

TIVOLI NATION

The perfect place to get away with IT.



Lessons learnt Successfully Deploying IBM Tivoli across IT & Operational Networks

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About TUSC

- Founded in 1981
- Part of the Ericsson Group since 2005
- Integrating with Ericsson on September 1, 2008 to become core part of new Ericsson business:
 - Leveraging strengths of both companies
 - Delivering ICT and operational management solutions to utilities, government & enterprise sectors
 - Tivoli remains key part of solution offering

Our Customers include...



UTILITIES & RESOURCES



TELECOMMUNICATIONS



GOVERNMENT



Australian Government
CRS Australia



ENTERPRISE



Our Services



- **Consulting**
 - Business & Technology Strategy
 - Solution Design & Architecture
- **Systems Integration**
- **Project Management**
- **Lifecycle Management**
 - Support & Maintenance
- **Managed Service**
 - ICT Infrastructure

Our Solutions



- **Our Tivoli-based solutions**
 - **Network Service Assurance**
 - Based around Netcool suite for telcos and other service providers
 - **IT & Enterprise Asset Management**
 - Based on the Maximo suite
 - **IT Network Management**
 - Based on Tivoli Network Manager products for IT operations
 - Network Management in a Box for medium IT groups
 - **IT Service Management**
 - Based on Tivoli Service Request Manager

Our Experience



- Netcool systems integrator since 2000
- Certified IBM Tivoli Systems Integrator
- We have successfully delivered 100+ Tivoli systems integration projects, helping customers like Telstra achieve:
 - Centralised fault & alarm management
 - End-to-end control & visibility of service delivery
 - Prioritized remediation services based on customer impact
 - Personalised & proactive customer service
 - Meaningful & enforceable service level agreements



Tivoli in Operational Environments

- Implemented Tivoli as Manager of Managers in a multi-vendor, multi-technology, multi-network telecommunications environment
 - Mix of transmission SDH, Cisco IP, packet core, Element Managers – Marconi and Ericsson, IT systems
 - Multiple groups of operations staff
 - Differing levels of experience in network elements
 - Different customers – internal and external, with varying levels of Service level agreements and rebate contracts

Learn from our experience!



My goal today is to help you:

- Prepare for your Tivoli implementation
- Manage your own and your stakeholder expectations
- Avoid common mistakes
- Understand common issues

Key Lessons Learnt



- **Allocate time & budget to properly understand and document your requirements**
 - It takes time (sometimes a long time) to get the alarms formatted to what the end user needs
 - Some end users do not understand what the alarms mean and what severity they are
 - May need to use other data sources such as customer databases to ensure only equipment that is serving a current customer is actioned by operations

Lessons (2)



- **Allocate time & budget for third party and setup of test environment**
 - Third party Vendors - It can take time to set up NDAs around alarm formats and work together to satisfy end customer
 - A test environment with multiple versions and multiple feeds from systems can be complex to manage
 - Important to include Change control in the test environment, especially if sharing
 - Consider how to test alarms when no active feed is possible?

Lessons (3)



