IBM Software Partner Academy Program

Telefonkonferenz am 12. Juni 2009

Vorstellung der Tivoli Netcool Suite als wichtiger Bestandteil einer integrierten IBM Service Management Lösung

Alexander Besemer

Channel Brand Sales Tivoli

Agenda:

- Service Management und aktuelle Wirtschaftslage
- Welchen Mehrwert liefert Tivoli Netcool für ein ingetriertes Service Management?
- Die Tivoli Netcool Suite im Überblick
  - Netcool Omnibus
  - Netcool Impact
  - Tivoli Network Manager IP (ITNM)
  - Tivoli Business Service Manager (TBSM)
- Q & A

Was ist IT- Service- Management?

IT-Service-Management (**ITSM**) bezeichnet die Gesamtheit von Maßnahmen und Methoden, die nötig sind, um die bestmögliche Unterstützung von Geschäftsprozessen (GP) durch die IT-Organisation zu erreichen…

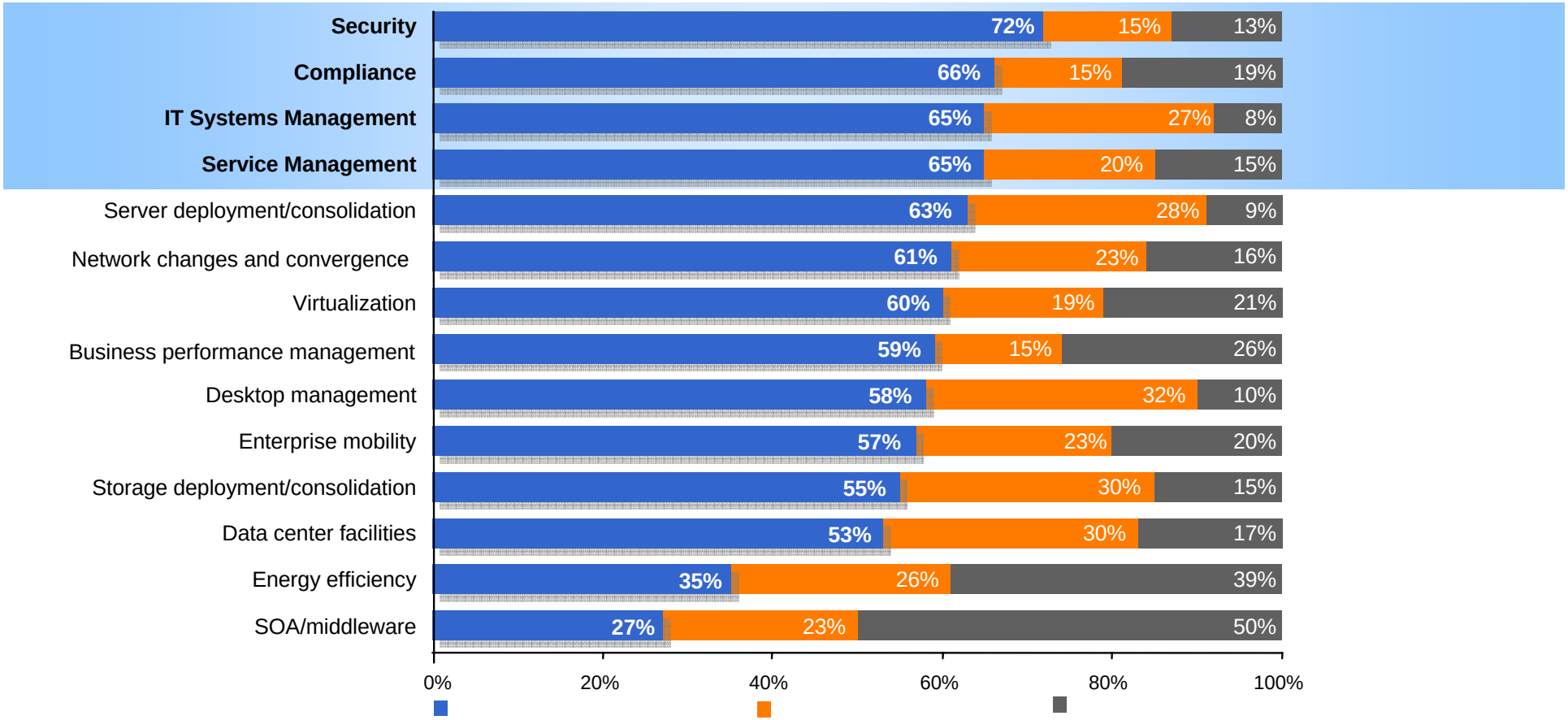
Quelle: Wikipedia

Was ist ITIL?

- Die **IT Infrastructure Library** (**ITIL**) ist eine Sammlung von *Good Practices* in einer Reihe von Publikationen, die eine mögliche Umsetzung eines IT-Service-Managements (ITSM) beschreiben und inzwischen international als De-facto-Standard hierfür gelten. In dem Regel- und Definitionswerk werden die für den Betrieb einer IT-Infrastruktur notwendigen Prozesse, die Aufbauorganisation und die Werkzeuge beschrieben.

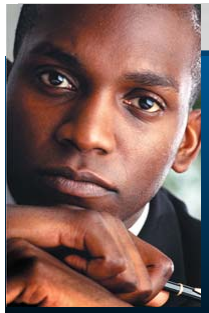
Quelle: Wikipedia

Die Top Prioritäten von IT Projekten

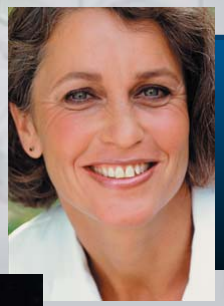


Quelle: IBM Market Intelligence, *Service Management In an Uncertain Economy*, January 2009
Erste US-Ergebnisse, vorgestellt auf der weltweiten Tivoli Anwenderkonferenz Pulse 2009.

Die Herausforderungen unserer Kunden ?



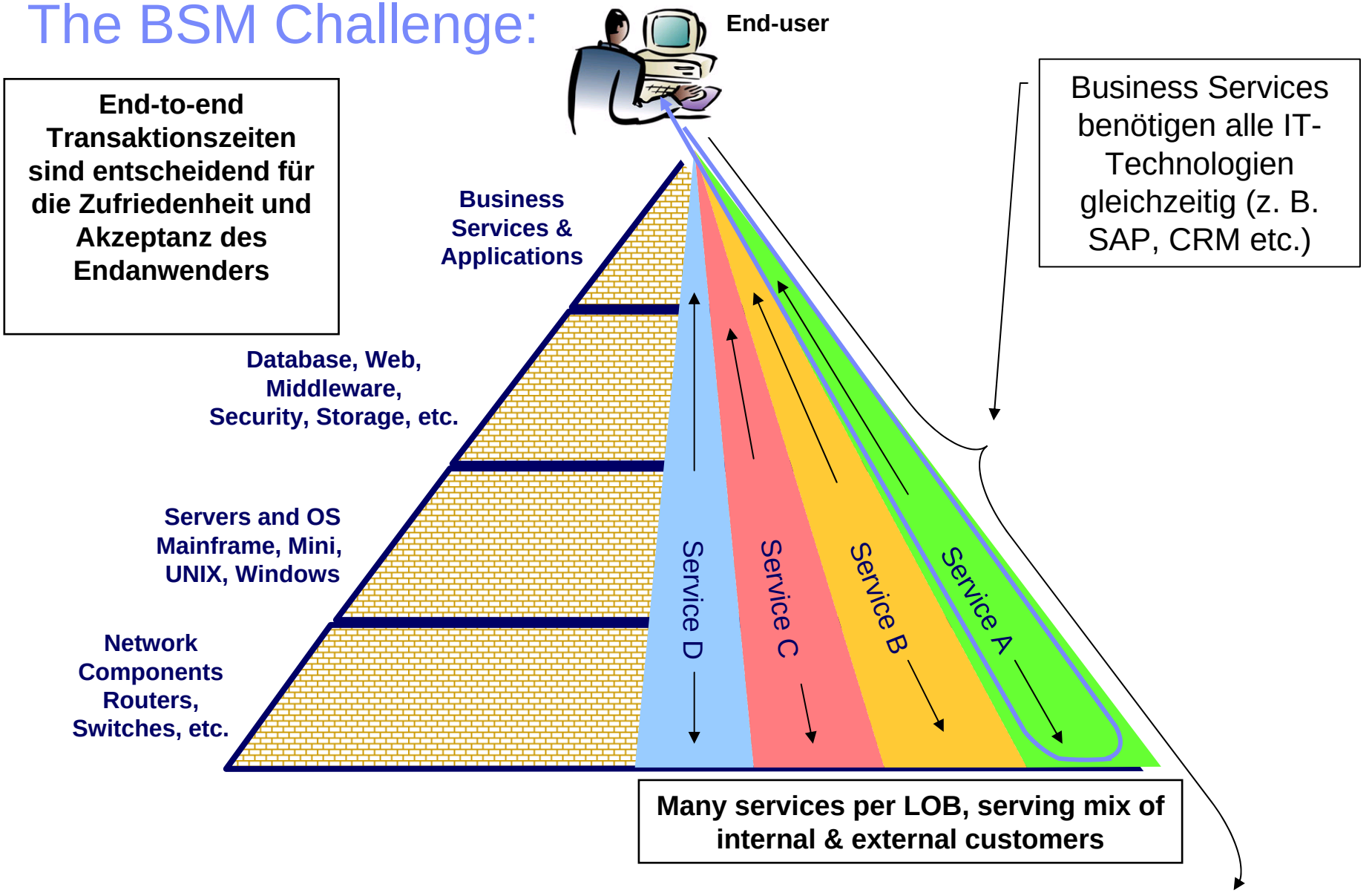
Wie verbessere ich die Verfügbarkeit in einer komplexer werdenden IT Infrastruktur?



Wie kann ich vorhandene Informationen nutzen um die operative Effizienz und Effektivität zu verbessern?

Wie verstehe ich besser den Zusammenhang zwischen wichtigen Geschäftsprozessen und der IT- Infrastruktur?

The BSM Challenge:



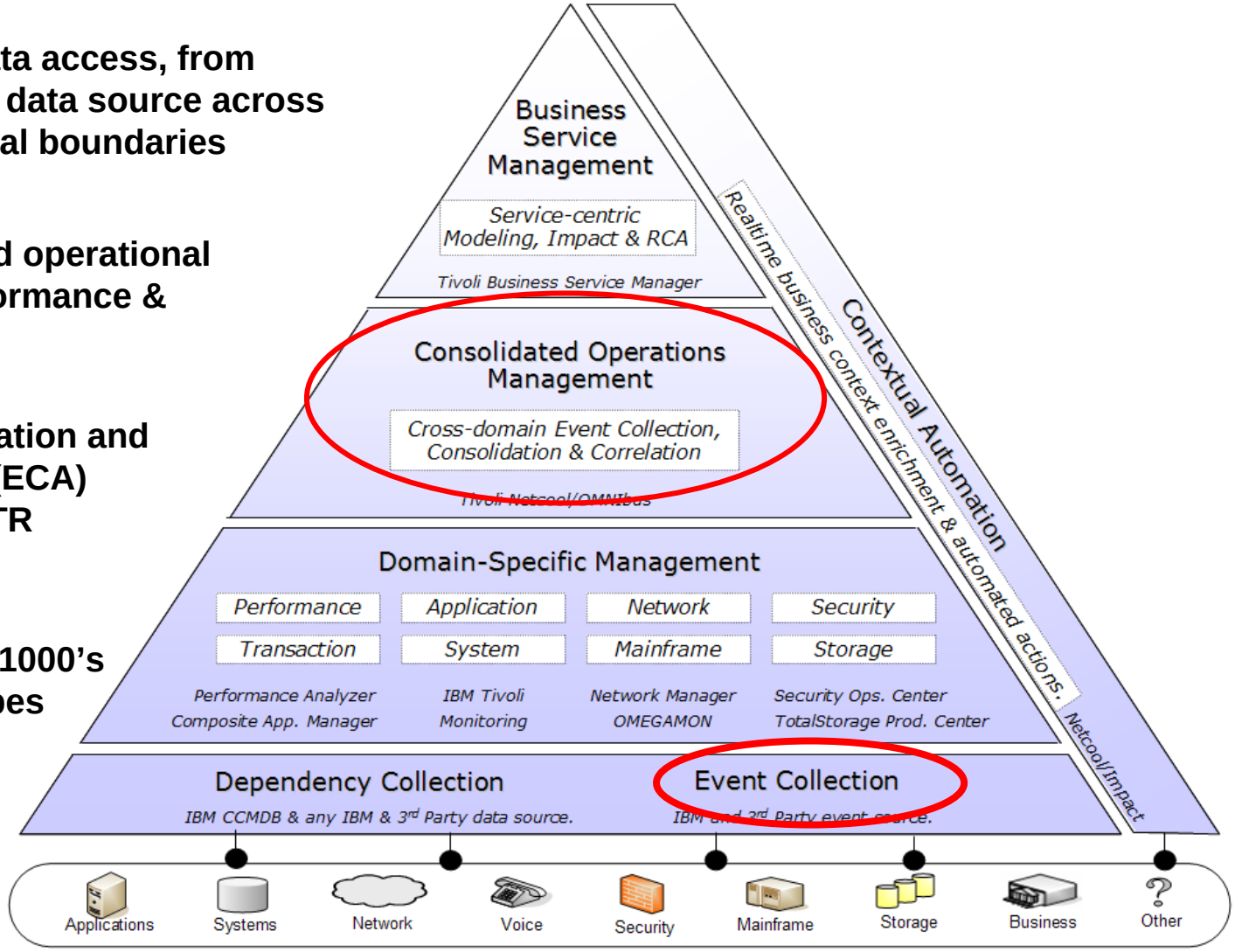
Konsolidiertes Operations Management mit Tivoli Netcool

