netk system **Innovative IT Operation Management** Solution

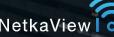
Company and Product Overview



NetkaQuartz Service Desk









About Netka System



ue

UniNet

ออมสิเ

Sacombank

No. 1 Private Bank

Netka System is software manufacturer for IT infrastructure and IT service management, founded in 2005.

Vision

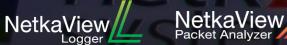
Provide innovative IT operation management solutions to empower your digital business transformation.

Mission

To gain visibility and insight into your IT infrastructure in real-time with advanced analytic tools.











NetkaView o



THE WORLD'S

TOP 3 AIRPORT



Telkom

Indonesia

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nmm



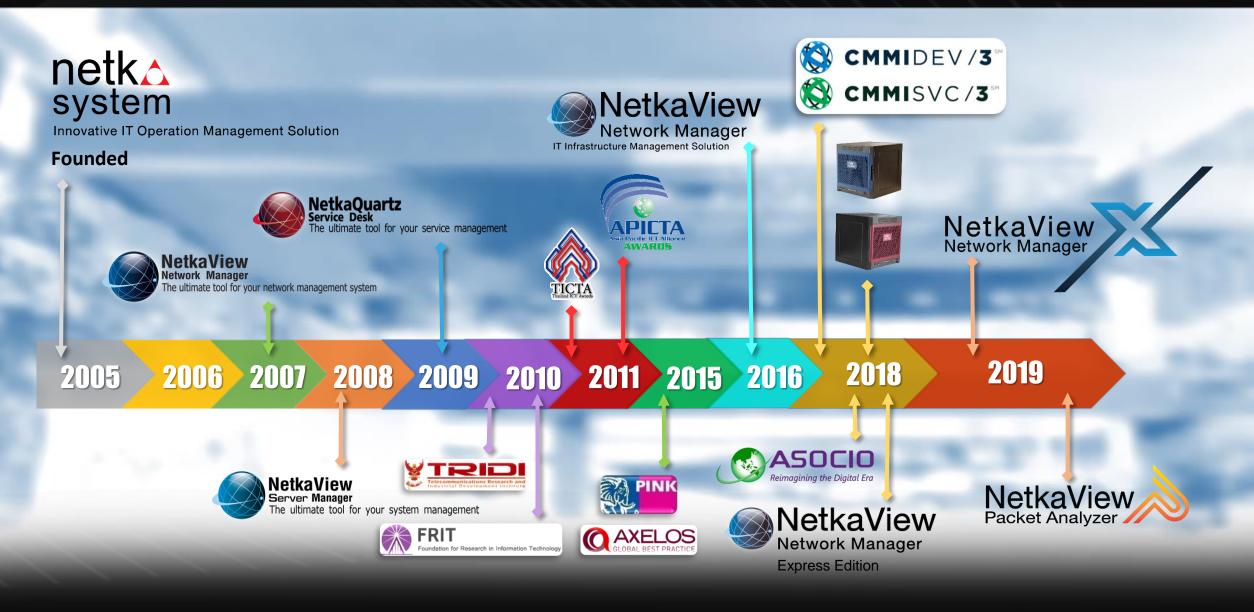
SYMPHONY

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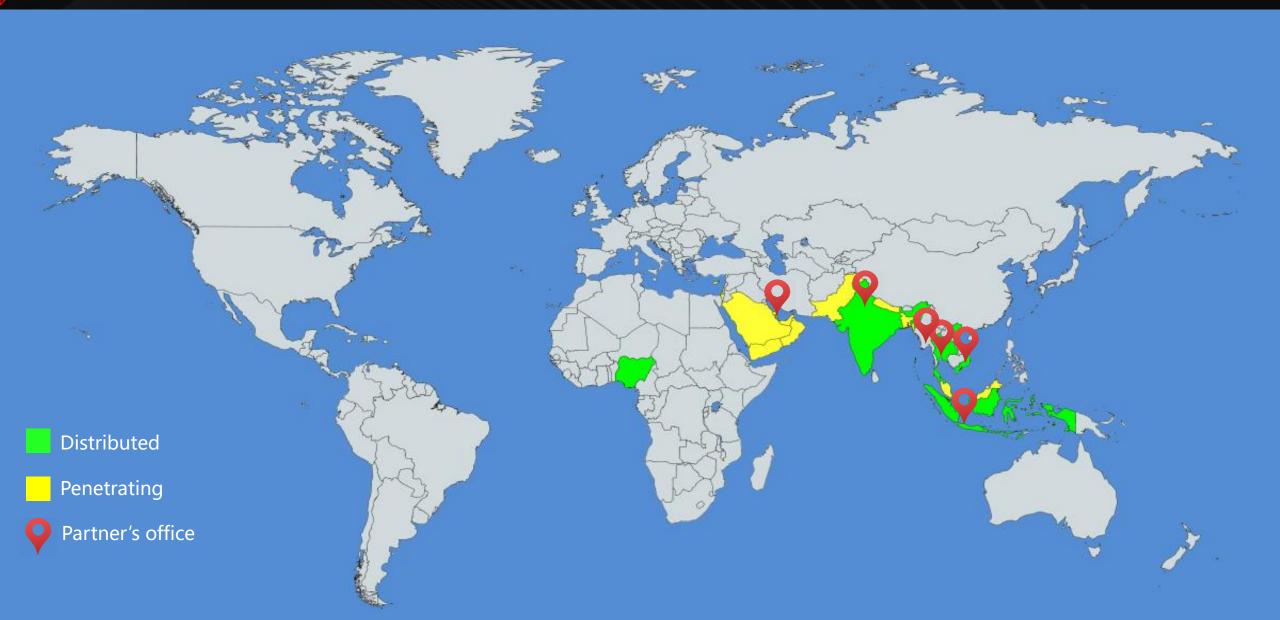
Netka System Timeline





