

CULTURE
SOA

IBM



RELEVEZ TOUS LES DÉFIS AVEC AGILITÉ

Mardi 7 juillet 2009

(4^{ème} édition du SOA Summit)

IBM Forum - Paris La Défense

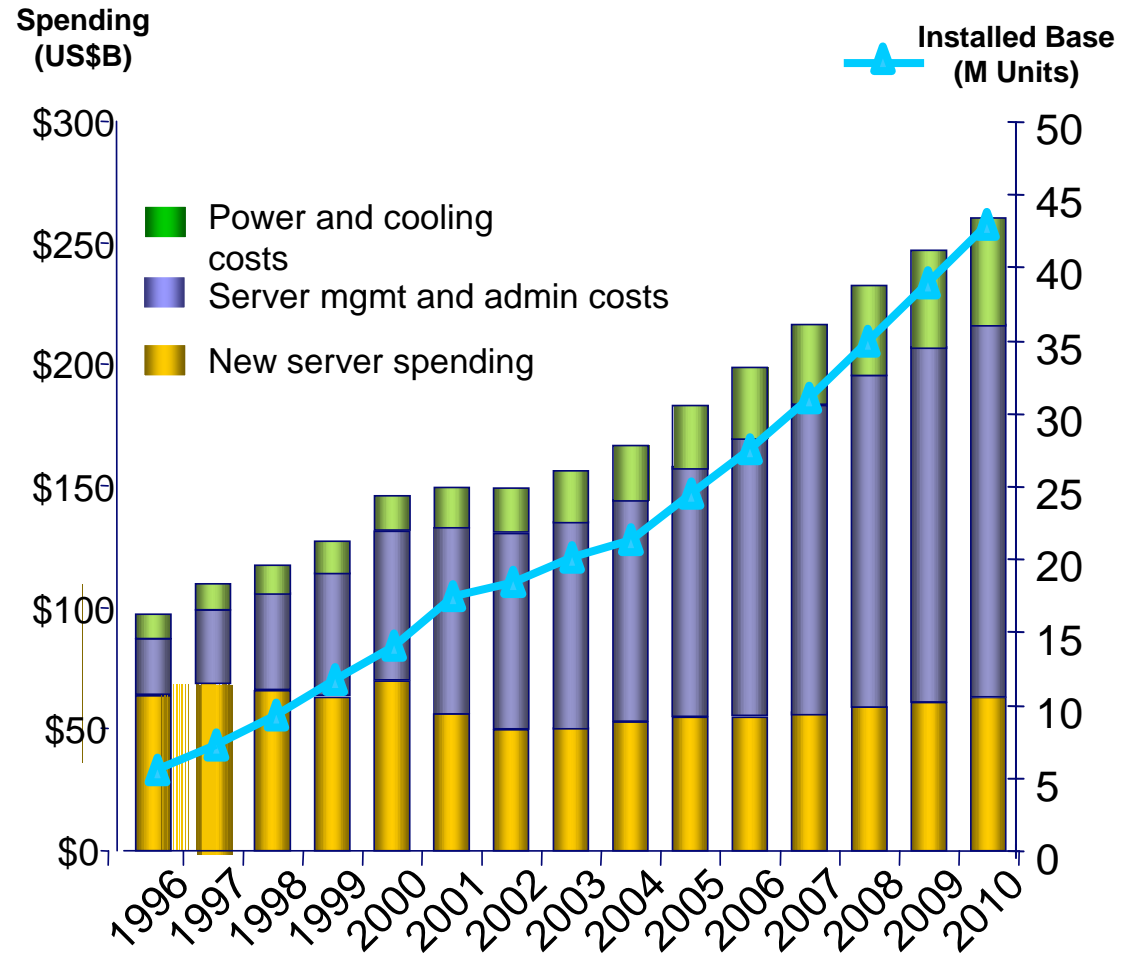
Un Cloud WebSphere dans votre entreprise

Découvrez la nouvelle appliance CloudBurst



IT costs continue to increase

- **Costs to manage systems have doubled since 2000**
- **Costs to power and cool systems have doubled since 2000**
- **Devices accessing data over networks doubling every 2.5 years**
- **Bandwidth consumed doubling every 1.5 years**
- **Data Doubling every 18 months¹**
- **Server processing capacity doubling every 3 years²**
- **10G Ethernet ports tripling over the next 5 years**



Source: IDC, 2008

¹WW TB Capacity Shipped on Enterprise Disk Storage Systems

²Server processing consumption doubles every 3 years



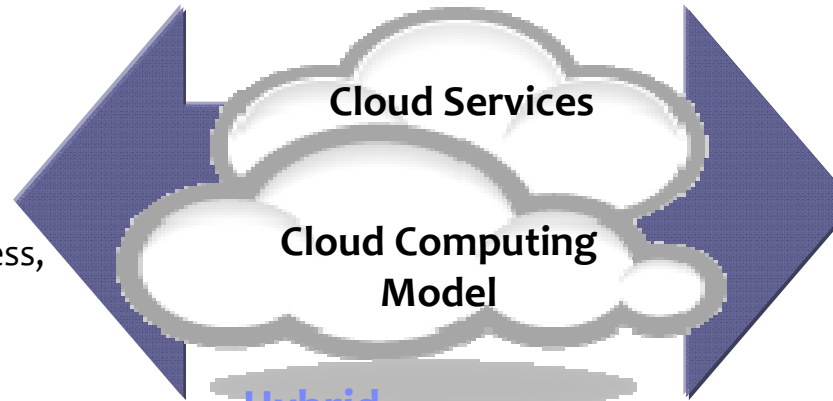
Cloud Computing Delivery Models

Flexible Delivery Models

Public ...

Service provider owned and managed.
Access by subscription.
Delivers select set of standardized business process, application and/or infrastructure services on a flexible price per use basis

... Standardization, capital preservation, flexibility and time to deploy



Private ...

Privately owned and managed.
Access limited to client and its partner network.
Drives efficiency, standardization and best practices while retaining greater customization and control

... Customization, efficiency, availability, resiliency, security and privacy

Hybrid ...

Access to client, partner network, and third party

ORGANIZATION → CULTURE → GOVERNANCE



Intelligent management for Virtualized Infrastructure

WebSphere® Application Server Hypervisor Edition

- New edition of WAS optimized for virtualized environments
- Pre-configured, ready to run on a hypervisor
- Images supported and maintained by IBM

WebSphere CloudBurst Appliance

- Secure cloud management appliance
- Reduce setup time for WebSphere environments
- Codify your infrastructure for reduced risk
- Simplified maintenance and management
- Dispenses WebSphere virtual image software



