

微软云计算与动态数据中心概览

牛可 MVP (安锐卓越)

Microsoft | TechNet

议程

- 云计算概述
- 企业的云计算之路与动态数据中心
- 动态数据中心的实现与运营

计算产业的演进

技术

经济

商务



Centralized compute and storage, thin clients

Optimized for efficiency due to high cost

High upfront costs for hardware and software



PCs and servers for distributed compute, storage, etc.

Optimized for agility due to low cost

Perpetual license for OS and application software



Large DCs, commodity HW, scale-out, devices

Order of magnitude better efficiency and agility

Pay as you go, and only for what you use

我们熟知的云计算服务



14 billion ads per month



23 million subscribers



10 billion messages processed daily



Over 6 million songs in the catalog



Over 3 billion WWW queries each month



Over 600 million unique users



370 million active accounts



500 million active Windows Live IDs



A Microsoft Subsidiary

2 billion unique calls per year

CLOUD SERVICES



PC

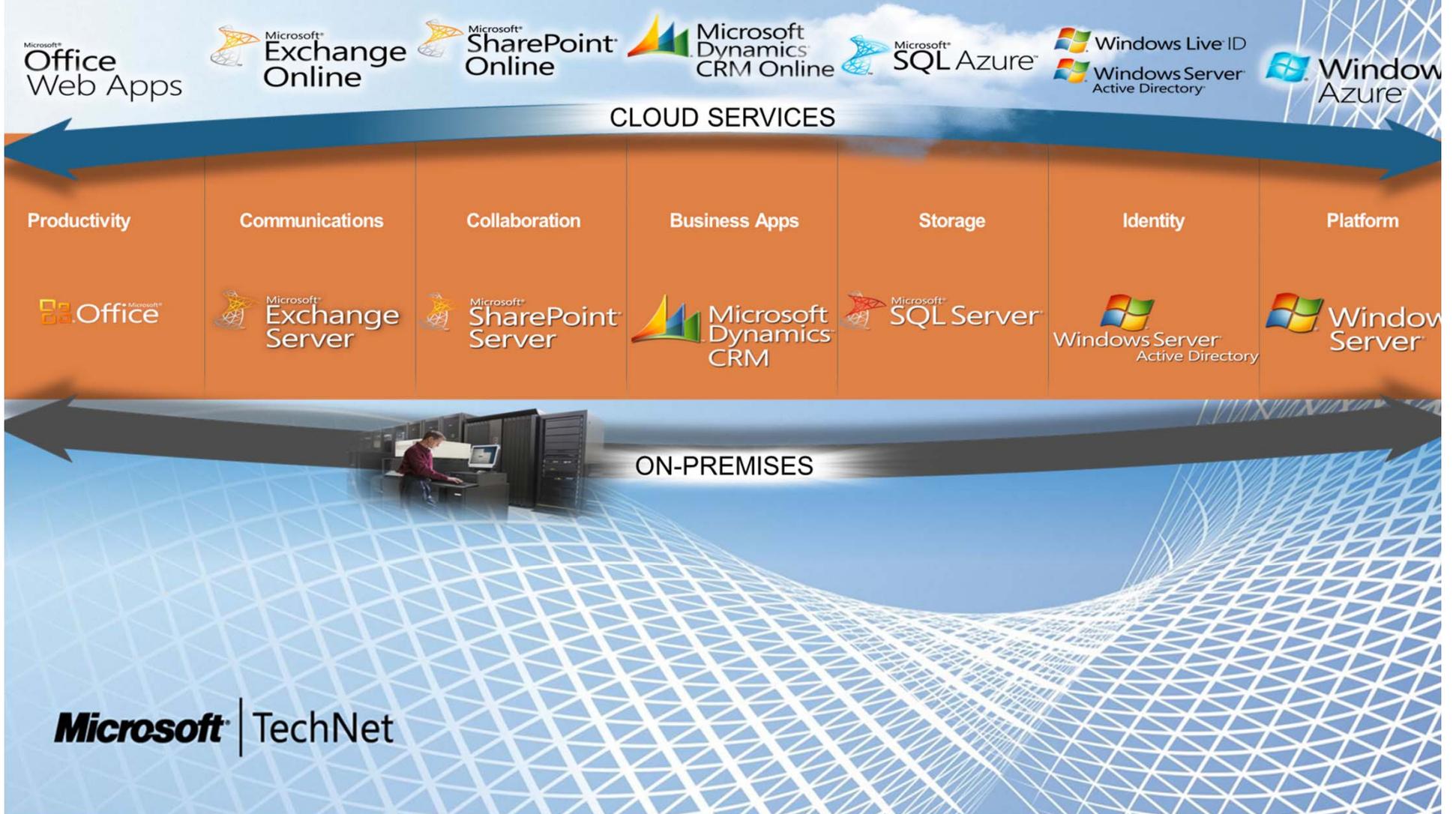


MOBILE



TV/HOME

面向企业的云计算平台



云计算的核心价值 – IT 即服务

云计算

让 **IT 即服务** 般交付，让您把注意力集中在所关心的事上而非技术细节

云计算带给用户的好处

- 用户能从云计算中获得更多收益



降低成本



灵活性



便捷访问



快速敏捷



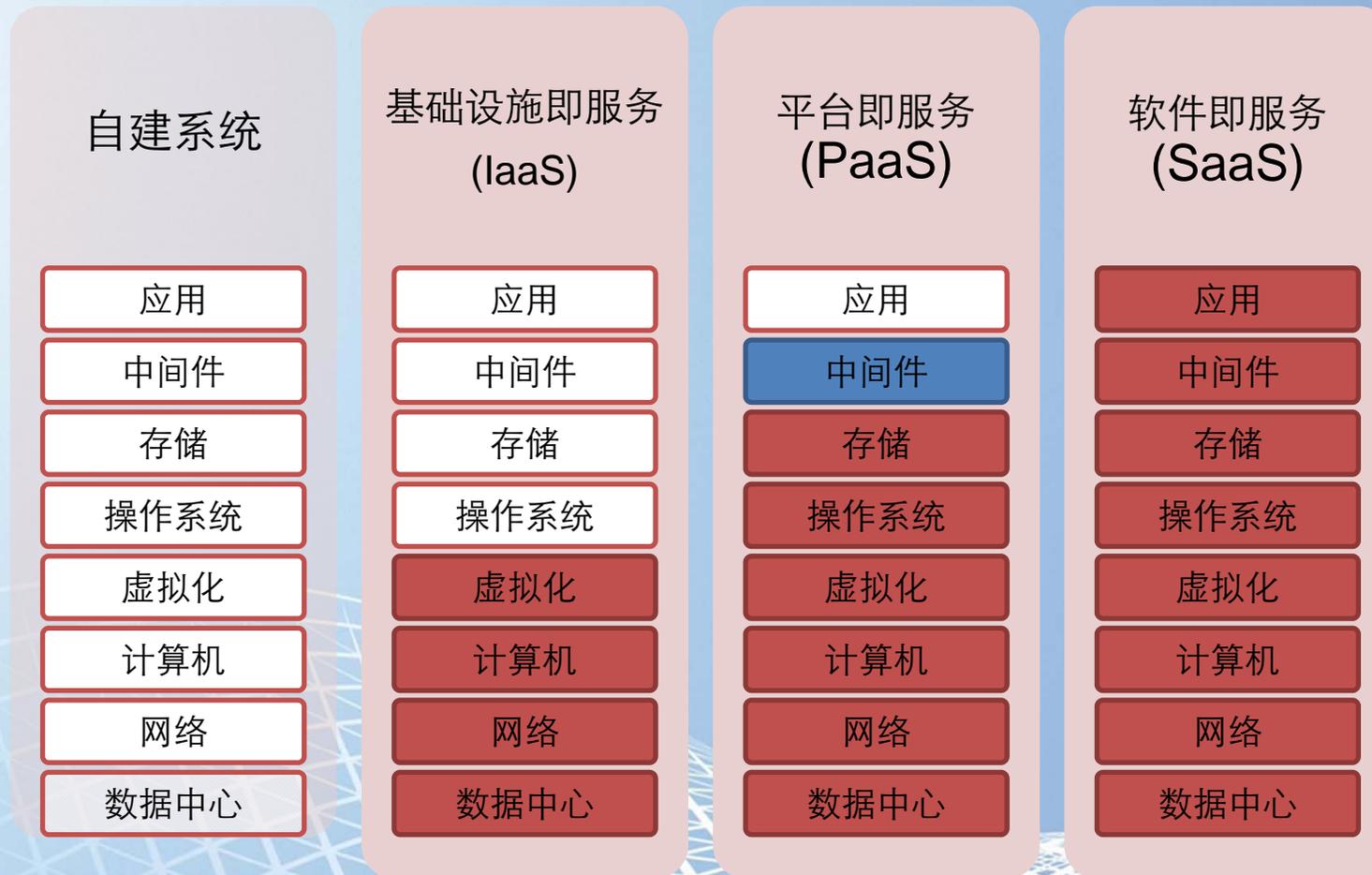
易于实现

云计算的特征

- 所有的云计算都具有这些特征
