

IBM服务管理体验之旅

高效管理随需而变 优化服务实践共赢



云计算与数据中心自动化

黄庆春
Tivoli 亚太技术售前

电子邮件: huangqc@cn.ibm.com



日程

Ø 什么是云计算

Ø IBM云计算架构模型

Ø Tivoli 云计算解决方案

Ø 演示



什么是云计算？

- Ø “云计算（**cloud computing**，台湾译作**云端运算**），是一种动态的易扩展的且通常是通过互联网提供虚拟化的资源计算方式，用户不需要了解云内部的细节，也不必具有云内部的专业知识，或直接控制基础设施。云计算包括基础设施即服务（**IaaS**），平台即服务（**PaaS**）和软件即服务（**SaaS**）以及其他依赖于互联网满足客户计算需求的技术趋势。云计算服务通常提供通用的通过浏览器访问的在线商业应用，软件和数据存储在服务器上。” (Source – zh.wikipedia.org)
- Ø “...a style of computing in which massively scalable IT-enabled capabilities are provided "as a service" to external customers over the Internet.” (Source - Gartner).
- Ø “A pool of highly scalable, abstracted infrastructure, capable of hosting end-customer applications, that is billed by consumption.” (Source – Forrester)
- Ø “Computing Clouds: vast, amorphous, delocalized nebulae of processing power and storage” (Source – The Economist)



IT运维智能化

电信：通过交换机保证服务，降低成本



制造：通过机器人提高质量，降低成本



银行：利用ATM，提升服务，降低成本



... 所有这些突破都是通过服务管理系统支持



业务变化的需求。。。

85% 闲置

在分布式计算环境中，高达85%的计算效率处于闲置状态。

400 亿

由于供应链低效，消费品和零售业每年损失约400亿美元，即其销售额的3.5%。

每 1 美元 的 70 美分

平均70%资金花费在维护当前IT基础设施而不是添加新功能上。

1.5 倍

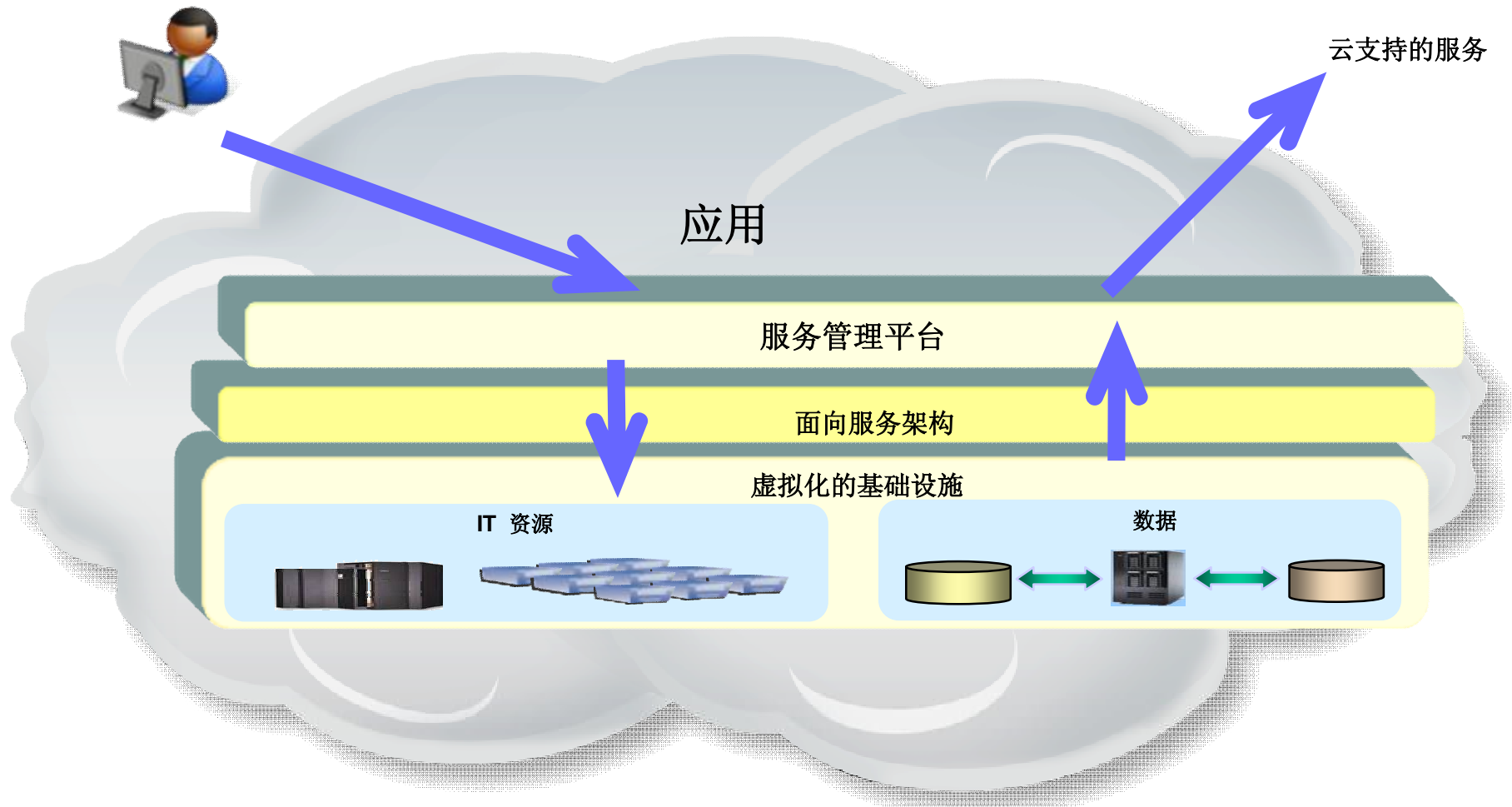
信息爆炸导致存储器使用量每年以54%的速度增长。

33%

得知安全性受到威胁的消费者中，有33%将终止与他们认为有责任的公司之间的关系。



基础设施虚拟化——云计算



云计算种类

私有云

- Owned & managed internally
- Access defined by owner

Economic Benefits:

- Reduced Capital Expenditures
- Reduced Operational Expenditures

混合云

- Private Cloud extends outward to consume public compute resource for peak need.

Economic Benefits:

- Scale private cloud for BAU
- Maintain service levels by scaling externally.

公有云

- Provider owned & managed
- Access by subscription

Economic Benefits:

- Reduced IT Service Delivery Cost
- Reduced HW, Systems, Software, Management and Application Costs

#1 Key Patterns

- Provisioning custom systems quickly and application on-boarding with minimal human effort.
- Request driven provisioning of development, test and production systems.
- Managing E2E life cycle.

#2 Key Patterns

- Policy driven acquisition of external compute resources beyond the data center firewall.
- Shift “commodity” workloads at periods of peak usage consumption to external compute/storage resource.

#3 Key Patterns

- User initiated consumption of compute/storage resources through service catalog portal.
- Highly scalable and highly automated provisioning of commodity compute resource.
- Pay-per-use metering & billing.

