IBM**SoftwareNetwork**2013

Fare partnership con il Software IBM

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Guido Schiaffino

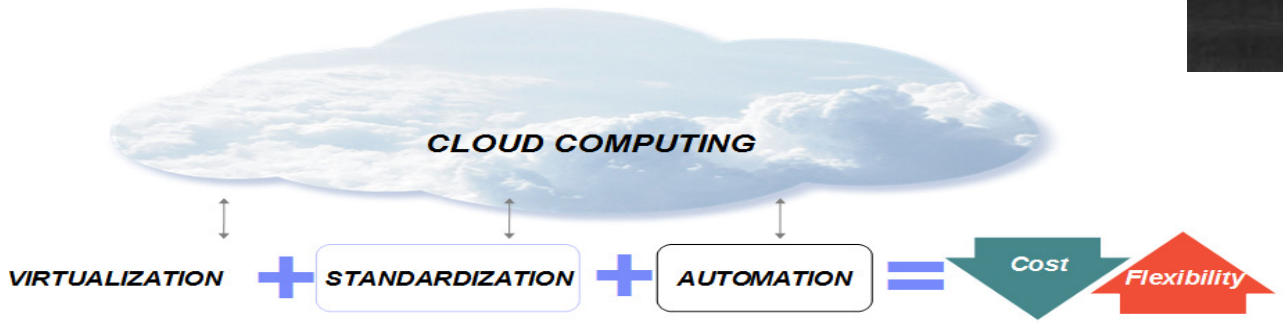
SmartCloud & Governance: la trasformazione dell'automazione in innovazione

IBM

How will you manage cloud computing?

- Do you have a service management strategy across your data center, public cloud services, and private cloud?
- What is your governance model?
- What type of quality of service do your customers, suppliers, and customers expect and demand?

Virtualized is not Cloud



Business Services: Visibility, Control and Automation

SEE
your Business

Visibility

MANAGE
your Business

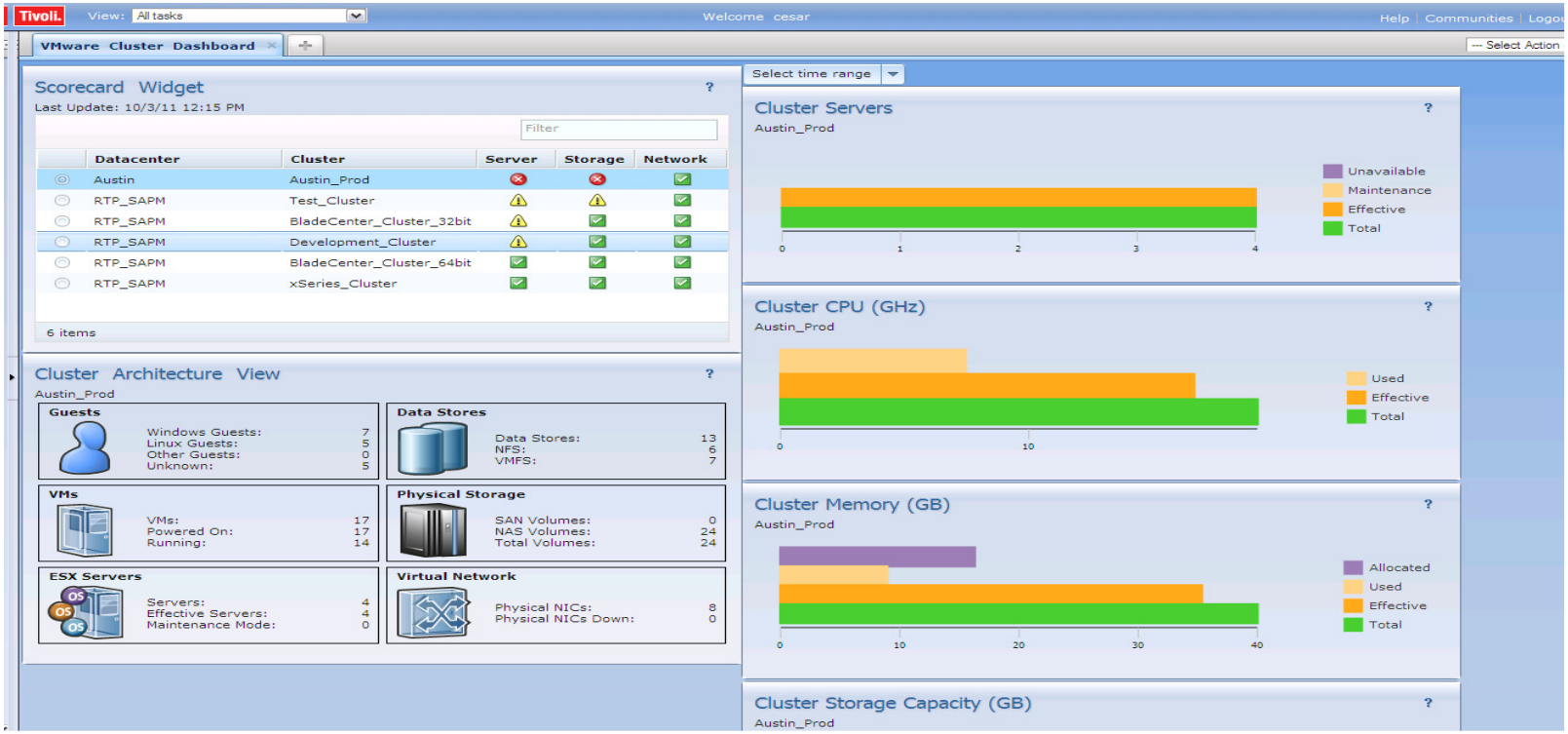
Control

IMPROVE
your Business

Automation

SmartCloud Monitoring

A single tool for all physical, Hypervisor, VMs
predict cloud problems before clients are impacted - provide historical and short-term reporting