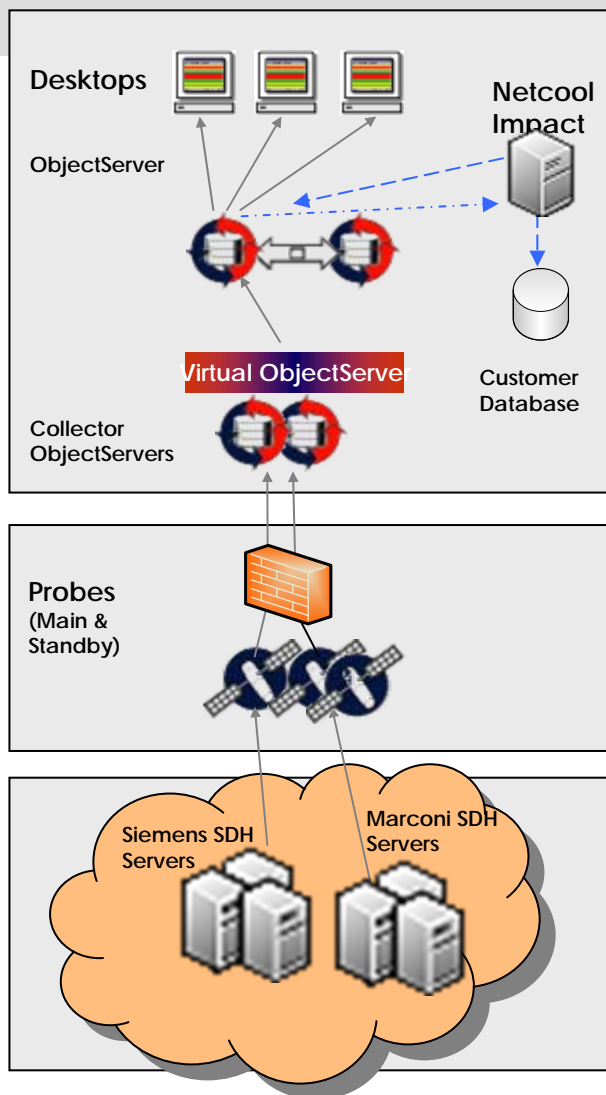
- **Automate integrations from Netcool to other tools**
 - Improve proactive customer service and support help desk staff
 - Help speed their problem investigation and time to repair by allowing them to
 - create, Update, close trouble tickets from the Netcool alarm screens
 - Open ticket application (eg from Service Request Manager) within Netcool with relevant information displayed (e.g. device alarm history)
 - Open help applications such as web pages that match alarm codes



Lessons (4)

- **Improve alarm information**
 - Insert customer data into alarm – know who is affected!
 - Support staff then can call and let them know before they call You!
 - Customer data from database - Not always updated by other operations team
 - A business process issue, not a technology one!
- **Consider multiple levels of Netcool OMNibus**
 - A collector database to trim the alarms that are not relevant
 - A higher level database to apply customer information to
 - A Netcool Impact instance to perform detailed analysis on SLA
 - See next slide

Complex data feeds





Lessons (5)

- **Understand the environment the customer is trying to manage**
- **Alarms for specific complex situations need careful understanding of devices**
 - Some network equipment does not use generic methods for alarms
 - Some alarms can be an amalgamation of several others
 - E.g. up to 10 environment alarms (air conditioning, temperature, humidity) could be contained in a single alarm message
 - Needs analysis and detailed understanding to break out each individual alarm
 - Needs work to handle alarm raises and clears properly

Lessons (6)



- **Tivoli Network Manager IP**
- **Work to develop understanding of a customer network**
 - May take time to work with customers to find all required network information (SNMP passwords, subnet addresses, firewall pass through ports) to perform IP discovery
 - Identify how the networks are set up in the customer environments
 - If IP network is not secured properly, new and unknown devices can appear in strange network places
 - May be a physical/user security issue? – raise an alarm when a new device is plugged into a network and is then discovered by TNM-IP so administrators can action

Lessons (7)



- **IP Discovery can be complex and require reliance on the quality of customer data**
 - Some customer data can have quality issues which will affect the time required to develop configuration & rules
 - Some networks cannot (or are not permitted by security) be discovered
 - Can load network topology into TNM-IP
 - Build static network maps in Webtop, which have status changes on icons
- **Large IP discovery can take time**
 - Schedule for times when network is 'quiet' or users numbers are reduced (e.g. late at night)

Lessons (8)



- **To give support staff meaningful presentations of data and help them work effectively**
 - What are the end user requirements? What is the best format to give them maximum understanding of network status allowing them to act
 - The right information in a simple format
 - Web pages with simple trend reports
 - Reports of network alarms performance
 - Most alarms node
 - Most affected customers
 - SLA metrics
 - Drill back to Netcool alarm screens
 - Drill down to detailed Node information

Lessons (9)



- **Change control is vital for ensuring the network monitoring works effectively**
 - The importance of the backups of critical configurations – rules, impact policies
 - Ensure processes for change are applied on production systems so that any issues can be resolved from the change catalogues and all configurations are backed up – ITIL Change management



Manager of managers

- **One single screen/application for all alarms from multiple**
 - Networks
 - Element managers, systems and applications
 - Data sources – customer information
- **Applicable for all customers with complex networks**
 - Telecommunications
 - Utility – power transmission and distribution
 - Enterprise businesses
 - Financial institutions



Questions??



Links and Contacts

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- **More info**
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