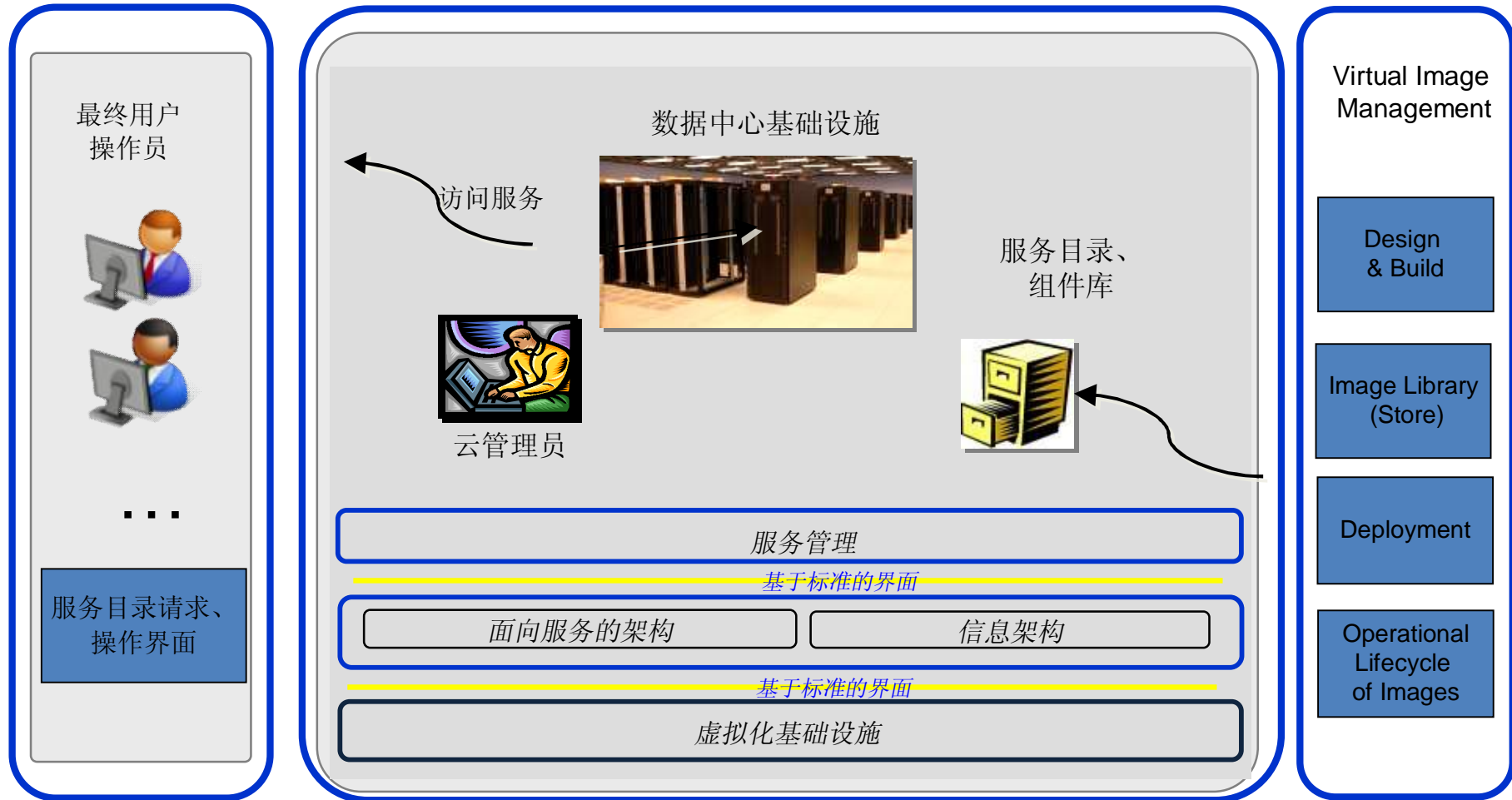


云计算架构模型

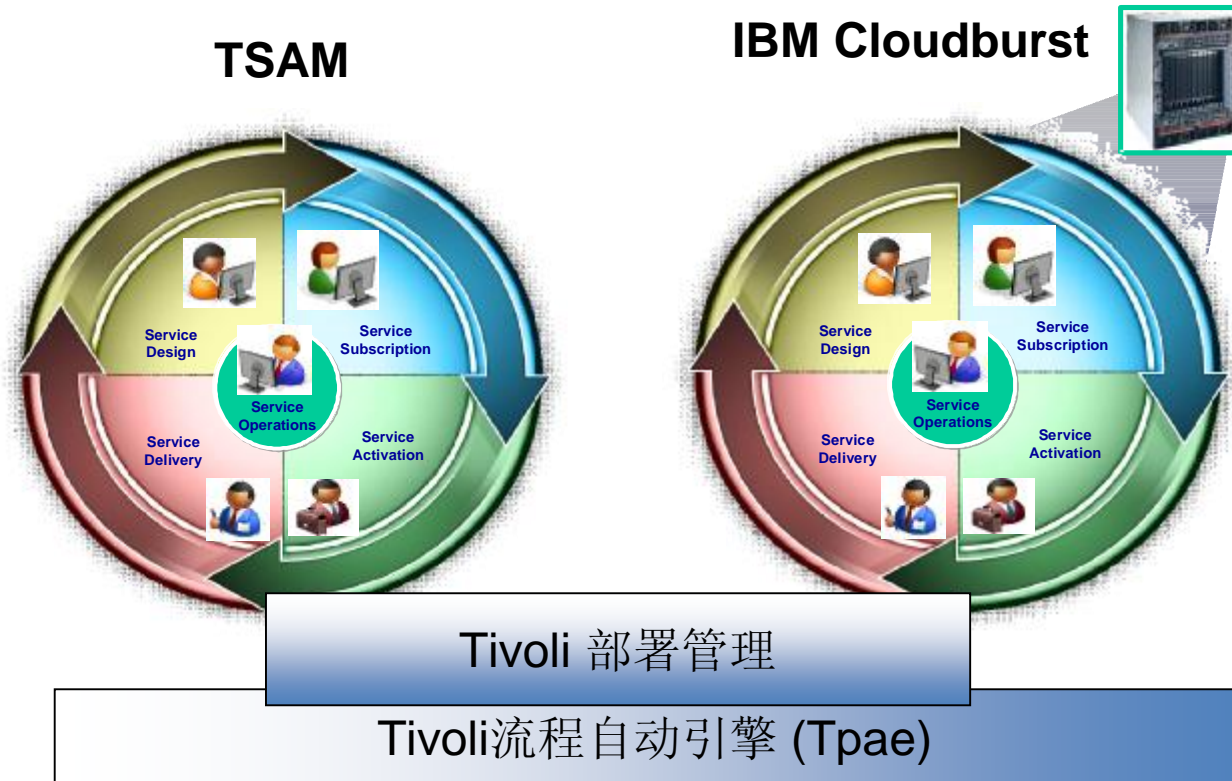
服务请求、操作

IT 基础架构和应用提供

服务创建、部署



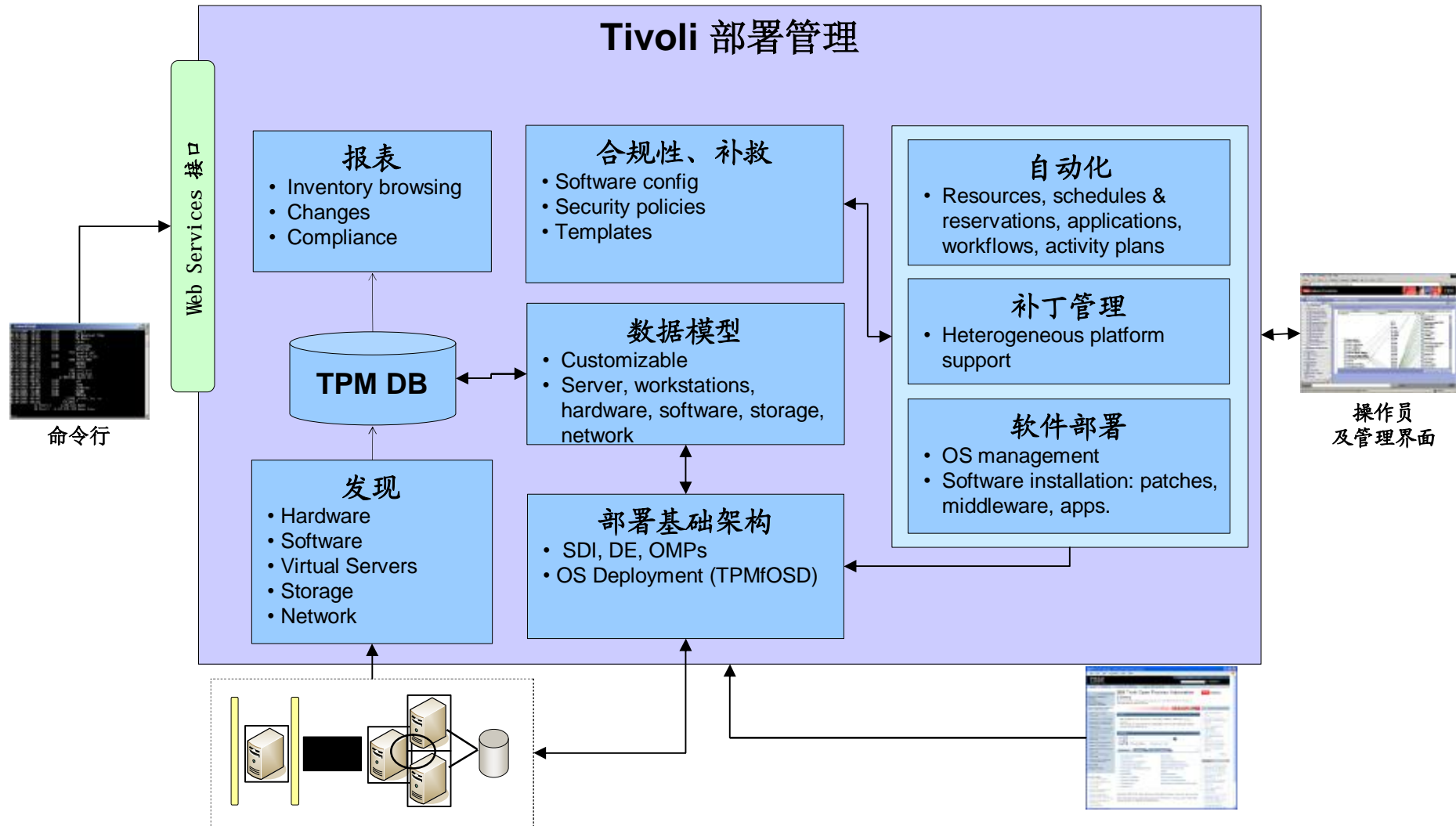