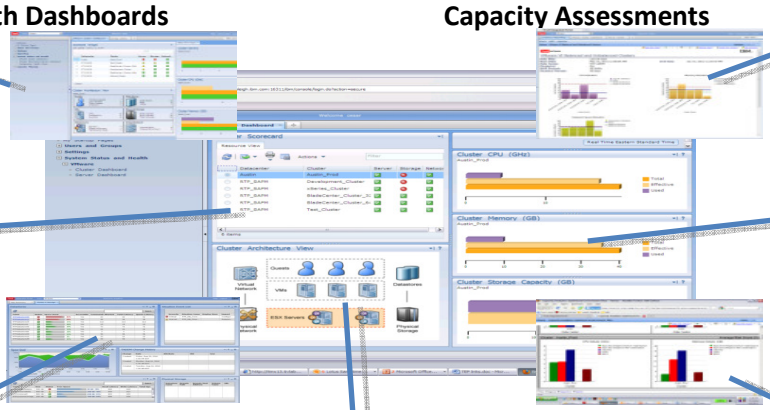


SmartCloud Monitoring

A single tool for all physical, Hypervisor, VMs
predict cloud problems before clients are impacted - provide historical and short-term reporting

➢**Health dashboards** to provide an instant, consolidated glimpse into cloud health.

➢**What-If** capacity planning scenarios.



➢**Performance Analytics** for right-sizing of virtual machines.

➢**Policy-Based** optimization to put workloads where they'll perform best, not just where they'll fit.

➢**Integration** with industry-leading Tivoli service management portfolio.

➢**Topology views** of the key interrelated components of the cloud.

➢**Reports** on the health trends of cloud components and workloads, powered by Cognos.

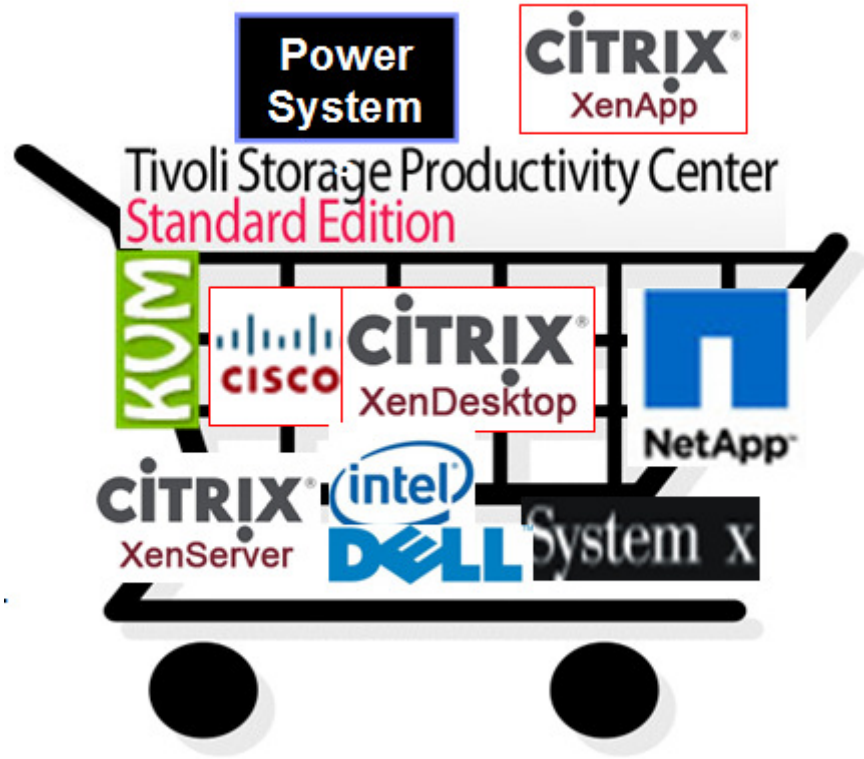
Monitoring Agents

ITM for Virtual Environments Today:

- VMware
- KVM
- NetApp
- Network Monitoring Agent
- Citrix XenServer
- Citrix XenApp
- Citrix XenDesktop
- Cisco UCS

