Verax NMS has helped data center management staff to proactively monitor infrastructure and applications to improve SLA levels and client–experienced quality of service.

Talex is a leading provider of outsourcing and virtualization services for the largest European financial institutions such as ING Group, Santander, Crédit Agricole, KBC Group and others.

Verax NMS **reduces costs of IT service delivery, shortens downtimes and increases customer satisfaction levels** through streamlining processes of business service management, problem detection and incident resolution.

Verax NMS is used to provide proactive monitoring of:

• **Data center infrastructure:** power supplies, HVAC devices, security and physical devices, CCTV and others.

• **IT infrastructure** servers, storage, virtualization and others.

• **Enterprise applications**: databases, transaction servers, application servers and others.

• **Networks and desktop computers**.

For more information about Verax NMS, please visit our website:
veraxsystems.com/en/products/nms

Integrated management of data center and virtualization infrastructure with the Verax Service Assurance solution

DATA CENTER INFRASTRUCTURE

Talex was looking for a single, integrated solution not only for monitoring of **network infrastructure and application**s, but also for data center equipment including:

- **Power system elements** such as: uninterruptible power supplies (UPS), power generators, power supply parameter sensors and others.
- **Heating, Ventilation, Air Conditioning (HVAC)** elements such as: air conditioners, fans, temperature and humidity sensors and others.
- **Security and access control system** including: fingerprint and proximity card readers, CCTV cameras, alarm system and others.

The objective was to provide a **single management console** for all the data center aspects with a single holistic view. That would streamline the data center management process and yield significant operational savings. Since it was difficult to find a system fully supporting such a variety of devices, the Verax NMS **open plug-in architecture** turned to be a great advantage. The architecture is open enough to allow various management protocols such as RS-422/485, MODBUS or custom direct communication cards apart from standard SNMP v2/3 and command line protocols.

APPLICATIONS AND CLOUD

Another important NMS requirement was the ability to supervise (monitor and provide IT automation) the **applications for hosting and SaaS/cloud services**. This is important, as Talex hosts many financial and telecom applications (e.g. IBM WebSphere) with associated SLA-enforced uptimes.

Verax NMS provides a rich out-of-the-box plugin library for enterprise applications (databases, web servers, J2EE application servers, transaction monitors and others). A SDK (Software Development Kit) is available in order to rapidly create new, custom plugins.

The extensibility with new plugins was an important feature for Talex, as it enables monitoring of new and future services both hosted and SaaS/cloud-enabled.

Talex uses VMware as their virtualization platform, which is fully supported by Verax NMS . The NMS also allows **advanced IT automation scenarios for virtualization**, such as restarting a virtual machine (and guest system) if performance counters for an application in the machine drop below acceptable thresholds.
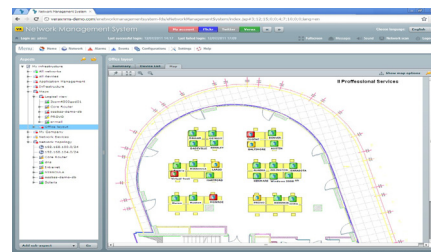
A SERVICE-ORIENTED VIEW

An important requirement was that Talex managers wanted to see their data center business as a collection of services, not a loose set of elements (hardware, applications, etc). Verax NMS allows creation of service perspectives to group particular elements constituting a particular "business service". In the course of deployment, many such views were created including:

- Data center infrastructure.
- SaaS/hosted services for particular customers.
- Internal back-office systems (e.g. CRM and invoicing, help desk, etc).
- Branch and BU (business unit) operational readiness (e.g. how much of given unit's infrastructure is up and running).
- Back office systems (e.g. CRM).
- Business processes views grouping applications and infrastructure required to execute given business process.

REPORTS AND SLA COMPLIANCE

SLA compliance and reporting were essential for the Talex business. Verax NMS reporting capabilities were used in conjunction with service-oriented perspectives to:

- **Calculate SLA** compliance and demonstrate it to Talex clients.
- Build **customer-specific reports**.
- **Automate** the report creation and distribution process.

Verax NMS contains a reporting engine (JasperReports) and a KPI (Key Performance Indicators) Dashboard that allowed both detailed reporting for operations teams as well as high level KPI-based management views.

INTEGRATION

In order to implement full automation of business processes, NMS had to be integrated with two other, in-house developed Talex systems: *Incident* and *Asset Management*. The integration took place via SOA interfaces (RMI and SOAP) exposed by Verax NMS. Verax NMS is an open system and its external interfaces are available in the standard package without any additional components or customizations.

IT AUTOMATION

Automation is the key to cost reduction in IT services. Verax NMS has extensive automation capabilities via a built-in scripted rules engine based on the industry-standard JRuby programming language. The initial set of automation rules has been provided by Verax Systems as part of the project, however vast majority of rules have been designed and implemented independently by Talex.

SUMMARY

Verax NMS has been installed at Talex NOC (NOC) as a virtual ESX image. Initial monitoring was set up in a matter of days, however the whole project including providing of additional plugins, business rules and integration took four months. At the end of the project, Verax NMS data center management solution fulfilled all Talex requirements proving to be the right choice for enterprise-grade integrated network, application and data center management.

micro-link

MICRO-LINK d.o.o. • Jaruščica 9a • 10000 Zagreb
Croatia • t. +385 1 36 36 884 • f. +385 1 36 45 850
microlink@microlink.hr • www.microlink.hr

SOLUTION SUMMARY

Computing infrastructure
IBM xSeries (Xeon) and pSeriers (Power) running VMware and the following operating systems as guests: • Linux: RedHat Enterprise Linux 4 & 5, Debian and Ubuntu • Windows: Server 2003 and 2008 • AIX

Applications
• Databases (Oracle, Microsoft SQL Server). • Application servers (Tomcat, WebSphere and others). • WWW Servers: Apache, IIS. • and others

Virtualization
VMWare vCenter 4.1

Network
Entire infrastructure is based on CISCO hardware with independent external communications links (3 fiber paths)

Security
• Vivotek and Sanyo IP cameras • SATEL Alarm system • Biostar access control

Data Center
• Emerson HPM/HPS and CRV series air conditioners • Emerson NX series and • PowerWare power supplies • Deepsea 5520 power generators • Lovato digital analyzers

Integration
Helpdesk and trouble ticketing – SOA based.

verax
systems

Verax Systems Corp. is a provider of software enabling end-to-end IT & Telco service delivery, assurance and compliance. We offer a comprehensive set of integrated applications covering the entire lifecycle from service definition through provisioning and monitoring to billing.

Worldwide locations

Plano, TX (U.S.A.)
Newton Abbot (England)
Dublin (Ireland)
Poznań (Poland)
Munich (Germany)

www.veraxsystems.com