Geographical Product Distribution





Netka Products



- Netka AlOps Director







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Netka Products





NetkaView Network Manager X (NNMX) IT Infrastructure Management (ITIM) Solution



NetkaQuartz Service Desk X (NSDX) IT Service Management (ITSM) Solution



NetkaView Packet Analyzer (NPA) Network Performance Monitoring & Diagnostics (NPMD) Solution



NetkaView Logger (NLG) Security Information and Event Management (SIEM) Solution Network Performance Monitoring & Diagnostics (NPMD) Solution

Netka Products





NetkaView IoT (NIoT) Internet of Things (IoT) Management Solution



NetkaGalaxy Data Analytics (NGDA) BI Data Visualization & Analytics Solution



Netka AlOps Director (N-AlOps) Artificial Intelligence IT Operations Director

(Release in 2021)

Our products & services



Software Licensing

- ✓ NetkaView Network Manager
- ✓ NetkaQuartz Service Desk
- ✓ NetkaView IoT
- ✓ NetkaGalaxy Data Analytics
 ✓ Netka AlOps Director

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Hardware Appliances Cloud Services

- ✓ NetkaView Appliance
- ✓ NetkaQuartz Appliance
- ✓ NetkaView Packet Analyzer Appliance
- ✓ NetkaView Logger Appliance
- NetkaGalaxy Data Analytics Appliance



✓ Microsoft Azure ✓ AWS (2020)

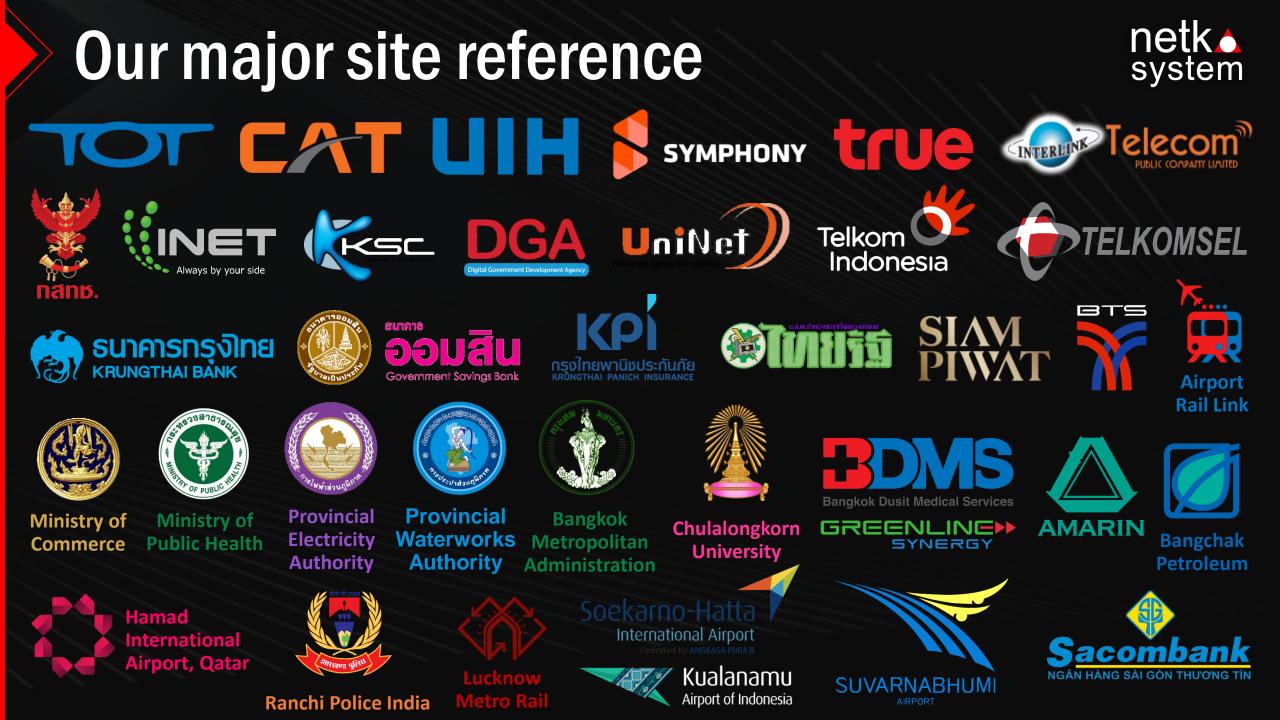




Support & Services

- ✓ Customization Service
- ✓ Implementation Service
- ✓ Training Service
- Software Subscription
 Service
- Software Maintenance
 Service
- Network Assessment Service
- Anomaly Detection Assessment Service





Reference & Reliability



NetkaView[®] Network Manager is selected as main network management system for top service providers in Thailand to manage their nation wide IP network.



National Broadcasting and Telecommunications Commission (USO Net Mobile/Broadband)



CAT Telecom Public Co.,Ltd. (IP/MPLS, Broadband)

UH

United Information Highway (IP/MPLS Network)

SYMPHONY

Symphony Communication PCL. (Metro E Network)



Hamad International Airport, Qatar (The world's top 3 airports)



Telkomsel, Indonesia (Top 7 no. of subscriber Mobile Operator, MPLS Network)

Network Manager

NetkaView Network Manager X





UNIFIED IT INFRASTRUCTURE MANAGEMENT SOLUTION

NNMX is carrier-grade IT Infrastructure Management solution provides Fault, Configuration, Accounting, Performance and Security management (FCAPS) for managing multi-vendor IP networking devices, server, VM and multi-networking technologies including IP, MPLS, QoS, IP SLA, RPM, NetFlow, sFlow, jFlow, IPFIX, NetStream, NBAR, AVC, DPI, xDSL, FTTx, microwave, wireless technology, IP Surveillance, IoT, site environment, Big Data Analytics (Predictive Analytics), AI Chatbot, ML/DL Automation.

