

Making Virtualization A Reality in the Next Generation Data Center

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Agenda

- Introduction – Al Stoddard, Novell, Vice President
- Exploiting the Value of the NGDC – Anurag Chauhan, Accenture, Senior Manager
- Novell Solutions in the NGDC – Carl Drisko, Novell, Global Strategic Partner Executive / Data Center Evangelist
- Wrap Up – Questions & Answers

State of Infrastructure Today

Server Sprawl

- **41 m** physical servers by 2010 - **700% increase** in 15 years
- **Ave UT <10%** = **\$140 bn** in excess server capacity - a 3-year supply

Power & Cooling

- **50c** for every \$1 spent on servers
- **\$29 bn** in power and cooling industry wide

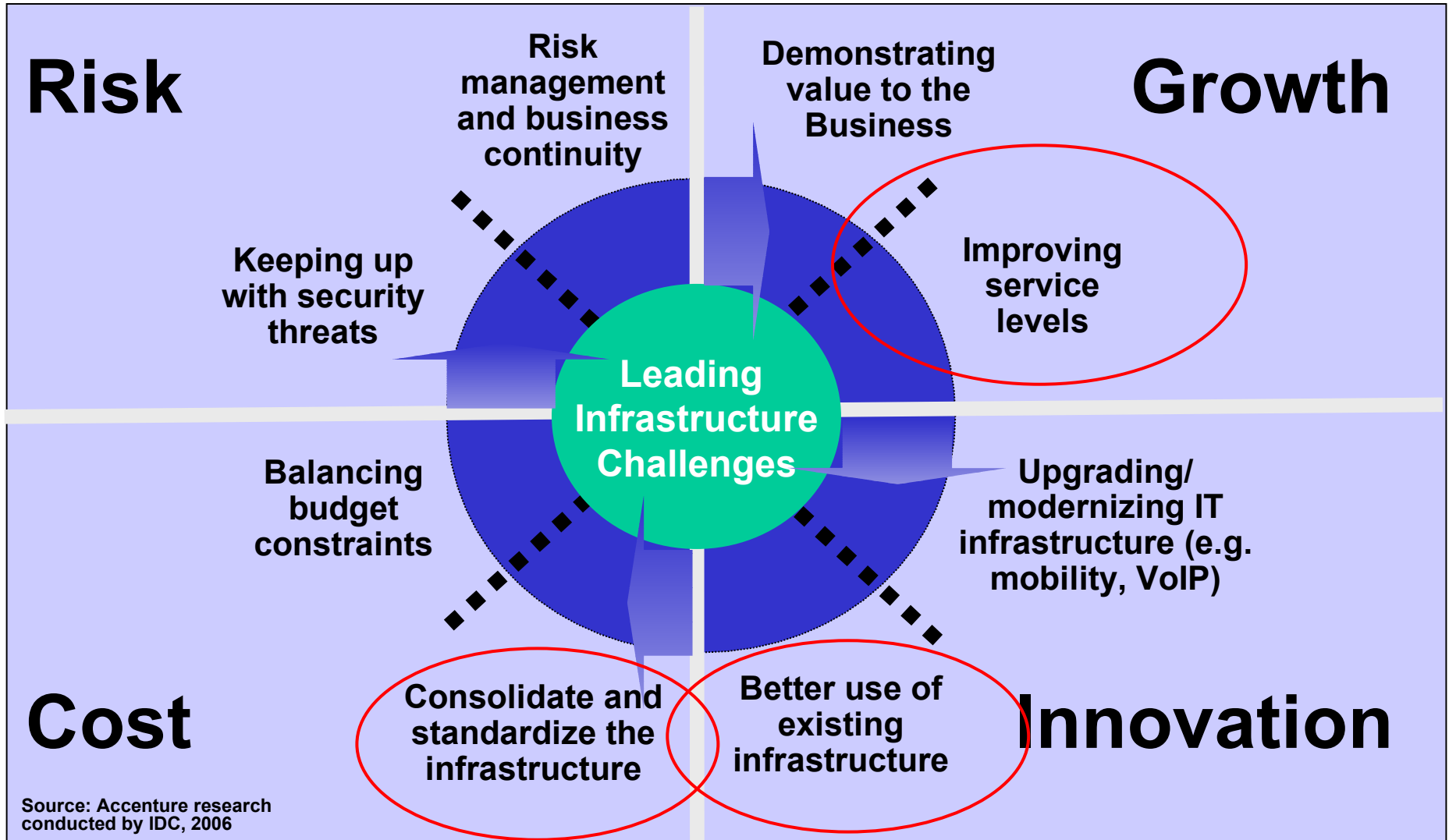
Space Crunch

- DC Space Costs **10's of millions** to build
- **Limits on facilities** upgrades in existing sites

Operating Cost

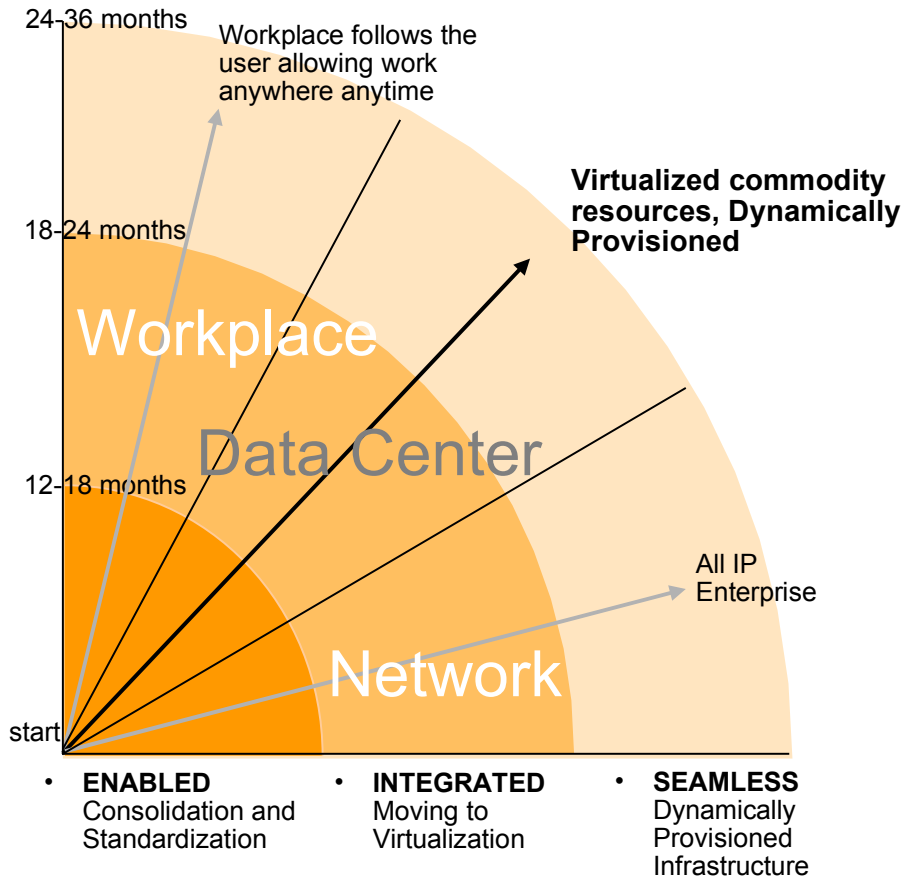
- **\$8** in maintenance for every \$1 spent on new infrastructure
- **20-30 : 1** server-to-admin ratio

Leading challenges facing IT Executives from High Performance Organizations



Source: Accenture research conducted by IDC, 2006

The Roadmap to the NGDC follows a three-phase Infrastructure Transformation model...