WebSphere Application Server Hypervisor Edition

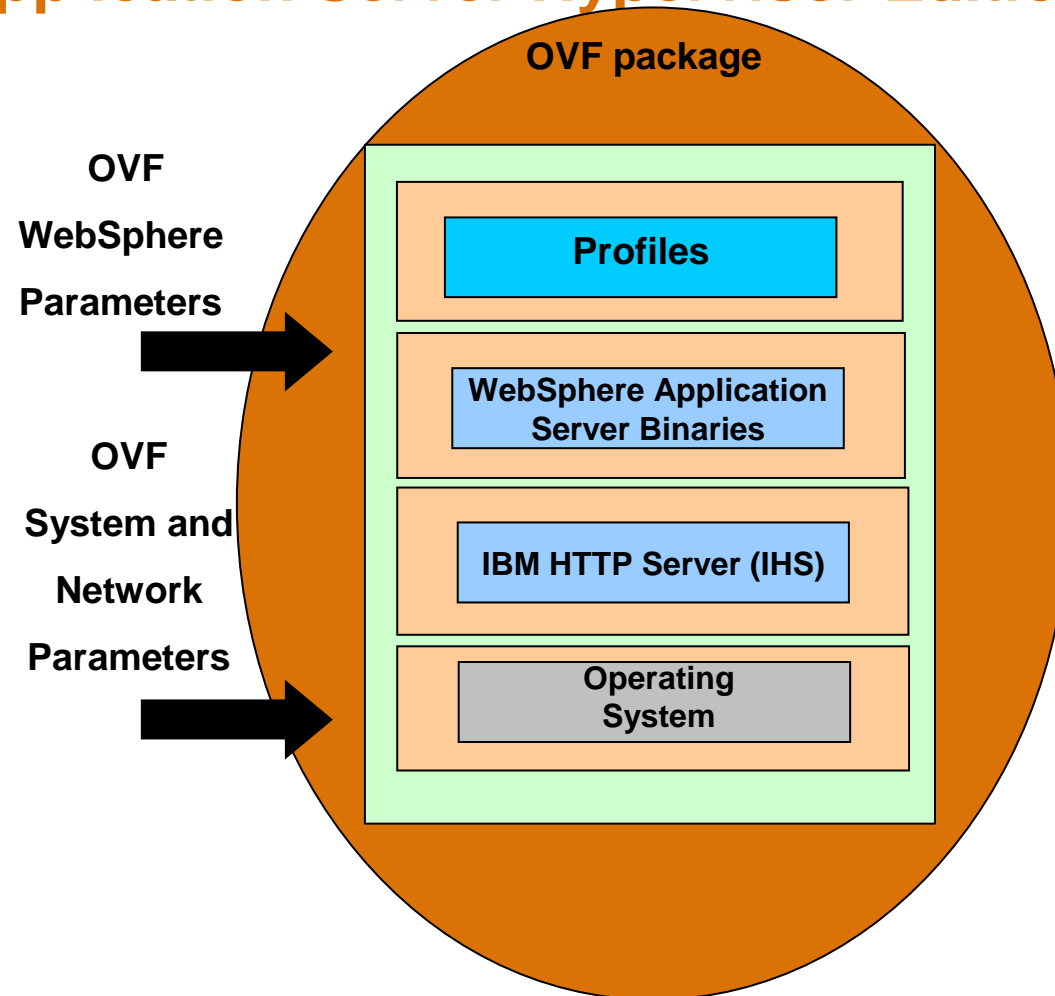


WebSphere CloudBurst Appliance



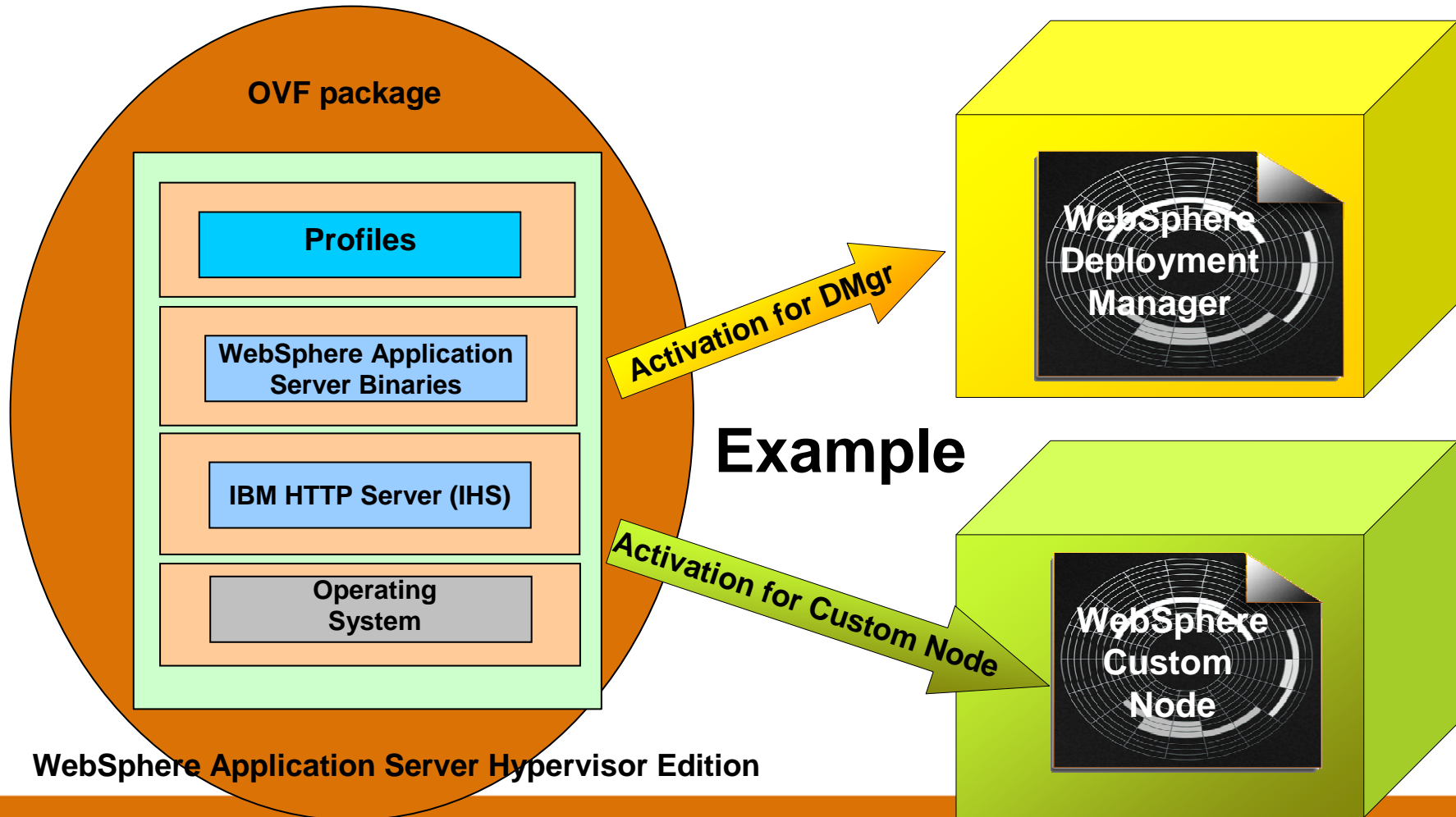
IBM® WebSphere Application Server Hypervisor Edition

- Preinstalled, configured, and tuned
- Open Virtualization Format standard packaging
- Attended and unattended activation
- WebSphere Application Server 6.1 and 7.0
- Available as a stand-alone image, or with WebSphere CloudBurst