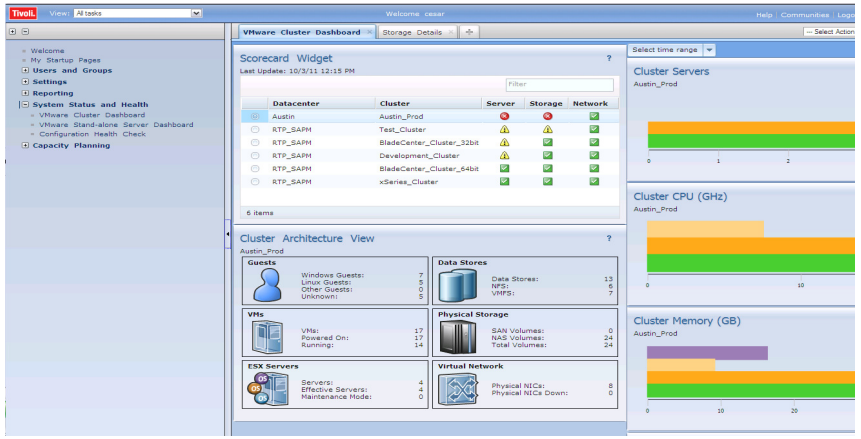
ITM 6.2.3 OS Monitoring

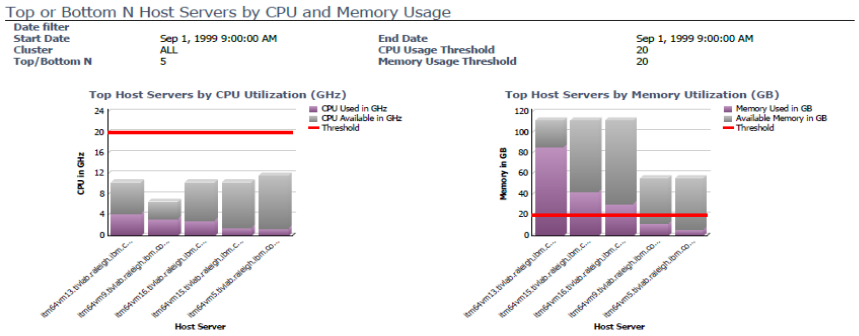
- Windows, UNIX, Linux, i5OS, Agent-less OS Monitoring
- Power Systems
- Log Monitoring
- Agent Builder



SmartCloud Monitoring Health Dashboards

- Dashboards with holistic view of health of whole environment
- Out of the box contextual views of health (availability, performance and capacity) in the complete context of the virtual environment to include physical and virtual server, storage and network resources.
- Integrates across our tool set to merge physical & virtual data – TPC, ITNM, ITM, TADDM & ITMfVE
- Views with performance and capacity reports for assessment of environment and long term trend analysis.