Phase I – Enabled

- Consolidation and standardization reduces complexity, cost and optimizes utilization of current IT Infrastructures. This is the first step to the Next Generation Data Center.

Phase II – Integrated

- With a standardized environment, enterprises can leverage virtualization models in the data center, full mobility and IP (Voice and Data) service and early Utility-style Computing models (internal).

Phase III – Seamless

- This exploits internal and external commoditized, dynamically provisioned and automated infrastructure resources, enabled by an all IP Enterprise which enables standards based work from an anywhere, anytime workplace.

Technology maturity in the areas of Virtualization and Provisioning and Automation support the transformation to the Next Generation Data Center

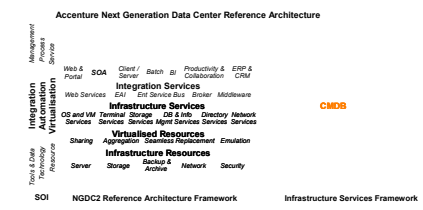
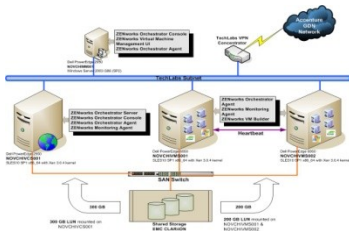
Accenture has deep experience and reusable tools and assets that provide clients with a robust and cost-effective way to move to the Next Generation Data Center



- | Phase I
Enabled | Phase II
Integrated | Phase III
Seamless |
|---|--|--|
| <ul style="list-style-type: none"> Consolidation and standardization Novell SUSE Linux Enterprise 10 Xen virtualization software PlateSpin PowerRecon & PowerConvert Commodity hardware from Novell/Accenture partners, such as Dell | <ul style="list-style-type: none"> Virtualization models PlateSpin PowerRecon & PowerConvert Xen Virtualization Software Novell ZENworks Orchestrator & Virtual Machine Manager (VMM) Novell ZENworks High Performance Computing software | <ul style="list-style-type: none"> Dynamically Provisioned and Automated Infrastructure resources Novell ZENworks Orchestrator Novell Identity & Security Management product sets to ensure automation is secure Novell Integration with 3rd party Data Center Management products – e.g., Tivoli, MS Manager of Managers |

Novell's product set spans the three phases moving towards utility style computing in the Data Center

Today's
Demonstration



NGDC Reference Architecture

DCT Workbench

Next Generation Data Center “Blueprint”