Tivoli 云计算方案



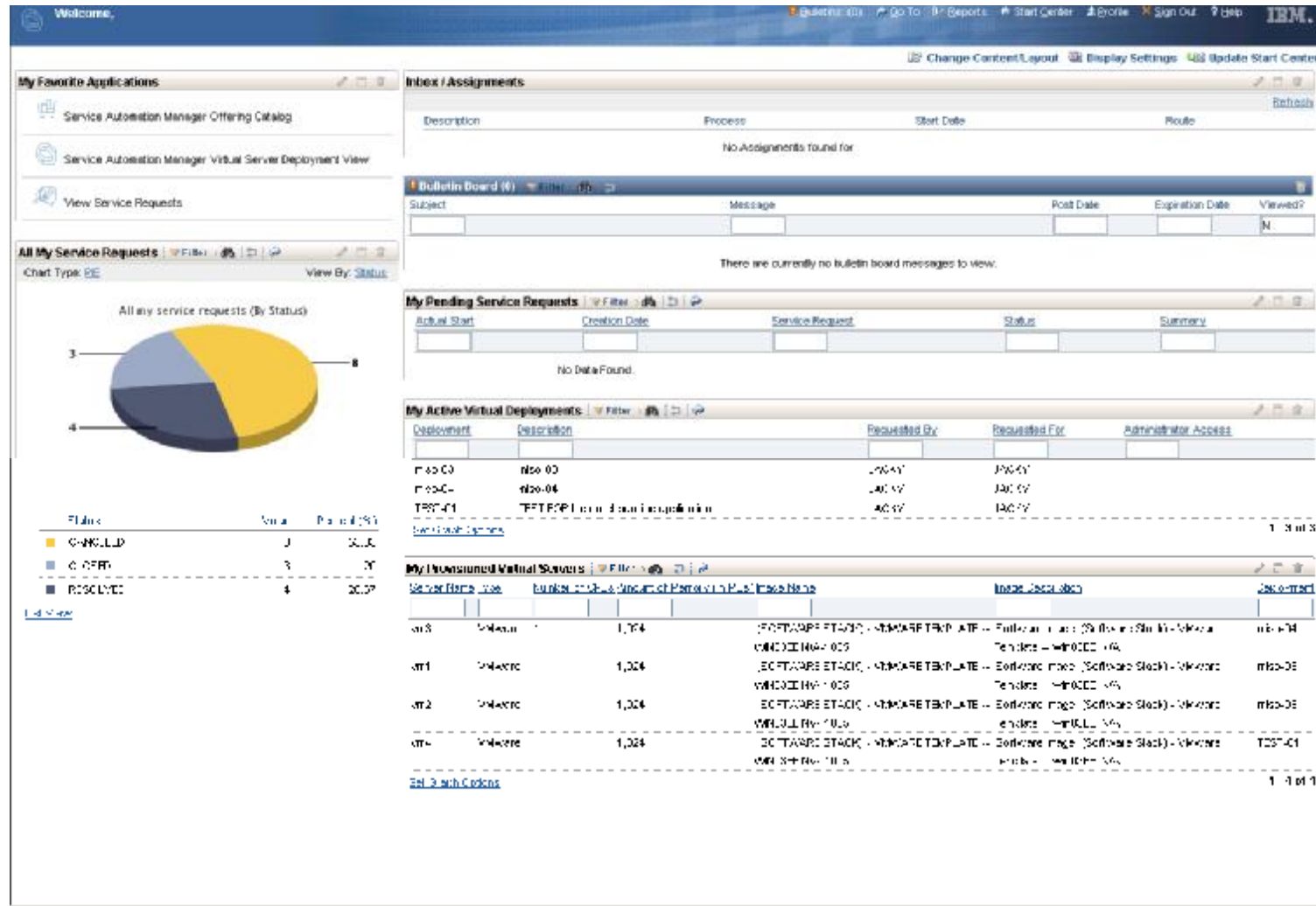
- 基于自动部署技术的两种解决方案
- TSAM = Tivoli Service Automation Manager
- IBM Cloudburst = 硬件+软件+服务