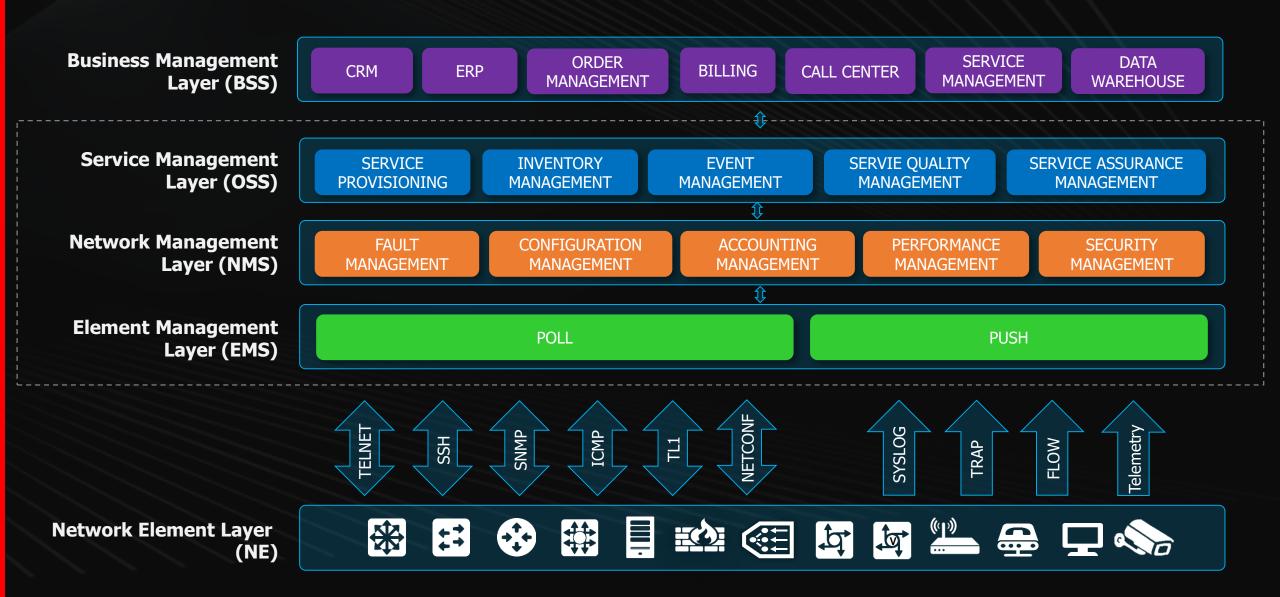
The 4 Pillars of Network Operation





ITU-T M.3010, M.3400 (TMN)





Technologies & Innovation





Multi-X Management High Speed

- ✓ Multi-Vendor
- ✓ Multi-OS platform
- ✓ Multi-Networking technologies
- ✓ Multi-Scale infrastructure

- High speed distributed polling engine which supports polling large network.
- ✓ Automatic discovery and polling.



- Proactively monitor and alerts you before incident will happen.
- Álert you when network have any problems via email, SMS, Line.

Event Management





- Reduce administrator work (automatic discovery and polling with less setup).
- ✓ Stability and less maintenance (self backup, self cleaning).
- Fast deployment with virtual appliance which up and run on hypervisors in a few minute.





- Single pane of view for total IT infrastructure, server and application health.
- \checkmark Custom views as need.
- Drill-down, drill-up for more detail and overall.

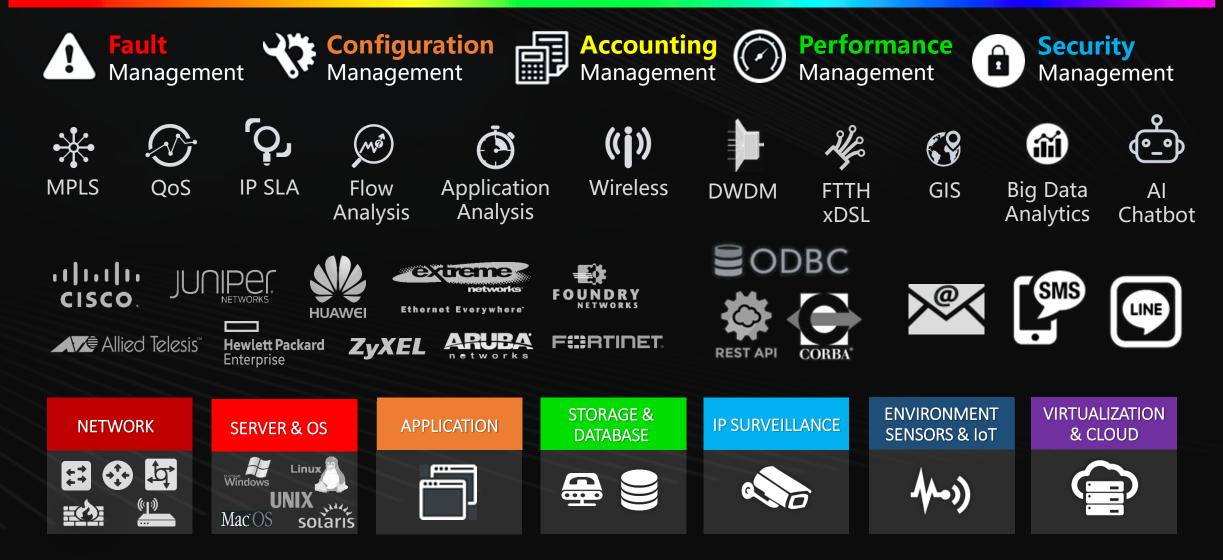
Multi Tenancy

 Powerful role-based access control based on combination of user level & privilege, geography, network and customer.