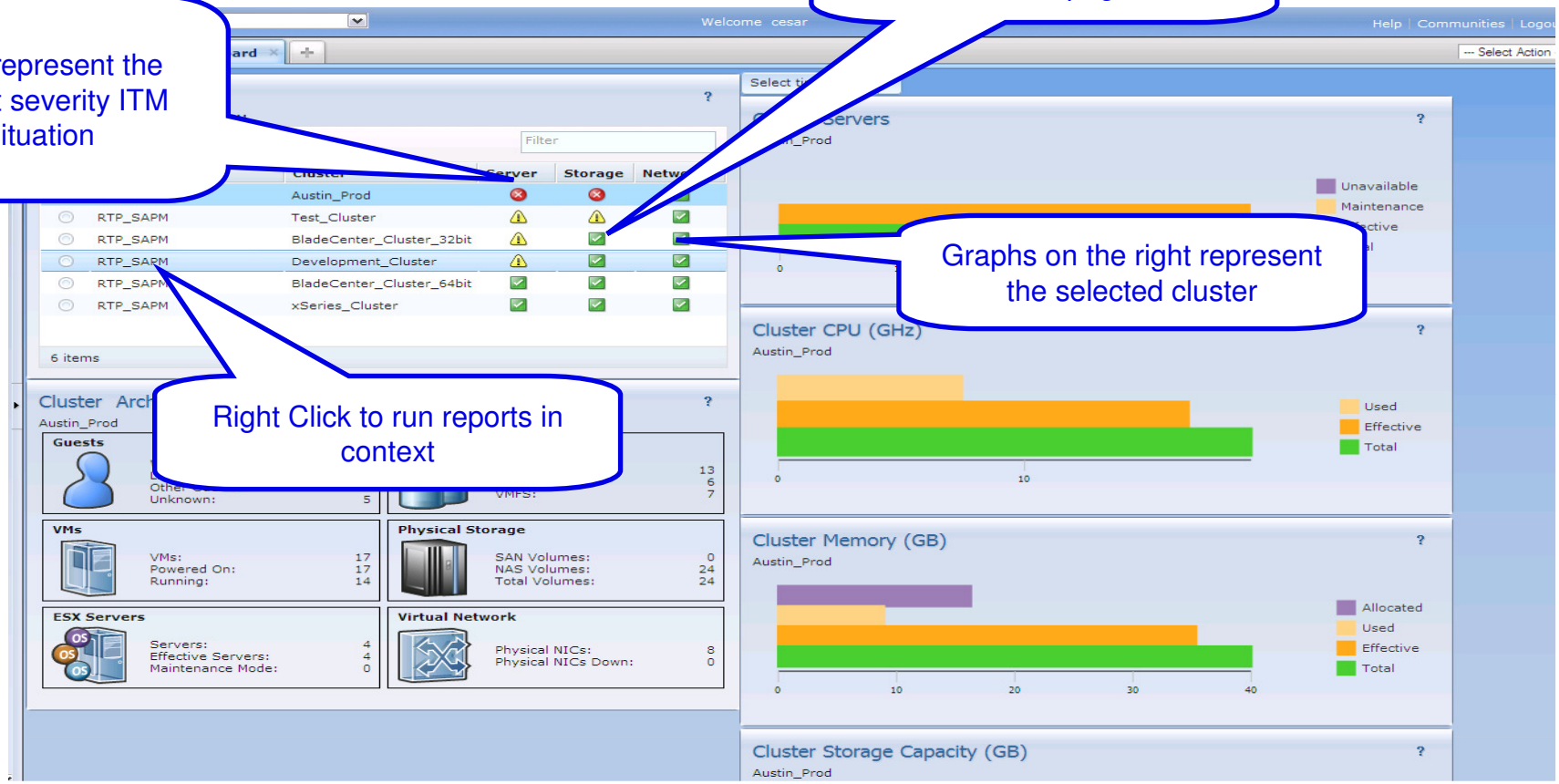
SmartCloud Monitoring Health Dashboards

Icons represent the highest severity ITM Situation

Click on icon to drill down to detailed page

Graphs on the right represent the selected cluster

Right Click to run reports in context



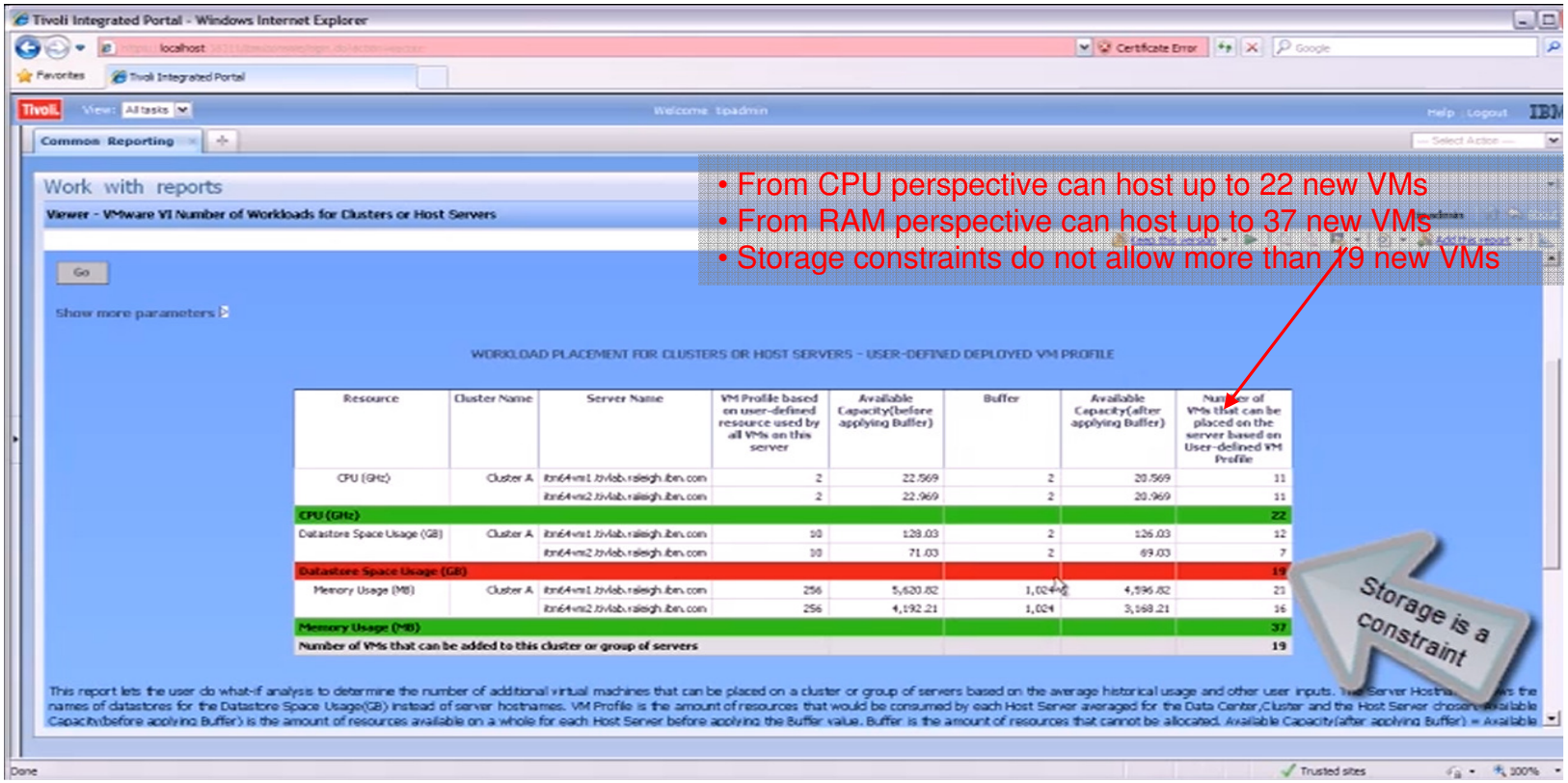
SmartCloud Monitoring Capacity Management:
Why is Capacity Management Important?

- **Helps consolidate and reduce costs**
  - Reduces HW and labor costs
  - Reduces number of physical servers required to run workloads
  - Reduce number of required licenses

