers, switches, WLC, servers, applications & databases.
- It has multiple filtering options for incoming system logs based on the target device, log ID, severity, level, message, OS type, application/database, etc., and an option to export specific Syslog messages to users via email/SMS.

Integration

- IMS offers integration capabilities with provisions on each module level. Any fault details are sent to third-party CRM, Customer Portal, UNMS, or even EMS if needed using the Trap, XML, and even direct
- It provides XML, CORBA, REST API, and SOAP-based systems to communicate with external software, and it is a completely integrated network management system to monitor and manage networks, servers, applications, WI-FI, CCTV, VSAT, etc., from a single platform with end-to-end visibility of all the services in your network.





Panel View

Infraon Suite Product Integrations

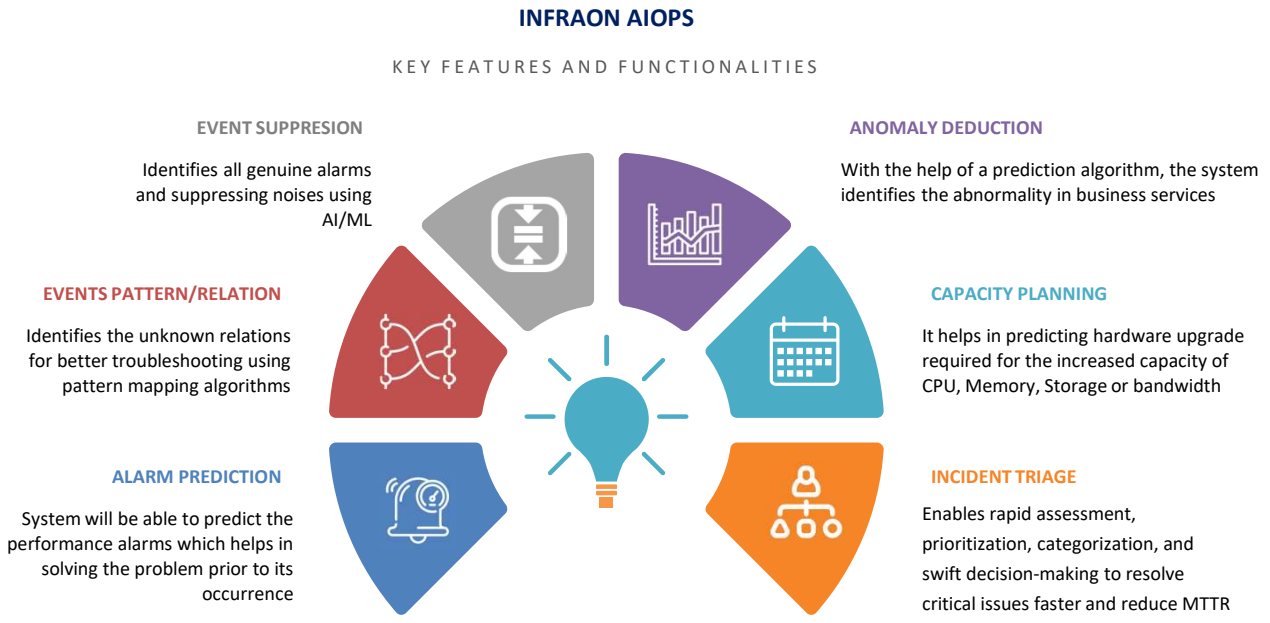
Infraon IMS, when integrated with other products from the Infraon Suite, forms a powerful offering that can address an array of ITOps challenges in a unified approach. You get a one suite-that-caters to all products. Below, we have listed the key integration features of three other Infraon Suite products.

Quality of Service (QoS)

- The tool allows QoS monitoring of WAN links across multiple technologies like Cisco IPSLA, Juniper RPM, Huawei NQA, etc., across multiple protocols like HTTP, TCP, FTP, DNS, etc.
- QoS parameters include link response time, link-level latency, link-level packet loss, link-level jitter, Round trip time, etc.
- It monitors Class-Based Quality of Service (CBQoS) to determine if traffic prioritization policies are effective and if business-critical applications have network traffic priority. It supports CBQoS Nested policies.

Deployment

- The tools cover geographically distributed networks through multi-level scalable distributed deployment architecture and can add new pollers at no extra cost for scale-out and scale-up.
- Secure data transfer between remote and central servers.
- Supports agentless (and agent, if required) data collection using the standard protocol.
- Local HA and DC/DR deployment models are supported.
- Can be deployed in a physical/virtual server environment or private/public cloud.
- Supports database backup and restore of the deployment set-up data.