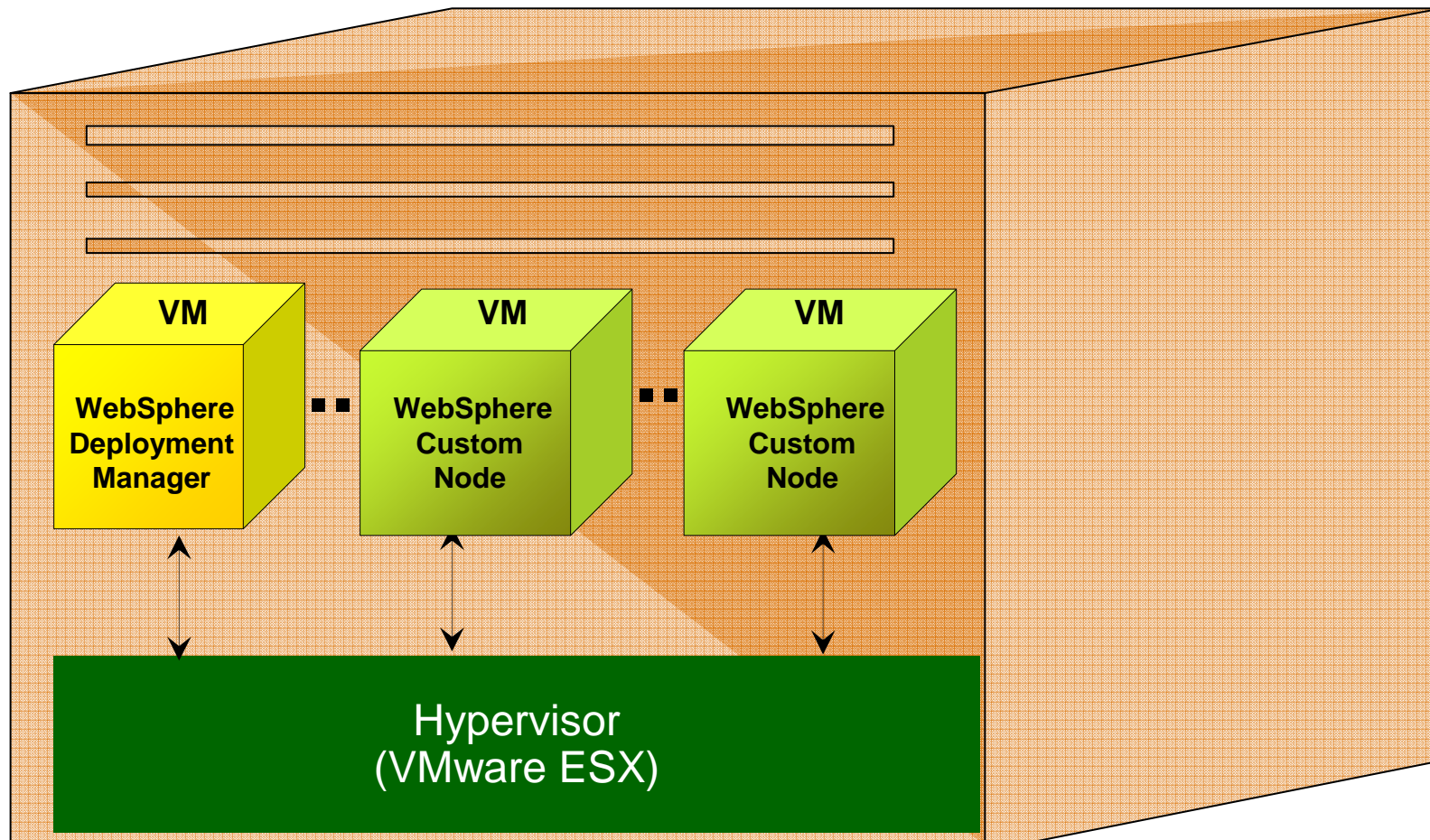


Deploying Virtual images of WebSphere Hypervisor Edition





Virtual Machines running on a hypervisor





What is WebSphere CloudBurst?

1. An appliance from IBM...

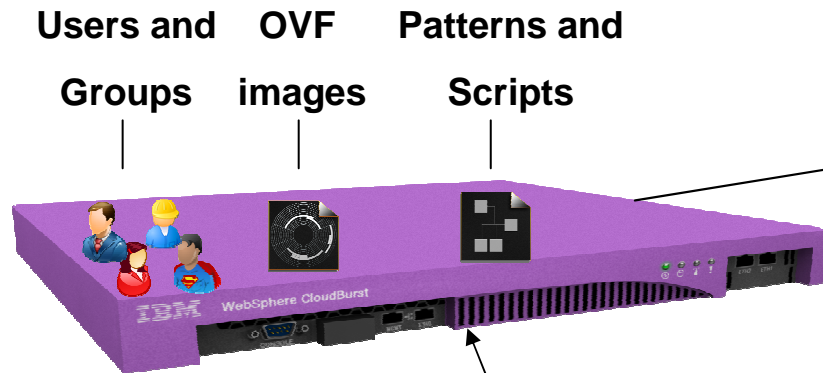
Includes

- hardware
- CloudBurst function
- WebSphere Application Server images
- WebSphere Application Server patterns

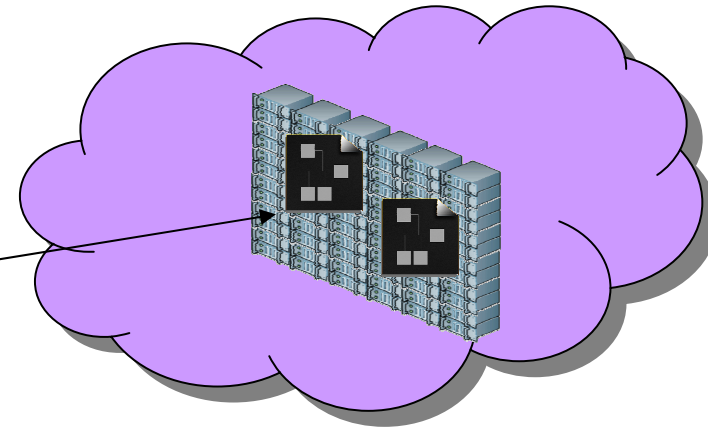
2. ...that manages your on-premise cloud...

Bring your own Enterprise cloud

- hypervisors
- storage
- network



Web 2.0 UI, CLI, and REST APIs



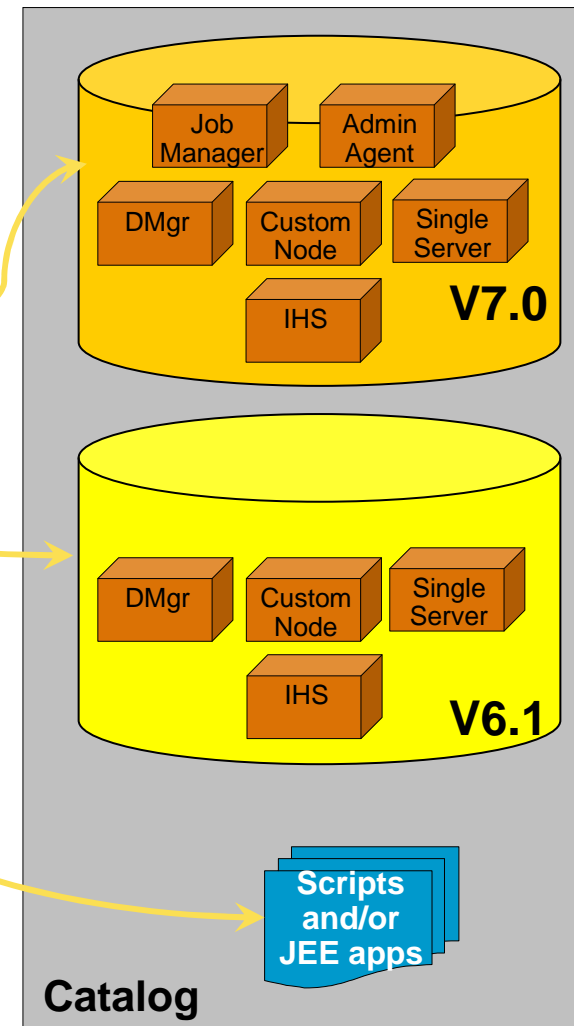
3. ... comprising WebSphere Virtual Systems