 - 自服务和按需分配
 - 随时随地和便捷的访问
 - 资源的共享与池化
 - 灵活和弹性扩展能力
 - 服务可度量

云计算

云计算的服务模型



由客户拥有并管理

由供应商拥有并管理

演示

微软公用云计算服务

Microsoft | TechNet

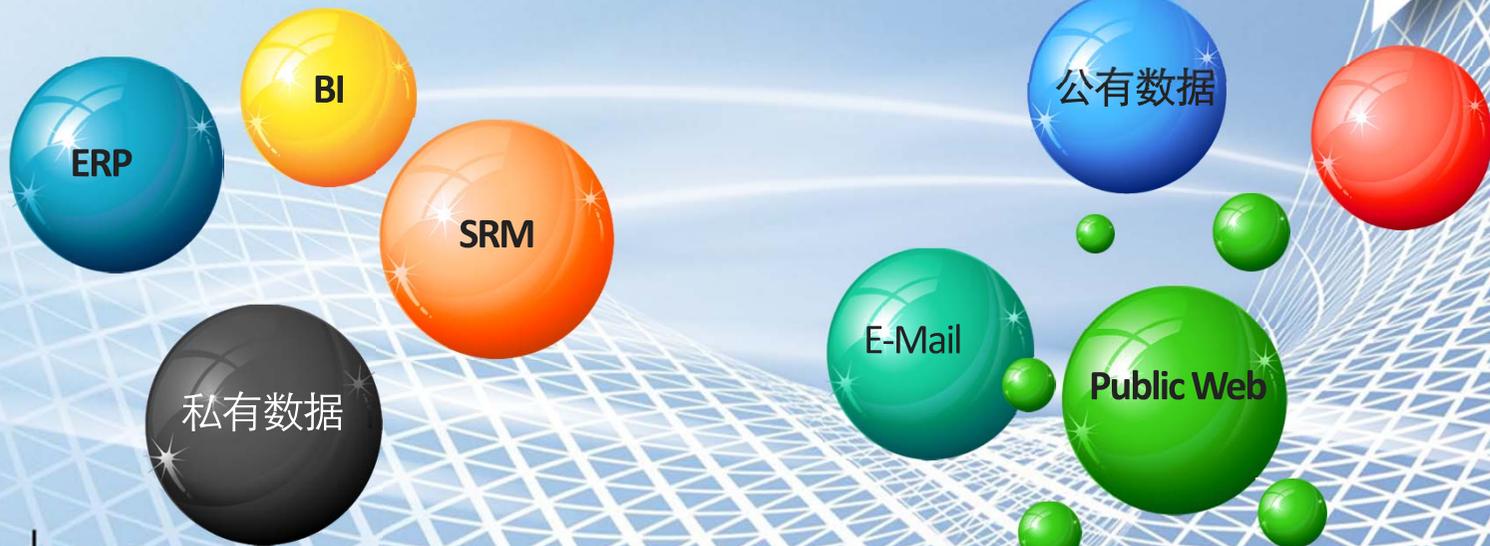
企业实现云计算的过程



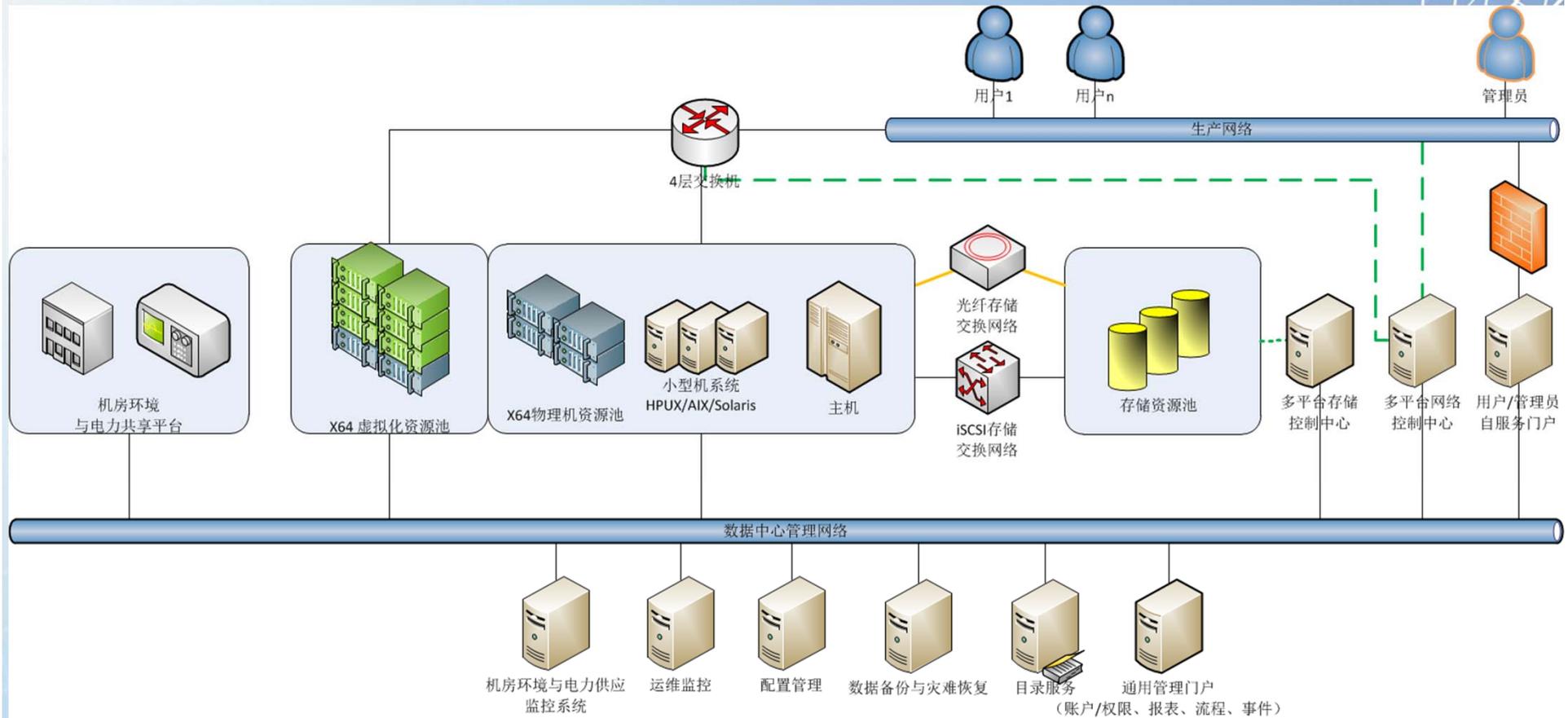
公有与私有的混合云结构



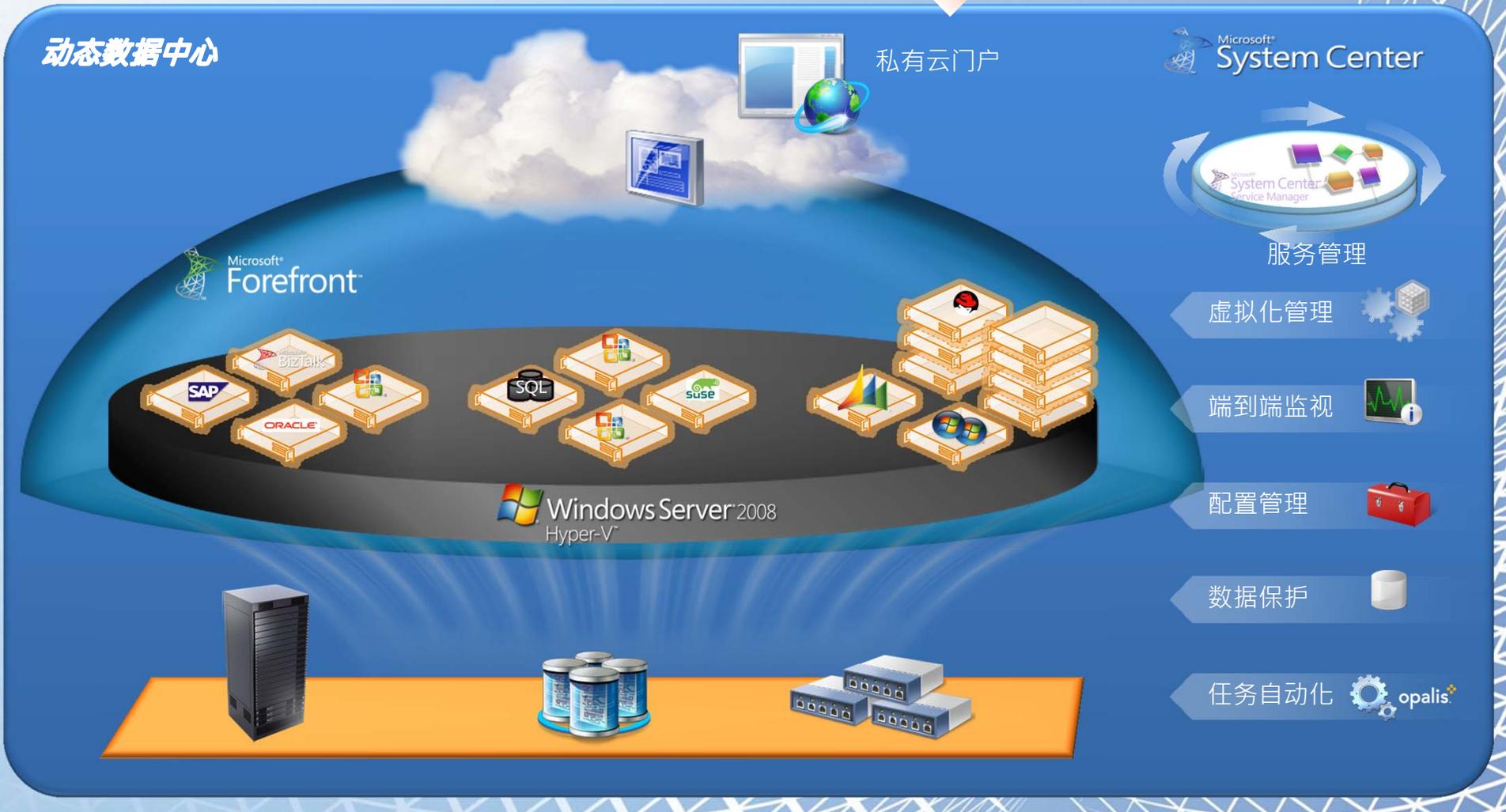
虚拟化



云平台 - 动态数据中心结构

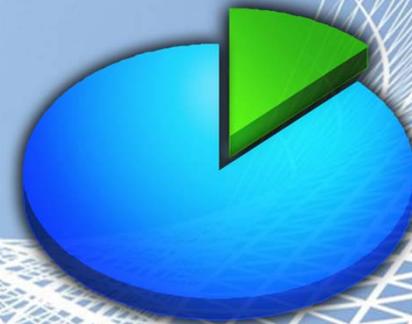
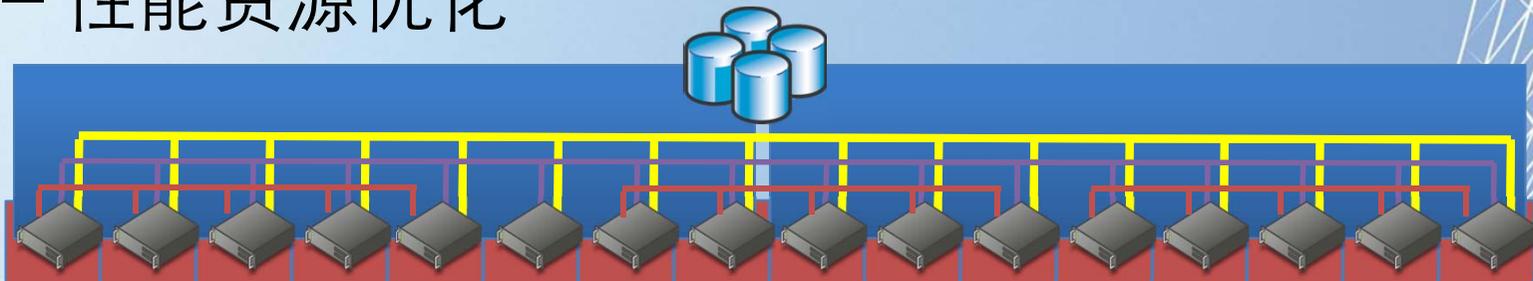