Real-time data access, from virtually any data source across organizational boundaries

Consolidated operational view of performance & availability

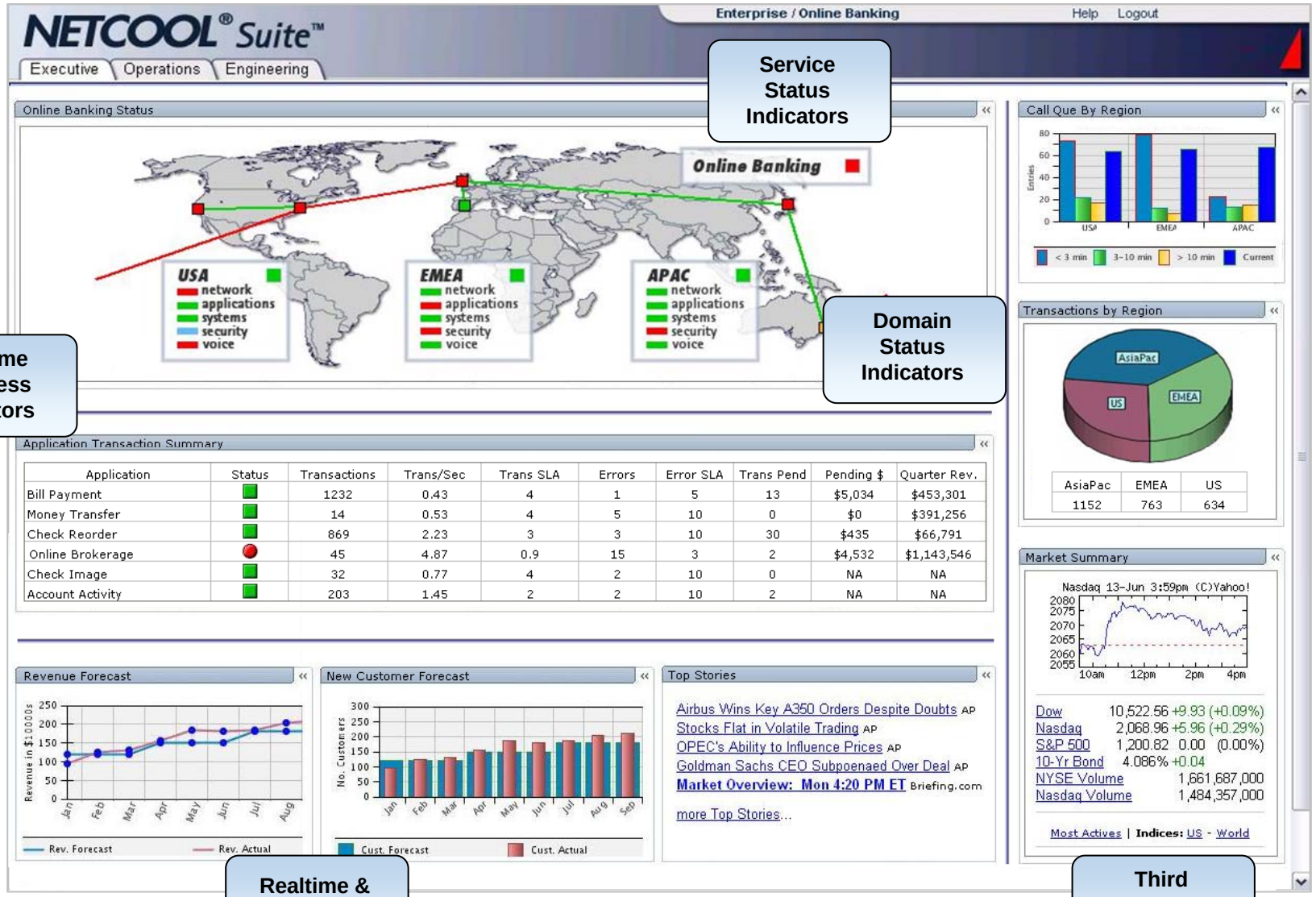
Event correlation and automation (ECA) reduces MTTR

Complete coverage of 1000's of device types



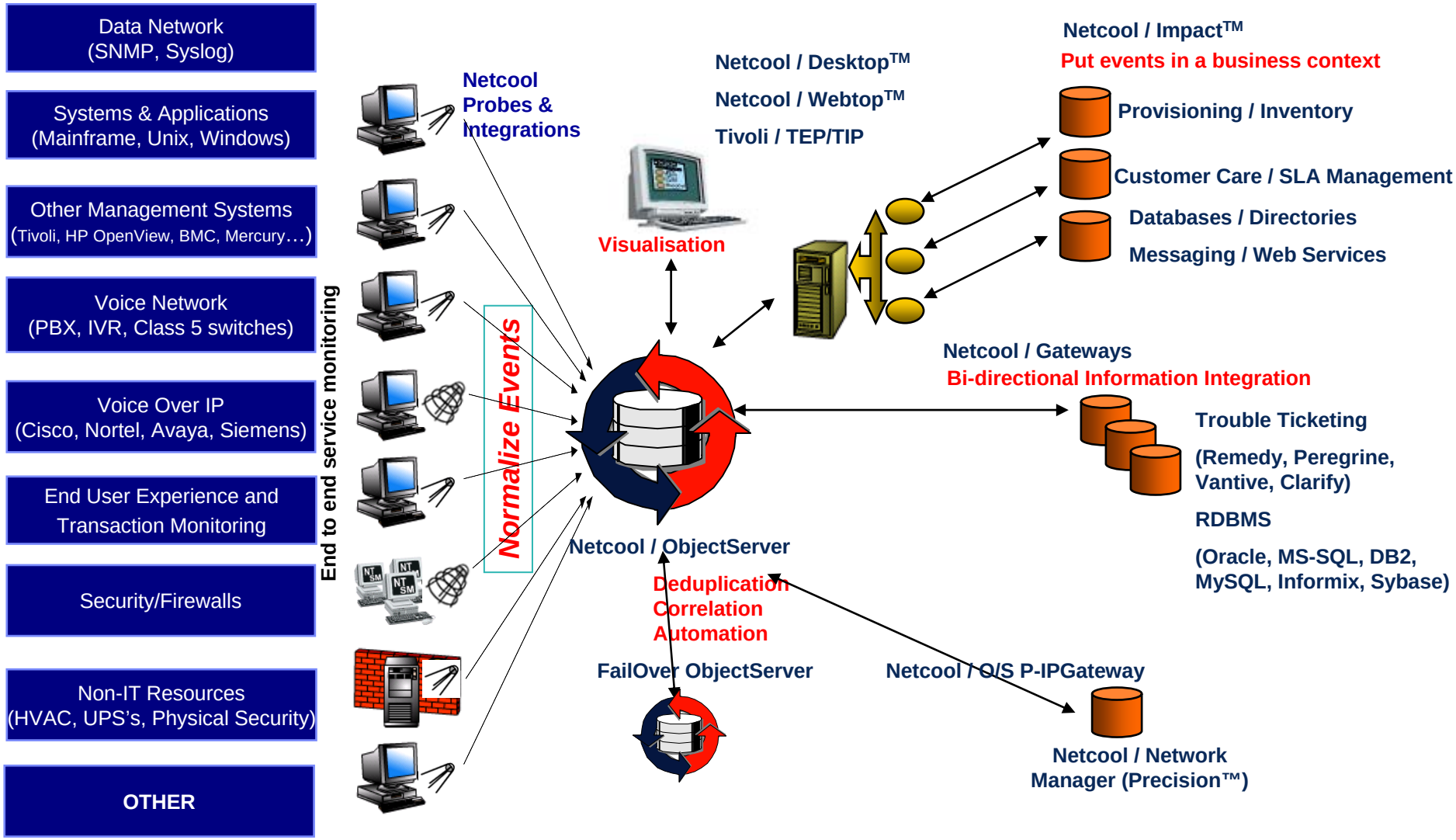
Note: All layers are inclusive of distributed and mainframe.

Service Dashboard

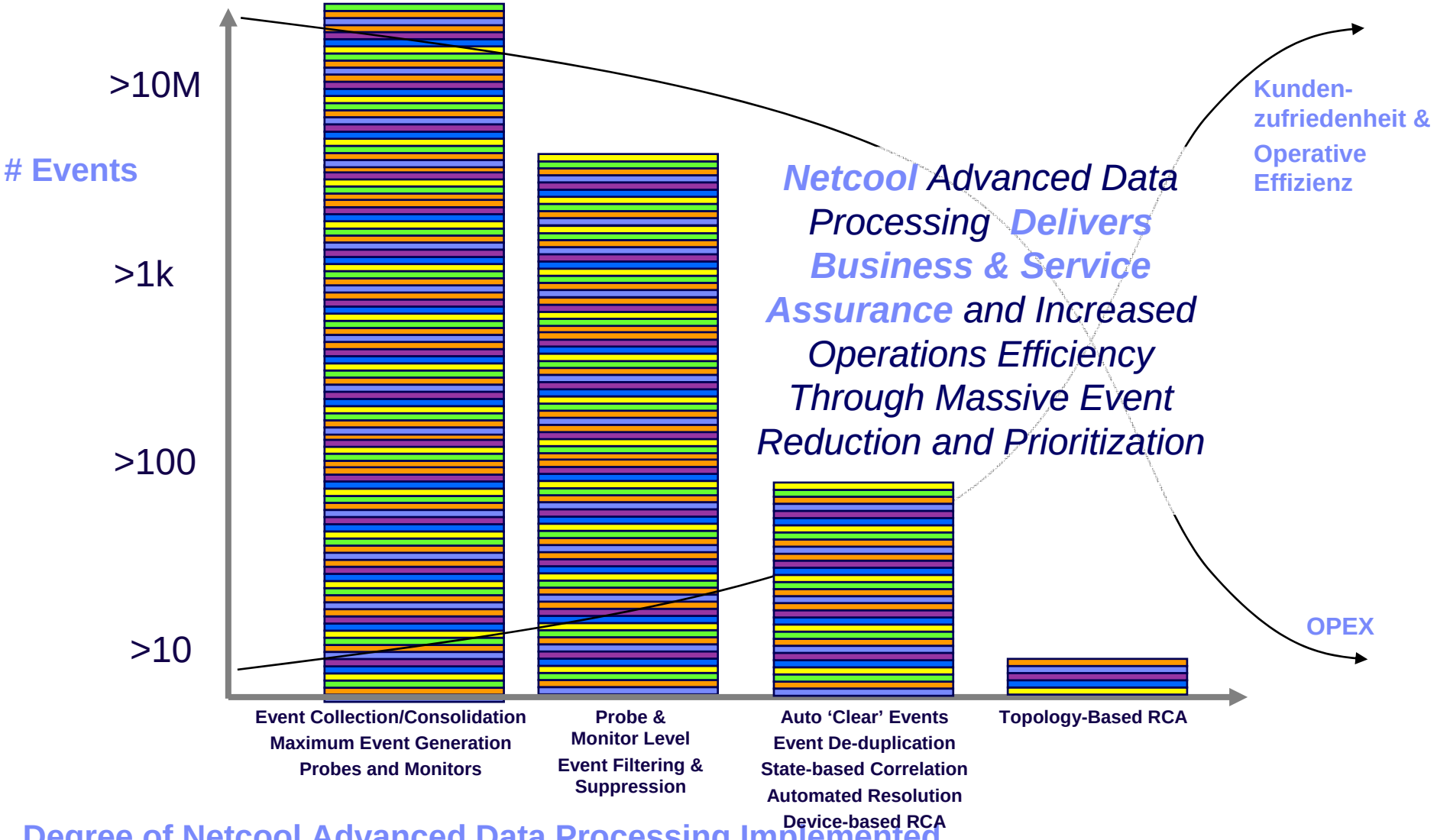


Netcool/OMNIbus
Event Management
Manager Of Managers

Netcool Event Management Architecture



Netcool Event Management - Summary: Dramatic Business Bottom-Line Impact



OMNIbus integrations

Netcool Knowledge Library SNMP support (175 MIBs), including:

- Bridge MIB RFC 1493
- MIB-II RFC 1213/2096
- RMON MIBs
- OSPF MIB
- BGP MIB
- ifStack MIB
- VRRP MIB
- ATM Forum MIB RFC 1695 for ATM switches
- ATM Forum PNNI (Single Pier) MIB
- ATM Forum ILMI MIB
- ATM Forum LANE Client MIB
- Frame Relay MIB RFC 1315
- FDDI MIB RFC 1512
- 31 different Cisco MIBs (including MPLS VPNs)
- 21 Nortel MIBs
- 6 different Extreme Networks MIBs (inc VLANs)
- Juniper MPLS VPN support

Probes (~ 250):