- Customize and extend images and patterns for your applications
- Dispense and run in the cloud
- Life-cycle management and optimization



Catalog

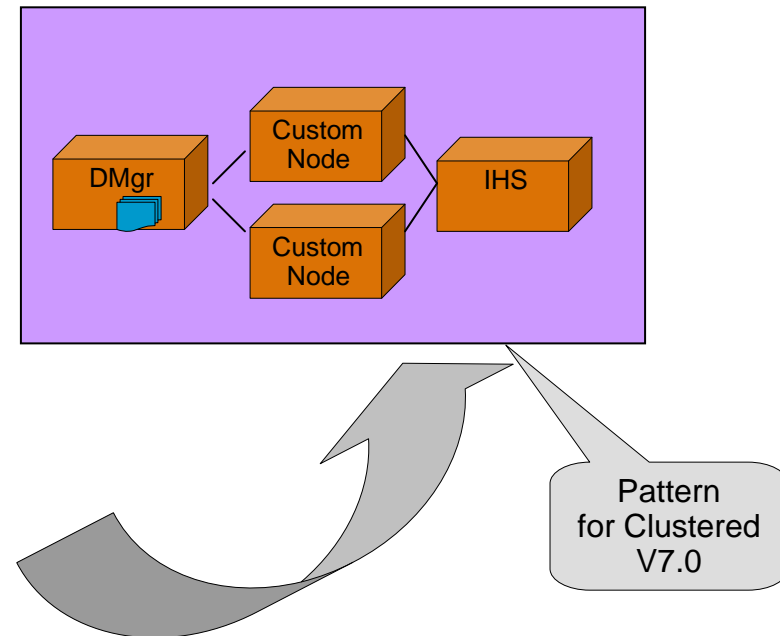
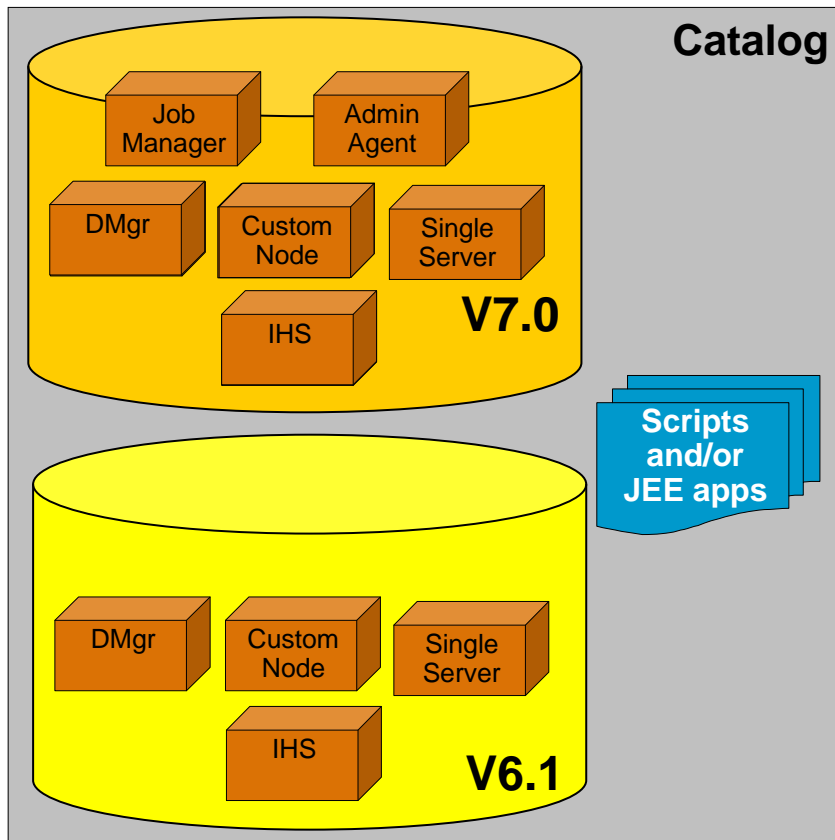
- IBM provided Virtual Images of WebSphere Application Server Hypervisor Edition
 - V7.0.0.3
 - V6.1.0.23
- User supplied Script packages
 - wsadmin or other scripts
 - JEE applications





Patterns

- Pattern is one or more virtual images and script packages from the catalog to satisfy a certain deployment topology
- Example: Creating pattern of WebSphere V7.0 Clustered topology

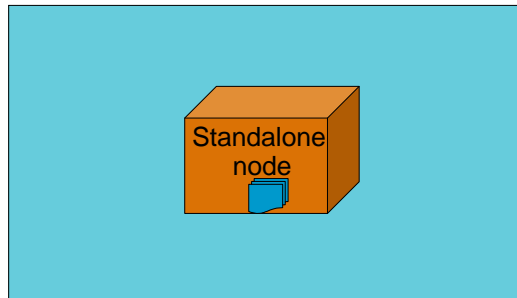


**Create Pattern from
components available
in Catalog**

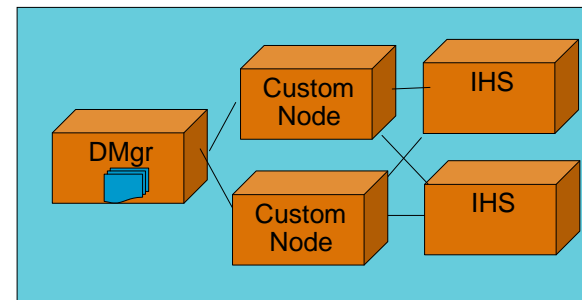


Preloaded Patterns

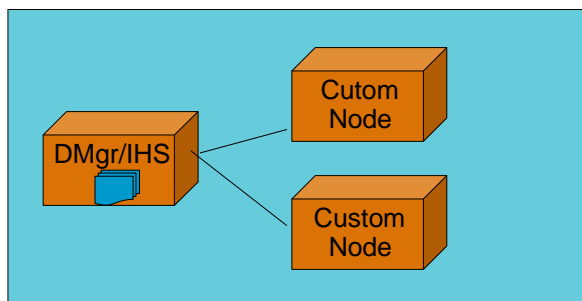
Single Server



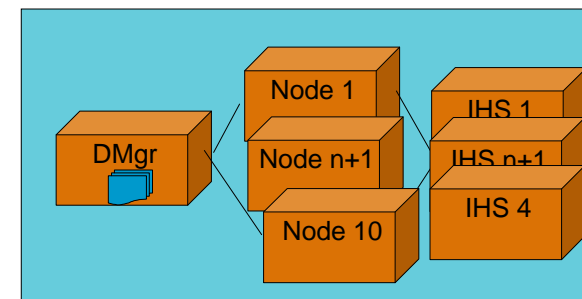
WebSphere cluster



WebSphere cluster (dev)



WebSphere cluster (large)

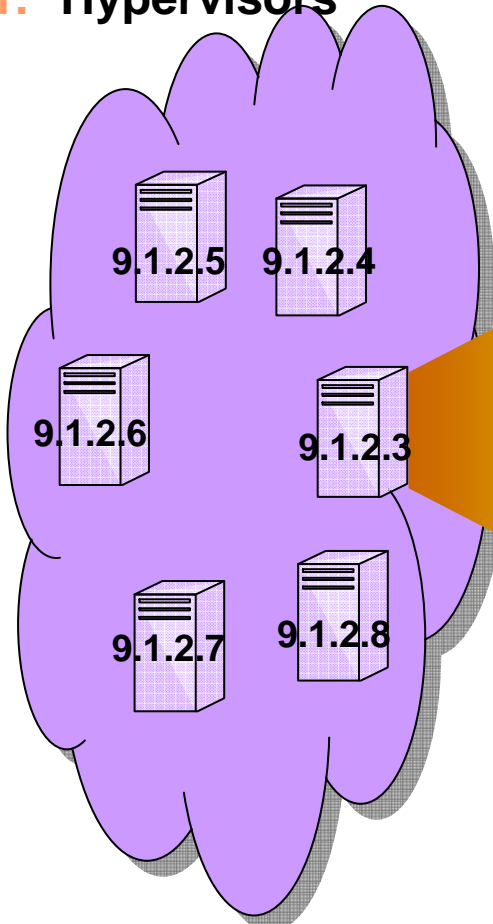


Advanced Options for messaging, session persistence, and global security available