InfraonIMS Supported Devices

Network Technologies

Wi-Fi | IP/MPLS | Metro Ethernet | DWDM | GPON | SDH | VoIP | ASON | FTTH | VSAT | RF | IoT

Network Devices

Cisco | Juniper | Huawei | 3Com | HP | D-Link | Edge Core | ZTE | Checkpoint | Mikrotik | Brocade | Avaya | Foundry | Alcatel Routers | Network Printers | Power Backup devices | Broadcom | BDCom | Cyberoam | Palo Alto and any SNMP supported devices

Optical Network

ECI | Nokia -ALU | Tejas | ZTE | Huawei | Calix

Servers

Windows | Unix | Linux | Solaris | IBM AIX | Ubuntu | RedHat | CentOS | SuSE | Debian

Hypervisors

VMWare ESXi | vCenter | XenServer | Nutanix

Applications

.Net | IIS | MS Exchange | Tomcat | MSSQL | MySQL | Oracle | PostgreSQL

Protocols

SNMP v1,v2c,v3 | WMI | SSH | CORBA | XML | REST API |HTTP | TCP/UDP | Syslog | NetFlow v5,v9 | sFlow | LLDP | VoIP | CDP | ARP | BGP | FTP | TFTP | Telnet | TMF 814 | TL1 | Serial | IPv4/v6

Services

DNS | IMAP2 | NTP | SMTP | JBoss | HTTP | HTTPS | POP | NNTP | SNMP | FTP | NFS | Radius | SSH | Oracle | Syslog | ICMP

Device Types

Server | Routers | Switches | Firewall | Load Balancer | SAN | Cluster | Access Controller | Access Point | Satellite Phones | UPS | DMR Handsets | Power Rectifiers | Smart Server Racks | SMPS | SDH | DWDM | CWDM | ASON | OTN | PTN | OLT/ONT | GPON

And capable of adapting to new devices through respective SNMP MIBs & other protocols

Key Monitored Performance Statistics

Network Availability | Application Availability | Resource Availability | Database Availability | Network Utilization | Network Throughput | Error Traffic | Overflow traffic | CPU Utilization | Disk Utilization | Memory Utilization | DB Status | DB Table Space | Connection Count | Aborted Clients | Aborted Connections | Job Run Count | Job Failure Count | Link Uptime | Buffer Overflow | Cache Utilization | Device Port Utilization | Latency | Packet Loss | Jitter | Ping Response Time | Web Response Time | DNS Response Time | Email Response Time | FTP Response Time | VPN Session Capacity | Active VPNs | VPN Packet Rate

And many more…

Licensing

Infraon IMS has a simple device-based licensing model wherein the cost of monitoring a single router, switch, firewall, or server is the same. The base pack includes fault & performance monitoring of devices bundled with topology mapping, reports, dashboards, and notifications. Users also have the option to purchase certain addon modules for additional features, including Network Device Configuration Management, Application & Database Monitoring, Syslog Monitoring, Service Desk, etc.

Module Name	Base Package	Add-on Package
Topology Discovery	✓	
WMI, SNMP, SSH Monitoring	✓	
Performance Scan	✓	
Alarms & Notifications	✓	
Reports & Dashboards	✓	
Live & Static Maps	✓	
Business Specific Views	✓	
Network Diagram	✓	
SLA Management	✓	
Basic Inventory Management	✓	
Syslog Monitoring		✓
Database Monitoring		✓
Virtualization Monitoring		✓
QoS Monitoring		✓
Configuration Management		✓
Traffic-flow Monitoring		✓
Wi-Fi Monitoring		✓
CCTV Monitoring		✓

Minimum System Requirements (For VM as well as Physical Server)	
CPU	Hexa Core 2 GHz or 6vCPU
RAM	12 GB
Hard Drive	50 GB
OS	Oracle Linux 9.x or above (64-bit)
Please contact our Pre-Sales team to get the exact specifications for your POC/Deployment	

About EverestIMS Technologies

EverestIMS Technologies Ltd. (Everest) is a leading software company – offering ITOM, AIOps, and Telecom OSS solutions. Backed with rich market experience in the I&O, AI, IoT, and digital transformation space, Everest has widespread global footprints through its focused product portfolio. We provide integrated IT solutions, operations, and infrastructure to empower corporations, enterprises, and telecoms to deliver future-ready services to end users. We aim to ensure they adapt and stay competitive in evolving digital landscapes.

Certifications: ISO 20000-1:2018, ISO 9001:2015, ISO/IEC 27034-1:2011, ISO/IEC 27001:2013, ISO 55000:2024, ISO 45001:2018, OWASP, SOC 3 and CMMI Level 3.

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Assets Monitored

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