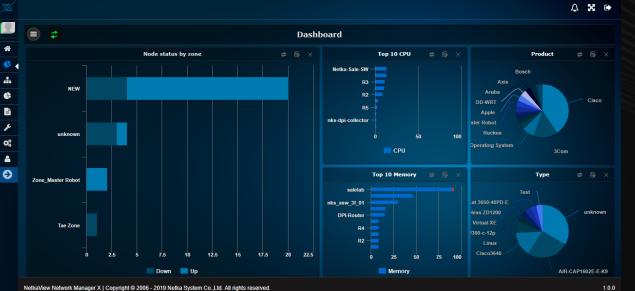
NetkaView Network Manager X



UNIFIED IT INFRASTRUCTURE MANAGEMENT SOLUTION



NNMX Screenshots









NetkaView Network Manager X | Copyright @ 2006 - 2019 Netka System Co.,Ltd. All rights reserved

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netk

NNMX Anomaly Detection

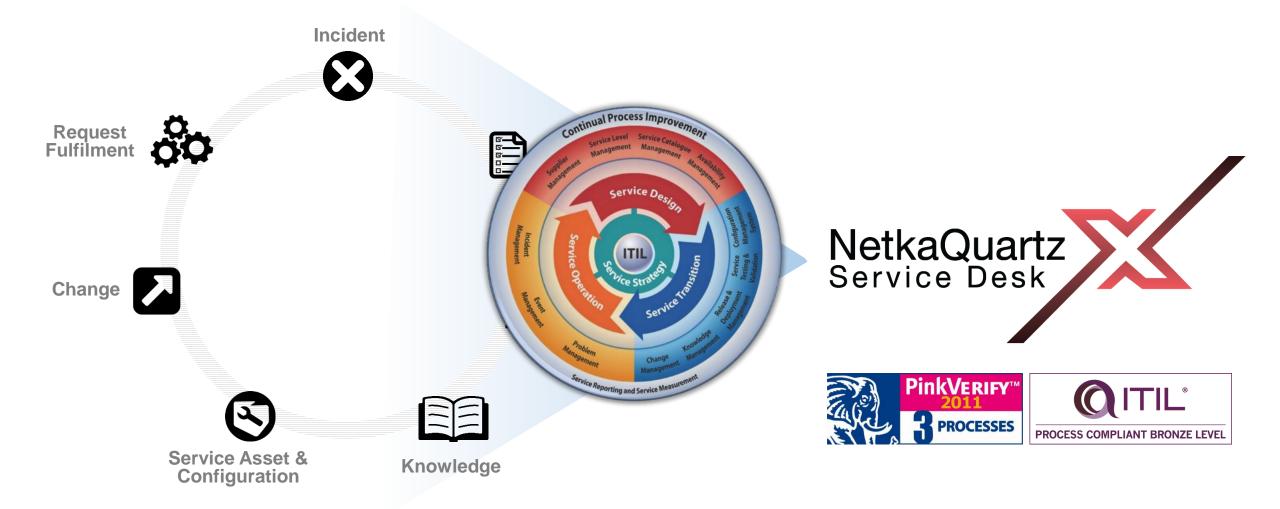




NetkaQuartz Service Desk

NetkaQuartz Service Desk X



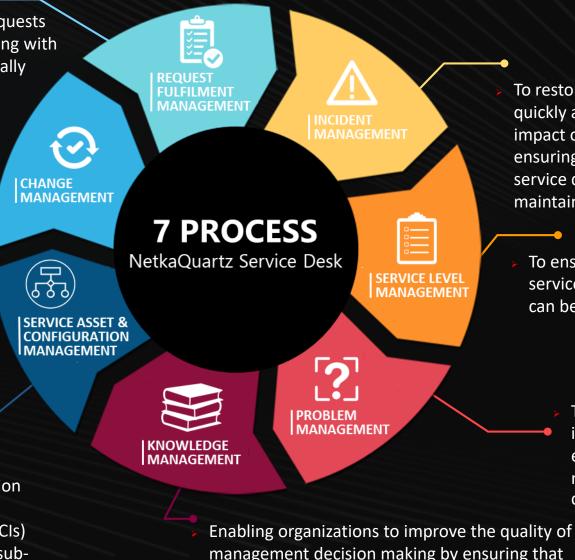


NetkaQuartz Service Desk X



To manage the life cycle of all service requests from the users. It is the process for dealing with service requests, many of them are actually smaller, or low risk

- To ensure that standardized methods and procedures are used for efficient and prompt handling of all changes to control IT infrastructure, in order to minimize the number and impact of any related incidents upon service.
 - Define and maintain the underlying structure of the CMS (the Configuration Model), so that it is able to hold all information on Configuration Items (CIs) including attributes, types and their subcomponents, relationships.



management decision making by ensuring that reliable and secure information and data is available throughout the Service Lifecycle.

- To restore a normal service operation as quickly as possible and to minimize the impact on business operations, thus ensuring that the best possible levels of service quality and availability are maintained.
 - To ensure that agreed levels of current IT services are provided, and future services can be delivered within agreed targets

To prevent problems and resulting incidents from happening, to eliminate recurring incidents, and to minimize the impact of incidents that cannot be prevented.