- ADC Metrica NPR
- Airspan Sitespan
- Alcatel 1000 E10/OCB-283
- Alcatel 5620 Logfile
- Alcatel 5620 NM CORBA
- Alcatel 5620 SAM
- Alcatel AWS
- Alcatel DSC Dex per Class 5 Voice Switch
- Alcatel MT20
- Alcatel NMC 1300
- Alcatel OMC-R (3GPP)
- Alcatel OMC-R (Q3 Interface)
- Alcatel OMC-R (Terminal Server Connection)
- Alcatel OMC-S
- Alcatel OS-OS
- Alcatel S12
- Alcatel SMC 1360
- Aprisma Spectrum
- Arcom Environmental Monitoring System
- Ascom CLOG
- Ascom PANMAN
- Ascom TimePlex TimeView/2000
- Avaya Definity G3 per switch
- BMC Patrol
- CA Unicenter TNG
- Castlerock SNMPC
- Comverse
- Dantel PointMaster
- DAWCOM
- DEC VAX Operator Communication Facility
- ECI Lightsoft CORBA
- ECI/eNM
- ECI/Telematics
- Email Probe
- Enterprise SNMP EMS Probe
- Ericsson 3GPP (OSS-RC/RANOS/CNOS)
- Ericsson ACP 1000
- Ericsson AXE 10 per Class 5 Voice Switch
- Ericsson BNSI
- Ericsson MD110
- Ericsson RANOS (3GPP)
- Ericsson Xmate
- Exec Probe
- Fibermux LightWatch
- FIFO
- FLEXR Probe
- Freshwater Sitescope
- Fujitsu FENS
- Fujitsu ICS Probe
- Fujitsu Netsmart
- Generic Logfile Probe
- Generic trapd/syslog capture per device
- Glenayre VMS Probe
- Hewlett Packard IT/Operations Center
- Hewlett Packard OpenView NNM
- Hewlett Packard Vantage Point Operations
- Cisco WAN Manager
- CMS400 Probe
- Compaq Tandem
- Informix
- Ion Networks Sentinel 2000
- KBU Fivemere
- Kodiak EMS
- Lucent 5ESS - Class 5 Voice Switch
- Lucent Agile ATM
- Lucent ECP
- Lucent ITM-NM/OMS
- Lucent ITM-SC
- Lucent JMTE (CORBA)
- Lucent Naviscore
- Lucent NFM
- Lucent OMC (CORBA)
- Lucent OTAF/SDHLR
- Lucent Wavestar SNMS

Gateways (~ 30):

- Bi-Directional
- Flat File
- HP OpenView
- IBM DB2 6.2
- IBM DB2 7.1
- IBM Informix 9.20
- MS SQL
- ObjectServer 3.5
- Remedy 7
- Siebel
- SNMP
- Socket
- ObjectServer v7 Unidirectional
- Oracle 10.1.0.2 EE & SE
- Peoplesoft Vantive 8

Vendor Alliances (~25):

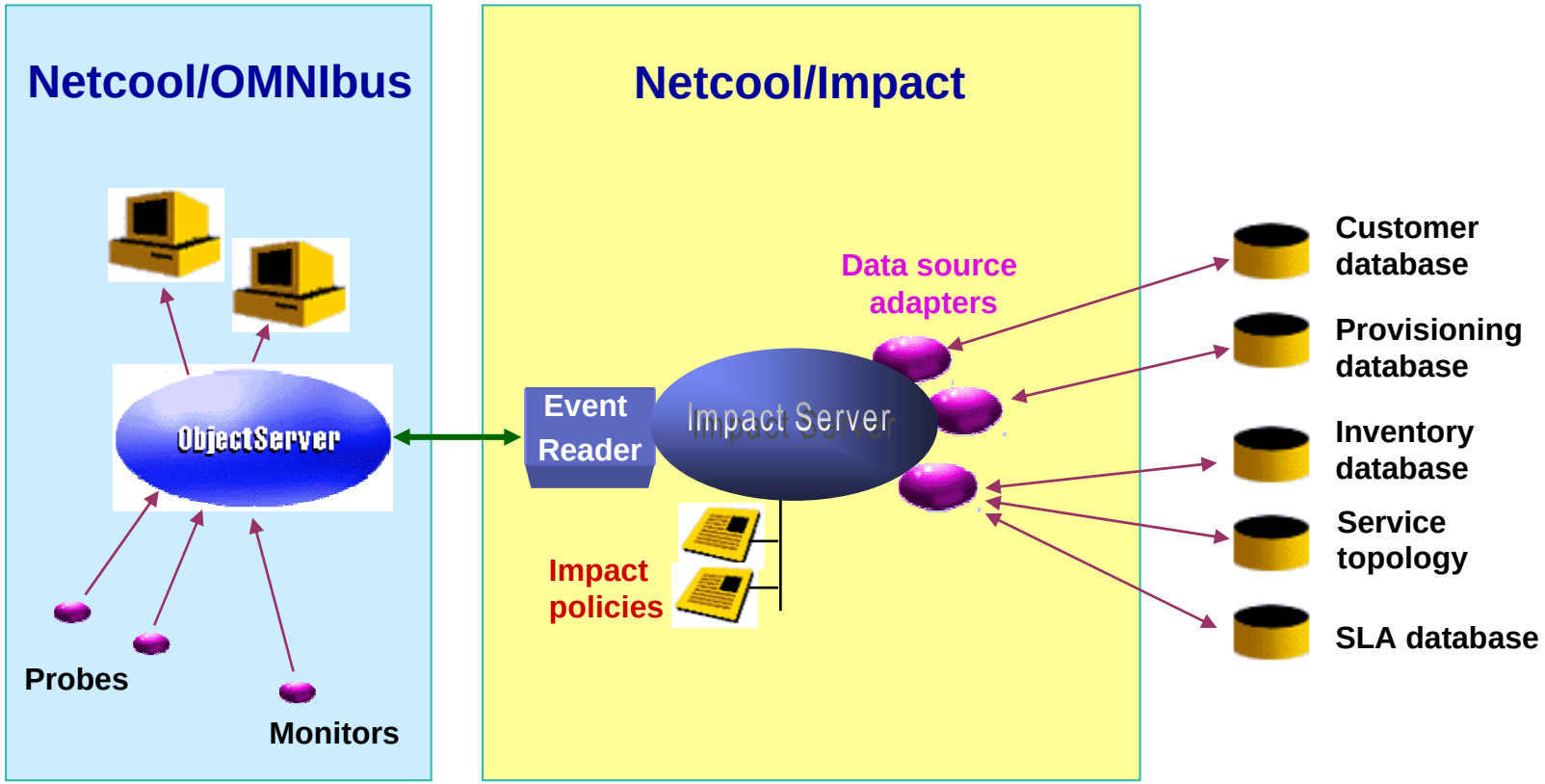
- **Alcatel**
- **Motorola**
- **Siemens**
- **Ericsson**
- **Tellabs**
- **Marconi**
- **Lucent**
- **Nokia**
- **Huawei**
- **Fujitsu**
- **Ciena**
- **Cisco**
- **Juniper**
- **Checkpoint**
- **Cramer**
- **Metasolv**
- **SAP**
- **Xtera**
- **Voyence**

…and if you need to manage something *<u>really unusual</u>*, OMNIbus probes can be developed and deployed quickly to enable you to manage virtually anything!

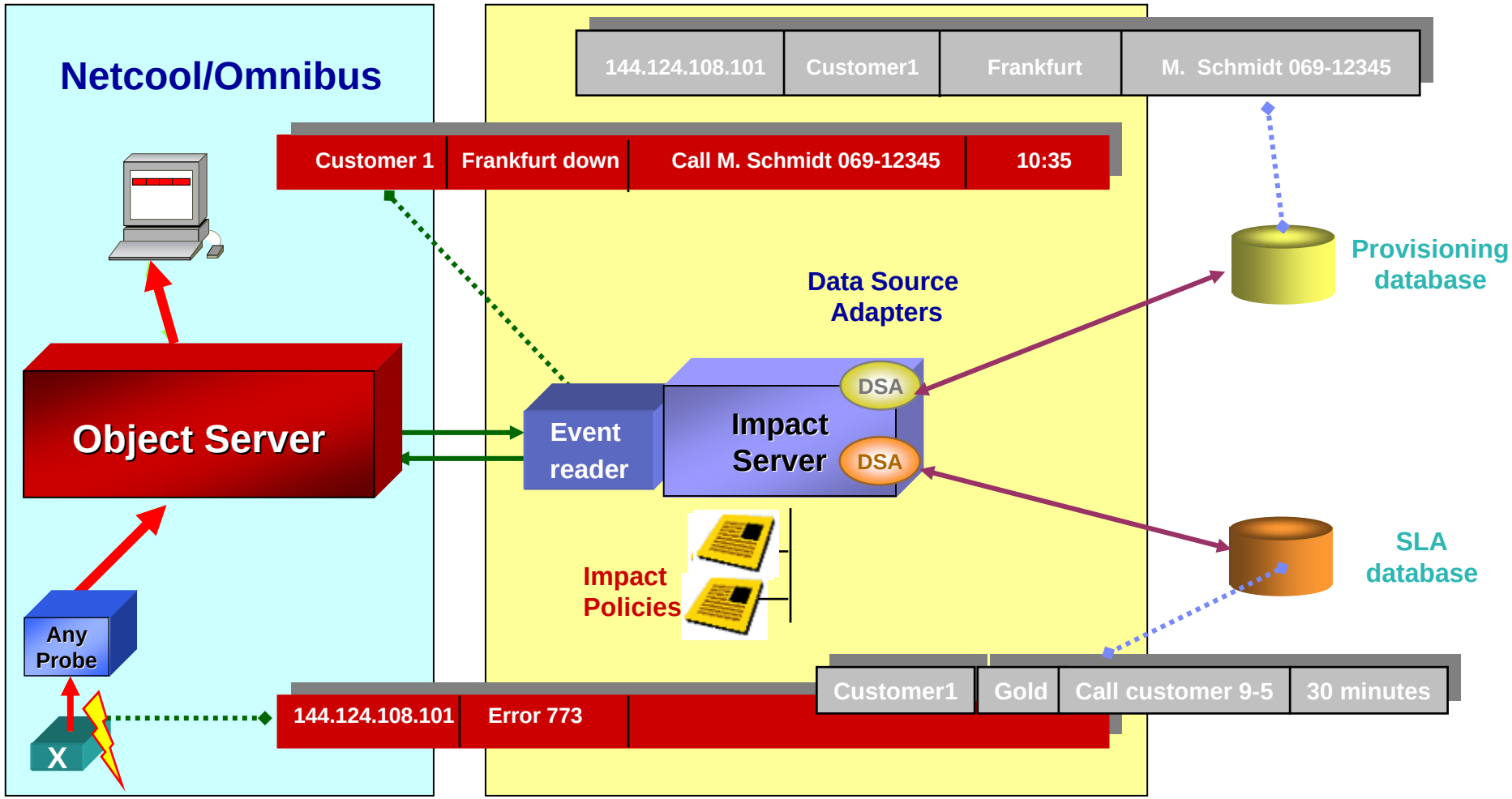
Tivoli Netcool Impact

Netcool/Impact

- High sophisticated and high-performant Event Manipulation Engine
- Impact does event Enrichment, Aggregation, Correlation, Suppression etc.



Event Lifecycle - Example



Site down

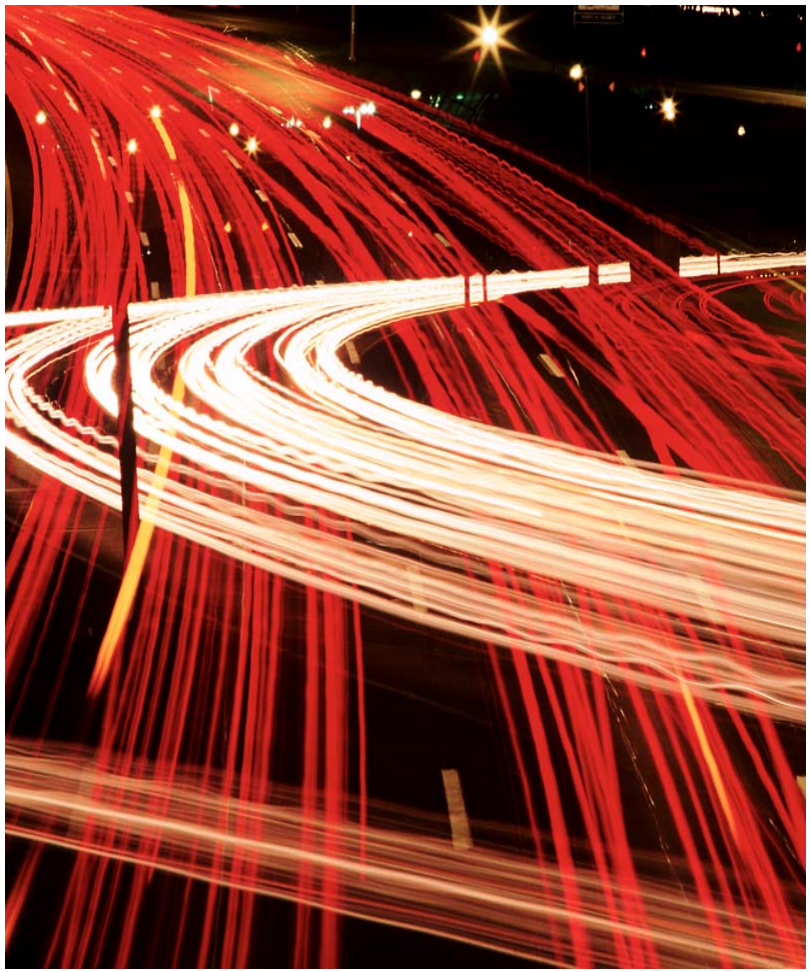
Summary

- **Impact stellt dem “Network Operation Center” eine “Business Sicht” zur Verfügung**
  - “Versteht” den Einfluss von Fehlern auf den Endanwender
  - Reduces noise and highlights the real problems
  - Manages problems according to business effect
  - Allows the NOC to be more responsive
- **Impact managed Ereignisse entsprechend den “business rules”**
  - Ensures that the correct operators see service-affecting events
  - Ensures greater consistency in the management of events
- **Impact liefert flexible Verbindungen zu externen Systemen**
  - Leverages corporate knowledge in inventory, provisioning, and customer relationship management (CRM) systems