Policy Rules

Work Requests

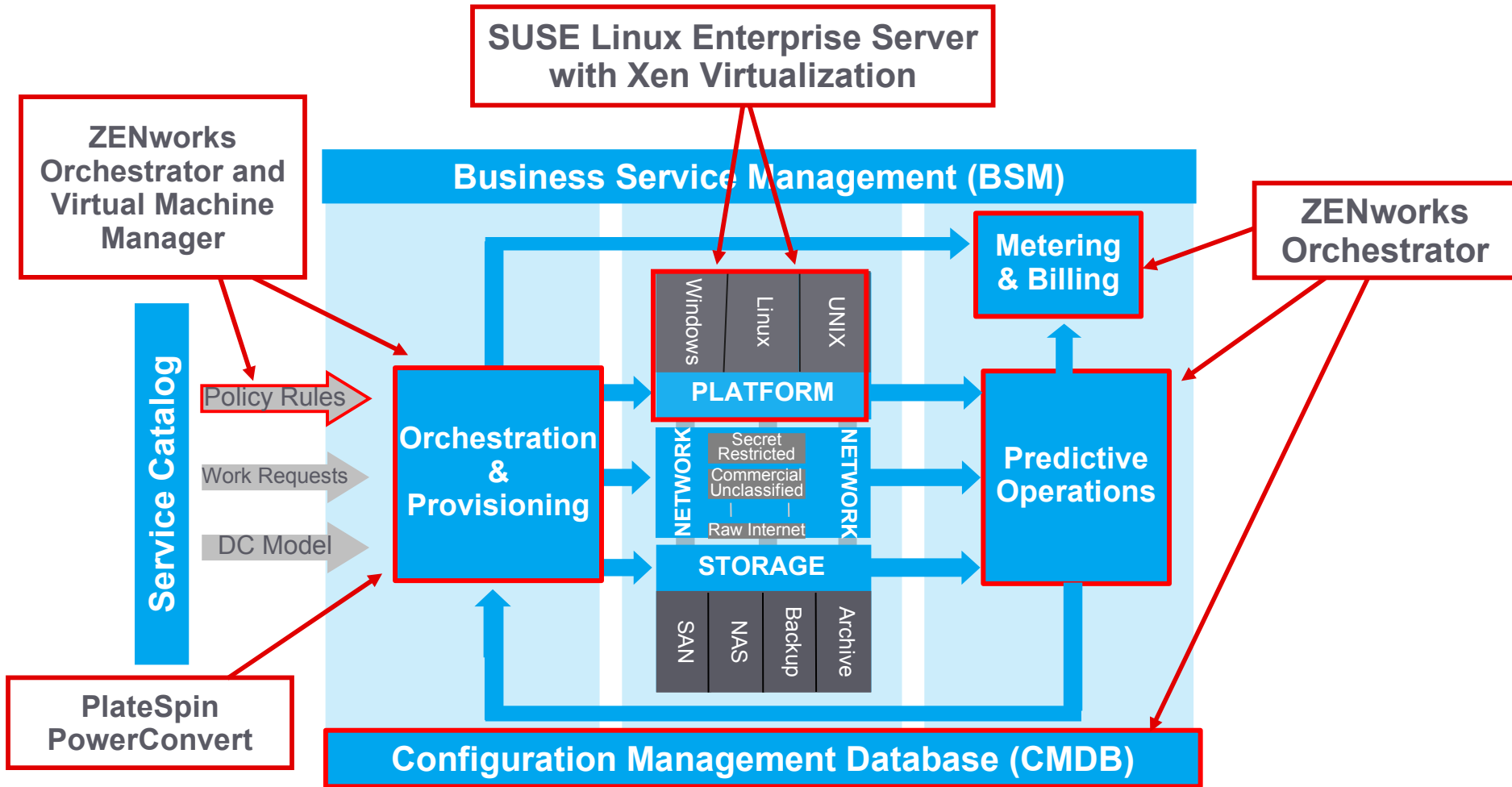
DC Model

**Workload Requests
and Provisioning**

**Shared Technical
Infrastructure**

**Technical Operations
Management**

Novell Solutions



Dynamic Infrastructure Use Cases

Use Case 1

- Automated SAP application server provisioning and deprovisioning in reaction to a changing workload / SLA breach
 - > Provision SAP Dialogue Instance when the Central Instance's process wait queue goes above a configurable threshold
 - > Deprovision SAP Dialogue Instance when the process queue is within the configured threshold value
 - > Provide data to support billing and reporting of these events