动态数据中心逻辑层次

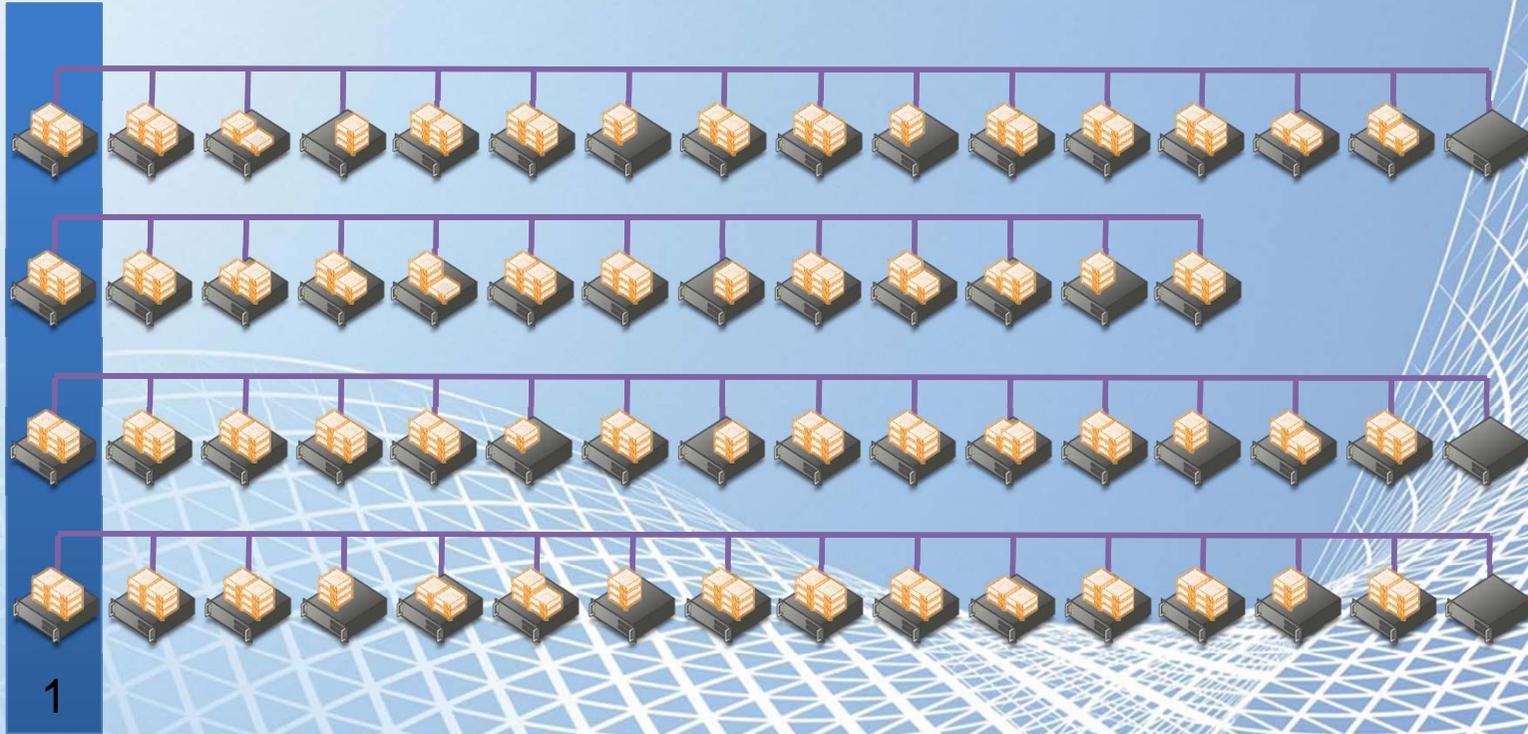
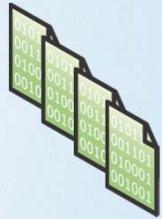


动态数据中心基础——计算资源池

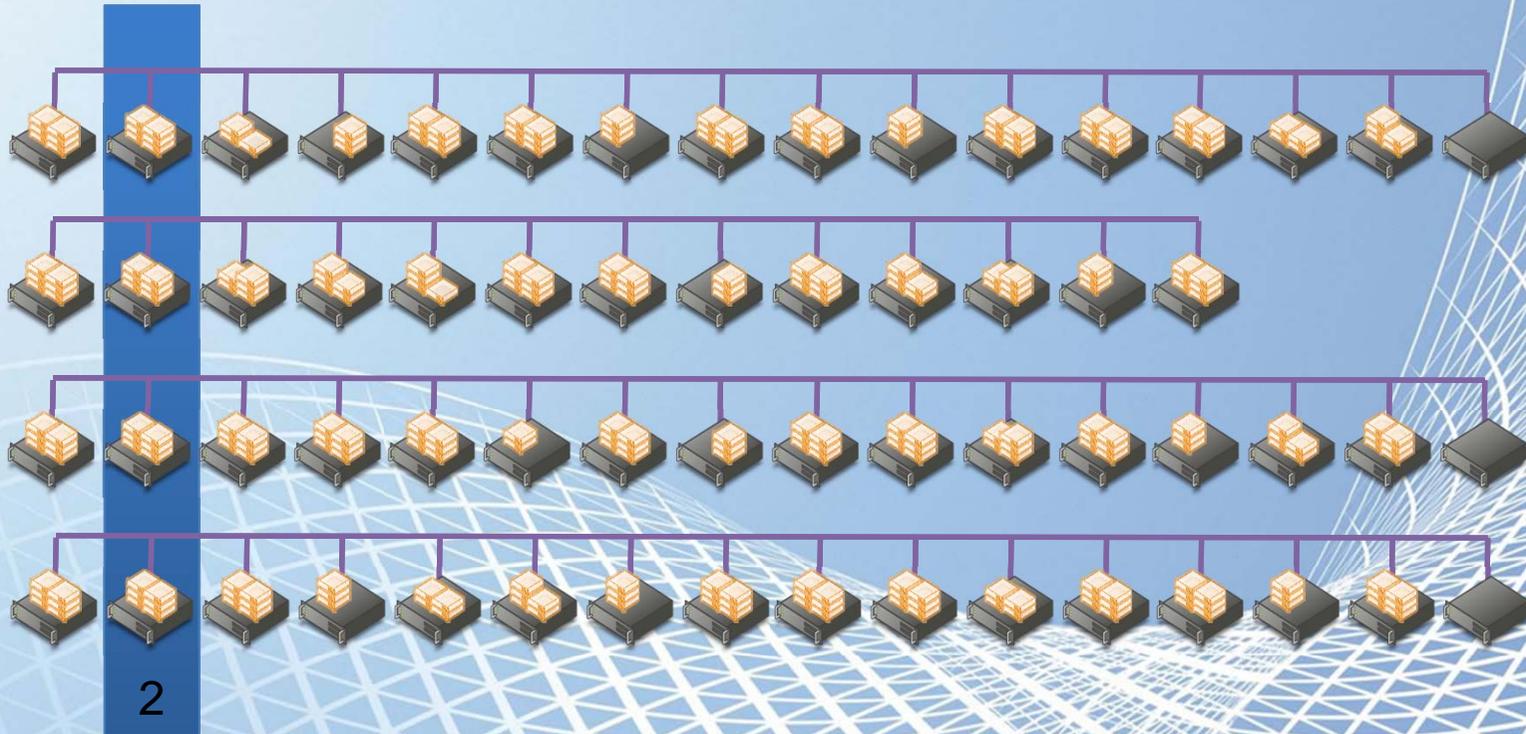
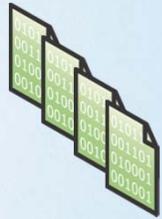
- 采用虚拟化技术实现底层资源的池化
 - 高可用性
 - 性能资源优化