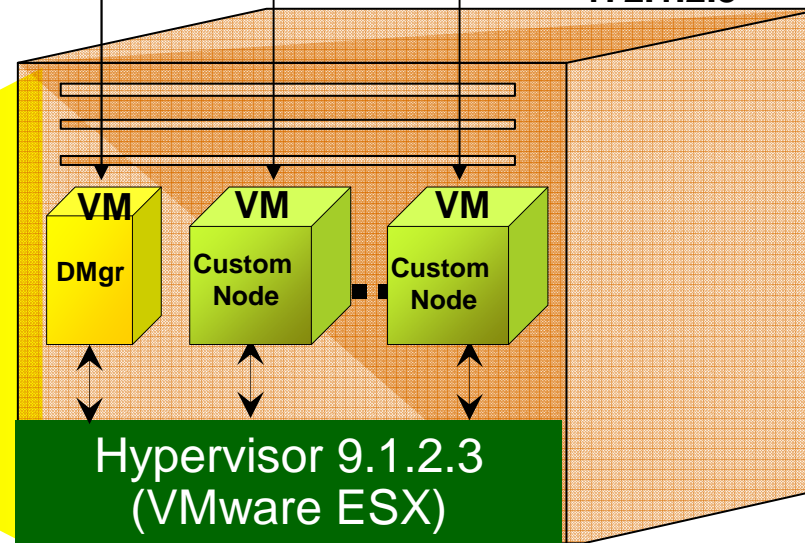
Bring your own private cloud

1. Hypervisors

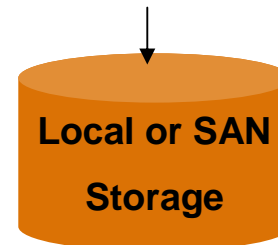


3. IP Address Pool

172.1.2.3 172.1.2.4 172.1.2.5 172.1.2.6
172.1.2.7
172.1.2.8



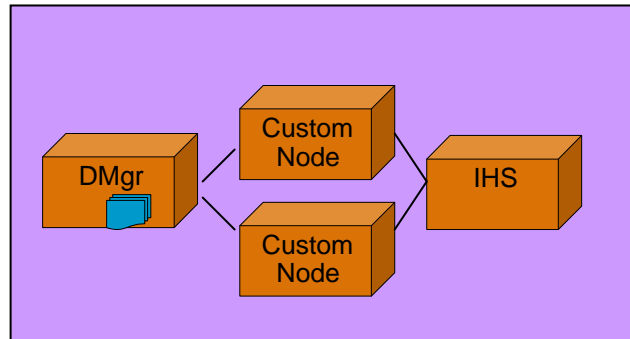
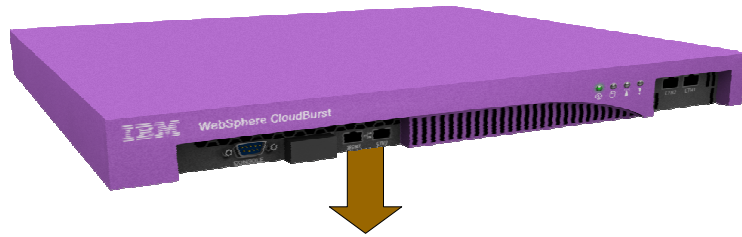
2. Storage