Tivoli Network Manager IP
Network Management

Tivoli Network Manager IP Edition

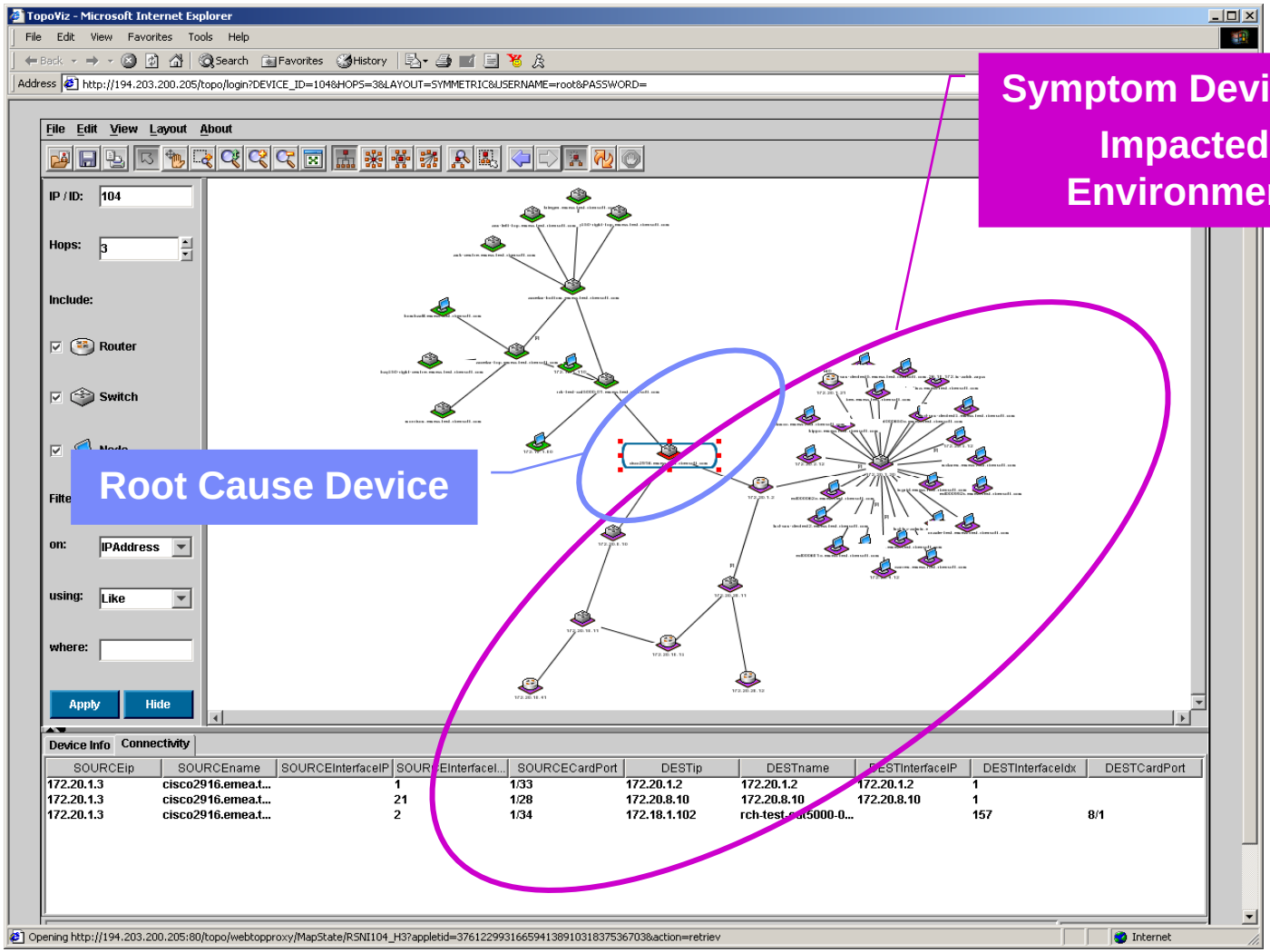
- **Network Manager IP Edition ist ein Netzwerkmanagement Produkt:**
  - Automatisierte Netzwerk Erkennung & Modellierung
  - Topologie-basierte Root Cause Analyse Funktionalität
  - Netzwerk-Visualisierung



Network Manager IP Edition
Layer-2/3 Discovery

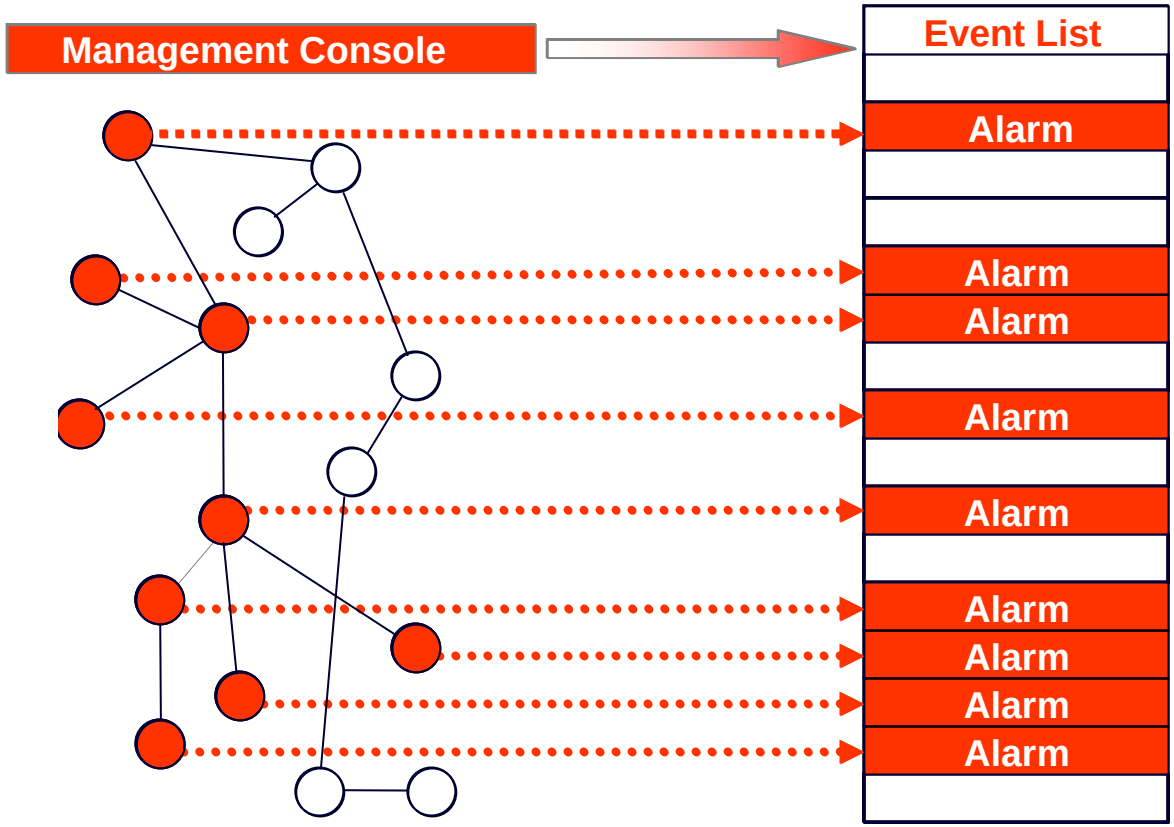
- **Automatisierte Discovery aller Layer-2/3 Netzwerk-Einheiten, Interfaces & Layer-2/3 Verbindung**
  - Netzwerk Technologien: IP, Ethernet, CDP, ATM (ILMI & PNNI), Cisco Frame Relay, HSRP, VLAN, static NAT, MPLS IP VPNs, ...
  - Unterstützung verschiedenster Netzwerk-Vendors
    - **Unterstützt RFC MIBs**
    - **Spezielle Unterstützung für mehrere Hersteller MIBs; z. B. Cisco, Juniper, Extreme … etc.**
  - Auto-Discovery konstruiert ein Modell mit Netzwerk-Verbindungen
    - **Durch Re-Discovery ständig aktuell gehalten (inklusive Event-gesteuerter 'partieller Re-Discovery')**
  - Ausgelegt für die Anforderungen eines Next Generation Network Management (MPLS etc.)

IBM Tivoli Network Manager for IP Networks
Connectivity Based Root Cause Analysis



IBM Tivoli Network Manager for IP Networks
Connectivity Based Root Cause Analysis

By understanding the relationships between devices it becomes possible to understand the relationships between the events that are originating from those devices



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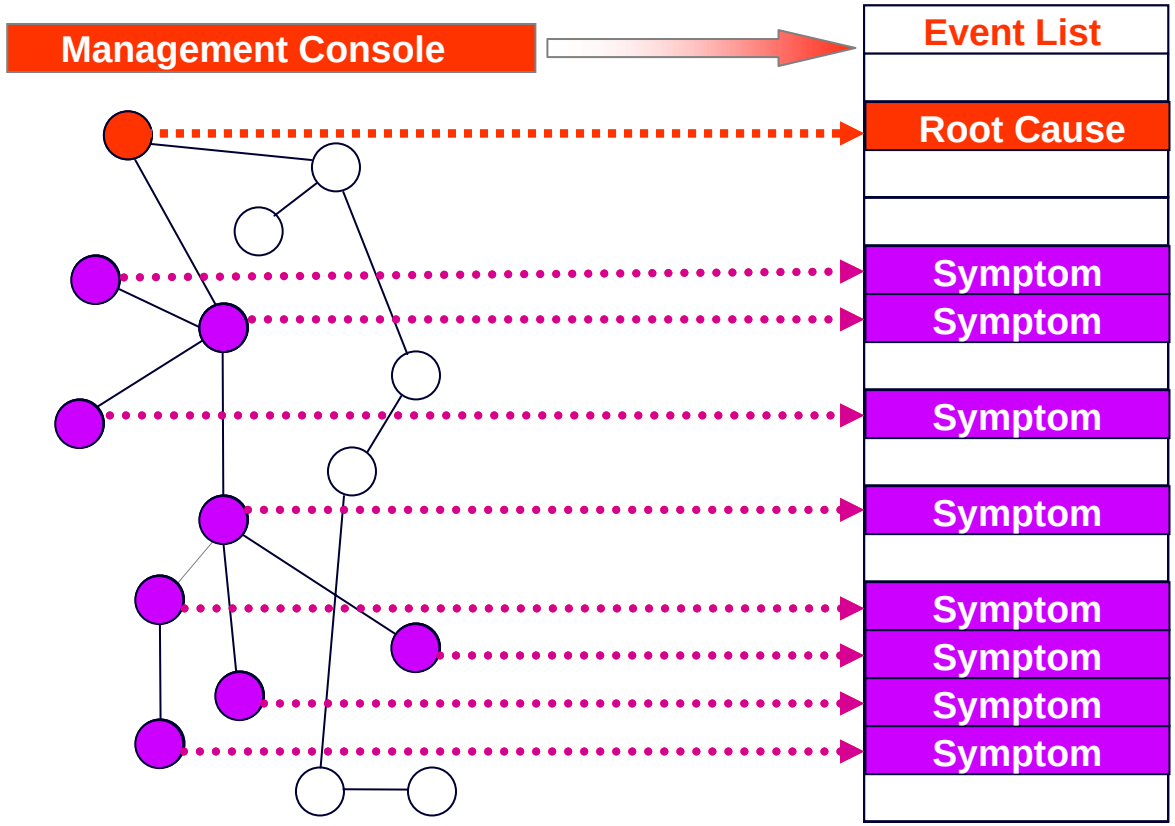