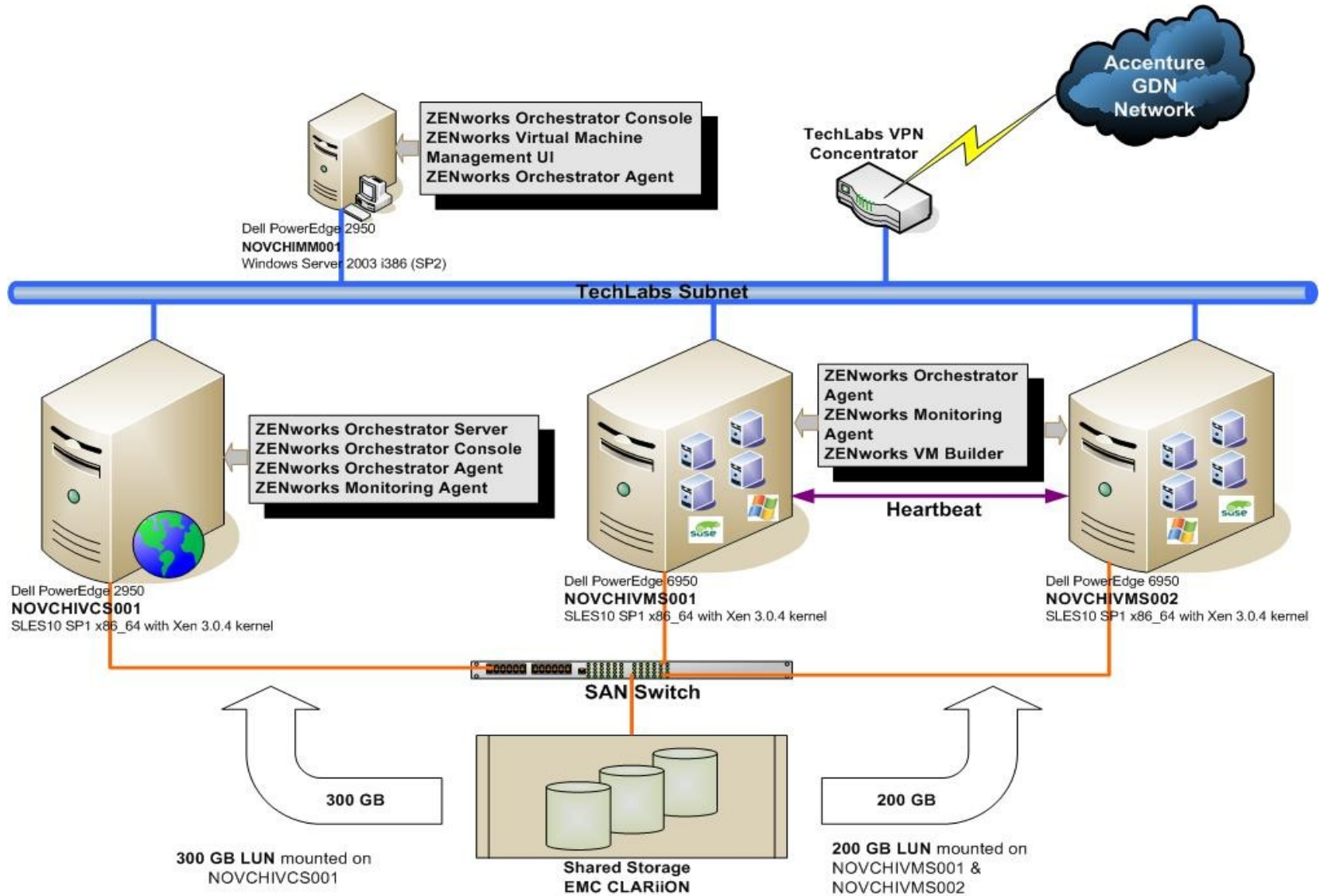
Use Case 2

- Migrate live VMs between XEN hosts (e.g. to handle physical machine failure, resource crunch on XEN host, scheduled maintenance, ...)

Demonstrating Today

Many additional use cases are available to be demonstrated at Accenture's NGDC Showcase