Awards & Certificates





This certifies that

Netka System Co. Ltd

has achieved PinkVERIFY[™] 2011 status on 2 processes for NetkaQuartz Service Desk Standard Edition









One in ASEAN The certified ITIL

And also a third of Asia after China and India

Key Advantages

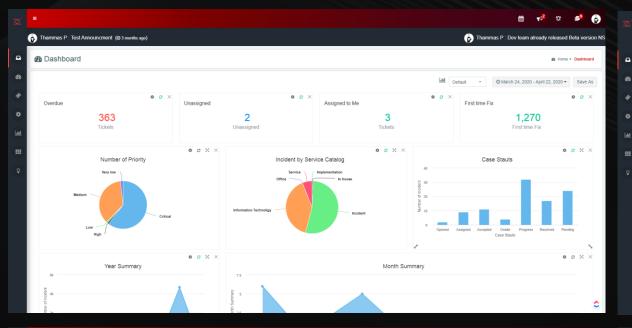


- Managing the lifecycle of incident request, problem request, change request and service request, escalating according to SLA.
- Provide solution with Known Error Database to response customer/user faster and minimize impact.
- ✓ Shorten resolution time, reducing TCO with fast ROI.
- ✓ Increase success rate for implementing and operating project.
- ✓ Leverage service quality and improve customer or user satisfaction.
- ✓ Evaluate customer SLA and resource KPI.
- ✓ Minimize knowledge lost caused from resource turnover.
- ✓ Create "Be Proactive" habit in your IT help desk staff.
- ✓ Integrate with NetkaView for automatic incident and inventory (CI) discovery.

NSDX Screenshots



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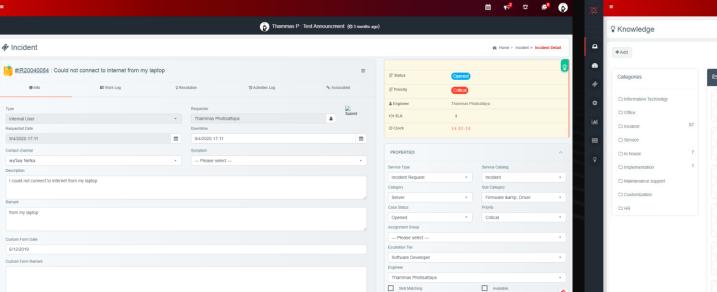


Description

Remark

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IR20040054	Could not connect to internet from my lapt	op Opened	09/04/2020 17:11:03	Thammas P.	Thammas P.	Incident	Server	 Critical
IR20030008	sadsadsad	Assigned	20/03/2020 15:39:03	Admin A.	Ranchana K.	Incident	facility	Medium
IR20030003	NSDX ไม่ส่ง email	Onsite	12/03/2020 11:49:02	Thammas P.		In house	Beta defect	 Medium
IR20020001	test by mdu	Onsite	21/02/2020 14:56:55	Admin A.		Service	Software ไห้บริการโดย Netka	 Medium
IR2010002	Haapr Test Subject	Progress	01/01/0001 00:45:00	Admin A.		Service	Software ให้บริการโดย Netka	😑 High
SR20010001	Test	Assigned	01/02/2020 12:12:00	& Admin A.		Incident	Project	 Medium
IR19120006	Circuit down	Assigned	27/12/2019 14:11:00	Thammas P.		Incident	Beta defect	 Medium
IR19120003	dfasdf	Assigned	26/12/2019 14:31:00	& Admin A.	Jirawat J.	Incident	Office	Low
IR19120002	สแกน ประดู ชั้น3 ใม่ได้	Assigned	26/12/2019 14:28:00	Admin A.	Jirawat J.	Incident	Office	● Low
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NetkaView Logger

NetkaView Product Overview



NLG is an appliance designed to receive and analyze all kind of IT logs including network log, system log, application log, security log and log files.

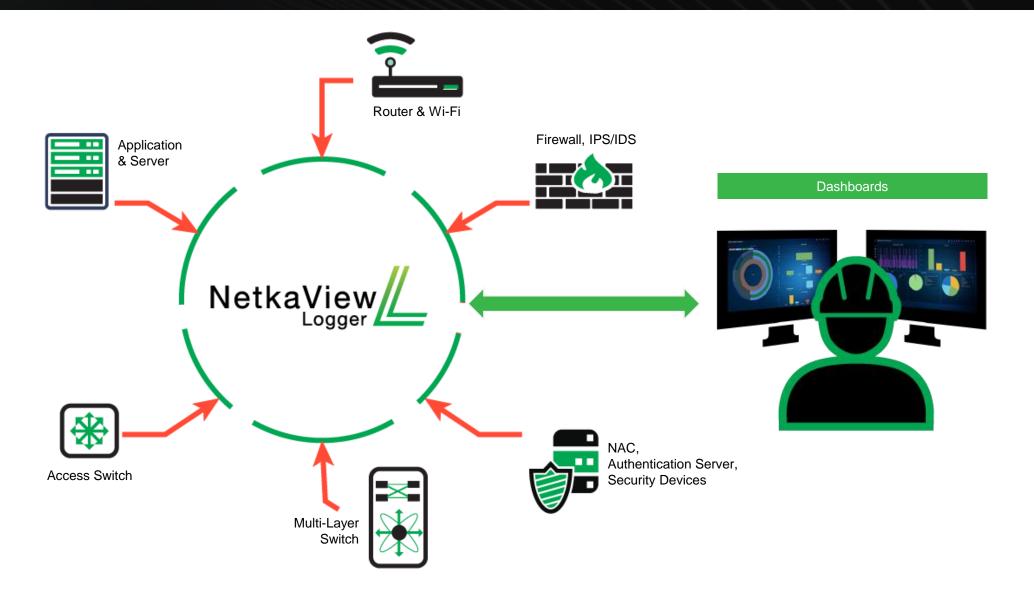
NLG is logger, packet analyzer, flow analyzer and event management tools including event suppression, event correlation, event action and alerting.