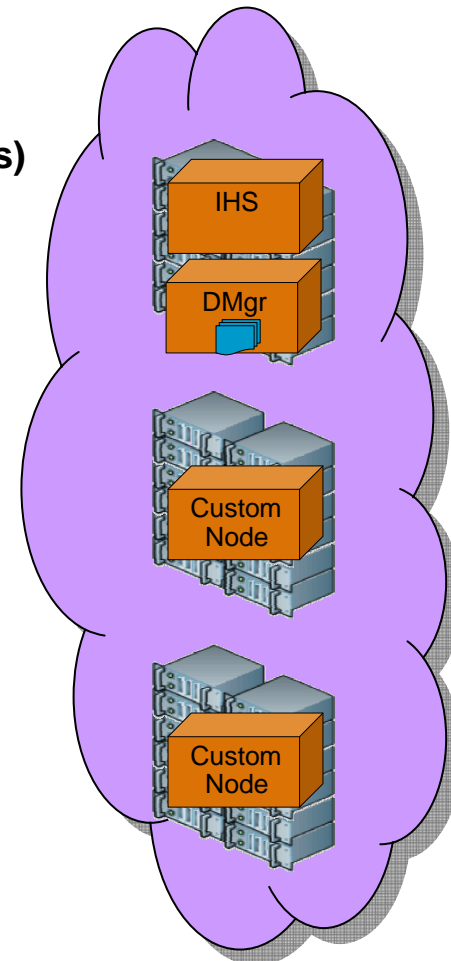


From Pattern to Virtual System

1. Choose hypervisor(s)
2. Create virtual machines
3. Inject IP addresses
4. Start VMs and WAS
5. Run scripts

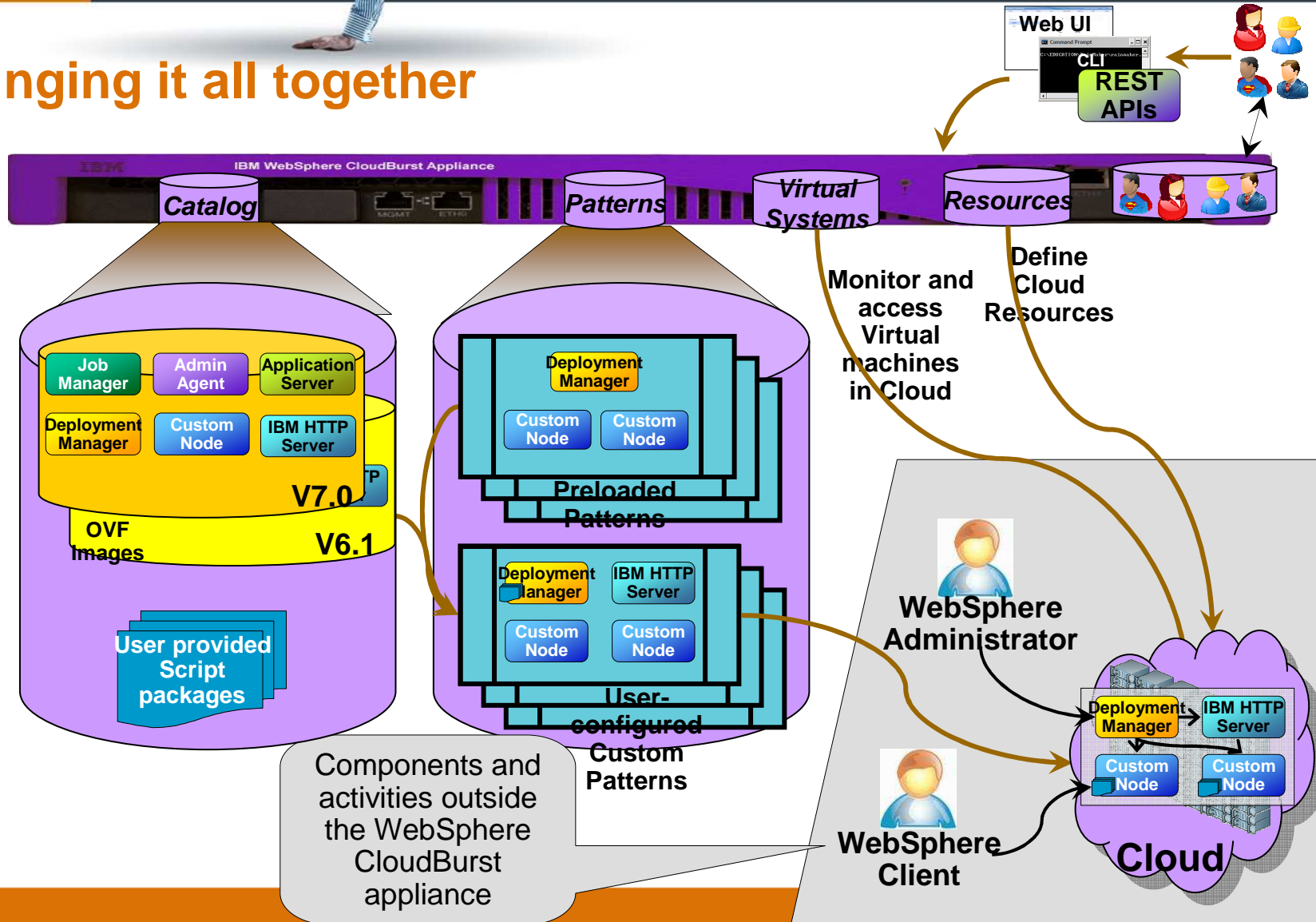


Placement of Virtual Images



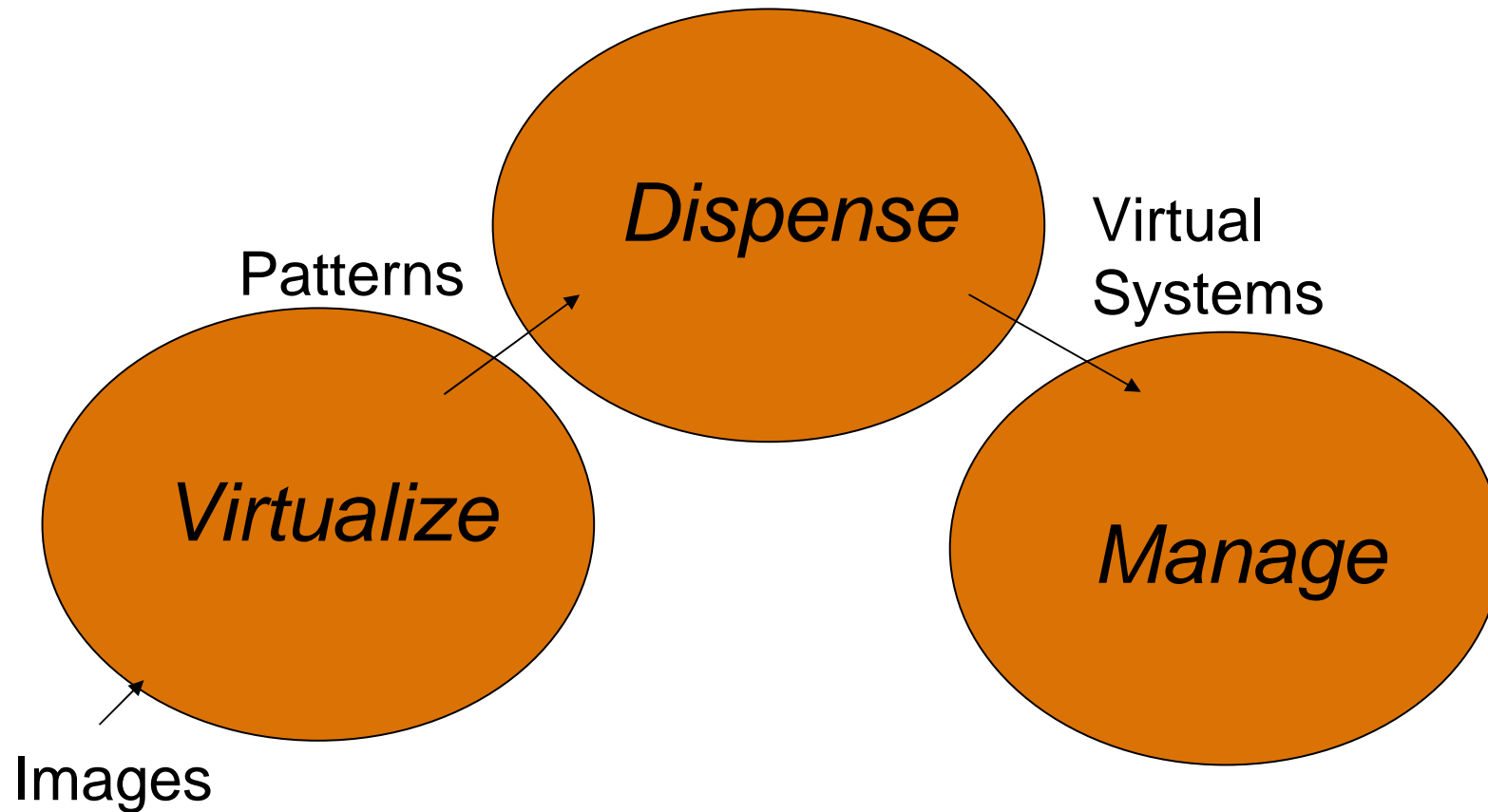


Bringing it all together



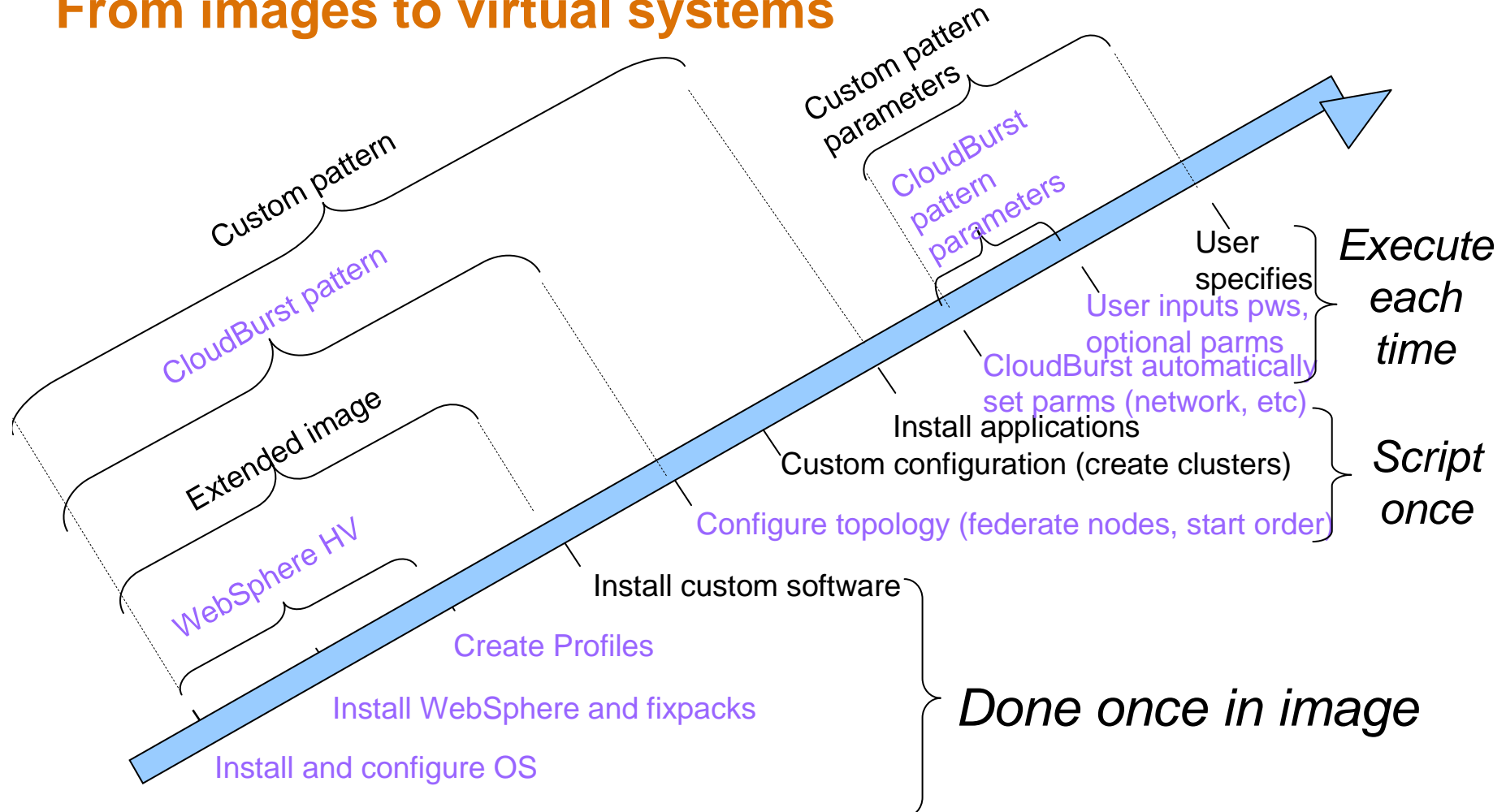


Life-cycle overview



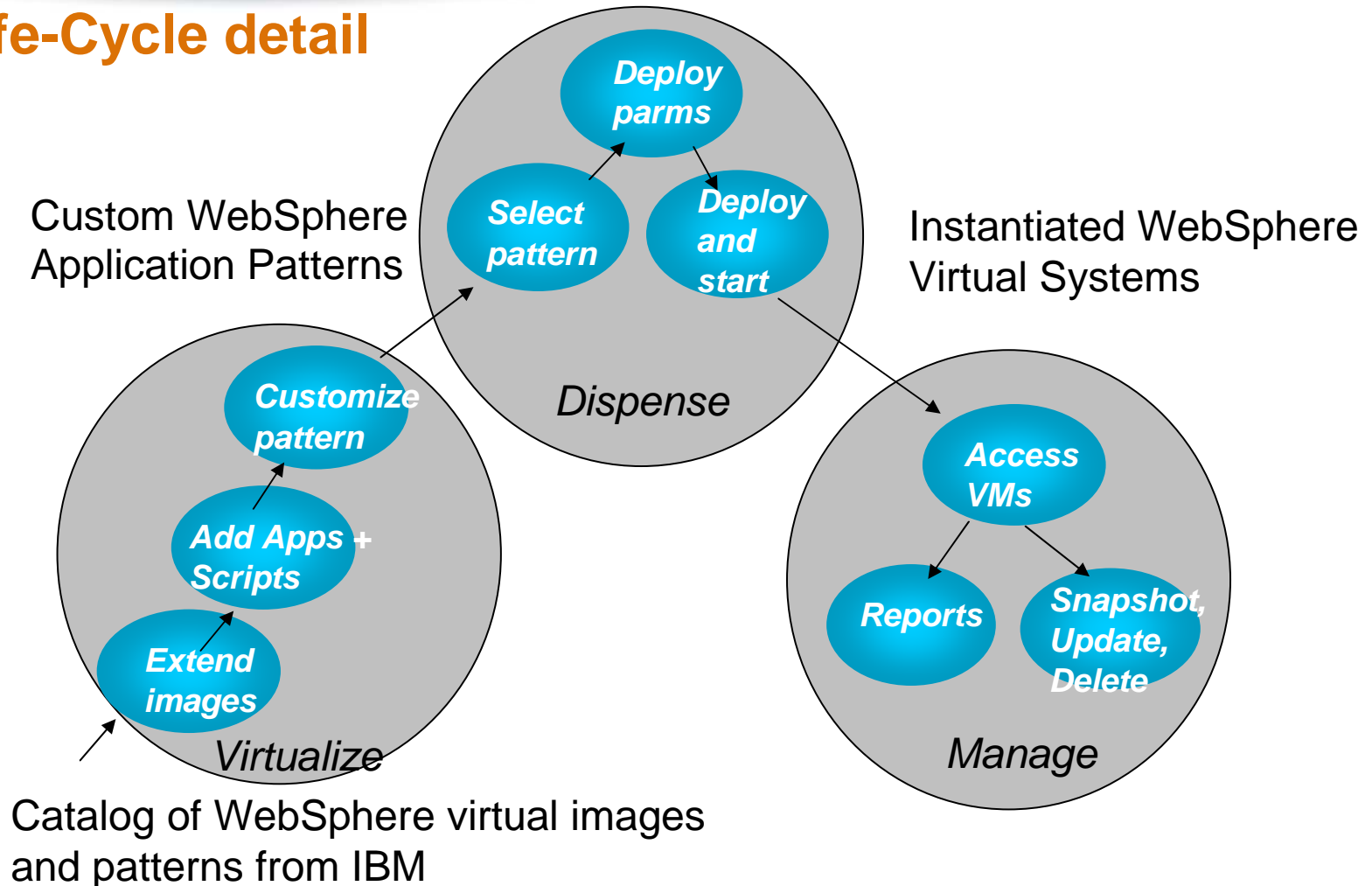


From images to virtual systems





The Life-Cycle detail





Highly Secure Vault

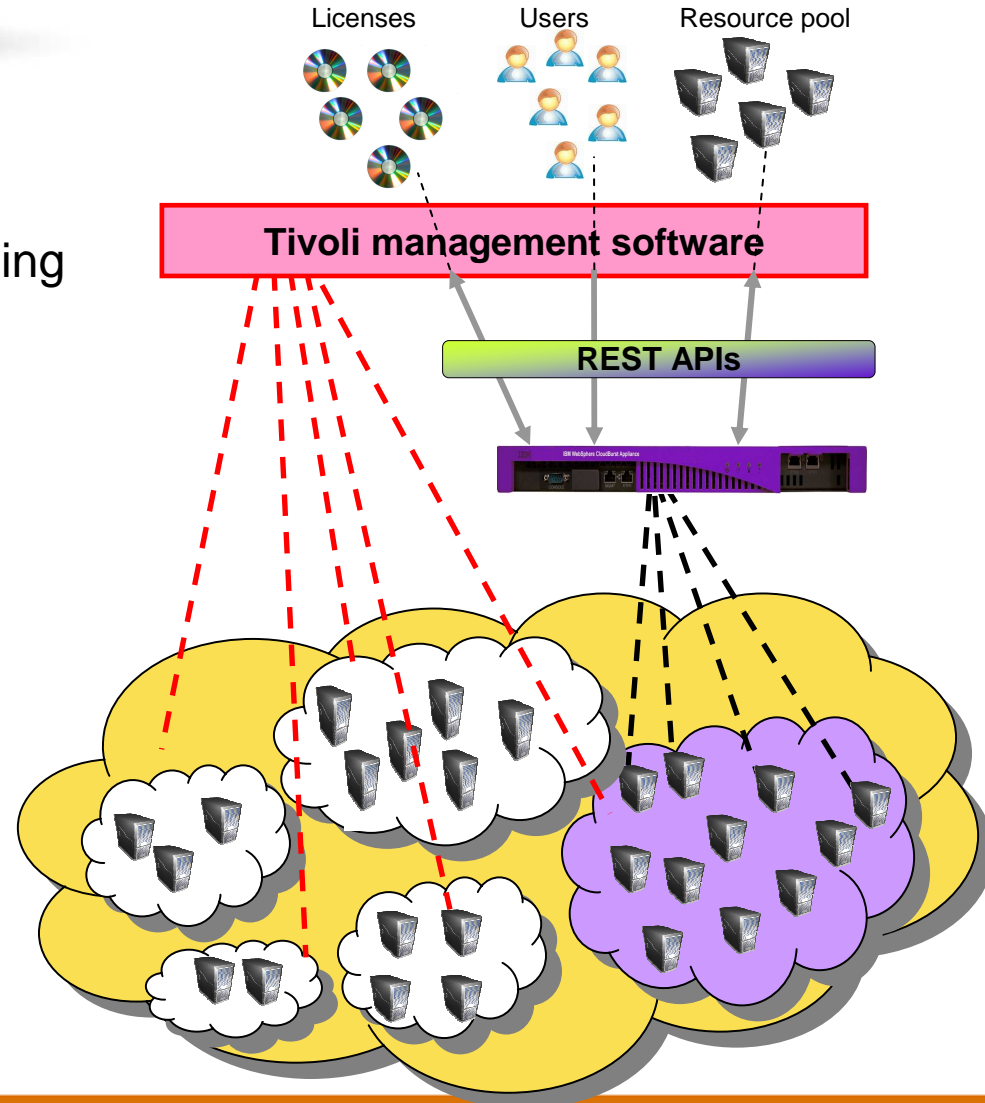