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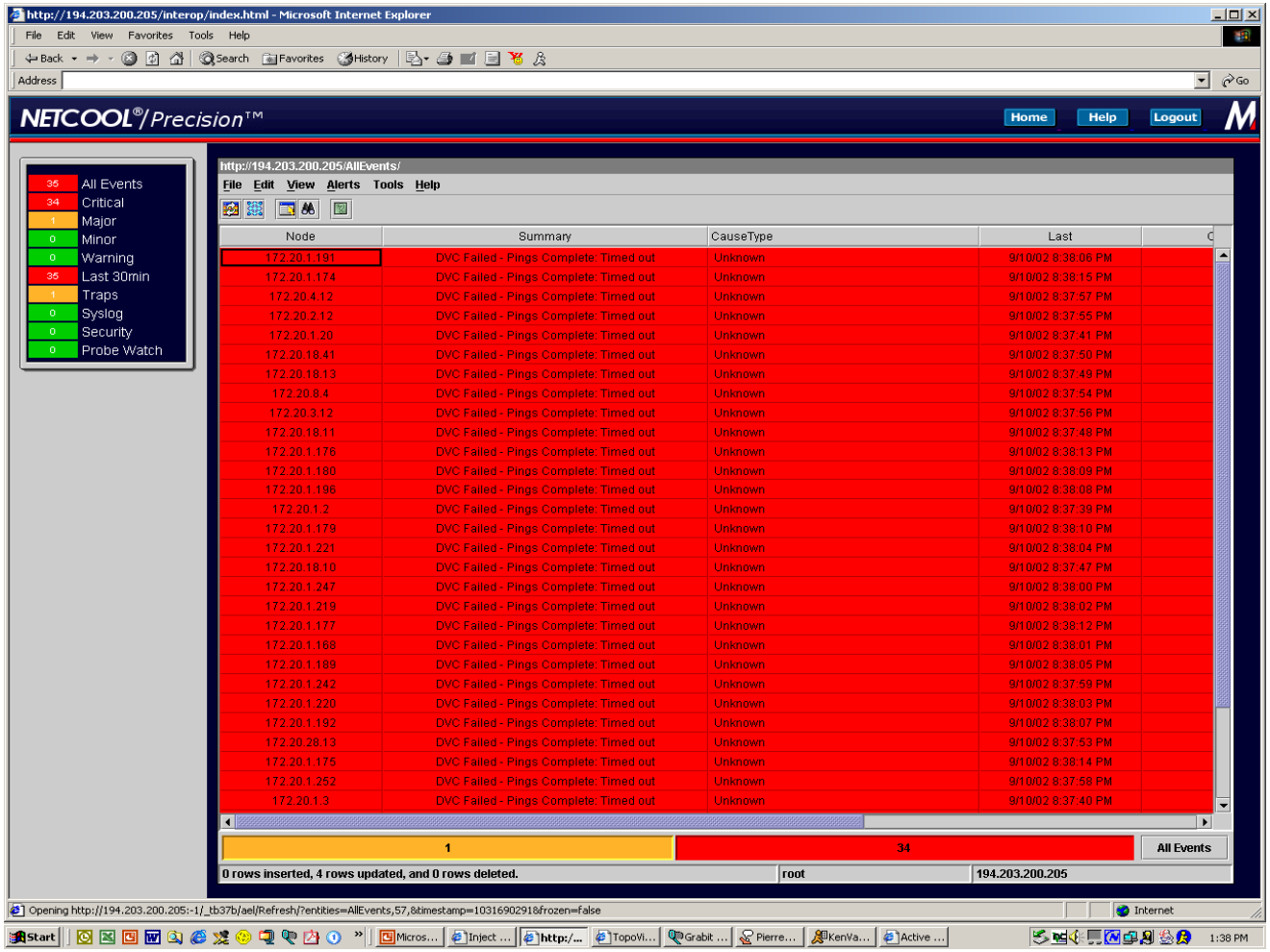

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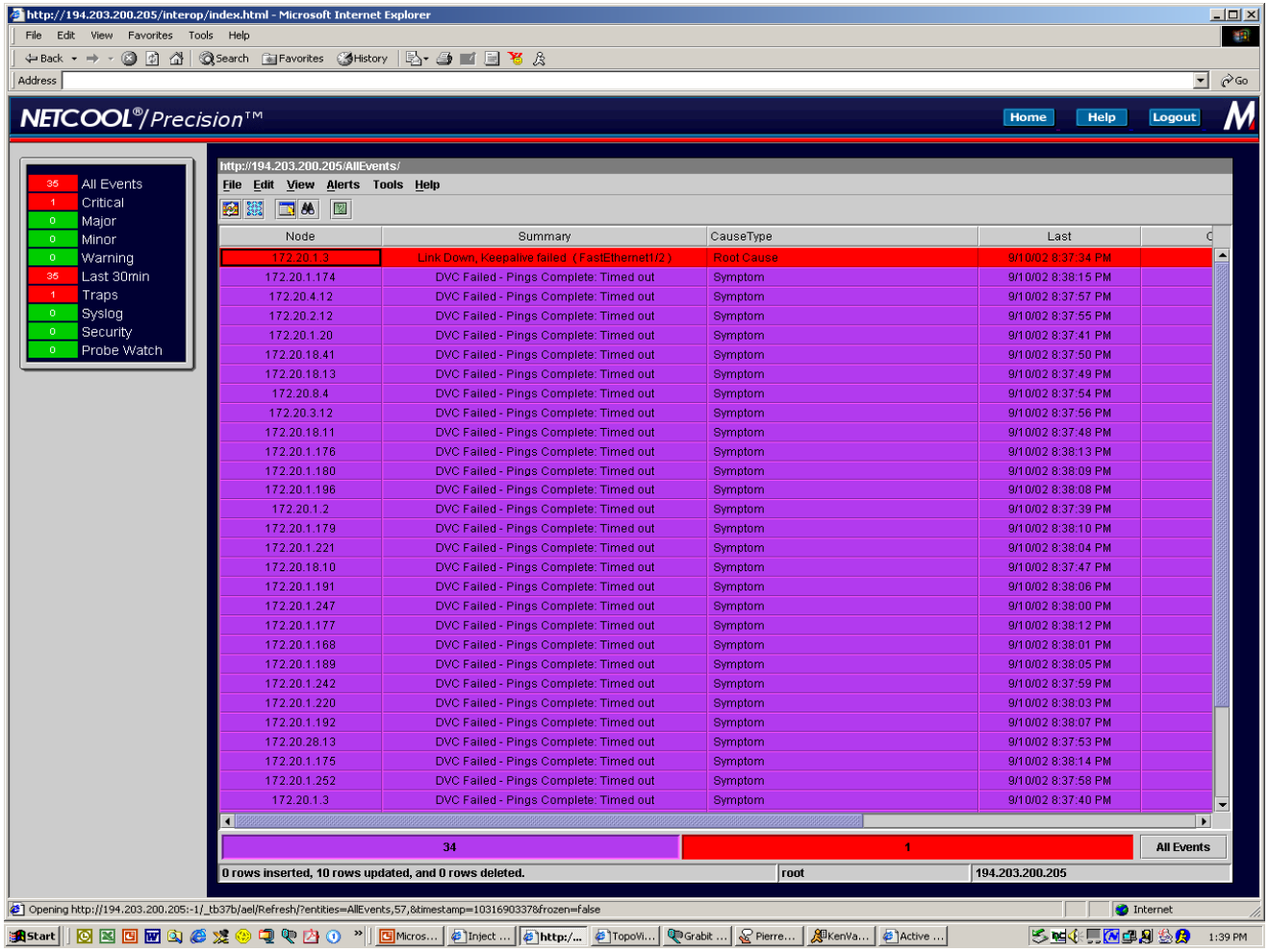
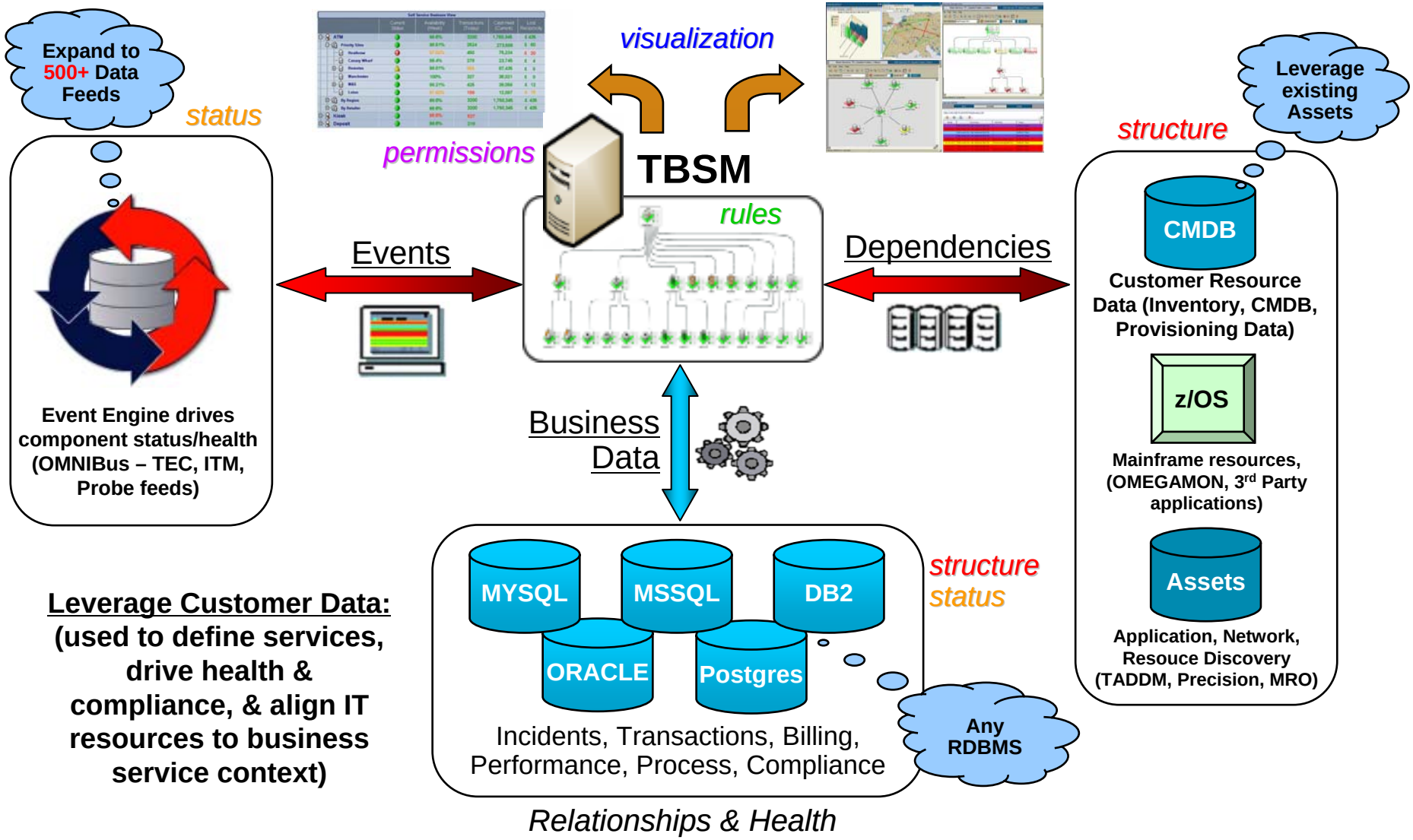


Tivoli Business Service Management (TBSM)

Business Service Management

TBSM 4.2 – High Level Architecture

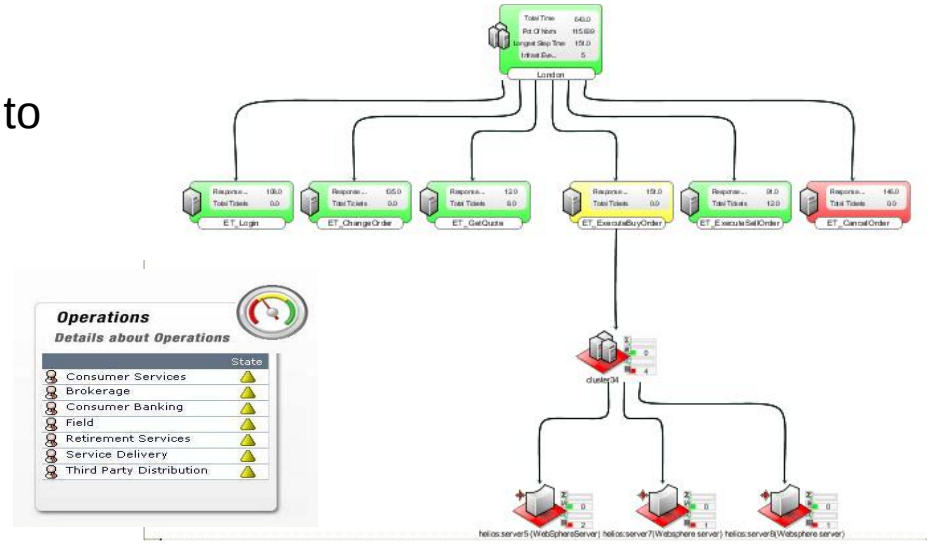


Leverage Customer Data:
(used to define services, drive health & compliance, & align IT resources to business service context)

Tivoli Business Service Manager – TBSM 4.2

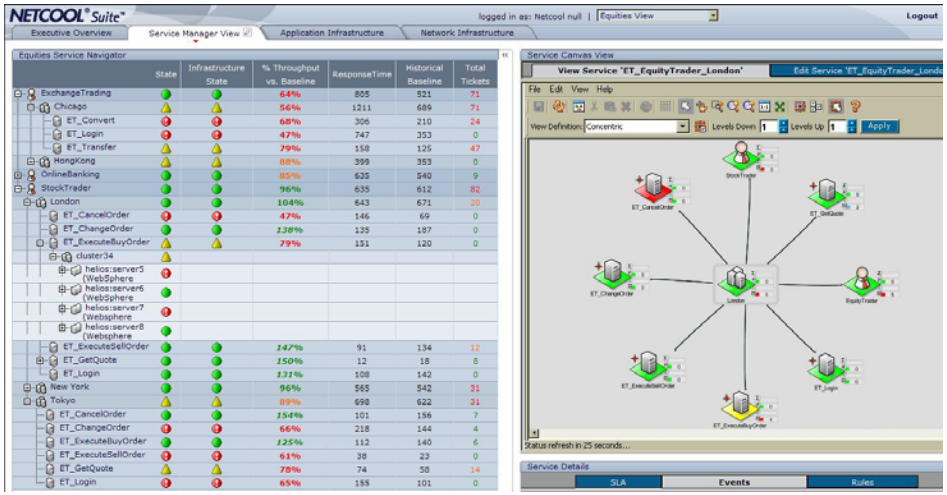
TBSM is Tivoli's Service Dashboard

- TBSM enables a service-centric approach to management



Capabilities include:

- Model any service
- Track real-time Service Level Agreements
- Custom business views & dashboards
- Service status/health from external sources
- Advanced numeric rules for calculations
- Dynamic key performance indicators (KPIs)
- Service definition from CMDB/inventory
- Tight BSM product integration:
  - ITCAM for ISM & ITM
  - TADDM, TSLA
  - OMNIbus & TEC

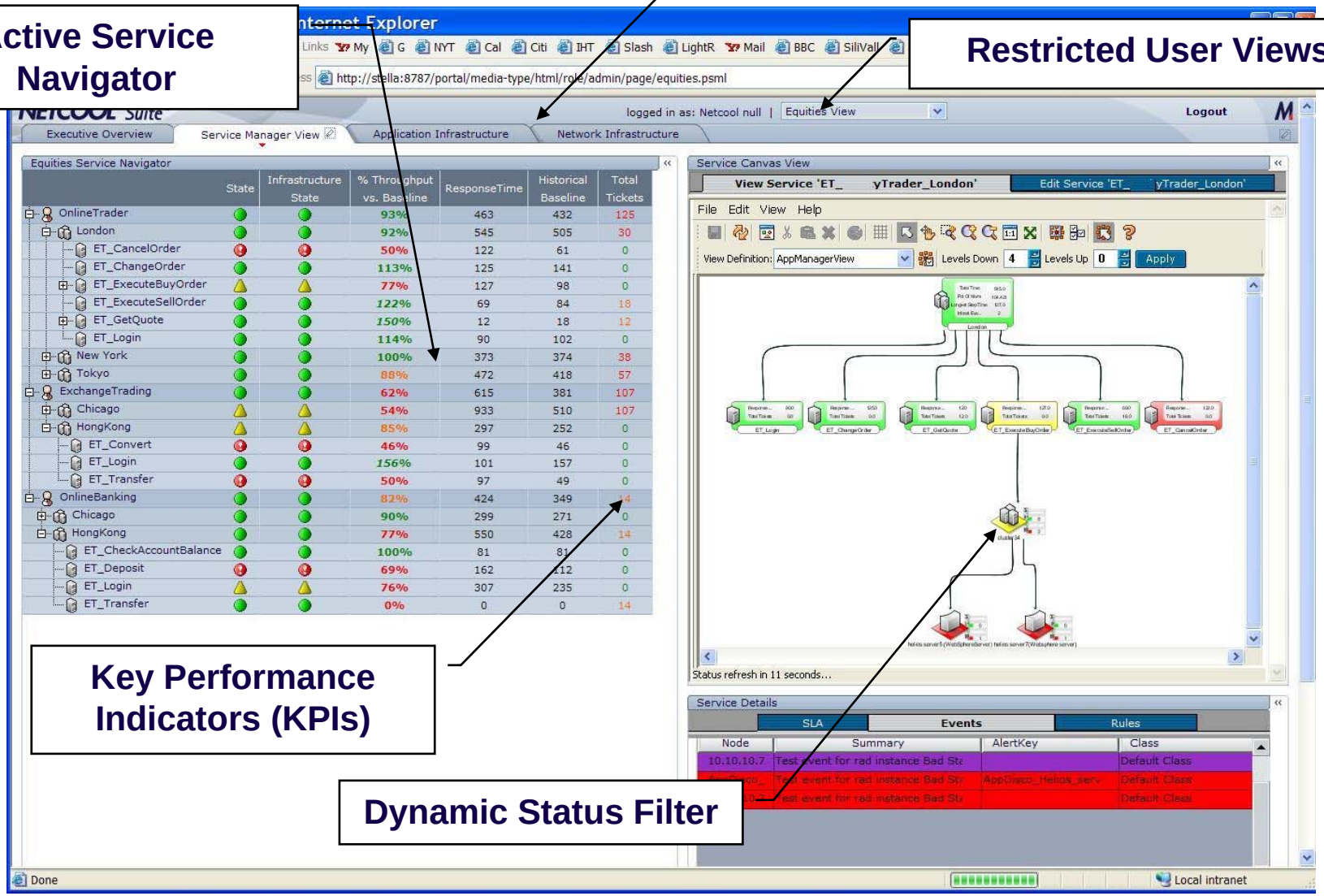


TBSM 4.2 Web-based Dashboard

Multi-View Navigation

Active Service Navigator

Restricted User Views



Key Performance Indicators (KPIs)

Dynamic Status Filter

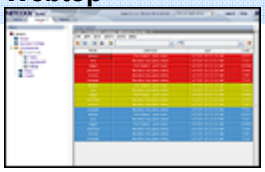
INTEGRATED VISUALIZATION

Tivoli Integration Portal (TIP)

Common Application Server

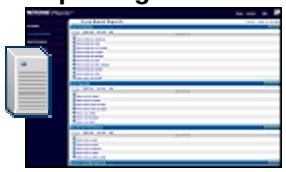
- Webtop
- TBSM
- Network Manager
- Tivoli Common Reorting

Webtop



Web based event views

Tivoli Common Reporting



Historical Reporting

ObjectServer

TEC

TDW

Archive DB

Gateways

3rd Party Trouble Ticketing

OMNIbus

Desktop

ObjectServer

TBSM4.x

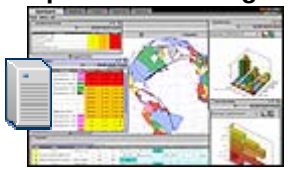
Business & Service Modeling

Data Fetchers

- Middleware
- Web Services
- Applications
- DBs
- etc…

DSAs

Tivoli Security Operations Manager



Security Management

Impact

Advanced Correlation & Integration

Probes

- SNMP Traps
- Logs
- TCP Socket
- 3rd party APIs
- TEC
- etc…

Monitors

- HTTP
- LDAP
- SAA
- TFTP
- TCP Port
- etc…

Proviso

Performance Management

System Agents

- ITCAM (ISM)
- ITM (ASM)

Events

Synthetic Transactions

Polling

IT Infrastructure

- Devices
- Systems & Applications
- 3rd Party EMSs / Agents
- etc…

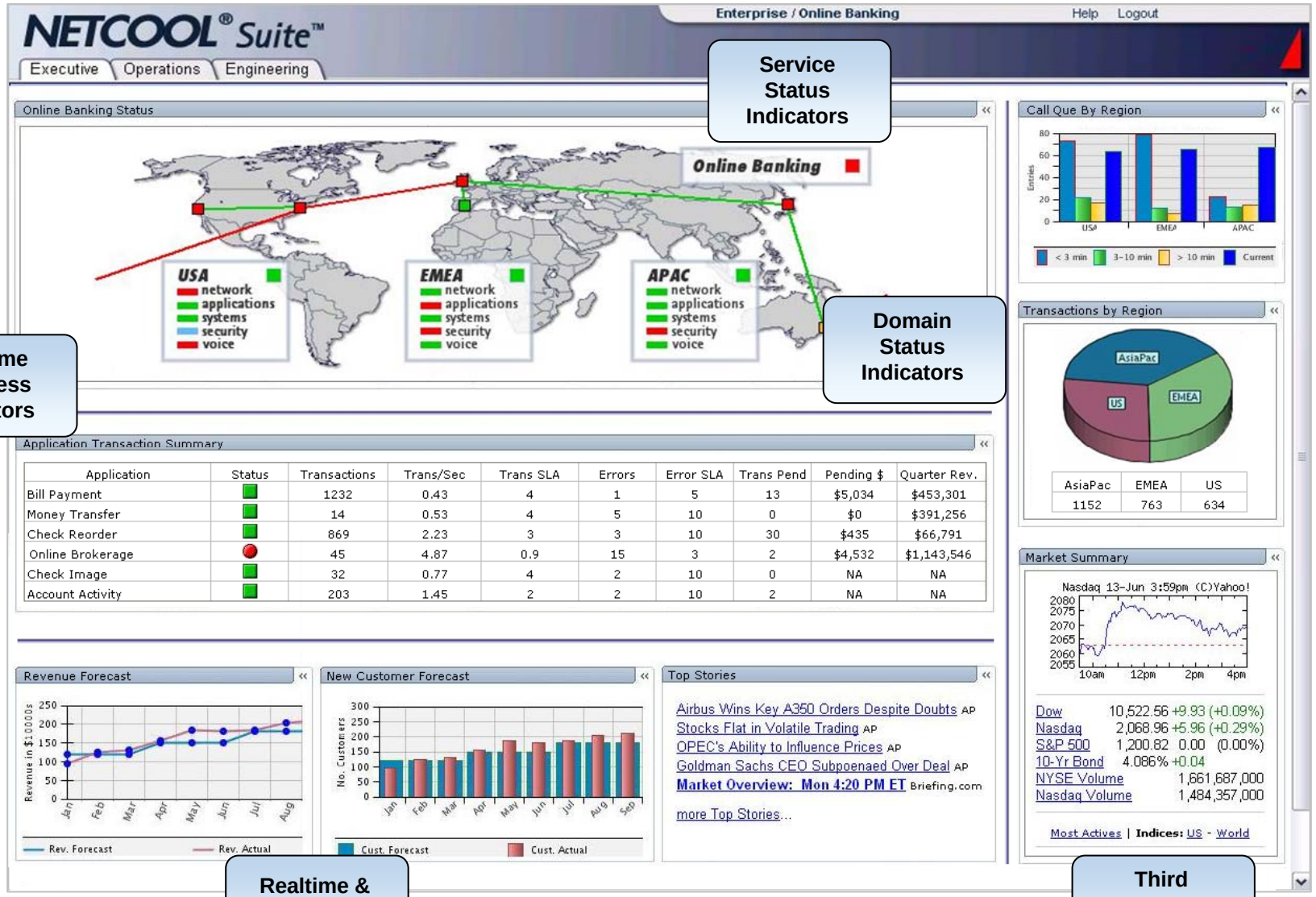
Discovery & Monitoring

Network Manager

Network Modeling (Layer 1/2/3)
Network Root Cause Analysis

COLLECTION

Service Dashboard



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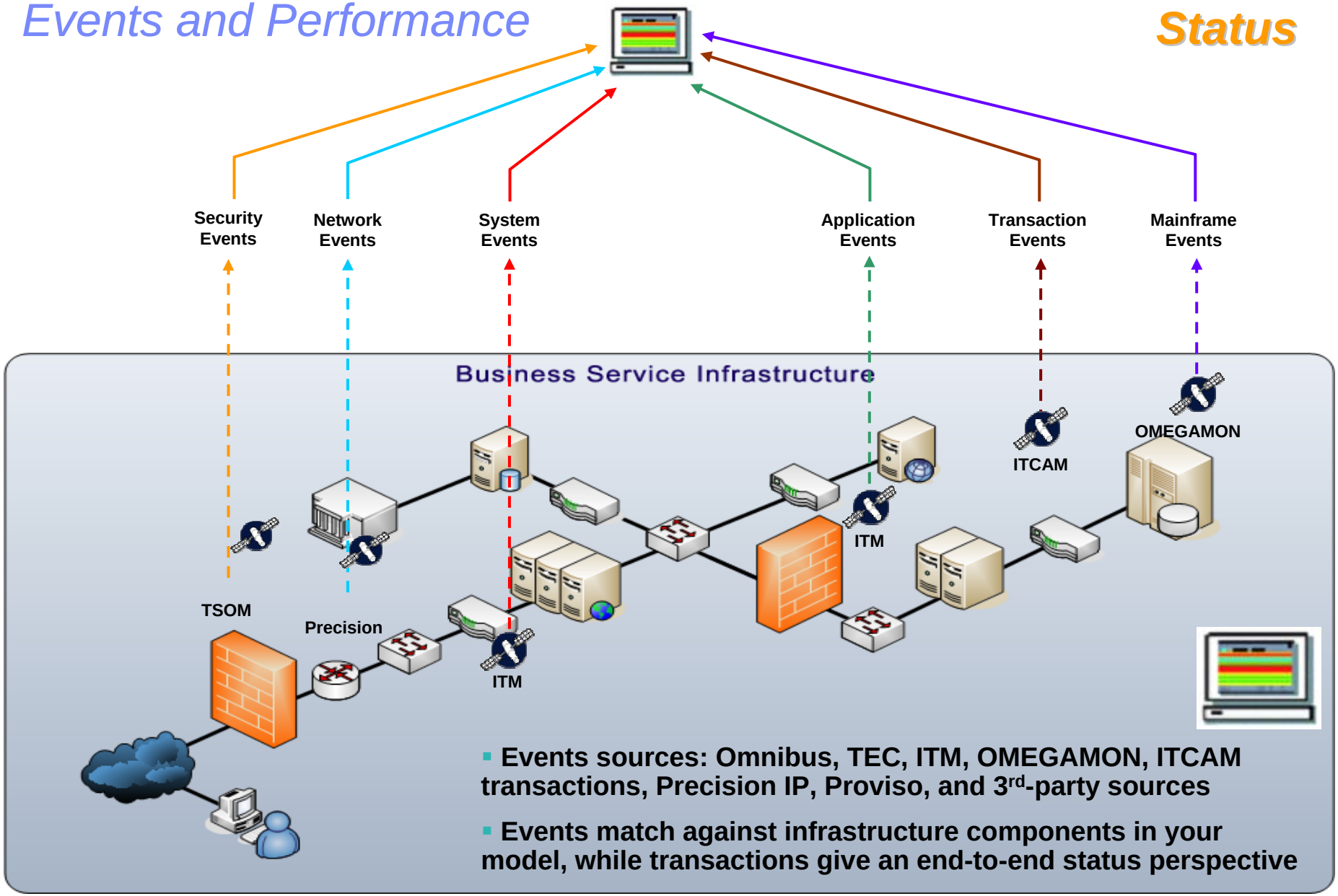
Vielen Dank für Ihre Aufmerksamkeit!