NLG comes with real-time interactive web-based data visualization and BI tools. It is suitable for medium enterprise up to service provider who is seeking a analytics tool to gain IT visibility and insight, centralized log repository, IT & computer act's compliances, threats detection and anomaly detection.

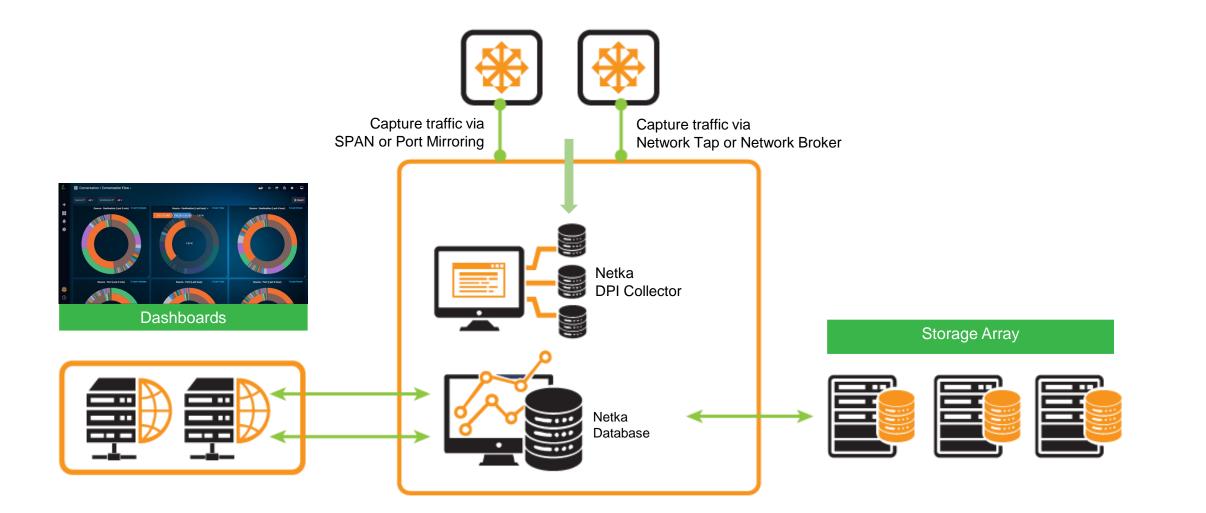
Fault & Security Network IT & **Centralized** Threat Anomaly Event & Info Performance Performance **Detection &** Computer Act Log Detection Compliances Monitoring Management Management Repository **Security Alert**

Logger Mode Deployment



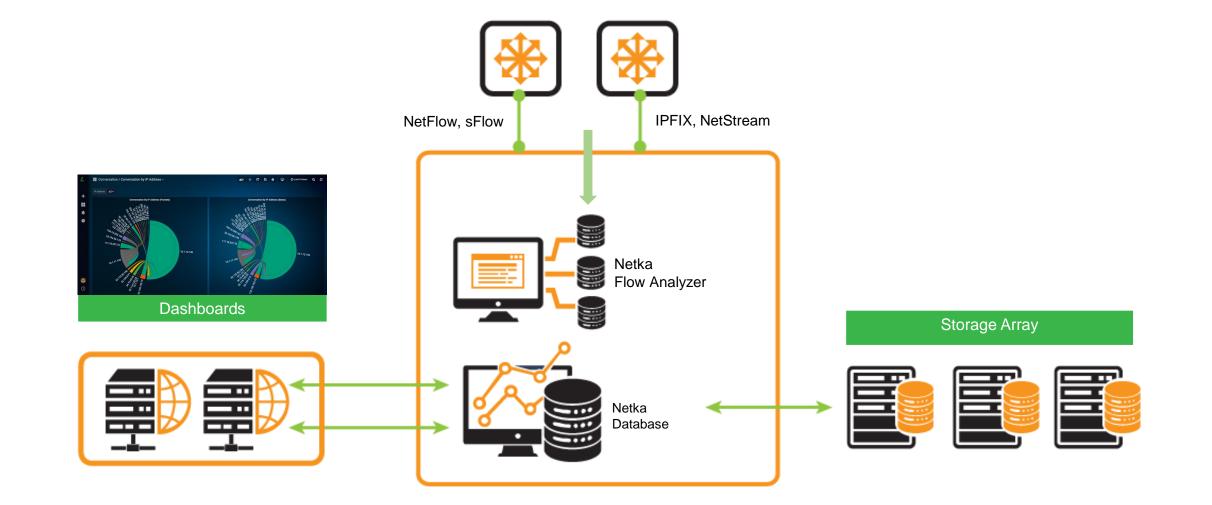


Packet Analyzer Mode Deployment



netk

Flow Analyzer Mode Deployment



netk







Real time web-based log analysis and packet analysis with data visualization



Support Security Information & Event Management (SIEM), Network Performance Monitoring & Diagnostics (NPMD)



Support log from network devices, server OS, storage, applications with Trap, Syslog, Windows Event



Scalability from medium enterprise to mobile operator



High availability with clustering & data replication



Customizable BI dashboard for big data analytics





- ✓ Centralized log management with real time web-based monitoring and analysis tool
- Real-time web based packet/flow analysis and data visualization
- Aggregates event data produced by security devices, network infrastructure, host, endpoint and applications
- ✓ Support Trap, Syslog, Windows Events with agent based and agentless technology
- ✓ Support flow analysis for NetFlow, sFlow, IPFIX, NetStream
- Support event management include event filtering, event suppression, event correlation, event action with trigger
- ✓ Customizable log parsing
- ✓ Customizable BI dashboard for big data analytics
- Integration support for third party solutions such as authentication server e.g. HPE Aruba ClearPass, Fortigate, RADIUS
- ✓ Support scalability and high availability with clustering & data replication
- ✓ Supports alerting via Email and LINE