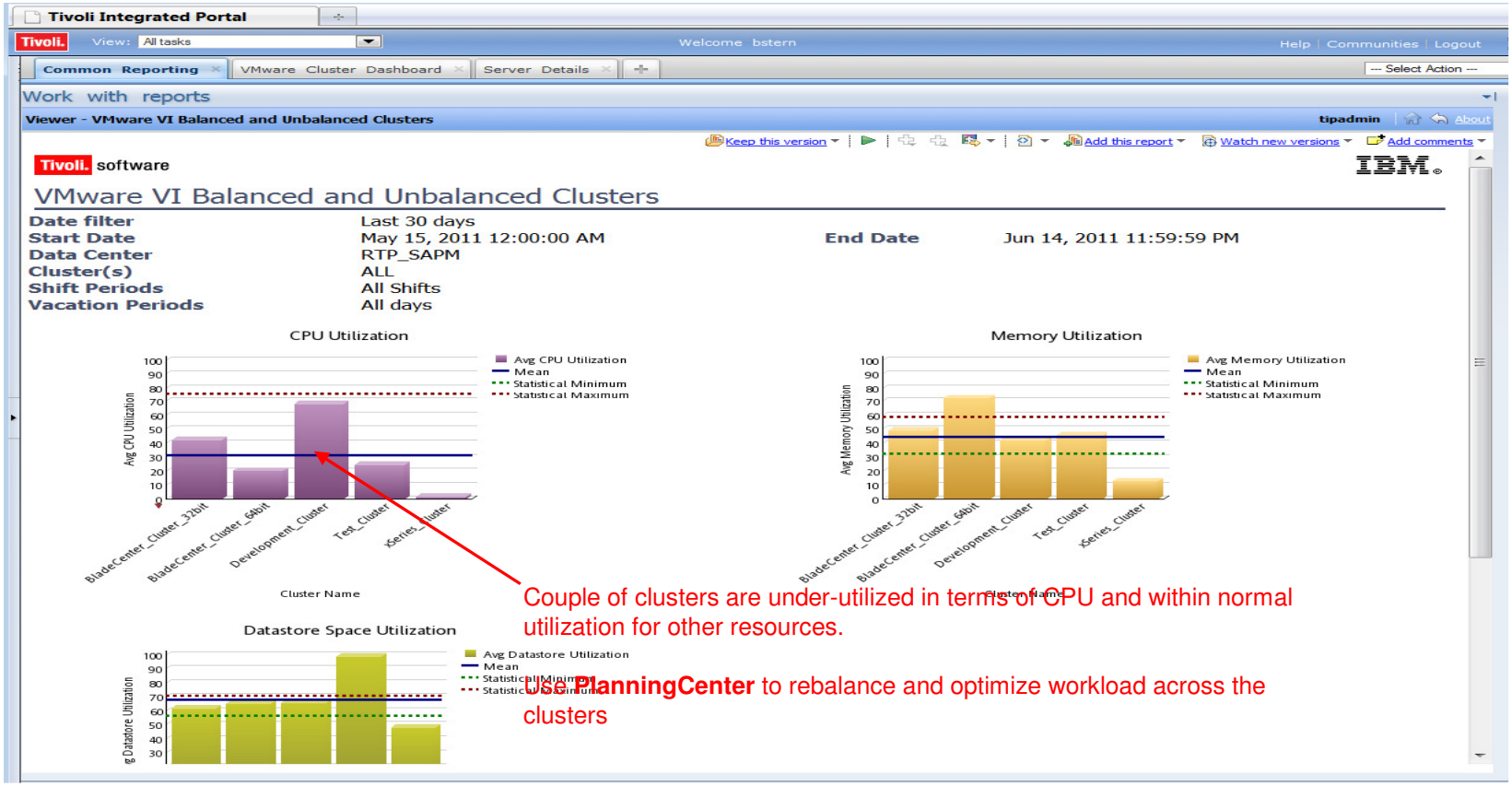
- **Helps ensure application availability**
  - Are any resources overloaded? When will physical resources reach their limits?
  - Have there been any significant changes in my environment between two weeks?
  - Ensure supply can meet demand
  - Ensure business policies are met

- **Helps optimize resource utilization**
  - Right size virtual machines
  - Identify trends for workload balancing

See how many new VMs can be hosted based on the resource constraints of the current infrastructure