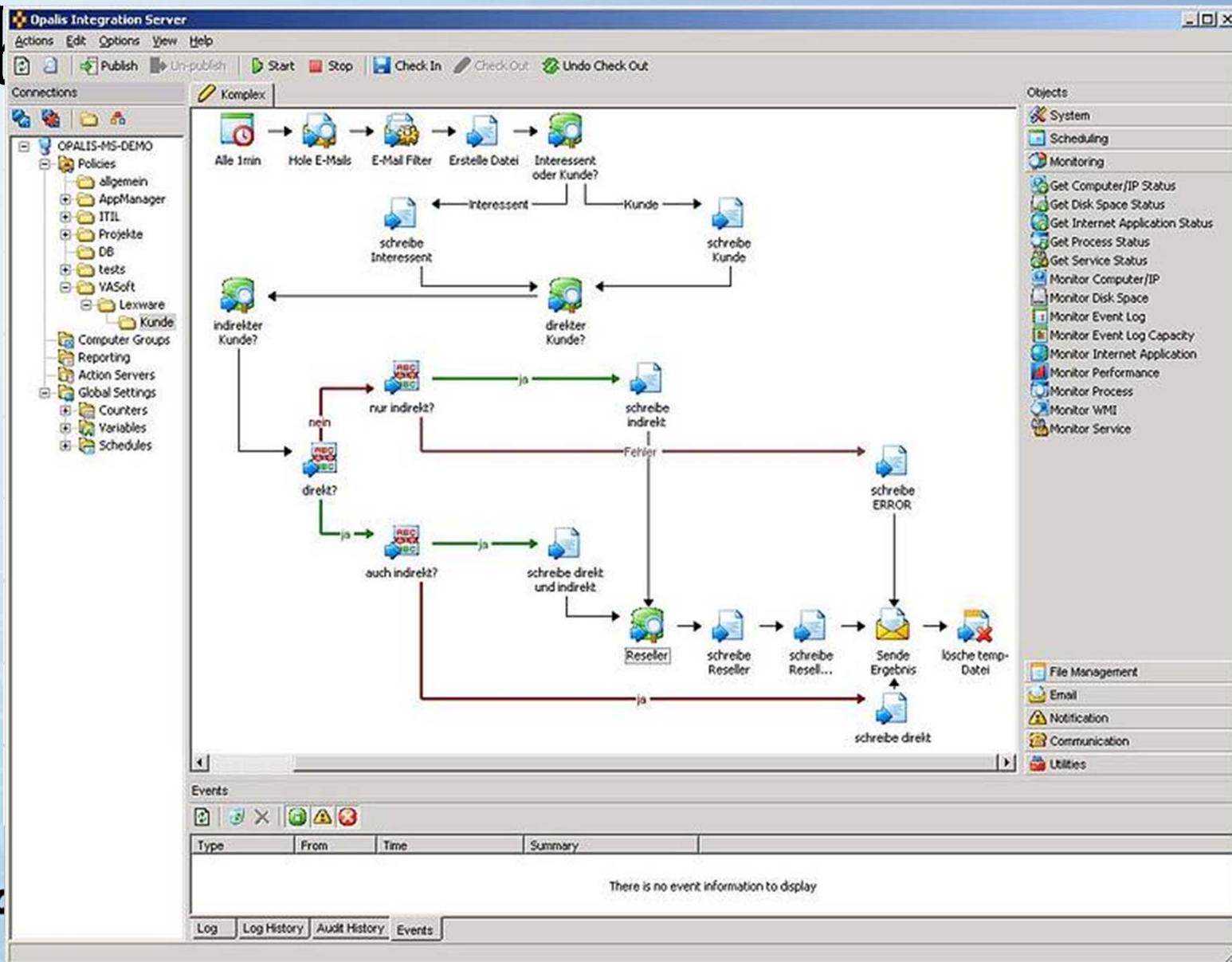
动态数据中心运营——配置管理



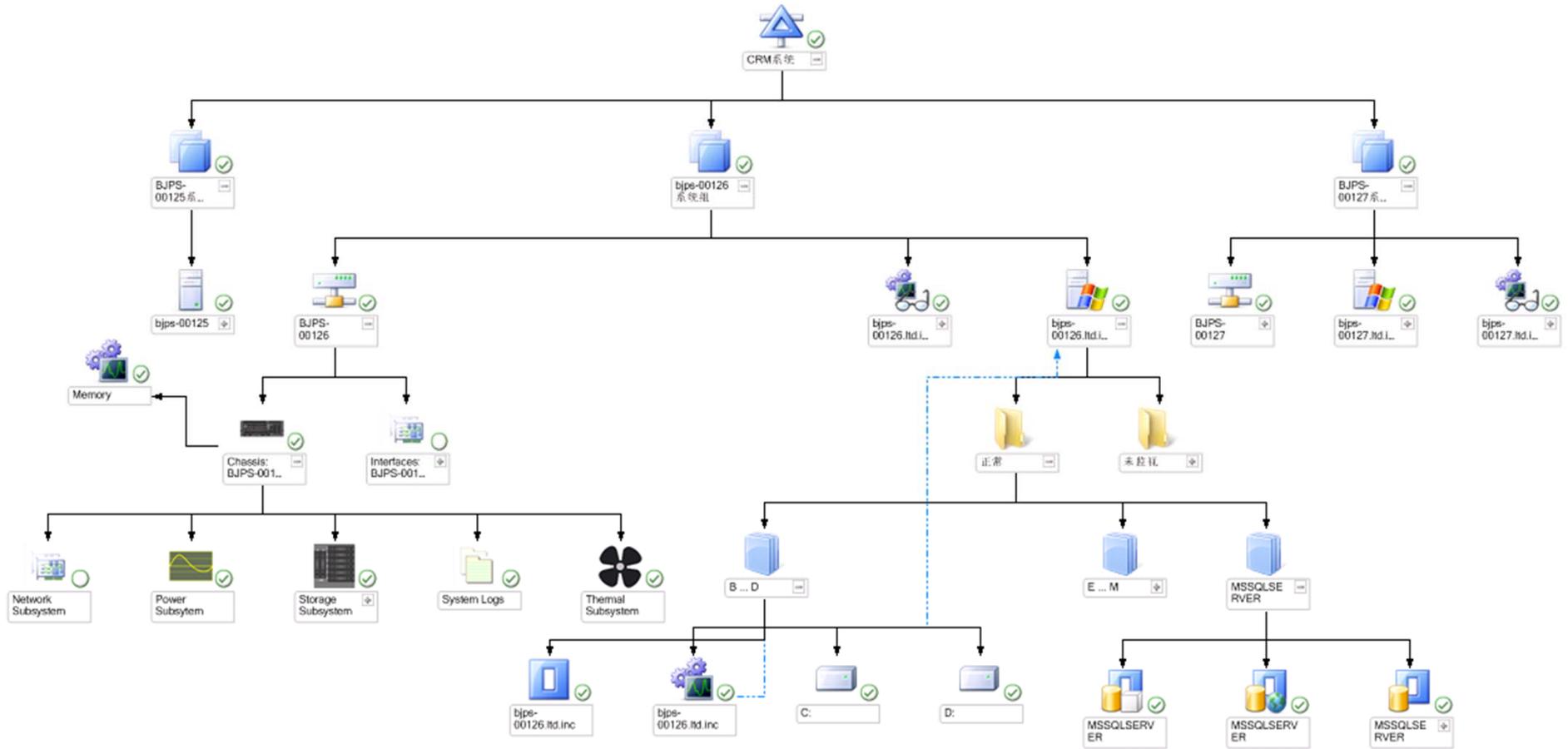
动态数据中心运营——配置管理



动态数据中心运营——流程自动化



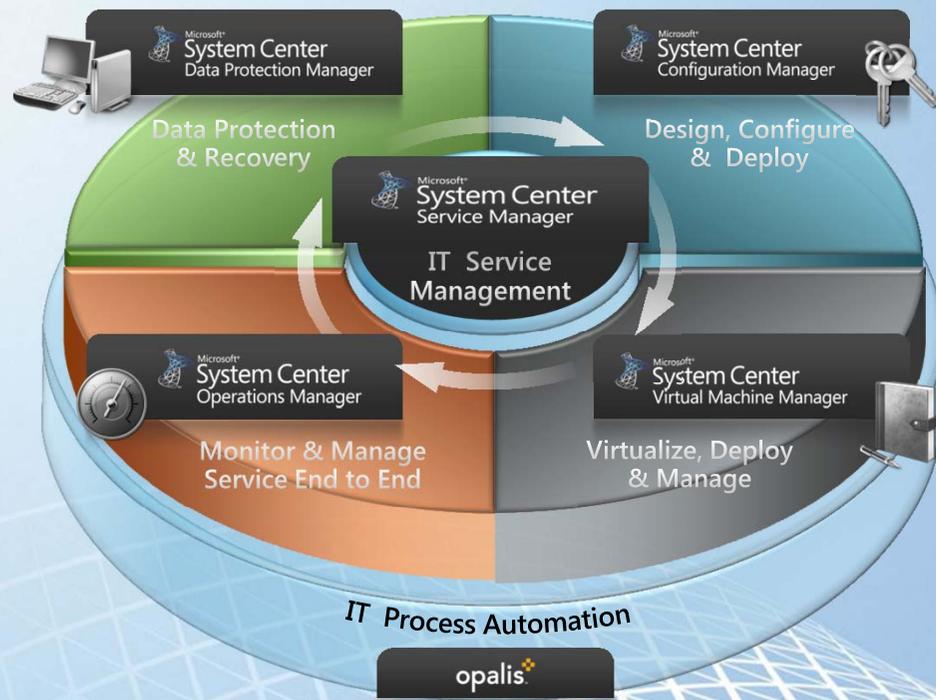
动态数据中心运营——监视



动态数据中心运营——服务管理



实现动态数据中心管理



Microsoft® System Center

- 优化跨数据中心和关键业务的服务交付
- 通过自动化过程降低成本
- 简化集成物理、虚拟化环境以及云端的管理
- 通过云计算提高灵活性

微软IaaS云平台

Dynamic Data Center Toolkit for Hosters (DDTK)



- 部署指南：构建可伸缩的、虚拟化的基础架构
- 示例代码和最佳实践
- 使用现有开发工具和技术开发应用



Windows Server[®] 2008
Hyper-V[™]



Microsoft[®]
System Center



Microsoft[®]
SQL Server[®]

Virtual Machine Manager Self-Service Portal 2.0 (SSP 2.0)



- 架构路线图、部署指南和最佳实践
- 熟悉的工具、兼容现有的应用程序
- 使用现有开发工具和技术开发应用

基于 DDTK-H 的动态数据中心

Welcome To Contoso Hosting Control Panel Powered By Microsoft Dynamic Data Center Toolkit

Home **Servers** Application Monitoring contoso

My Servers +

- ContosoMVM
- Streaming**
- MVMDemo