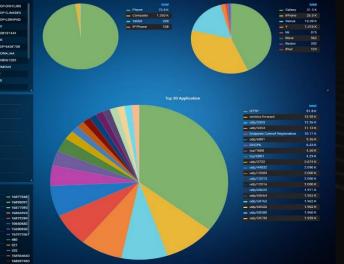
NLG Screenshots



📰 User's Overview



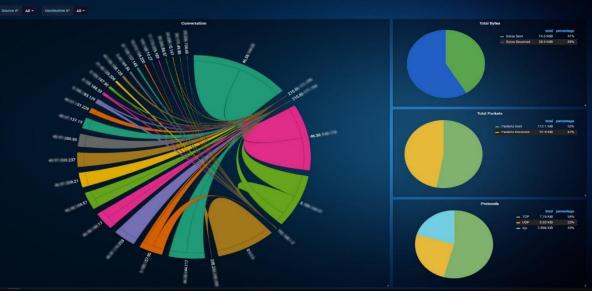
nhde ☆ 한 환 🗣 🖵 O Last 6 hours Q 🥏 Top 20 Device Type



Top 20 Device Type

netko system

Q Last 5 minutes Q 2



📰 Geo IP 🗸

ersation Overview

Source IP Source Mac Add 2020-01-07 14:56:0 KG PPR P 192.168.00.00 co:2f.71:6f.54:c3 61399 192,100,000,00 00 50 56 90 51 8 192.146 10.10 2020.01.07 14:56:0 KC PPP.PC 192 168 88 88 cc:2f71:6f:54:c3 63281 00-50-56-90 bit 8 Reserved 2020-01-07 14:561 KG-PPR-P 192.16 ec:2171:6154:e3 192.100 00:50:56:90.bf # Reserved 2020-01-07 14:56:05 KOPPRE 192 168 88 00-21-71-65-54-03 00-50-56-90-51-8 Reserved 64870 192.144 00 50 56 90 bf 8 020.01.07 14:56.0 SALE3 192.16 00 24 17 46 25 04 eserves SALE3 192.164.4 00 24 07 46 25 04 192,146,161,16 00:50:56:90 bf 8 onerver 020.01.07 14:56:0 2020-01-07 14:56:0 SALE3 192.168.88 00:24:07:46:25:04 00 50 56 90 bf I Reserved 2020-01-07 14:56:02 SALE3 192,164.00 00 24 07 46 25:04 192.10 Reserved 2020-01-07 14 56:0 SALES 192.16 00 24 17 46 25:04 192.1





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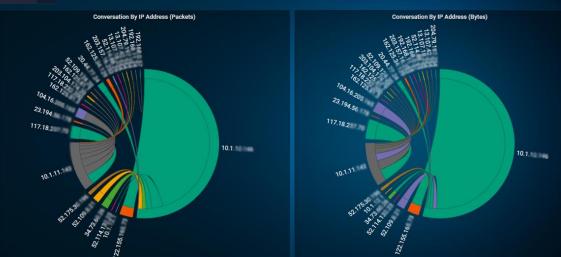
NLG Screenshots



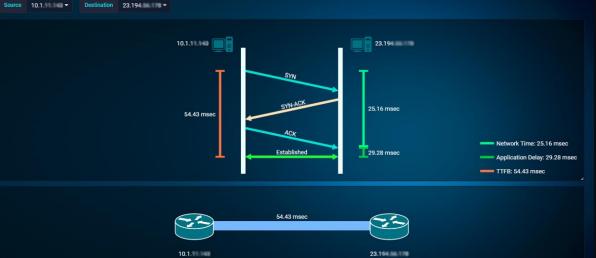
Conversation / Conversation by IP Address -

🕘 Last 6 hours 🛛 🕄 11.44 1 - ☆ ð

IP Address All -







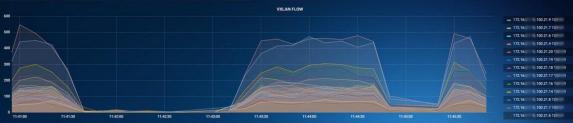
Analysis / Overlay Network -

Analysis / Source-Destination Latency -

VXLAN Destination IP VXLAN Destination Mac All -

VNI All . DPI Agent All . VXLAN Source Mac All .

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VXLAN Flow									
Time Stamp	VTEP Source IP	Client Source IP *	Client Source MAC	VTEP Destination IP	Client Destination IP	Client Destination MAC	VNI		
2019-06-25 11:45:54	10.5	172.	00:1c:73:fe:d9:21	10.5	10.100	28:99:3a:d2:22:ea	100121		
2019-06-25 11:45:54	10.5	172.	00:1c:73:fe:d9:21	10.5	10.100	28:99:3a:d2:22:ea	100121		
2019-06-25 11:45:54	10.5	172.	00:1c:73:fe:d9:21	10.5	10.100	28:99:3a:d2:22:ea	100121		
2019-06-25 11:45:54	10.5	172.	00:1c:73:fe:d9:21	10.5	10.100	28:99:3a:d2:22:ea	100121		
2019-06-25 11:45:54	10.5	172.	00:1c:73:fe:d9:21	10.5	10.100	28:99:3a:d2:22:ea	100121		
2019-06-25 11:45:54	10.5	172	00:1c:73.fe:d9:21	10.5	10,100	28:99:3a:d2:22:ea	100121		
2019-06-25 11:45:54	10.5	172.	00:1c:73:fe:d9:21	10.5	10.100	28:99:3a:d2:22:ea	100121		
2019-06-25 11:45:54	10.5	172.	00:1c:73:fe:d9:21	10.5	10,100	28:99:3a:d2:22:ea	100121		
2019-06-25 11:45:54	10.5	172.	00:1c:73:fe:d9:21	10.5	10.100	28:99:3a:d2:22:ea	100121		
2019-06-25 11:45:54	10.5	172.	00:1c:73:fe:d9:21	10.5	10.100	28:99:3a:d2:22:ea	100121		
2019-06-25 11:45:54	10.5	172.	00:1c:73.fe:d9:21	10.5	10.100	28:99:3a:d2:22:ea	100121		
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NetkaGalaxy Data Analytics