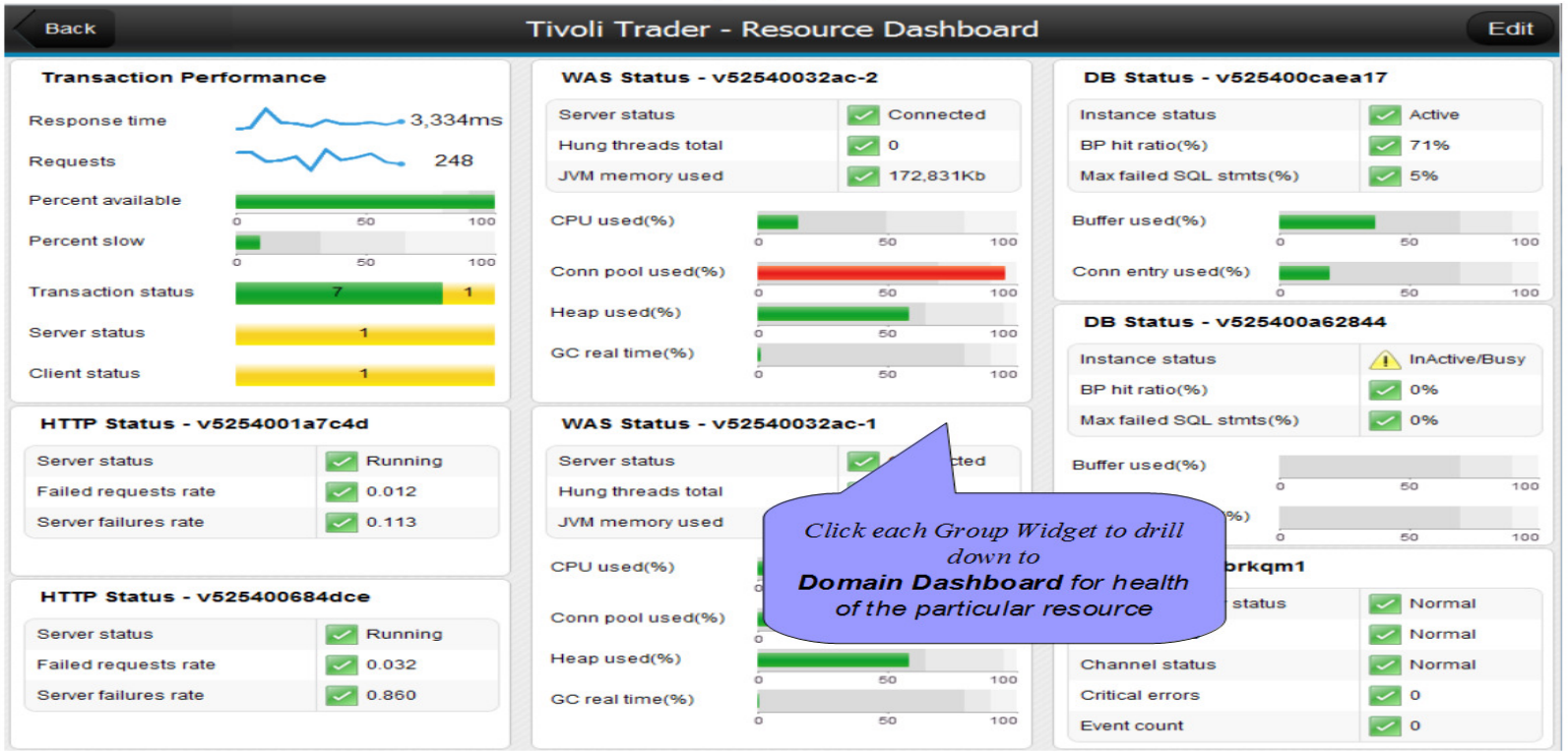
Found Clusters to Balance Load



SmartCloud Application Performance management

Tivoli software

Resource Dashboard (1)



SmartCloud Cost Management

Cost management capabilities for Providers and their Clients

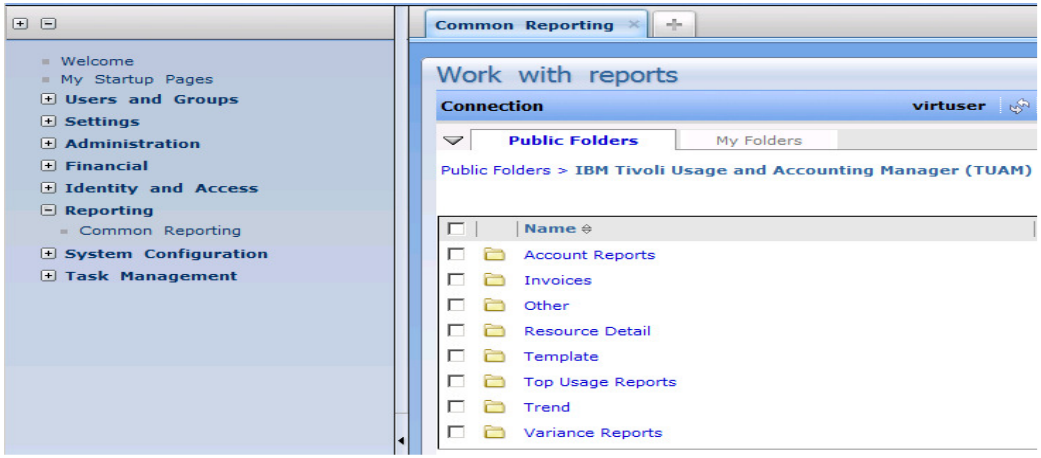
Metering and accounting for projects and servers in self-service environments

Metering

- **Server hours**: The time a server is allocated to a project (in h)
- **CPU hours**: Time one or more CPUs are allocated to a server (in h)
- **Memory hours**: The time multiplied by MB of memory allocated to a server (in MB h)
- Storage hours: The time multiplied by GB of storage allocated to a server (in GB h)