Beispiel Szenario

Events and Performance

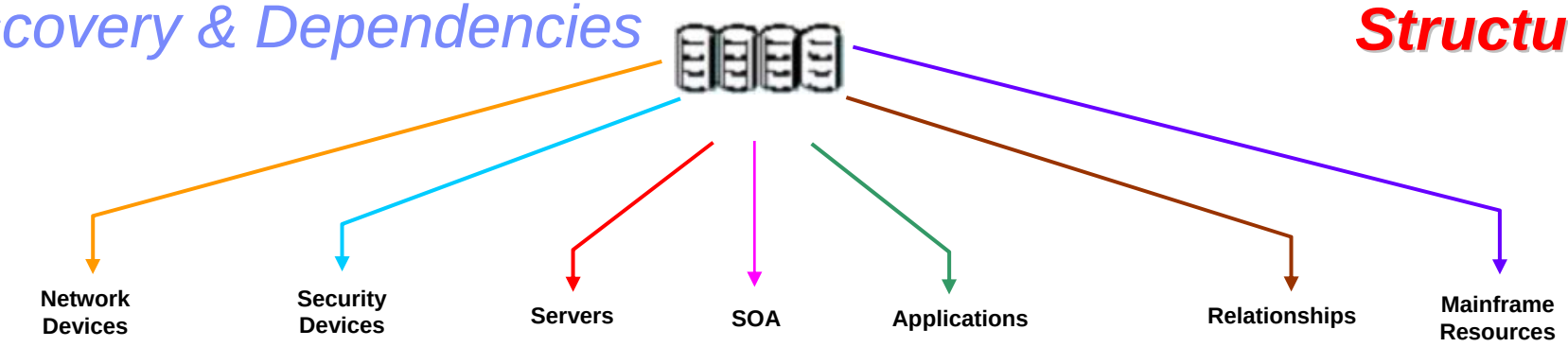
Status

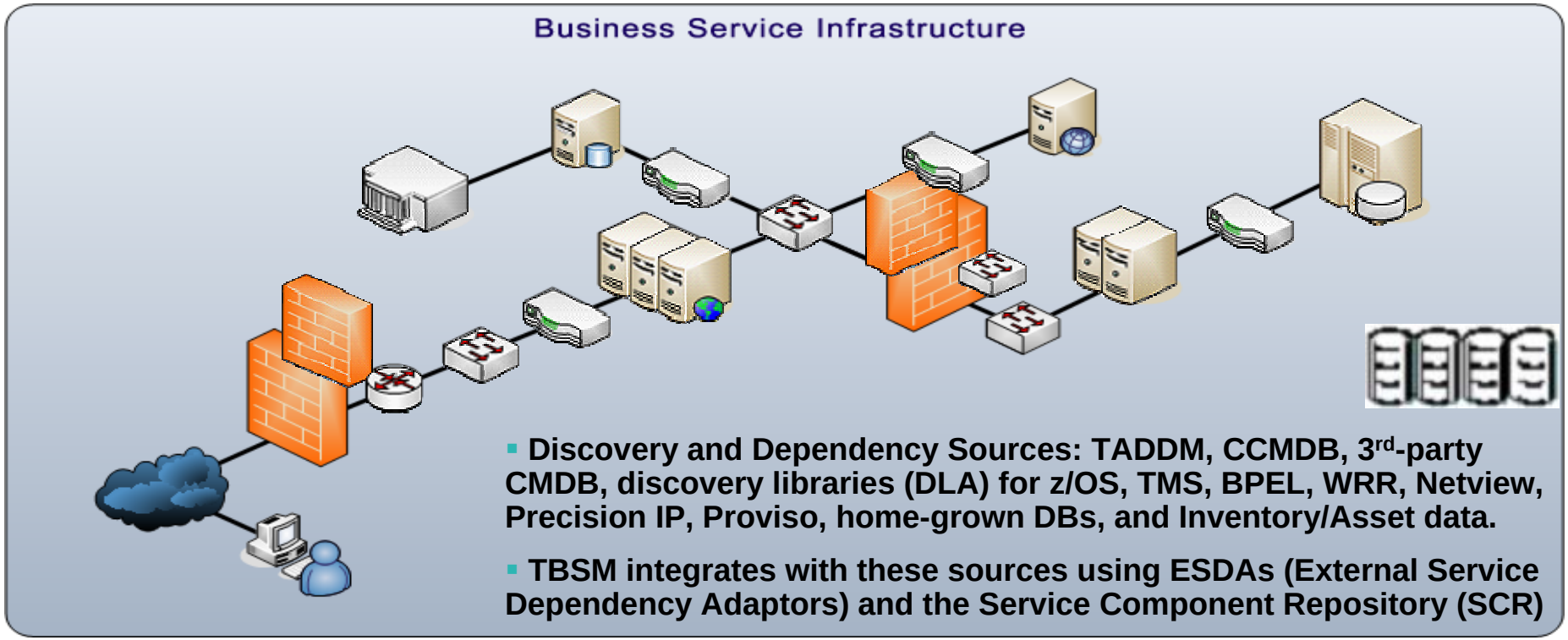


- **Events sources: Omnibus, TEC, ITM, OMEGAMON, ITCAM transactions, Precision IP, Proviso, and 3rd-party sources**
- **Events match against infrastructure components in your model, while transactions give an end-to-end status perspective**

Discovery & Dependencies

Structure

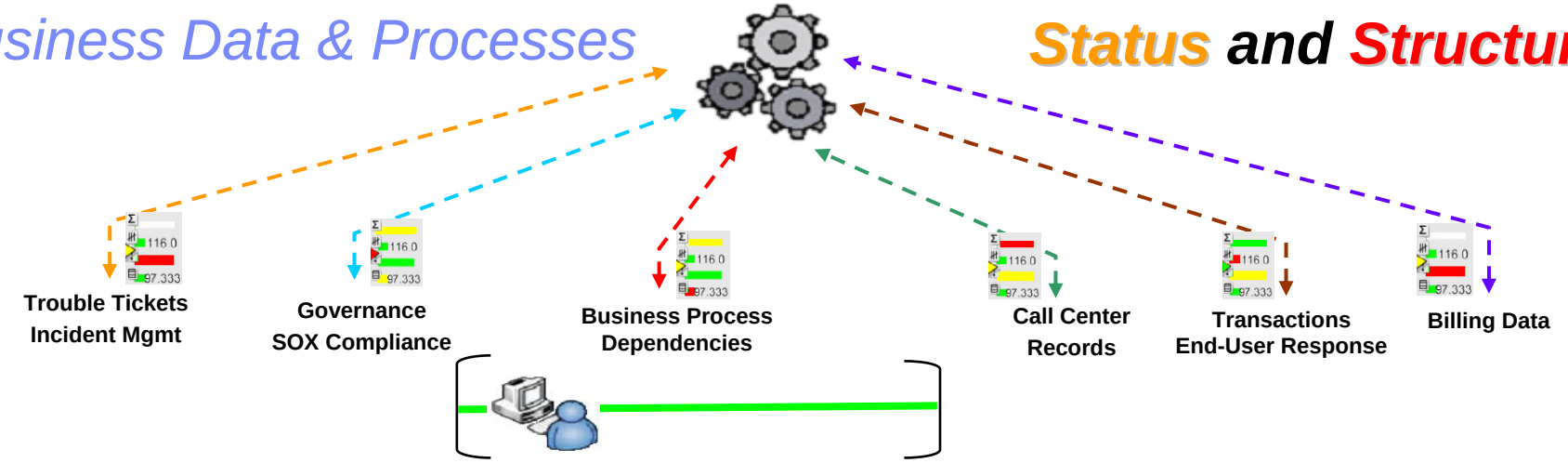


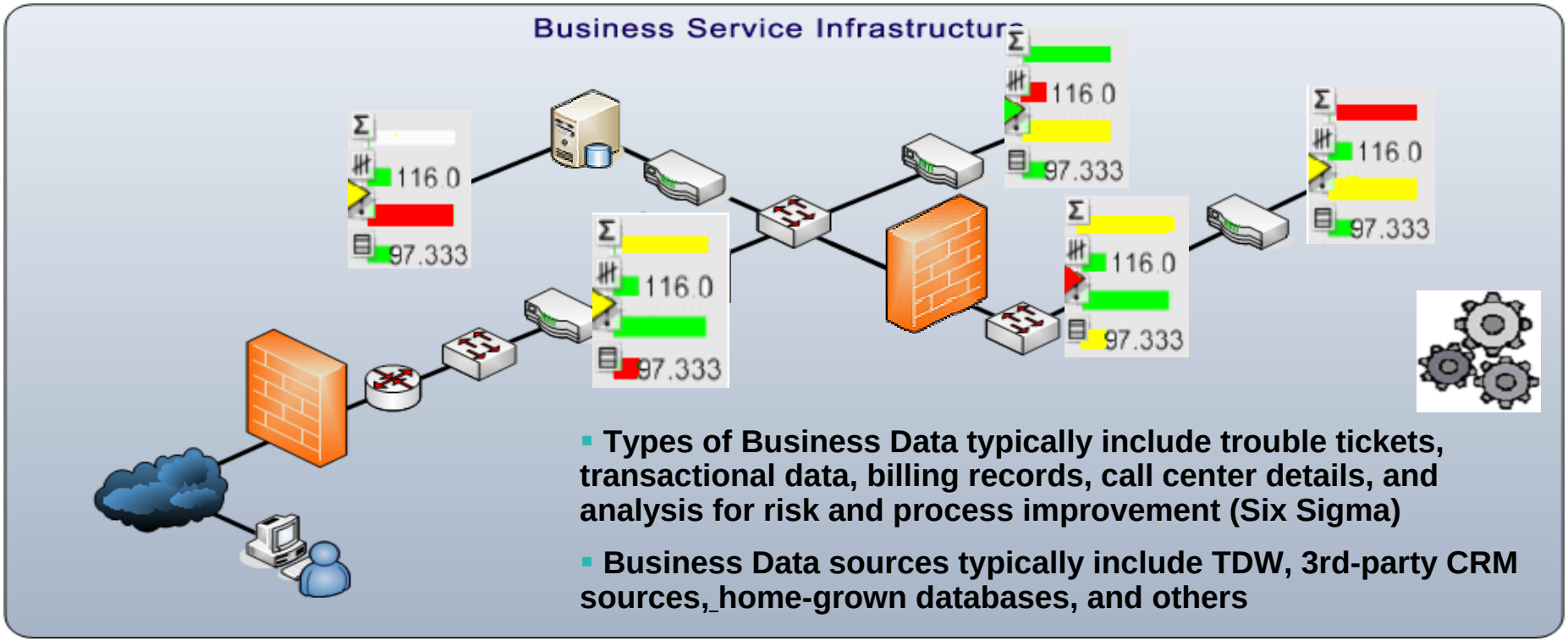


- **Discovery and Dependency Sources: TADDM, CCMDB, 3rd-party CMDB, discovery libraries (DLA) for z/OS, TMS, BPEL, WRR, Netview, Precision IP, Proviso, home-grown DBs, and Inventory/Asset data.**
- **TBSM integrates with these sources using ESDAs (External Service Dependency Adaptors) and the Service Component Repository (SCR)**