S Product Overview



NetkaGalaxy® Data Analytics (NGDA)

is a business intelligence tools with real-time interactive web-based data visualization and data analytic tools. NGDA comes with NNM dashboards, NSD dashboards and supports diversity of data sources which will be single pane of view for your total IT operation management.





NetkaGalaxy Product Features



- Provide customizable data visualization dashboard \checkmark
- Dashboard support multiple panel/view with diversity components including bar \checkmark chart, line chart, pie chart, gauge, single number, table, list, heat map, chord diagram, sunburst diagram and GIS map
- Panel/View is moveable and resizable \checkmark
- Support data sources including Elasticsearch, OpenTSDB, MSSQL, MySQL, \checkmark MariaDB, PostgreSQL
- Include optional Dashboard Module for NetkaView Network Manager \checkmark
- Include optional Dashboard Module for NetkaQuartz Service Desk \checkmark
- Support filtering by time and custom variables \checkmark
- Support unlimited dashboards, users and data sources \checkmark
- Support rule-based alerting to LINE 👳 and Email 🥬 \checkmark
- Support user levels e.g. admin, editor, viewer \checkmark
- Support authentication for local, LDAP and OAuth V

NetkaGalaxy Data Analytics



🔡 NetkaGalaxy Data Analytics NSD Dashboard / Overall Dashboard 🗸

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NetkaView





NetkaView[®] Internet of Things (NIoT)

is a platform where collect and analyze IoT sensor data from IoT gateways with real-time interactive web-based data visualization, data analytic tools and threshold-based alerts.



NetkaView **Product Features**



- ✓ Collect sensor data from IoT gateway (MQTT) and store into centralized database
- Support diversity of sensor type including temperature, humidity, AC/DC voltage, current, watt, fuel level, water level, water quality, air quality (PM2.5), light, switch, relay, contact, proximity, pressure, smoke, IR, accelerometer, motion detection, etc
- ✓ Support geo location based for IoT gateway and sensors
- Real-time and historical data visualization with customizable dashboards which support charts, gauge, table, heat map and GIS map
- ✓ Support Scalability for large number of sensors and gateways
- Support High Availability with multi-node active/active clustering & synchronized data replication
- Alerts to LINE and Email

Netka AlOps Director

Artificial Intelligence IT Operations Director





Netka AlOps Director (N-AlOps)

is a platform that combine data analytics, AI or machine learning functionality by integrating with NNM, NSD, NPA, NLG, NIoT in order to provide insight of IT operations management (ITOM) including fault and performance analysis, log analysis, IT service analysis, event correlation, predictive analytics, threat & anomaly detection, and automation.





Netka AlOps Director Artificial Intelligence IT Opertations Director Product Features



- Consolidate and process big data from all Netka products including NetkaView Network Manager, NetkaQuartz Service Desk, NetkaView Packet Analyzer, NetkaView Logger, NetkaView IoT and using AI (machine learning, pattern recognition, correlation) for
 - Detection: anomaly, threat and incident in IT •
 - Predictive: fault, performance, incident which have high chance to occur •
 - Automation: response, control, enforcement, self recovery to gain high availability of IT infrastructure and services
- Support supervised learning by creating model based on past experience \checkmark
- Support unsupervised learning techniques \checkmark
- Include the intelligence dashboard which summarize anomaly/threat/incident in your \checkmark IT with drill down feature for details. This intelligence dashboard will pinpoint what exactly problem in your IT in a single click.

Why Netka?





Product Excellence

- ✓ Total IT infrastructure and IT service management solution.
- ✓ Seamless integration for autoticketing and CMDB synchronization.
- Discover and build CI relationships automatically.
- ✓ ITIL certification.
- ✓ Multi-X (multi-products, multi-OS, multi-networking technologies).
- ✓ High speed distributed polling.
- ✓ Proactive monitoring and alerting.
- Diversity in the style of dashboard, diagrams, reports.
- Analyze and identify fault and performance issues.
- Handle and manage plenty of IT events with top-class event management tools.
- ✓ Less setup, less maintenance.
- High availability with near zero data loss and a few minute fail-over.

Service Excellence

- ✓ Onsite implementation and training till system go live.
- ✓ 7x24 technical service and support by professional and experts.
- ✓ Proactive with quarterly preventive maintenance.
- ✓ Corrective service on priority.
- Customization service at lower cost for special features.
- Services is powered and driven by NetkaQuartz, ITIL certified IT service management tool.
- Professional service which is trusted by top service providers and airports.



Experiences

- ✓ Have managed more than 10M interfaces and 300,000 nodes
- Implemented and operates in 70% of service provider in Thailand.
- ✓ Implemented and operates in multinational projects including the world's top 3 airport, No. 1 mobile operator in Indonesia, No. 1 private bank of Vietnam.



Low CAPEX & OPEX

- Low capital expenditure (CAPEX) comparing with others.
- Low annual operating expenses (OPEX) which will save cost very much in long run.



netk system

THANK YOU

Coming together is a beginning. Keeping together is progress. Working together is success.

Henry Ford

Chiang Dao, Chiangmai