自动部署逻辑架构



流程平台启动中心



The screenshot displays the IBM Service Management Portal interface. The top navigation bar includes links for 'Welcome', 'Queries (0)', 'Go To', 'Reports', 'Start Center', 'Profile', 'Sign Out', and 'Help'. The main content area is divided into several sections:

- My Favorite Applications:** Lists 'Service Automation Manager Offering Catalog', 'Service Automation Manager Virtual Server Deployment View', and 'View Service Requests'.
- All My Service Requests:** Features a 3D pie chart titled 'All my service requests (By Status)'. The chart shows three segments: CONCLUDED (yellow, 3 requests, 25%), OPEN (blue, 3 requests, 25%), and RESOLVED (grey, 4 requests, 33%). A table below the chart provides the following data:

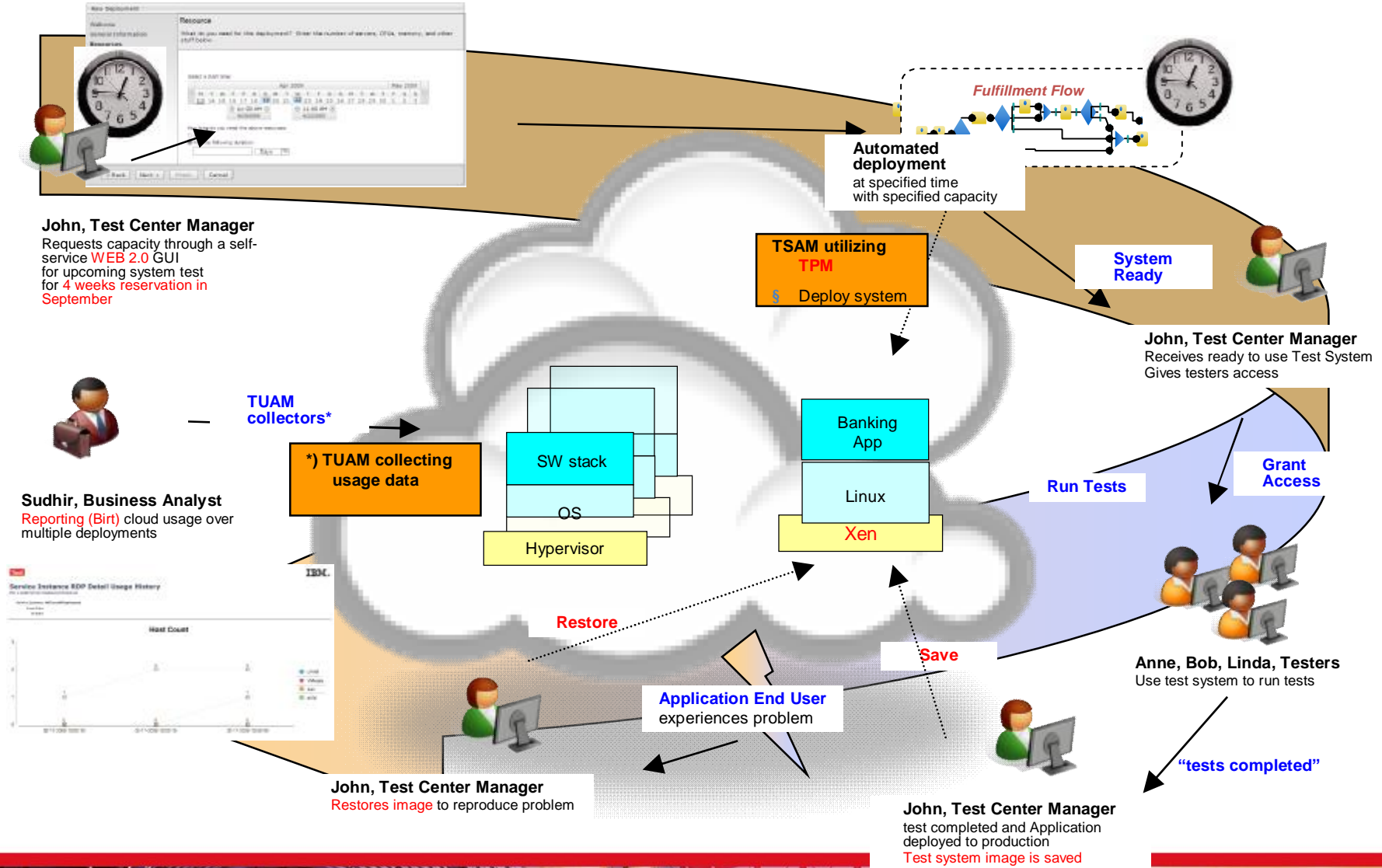
Status	Count	Percent (%)
CONCLUDED	3	25%
OPEN	3	25%
RESOLVED	4	33%
- Inbox / Assignments:** A table with columns 'Description', 'Process', 'Start Date', and 'Route'. It displays 'No Assignments found for'.
- Bulletin Board (0):** A table with columns 'Subject', 'Message', 'Post Date', 'Expiration Date', and 'Viewed?'. It displays 'There are currently no bulletin board messages to view.'.
- My Pending Service Requests:** A table with columns 'Actual Start', 'Creation Date', 'Service Request', 'Status', and 'Summary'. It displays 'No Data Found.'.
- My Active Virtual Deployments:** A table with columns 'Deployment', 'Description', 'Requested By', 'Requested For', and 'Administrator Access'. It lists three deployments:

Deployment	Description	Requested By	Requested For	Administrator Access
miso-03	miso-03	JAC/YY	JAC/YY	
miso-04	miso-04	JAC/YY	JAC/YY	
TSP-01	TFTFEP1 (miso-04) (miso-04)	JAC/YY	JAC/YY	
- My Unassigned Virtual Servers:** A table with columns 'Server Name', 'Size', 'Number of CPUs', 'Number of Memory', 'Instance Name', 'Image', 'Description', and 'Link to Detail'. It lists four virtual servers:

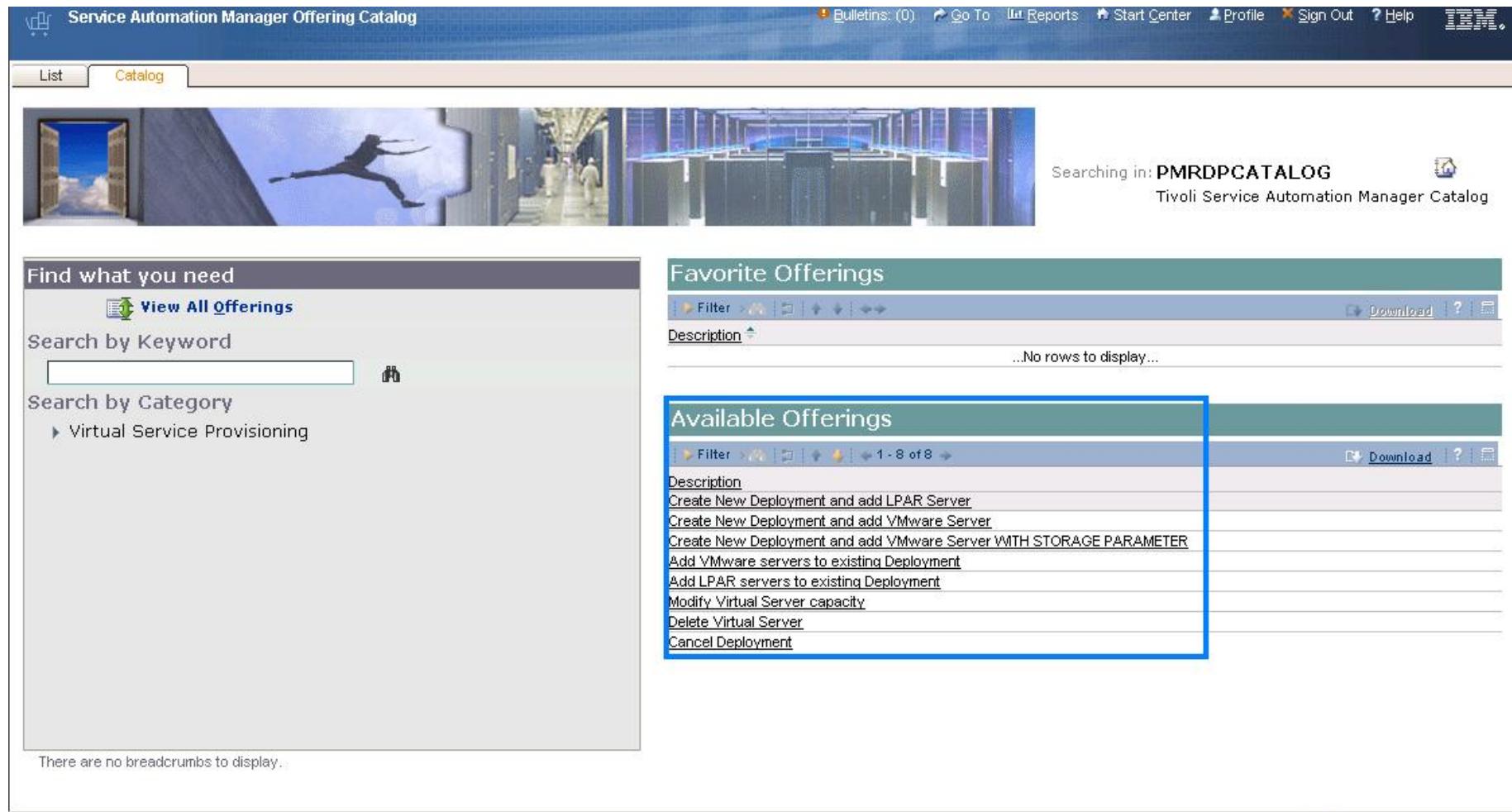
Server Name	Size	Number of CPUs	Number of Memory	Instance Name	Image	Description	Link to Detail
vm3	1,024	1	1,024	SOFTWARE STACK - VMWARE TEMPLATE -- Fullstack (miso-03) (miso-03)	Fullstack (miso-03) (miso-03)	Fullstack (miso-03) (miso-03)	miso-03
vm1	1,024	1	1,024	SOFTWARE STACK - VMWARE TEMPLATE -- Fullstack (miso-03) (miso-03)	Fullstack (miso-03) (miso-03)	Fullstack (miso-03) (miso-03)	miso-03
vm2	1,024	1	1,024	SOFTWARE STACK - VMWARE TEMPLATE -- Fullstack (miso-03) (miso-03)	Fullstack (miso-03) (miso-03)	Fullstack (miso-03) (miso-03)	miso-03
vm4	1,024	1	1,024	SOFTWARE STACK - VMWARE TEMPLATE -- Fullstack (miso-03) (miso-03)	Fullstack (miso-03) (miso-03)	Fullstack (miso-03) (miso-03)	TSP-01