Business Data & Processes

Status and Structure

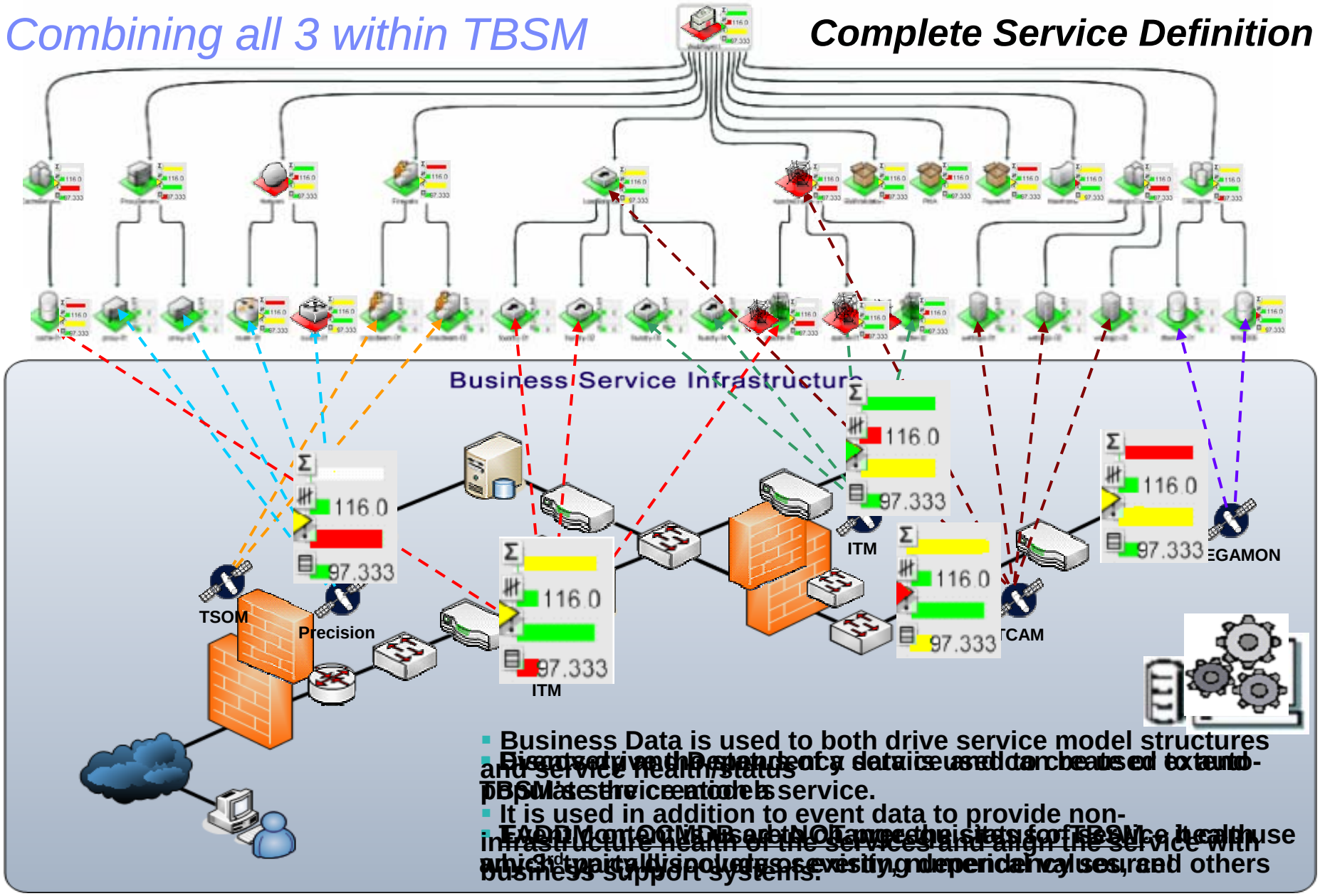




- Types of Business Data typically include trouble tickets, transactional data, billing records, call center details, and analysis for risk and process improvement (Six Sigma)
- Business Data sources typically include TDW, 3rd-party CRM sources, home-grown databases, and others

Combining all 3 within TBSM

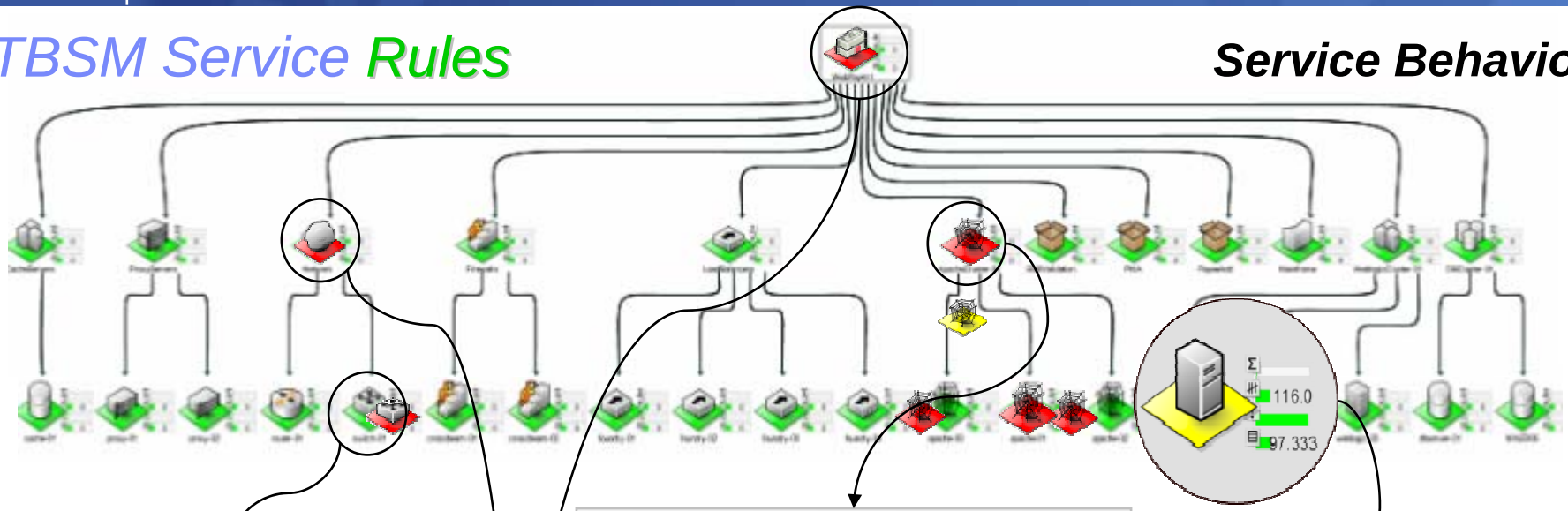
Complete Service Definition



- Business Data is used to both drive service model structures and service health/status
- It is used in addition to event data to provide non-infrastructure health of the services and align the service with business support systems.

TBSM Service Rules

Service Behavior



Event Based Status Rule

Status derived from:

- Incoming Status Events
- External Business Data

Dependency Rule (% of children)

- Status derived from a % of children

Dependency Rule (Any Child):

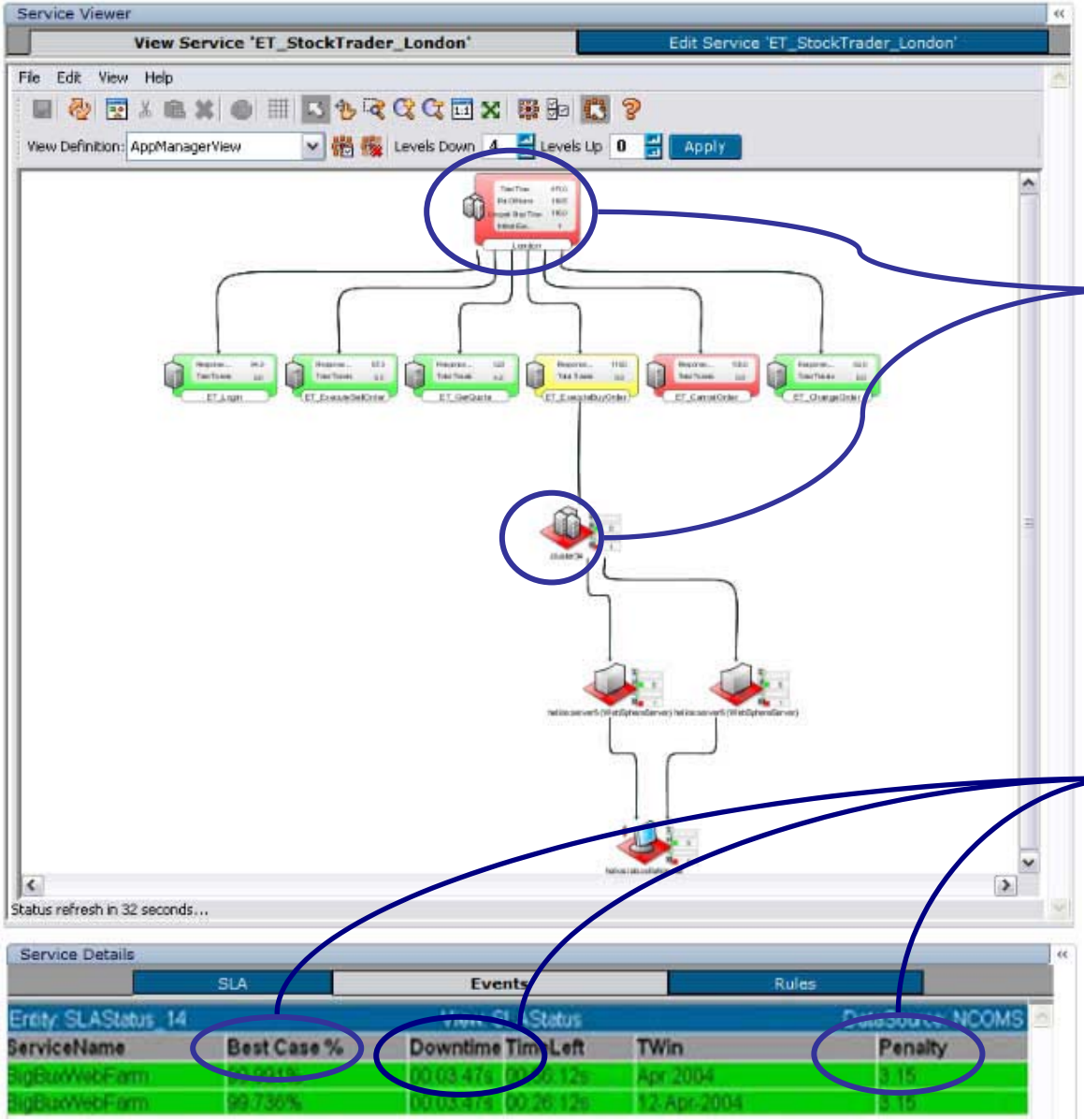
- Status derived from status of children

Numerical Rules

- Used to obtain a numerical value for output
- Response time, Number of Trouble Tickets

Numerical Aggregation Rules

- Value is calculated using children's numerical values
- Avg, Sum, Min, Max or Weighted Avg



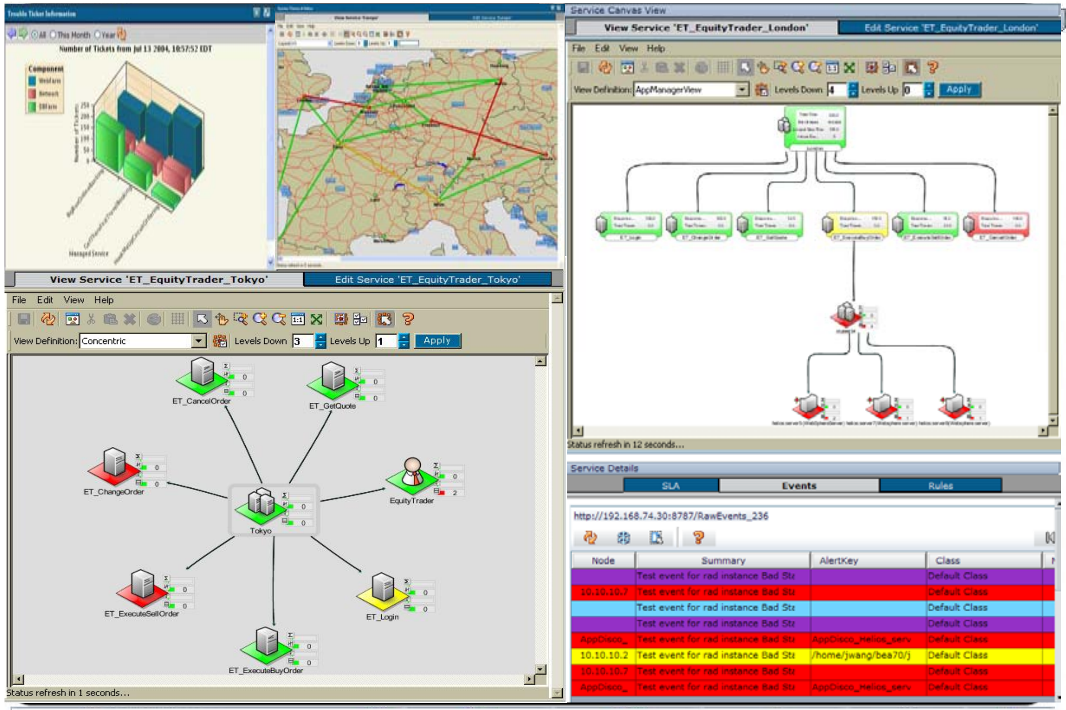
Service Measurement

SLA Rules

- **Can be defined for:**
  - **Services**
  - **Applications**
  - **Devices**
- **3 Types of SLAs**
  - **Instance**
  - **Cumulative**
  - **Violation Count**

SLA Metrics

- Availability
- Downtime (MTTR)
- Penalties ($$$)



Service *Visualization*

Visualization of Services:

- Custom Dashboards (Canvas) … alization
- Dynamic Relationships/Dependencies status
- Charts and Table Reports … business data
- Gauges for service data & business data
- Event drill-down and services
- Visio-like layouts, with live status feeds
- GIS map display support … control
- User/Role permission control

User/Role permission control