Availability Management in the era of Cloud Computing

Presented by
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Agenda

- Introductions
- ITIL® Availability Management concepts
- The Cloud Family & Availability Management issues
- Organizational considerations
- Availability Management and IaaS Cloud
- Neebula Demo
- Questions & Answers
Reg Lo & Third Sky

Reg Lo
- Certified ITIL v3 Expert
- Vice President for Third Sky
- Contributor to “The Forum” the official newsletter of itSMF USA
- Speaker at itSMF and HDI events
- Reviewer for ITIL v3 Update

Third Sky
- ITIL Education
- ITIL Assessments & Roadmaps, Workshops and Process Consulting
- Technology Solutions
Ariel Gordon

– Founder & VP Products of Neebula
– CTO of BMC
– Creator of BMC’s BSM strategy and Atrium integration infrastructure
– VP Engineering, CTO at New Dimension (acquired by BMC)

Neebula

– Automates Service model creation and maintenance
– Integrates with leading CMDB’s
– Provides a comprehensive Business Service Availability solution for dynamic cloud environments
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Availability Management: The process responsible for defining, analyzing, planning, measuring and improving all aspects of the availability of IT Services. Availability Management is responsible for ensuring that all IT Infrastructure, processes, tools, roles, etc. are appropriate for the agreed Service Level Targets for availability.
Availability Management Process

Reactive activities
- Monitor, measure, analyse report & review service & component availability
- Investigate all service & component unavailability & instigate remedial action

Proactive activities
- Risk assessment & Management
- Plan & design for new & changed services
- Implement cost - justifiable countermeasures
- Review all new & changed services & test all availability & resilience mechanisms

Availability Management Information System (AMIS)
- Availability Management reports
- Availability Plan
- Availability design criteria
- Availability testing schedule

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Availability Management Key Element

- Reactive
  - Monitor service and service component availability
  - Investigate service and component unavailability issues
- Proactive
  - Risk assessment, plan and design

Availability Management inter connecting levels

- Service
- Component
Key Issues for Availability Management

Key Messages:

- Improving Availability can only begin when the way the technology supports the business is understood.
  - If you don’t measure it, you cannot manage it
  - If you don't measure it, you cannot improve it
  - If you don’t measure it, you probably don’t care
  - If you can’t influence or control it, then don’t measure it
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The Cloud Family

Infrastructure as a Service (IaaS)
- Client
- App
- Platform

Platform as a Service (PaaS)
- Client
- App
- App
- Platform

Software as a Service (SaaS)
- Client
- App
- App
- App
- Platform

Private / Public

Value

Public
Cloud Types and Availability Management Relationships

- **SaaS (Software as a Service)**
  - Example: Sales Force
  - Availability management considerations are the same as an external provider (Set an SLA)

- **PaaS (Platform as a Service)**
  - Example: Microsoft Azure, Force.com, Internal Clouds
  - Availability management considerations similar to SaaS but more complexity’s regarding the service layer

- **IaaS (Infrastructure as a Service)**
  - Example: Amazon EC2, Internal clouds
  - Availability management considerations like internal run service

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IaaS Cloud influences IT Organization

- Separation of IT teams
  - Dedicated IaaS Cloud Organization
  - Moving Processes from Engineering to Operations, e.g.
    - Provisioning new virtual servers

- You may end up creating greater separation between Infrastructure and Application teams. This separation may be on a
  - Team Level
  - Organization level
  - Company Level
Goals of Cloud infrastructure team

- On demand provisioning of resources
- To provide the services in the infrastructure Service Catalog
  - For example Windows 2008 server with 4GB storage
- To manage the infrastructure and application components
- To provide the committed SLA on Infrastructure components

They are judged by the availability of the cloud like Amazon is measured for EC2
Application Management Cloud Team

IT People & processes
Service Desk  Application Support  Operations

ITIL Tools and Processes

IT Tools

IT Applications

IT Applications

BSM

BSM Console

CMDB
Goals of Application team

- To see that the business services are Available
- To manage and resolve issues in the Service
- To provide the committed SLA on Services

They are judged by the availability of the Service like Salesforce is judged by there clients
Both teams are sometimes in different organizations
However Availability management spans across both teams so the issues are
- How do we get both teams communicating on the component level and on the service level
- Need for both to be able to understand the services and the components and policies that support them
- How events in the cloud impact the service
- How do you influence cloud resources of a service

Look for tools that are able to bridge this gap
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Explaining XaaS


Notes:
Brand names for illustrative / example purposes only, and examples are not exhaustive.

* Assumed to incorporate subordinate layers.
Perceived Cloud Availability

Benefits

- Less Risk
  - Infrastructure components are easily changed
  - Applications may be hosted dynamically across infrastructure
  - Elasticity of cloud provides coverage for peak usage

- Easier to plan & react
IaaS Key issues for cloud

- Visibility issues - Loss of
  - Service component visibility
  - Ability to monitor on the service component level
  - Ability to analyze issues on the service component level
  - Ability to determine component risk

- Organizational issues
  - Who is responsible to resolve an issue

- How to you influence cloud change based on Availability policy
Key Cloud issues for Availability Management

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Look for tools that are able to provide both a service level analysis and component level analysis and are able to influence cloud deployment policies.
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Neebula Demo
Q&A