云计算测试-开发典型场景



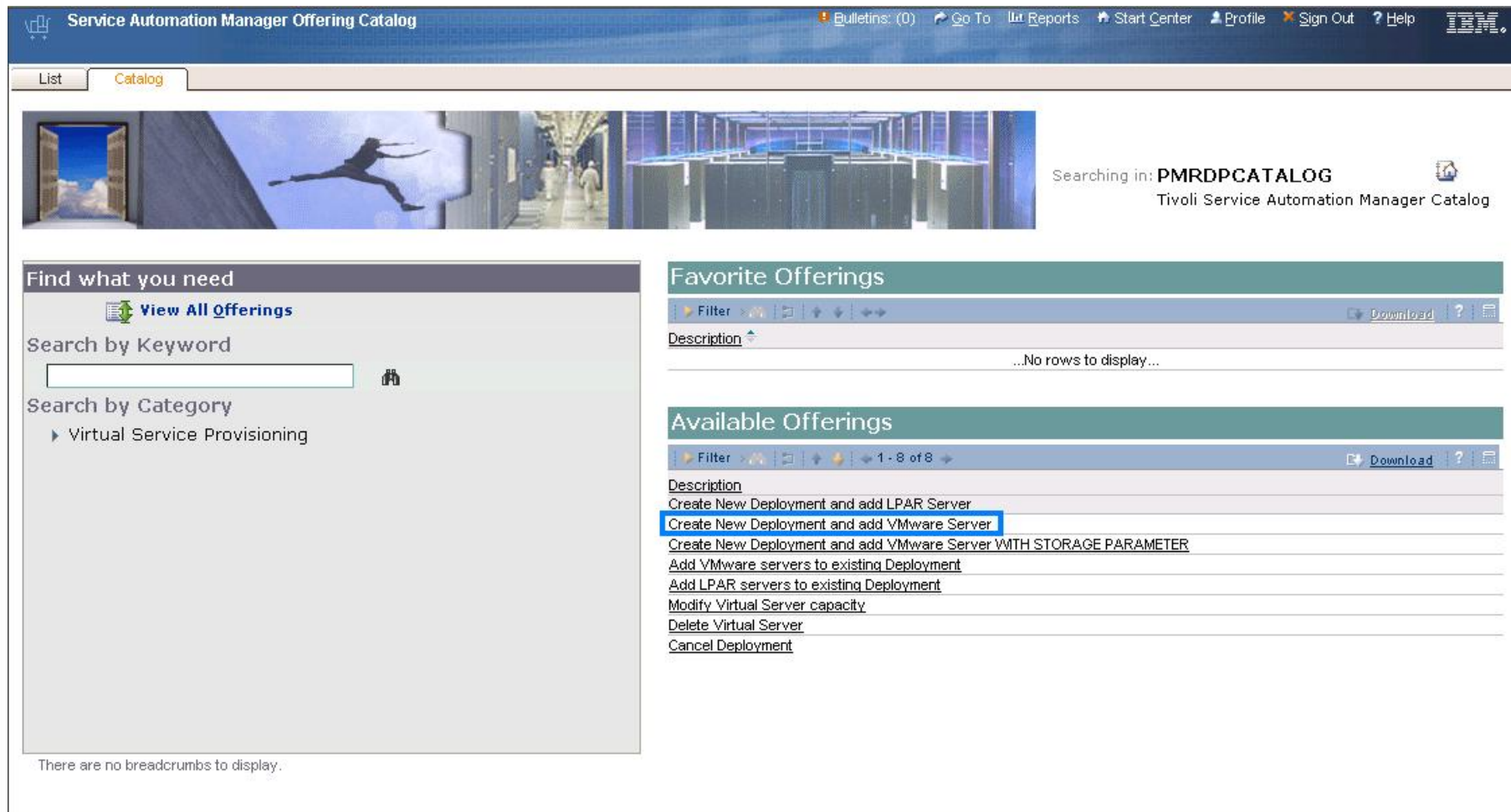
服务目录



The screenshot displays the 'Service Automation Manager Offering Catalog' web application. At the top, a navigation bar includes links for 'Bullatins: (0)', 'Go To', 'Reports', 'Start Center', 'Profile', 'Sign Out', and 'Help'. Below this, a secondary navigation bar shows 'List' and 'Catalog' tabs. The main content area features a large banner image on the left and a search bar on the right with the text 'Searching in: PMRDPCATALOG' and 'Tivoli Service Automation Manager Catalog'. On the left side, there is a search panel titled 'Find what you need' with a 'View All Offerings' link, a 'Search by Keyword' input field, and a 'Search by Category' section with a dropdown menu currently showing 'Virtual Service Provisioning'. Below the search panel, a message states 'There are no breadcrumbs to display.'. On the right side, there are two sections: 'Favorite Offerings' and 'Available Offerings'. Both sections have a 'Filter' button and a 'Download' button. The 'Favorite Offerings' section shows '...No rows to display...'. The 'Available Offerings' section shows a list of 8 items, with the first 8 items visible: 'Create New Deployment and add LPAR Server', 'Create New Deployment and add VMware Server', 'Create New Deployment and add VMware Server WITH STORAGE PARAMETER', 'Add VMware servers to existing Deployment', 'Add LPAR servers to existing Deployment', 'Modify Virtual Server capacity', 'Delete Virtual Server', and 'Cancel Deployment'. A blue box highlights the 'Available Offerings' section.



提交服务请求 (1)



The screenshot shows the 'Service Automation Manager Offering Catalog' web interface. At the top, there is a navigation bar with links for 'List' and 'Catalog'. Below this, a search bar contains the text 'PMRDPCATALOG' and 'Tivoli Service Automation Manager Catalog'. The main content area is divided into two sections: 'Find what you need' on the left and 'Favorite Offerings' and 'Available Offerings' on the right. The 'Find what you need' section includes a search box and a list of categories, with 'Virtual Service Provisioning' selected. The 'Available Offerings' section displays a list of service offerings, with 'Create New Deployment and add VMware Server' highlighted in blue. The interface also features a search bar, a filter dropdown, and a 'Download' button.

Service Automation Manager Offering Catalog

Bulletins: (0) Go To Reports Start Center Profile Sign Out Help

List Catalog

Searching in: **PMRDPCATALOG**
Tivoli Service Automation Manager Catalog

Find what you need

[View All Offerings](#)

Search by Keyword

Search by Category

- Virtual Service Provisioning

There are no breadcrumbs to display.

Favorite Offerings

Filter Download ?

Description

...No rows to display...

Available Offerings

Filter Download ?

1 - 8 of 8

Description

- Create New Deployment and add LPAR Server
- Create New Deployment and add VMware Server**
- Create New Deployment and add VMware Server WITH STORAGE PARAMETER
- Add VMware servers to existing Deployment
- Add LPAR servers to existing Deployment
- Modify Virtual Server capacity
- Delete Virtual Server
- Cancel Deployment



提交服务请求 (2)

Create New Deployment and add VMware Server

Offering: PMRDP_0001B Create New Deployment and add VMware Ser

Description: Provision one or more VMware virtual machines containing a software package.

Requested For*: JACKY

Deployment Name: TEST-01

Deployment Description: TEST FOR Internet banking application

Administrator Access for Requests: []