- HA-VM-01

Streaming

Summary System Alerts Software Updates Backup and Restore Performance Monitoring Snapshots

System Health Overview

Streaming ● 0 ● ● ●

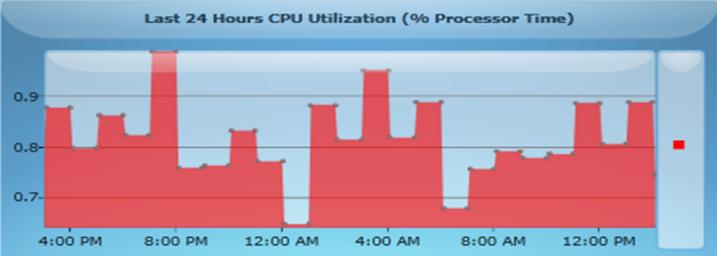
Virtual Machine Controller



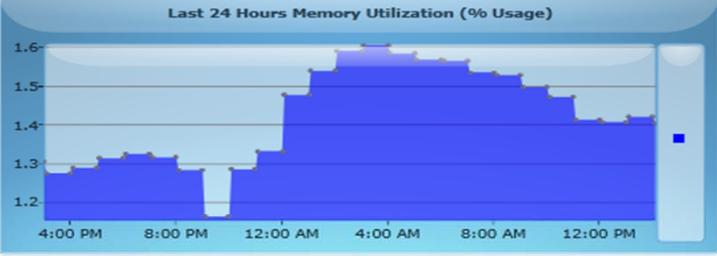
Start
Stop
Pause
Reset
Snapshot

System Performance

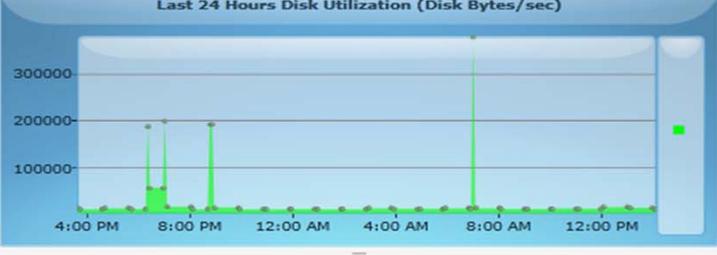
Last 24 Hours CPU Utilization (% Processor Time)



Last 24 Hours Memory Utilization (% Usage)



Last 24 Hours Disk Utilization (Disk Bytes/sec)



System Properties

PropertyName	PropertyValue
Install Type	Full
Is Virtual Node	
Principal Name	STREAMING.contosohosting.com
DNS Name	STREAMING.contosohosting.com
NetBIOS Computer Name	STREAMING
NetBIOS Domain Name	CONTOSHOSTING
IP Address	10.5.18.52, fe80::a08e:6baf:7ec4:139f
Network Name	STREAMING.contosohosting.com
Active Directory SID	S-1-5-21-3465563656-3002480737-2691637897-11
Virtual Machine	True
DNS Domain Name	contosohosting.com
Organizational Unit	CN=Computers,DC=contosohosting,DC=com
DNS Forest Name	contosohosting.com
Active Directory Site	Default-First-Site-Name

演示

基于动态数据中心的云计算平台

回顾

- 云计算概述
- 企业的云计算之路与动态数据中心
- 动态数据中心的实现与运营

The image features a solid light blue background. In the center, the Microsoft logo is displayed in a bold, italicized, black sans-serif font. Below the logo, the tagline "Be what's next." is written in a smaller, black, sans-serif font. The bottom half of the image is dominated by a white wireframe grid that curves upwards from the bottom center towards the right side, creating a sense of depth and movement. The grid consists of numerous thin white lines that intersect to form a mesh of small, irregular shapes.

Microsoft[®]

Be what's next.™