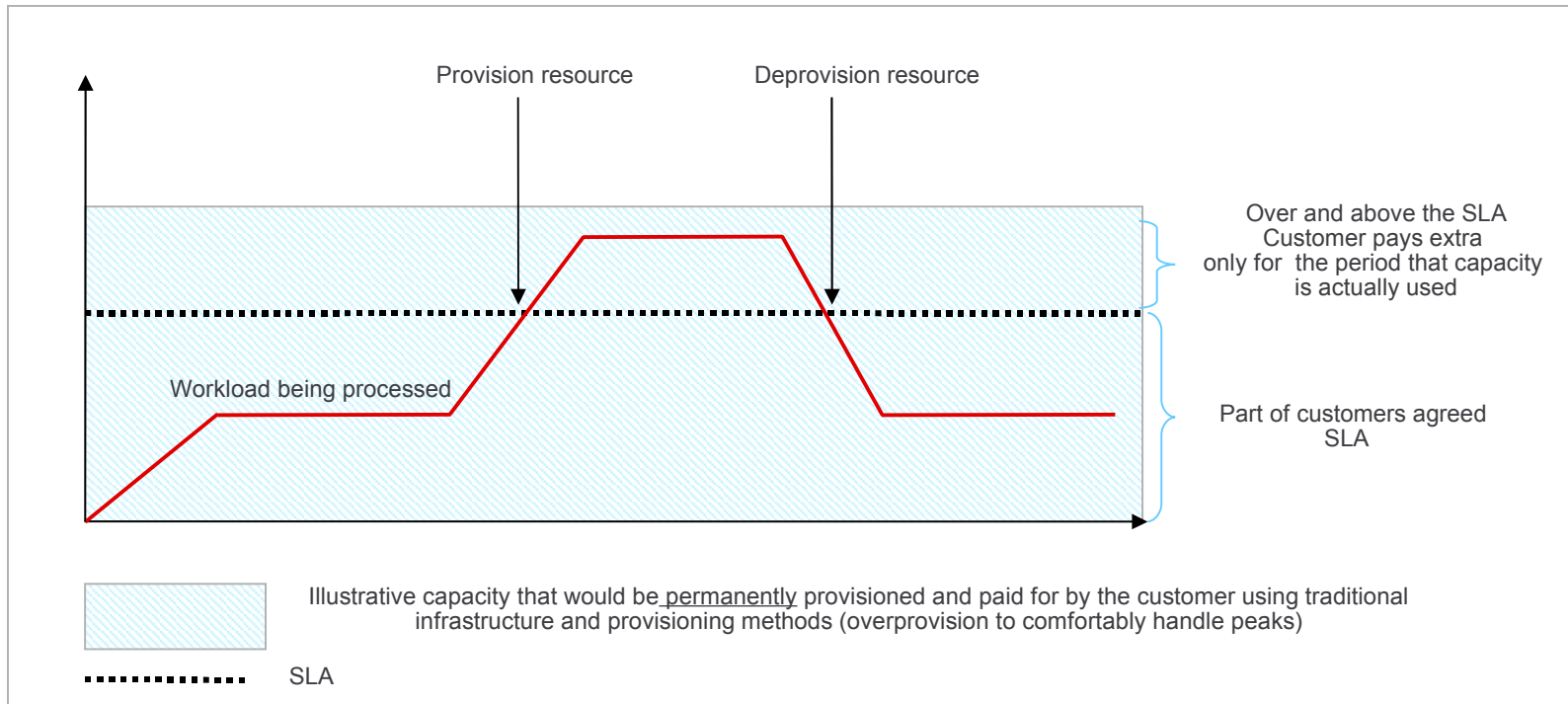
Showcase Infrastructure



Automated, dynamic optimization occurs within the NGDC to align IT resource provisioning with business demand