Accounting information for projects can be defined for teams

Collection of metering data can be activated or deactivated by customer



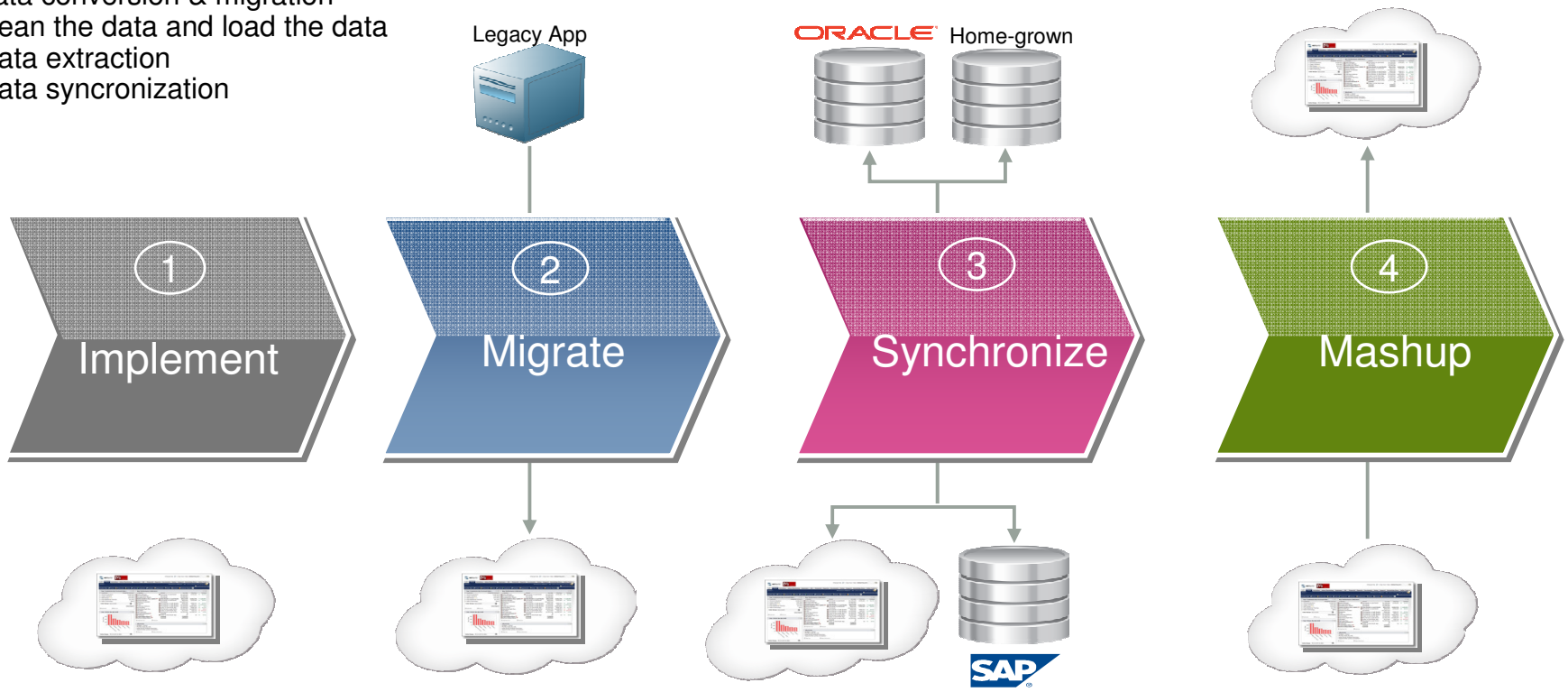
Why the Future of Cloud is Hybrid?

Customer Challenge

- Developers and Line-of-Business owners increasingly turn to cloud services (SaaS, IaaS) to meet their resource needs
- Impact:
  - IT loses its centralized view and control of all owned resources, unaware of overall costs and data relocation
  - Company data and resources may not be properly handled or safeguarded, putting business and reputation at risk

Comprehensive Cloud Integration Capabilities for Rapid Success

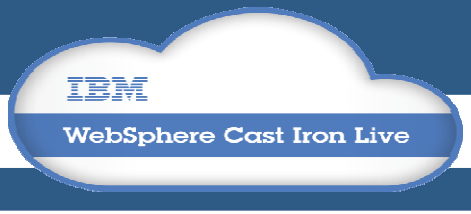
- data conversion & migration
- clean the data and load the data
- Data extraction
- Data syncronization



4 main steps to data integration

Websphere Cast Iron Cloud Integration Solution Overview

Integration-as-a-Service



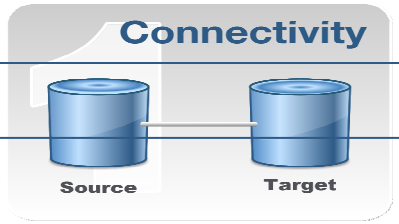
Websphere Cast Iron Live

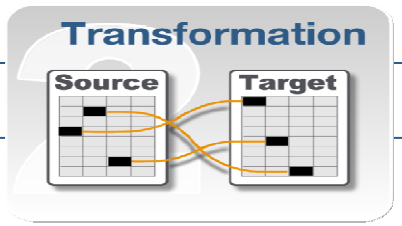
Integration on Premise

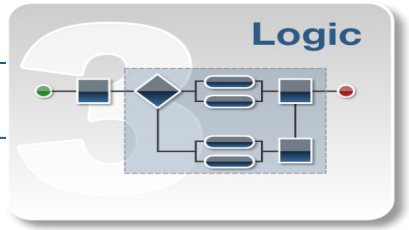
Websphere Data Power Cast Iron XH40

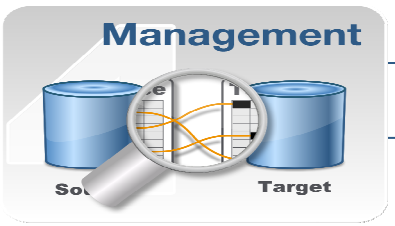
Websphere Cast Iron Hypervisor Edition

What Our Integration Solution Does



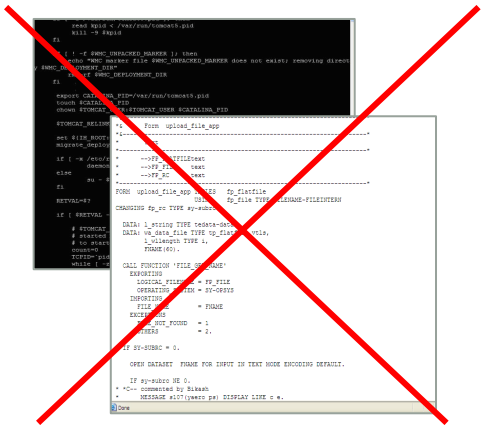




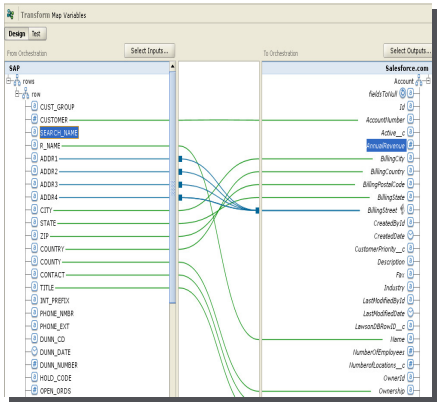


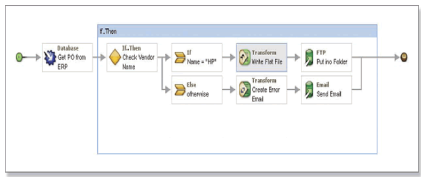
Simple: “configuration, not coding”Approach