- *Highly Secure / Tamper Resistant Vault*
- *Protects Customer Assets*
 - *Passwords*
 - *Virtual Images*
 - *Applications*
 - *Scripts*
 - *Certificates*



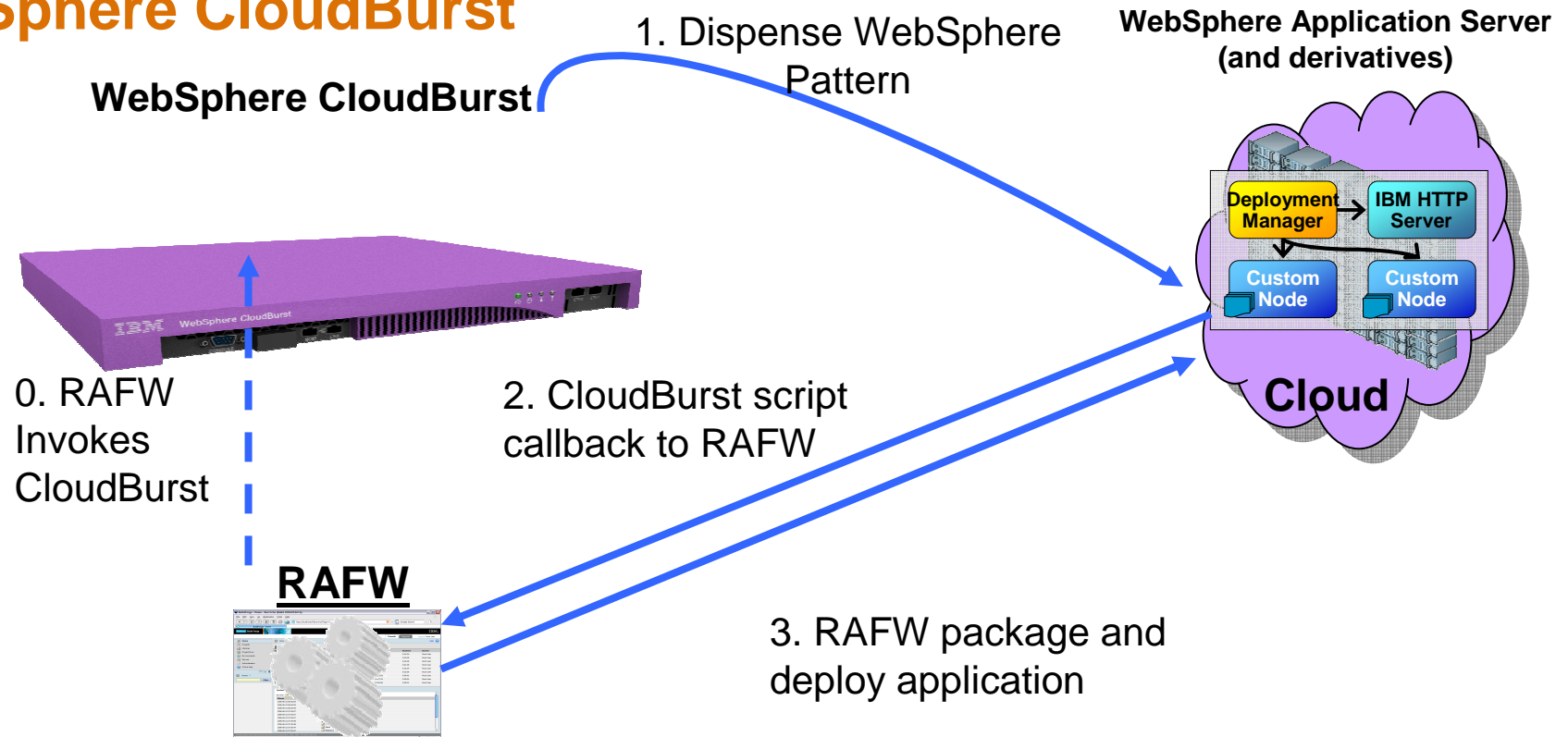
Datacenter integration

- Automation / resource provisioning
- Monitoring
- User management
- License management





Rational Automation Framework for WebSphere and WebSphere CloudBurst

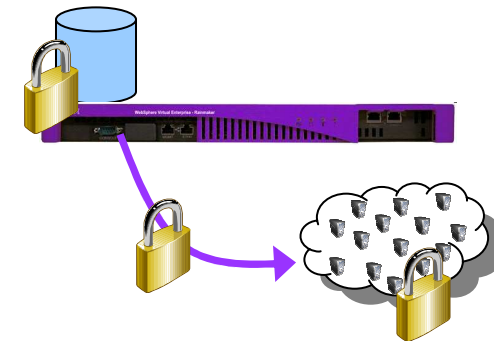


Note: This scenario can be extended to include additional Rational components including Rational Asset Manager, Rational AppScan, and Rational Software Architect



Summary

- Much less time between saying “GO” and having a running system
- Security throughout entire virtual image lifecycle: on disk, on the wire, in the cloud
- Codify your infrastructure
- Enhanced lifecycle management





Resources

- WebSphere CloudBurst
 - <http://ibm.com/cloudburst>
- WebSphere Application Server Hypervisor Edition
 - <http://www.ibm.com/software/webservers/appserv/hypervisor>
- WebSphere Cloud Computing Community
 - <http://www.ibm.com/developerworks/spaces/websphereclouds>