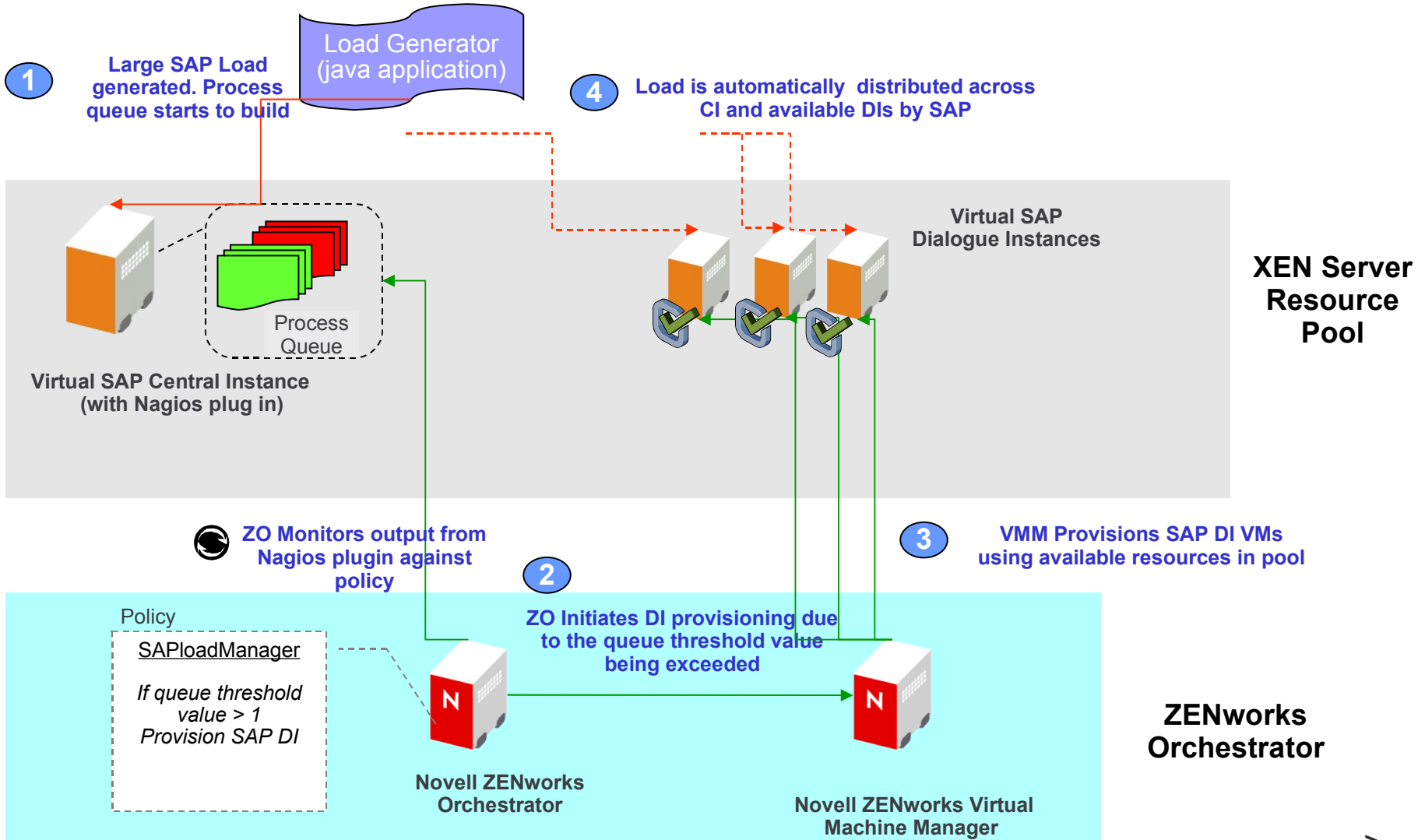


A data center that dynamically reconfigures itself based on **pre-defined policies** for changing conditions such as spikes in application workload, and server failures as well as **predicted changes** to business applications loads