Number of Servers to be Provisioned: 1

Number of CPUs: 1

Amount of Memory (in MBs): 1,024

Software to be Deployed: [] - VMWARE TEMPLATE -- VMN03EE:N/A-1005

Buttons: Add to Favorites, **Submit Request**, Cancel

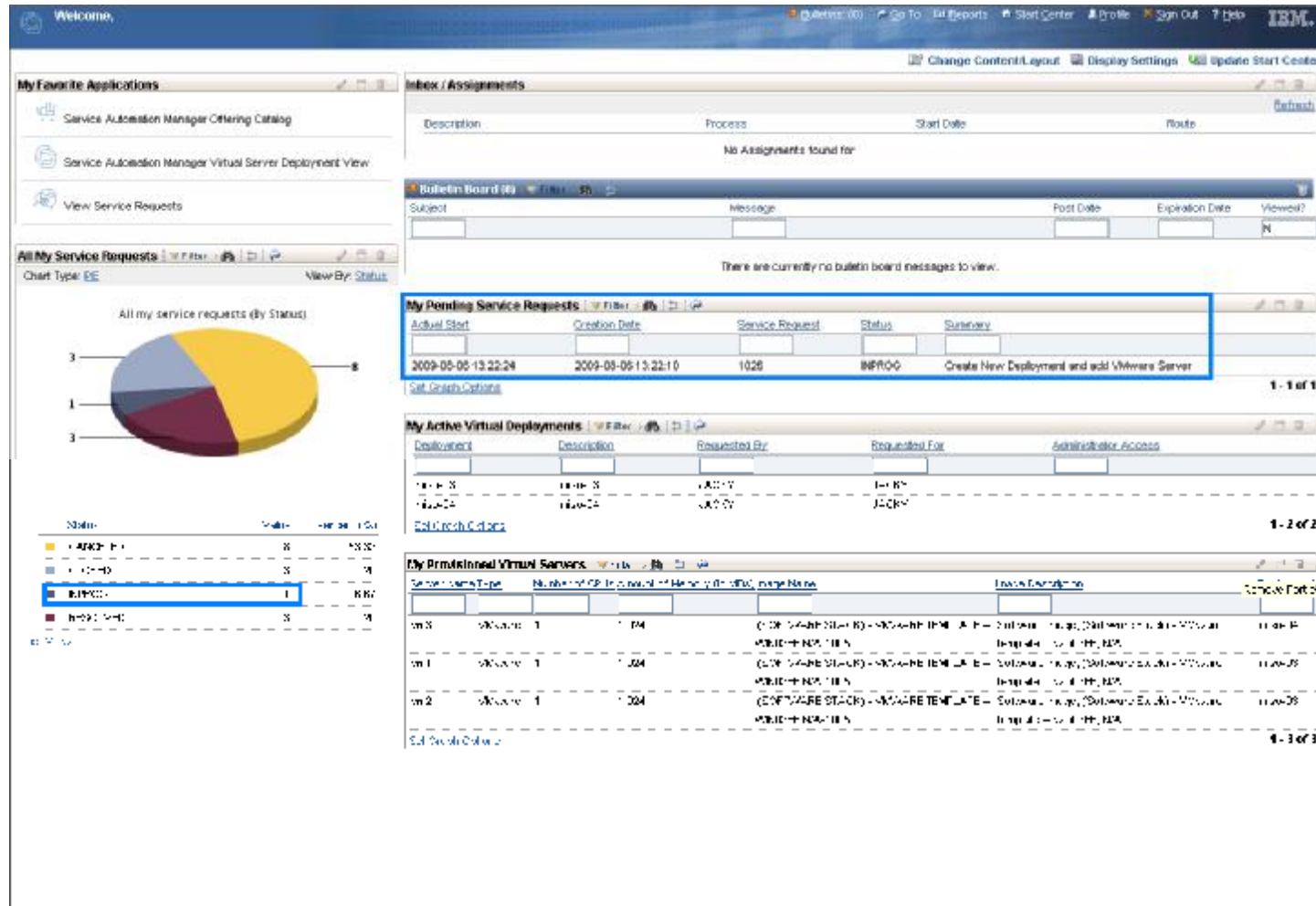
Information

New Service Request created.

Close



提交服务请求 (3)



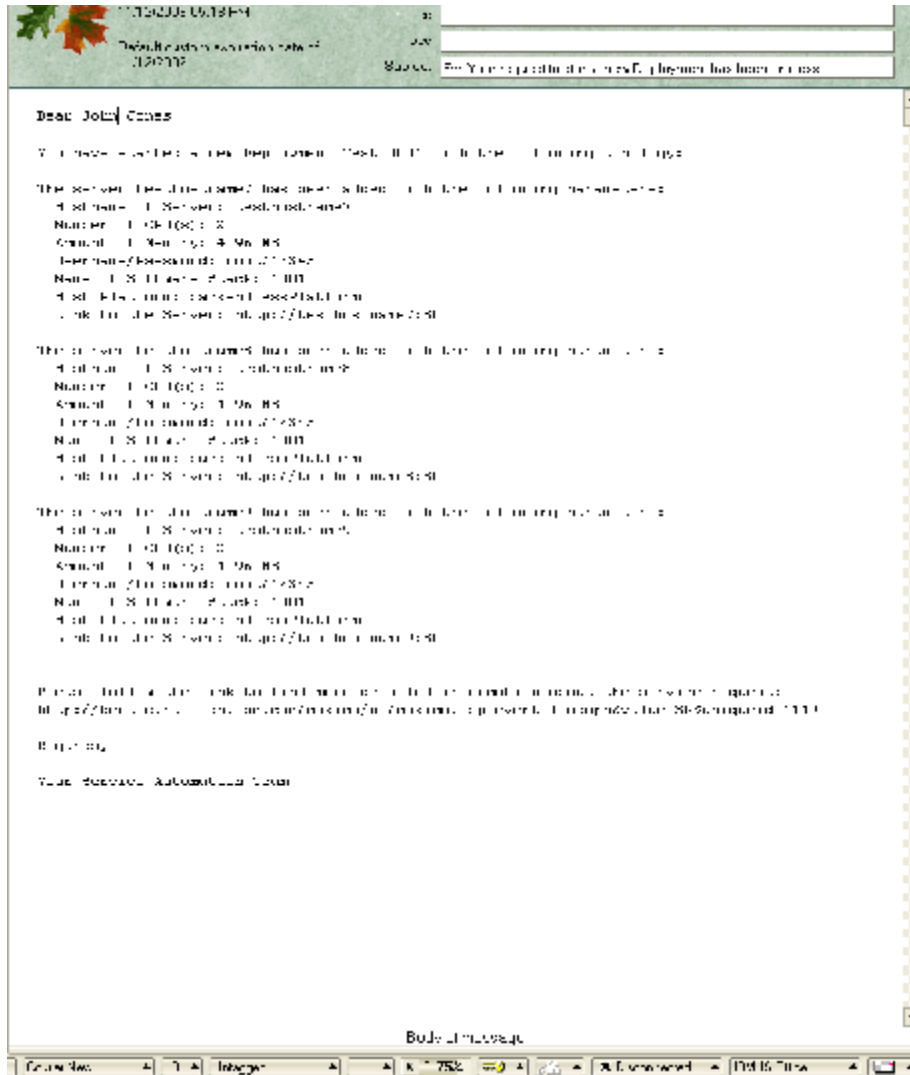
The screenshot displays the IBM Service Management interface. On the left, there are navigation options like 'My Favorite Applications' and 'All My Service Requests'. A pie chart titled 'All my service requests (by Status)' shows the distribution of requests. The main area contains several sections:

- Index / Assignments:** A table with columns for Description, Process, Start Date, and Route. It currently shows 'No Assignments found for'.
- Bulletin Board (0):** A table with columns for Subject, Message, Post Date, Expiration Date, and Viewed? It shows 'There are currently no bulletin board messages to view.'
- My Pending Service Requests:** A table with columns for Actual Start, Creation Date, Service Request, Status, and Summary. One request is listed:

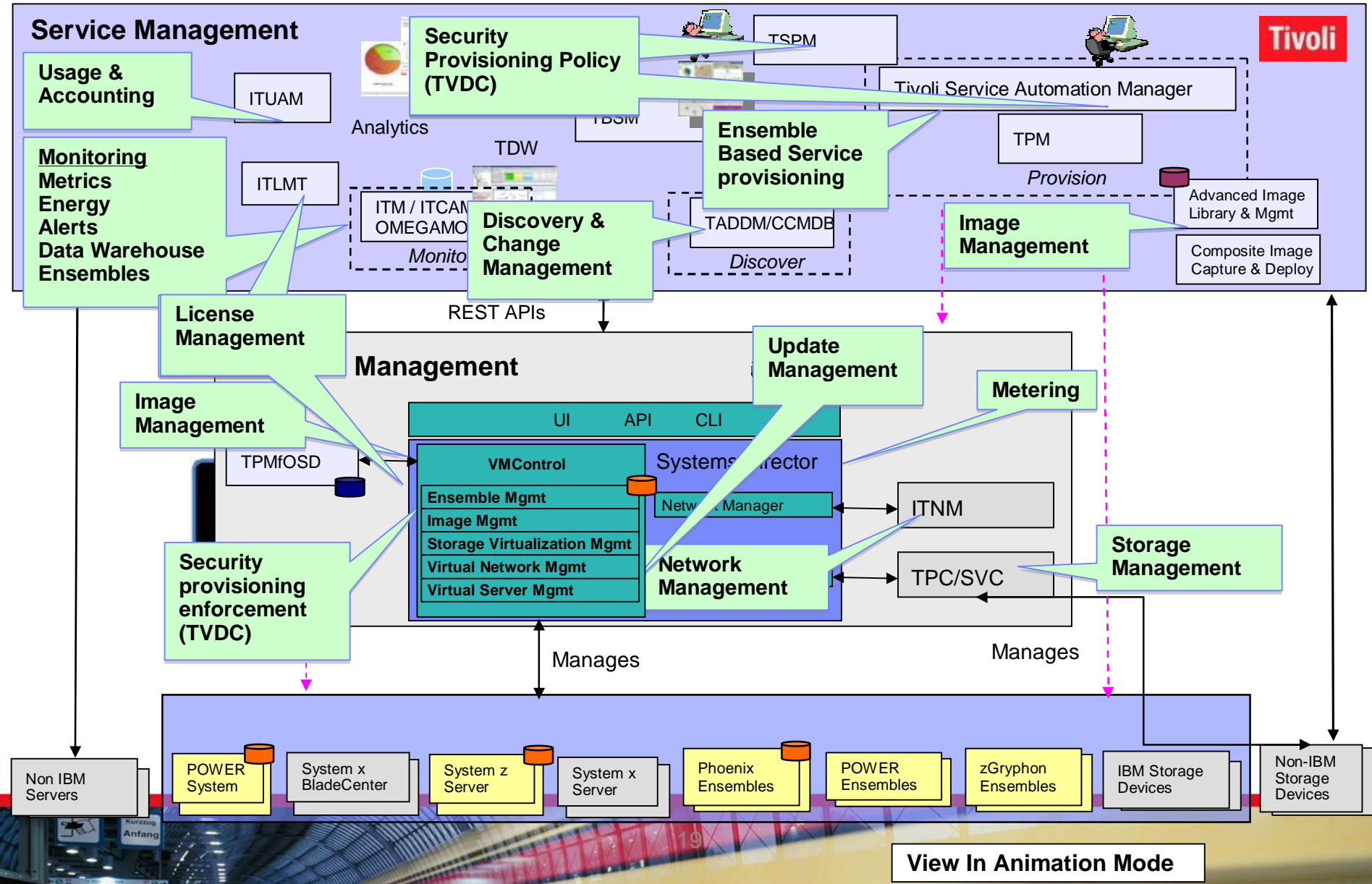
Actual Start	Creation Date	Service Request	Status	Summary
2009-05-05 13:22:24	2009-09-05 13:22:10	1026	INPROG	Create New Deployment and add VMware Server
- My Active Virtual Deployments:** A table with columns for Deployment, Description, Requested By, Requested For, and Administrator Access. It shows two active deployments.
- My Provisioned Virtual Servers:** A table with columns for Server Name, Type, Number of CPUs, Number of Memory, Usage Name, Network Configuration, and Storage Port ID. It lists three provisioned virtual servers.



提交服务请求 (4)



IBM服务管理云计算支持方案



云计算创造智慧的星球 —— IBM 云计算中心

概述

IBM 云计算价值

IBM 蓝云解决方案

IBM Cloud Labs - IBM大中华区云计算中心

最新公告

所有的事物都变得越来越智能。算法和强大的系统可以分析那些海量数据，并将其转换成实际决策和行动。这样世界将变得更加美好，更加智慧。

云是一种新兴的信息技术基础设施，它可以更巧妙地使用计算资源，从而更智能地处理大量数据。业务或客户服务以一种简化的方式交付，拥有无限的规模、出众的质量，以用户为中心的设计可以促进快速创新和高效决策制定。

云计算是一种可能经济有效的模型，提供了流程、应用程序和服务，同时使 IT 管理更轻松，能更快响应业务需求。这些服务（计算服务、存储服务、网络服务等一切必要服务）以一种简化的方式——“按需应变”来交付和落实，无需考虑用户所在地和所用设备类型。

这种方法既可实现快速创新，又能支持核心业务功能。新应用程序通过高效的虚拟计算资源获得，这种虚拟计算资源能以一种灵活但安全的方式快速扩展和缩减，可以交付高质量的服务。

借助 IBM 云计算，您能更进一步将整个环境或云虚拟化，而不是仅虚拟化一些集合体，因此您可体验具有高度响应能力并由业务目标驱动的动态环境。IT 专业人员能够摆脱日常 IT 操作的束缚，专注于可推动业务发展的战略计划——因而能适应各种市场因素（例如新兴技术、Web 2.0 之类不断变化的 IT 规划）。

公有云和私有云

公有云通常指第三方提供商用户能够使用的云，公有云一般可通过 Internet 使用，可能是免费或成本低廉的。这种云有许多实例，可在当今整个开放的公有网络中提供服务。

私有云提供许多与公有云相同的益处，但在组织内部管理。此类型的云不承受网络带宽和可用性问题或潜在安全风险的重担，而这些负担可能与公有云相关。私有云能为供应商和用户提供更好的控制、安全性和恢复能力。

许多公司正开始提供并实现云计算功能。IBM 的方法、独特优势，以及对云计算基础设施、架构以及信息管理的关注，旨在帮助您更快地获取更好的结果。

更多信息，请联系 IBM 大中华区云计算中心：
cloud@cn.ibm.com

智慧的地球

→ 深入探讨：智慧的 IT 基础架构

→ 智慧的地球索引

dW 中国云计算空间

获取最新的来自 IBM 和业界其他媒体的云计算消息，得到云计算相关的入门技术知识，理解云计算的重要性。

→ 立即点击了解详情



धन्यवाद

Hindi

多謝

Traditional Chinese

ขอบพระคุณ

Thai

Спасибо

Russian

Gracias

Spanish

Thank

English

Obrigado

Brazilian Portuguese

شكراً

Arabic

You

Danke

German

dziekuje

Polish

Grazie

Italian

Kiitos

Finnish

Merci

French

நன்றி

Tamil

ありがとうございました

Japanese

감사합니다

Korean

多谢

Simplified Chinese