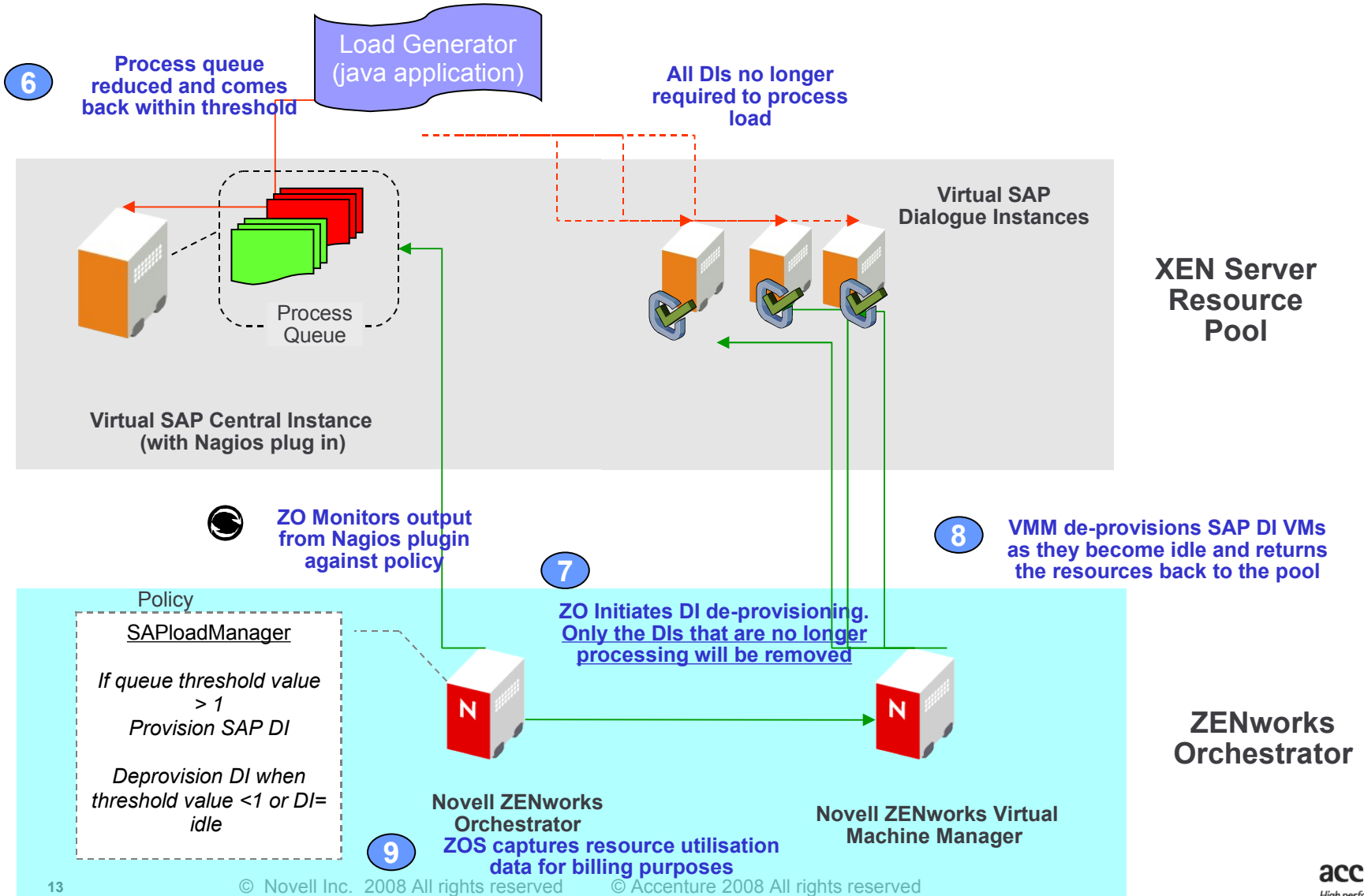


- Applications “self-heal” without error-prone and costly human intervention
- Workloads are understood and capacity is planned and provisioned accordingly
- Service levels are guaranteed while making optimal use of resources according to business-oriented policies
- Business pays for IT capacity used, as a service

Automated load management of SAP service in reaction to SLA breach (Scale out)



Once the SLA challenge is resolved, assets are returned to the resource pool



DEMONSTRATION

Next Steps

- For More Information:
 - www.novell.com
 - www.accenture.com
- Request a Next Generation Data Center Workshop from Accenture:
 - Anurag Chauhan: anurag.chauhan@accenture.com Cell - 847 312 7025
- Request additional information from Novell:
 - Carl Drisko: cdrisko@novell.com

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