No Coding

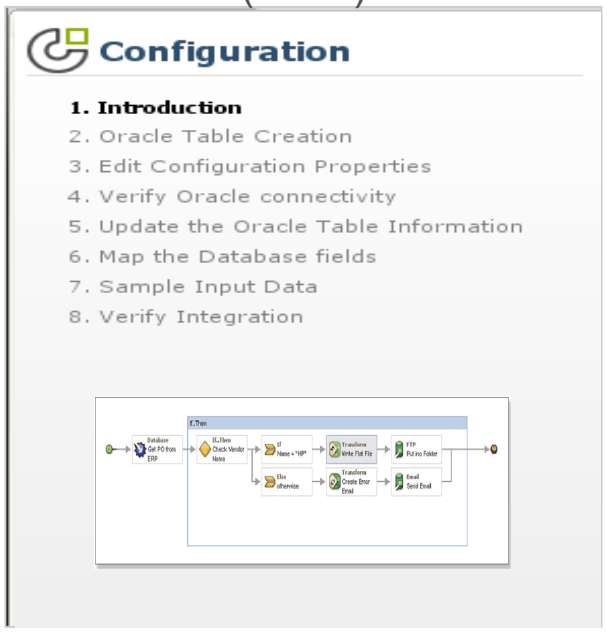


Beyond Configuration

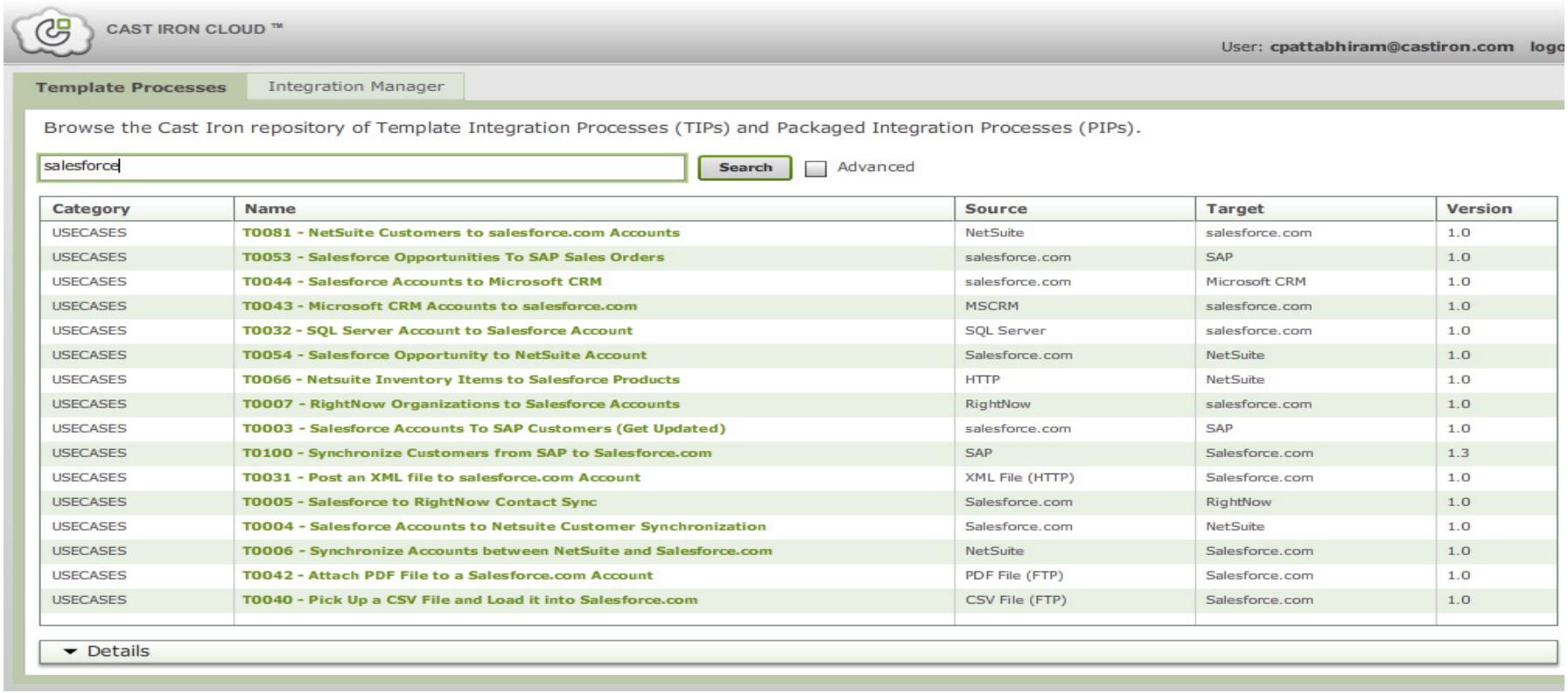




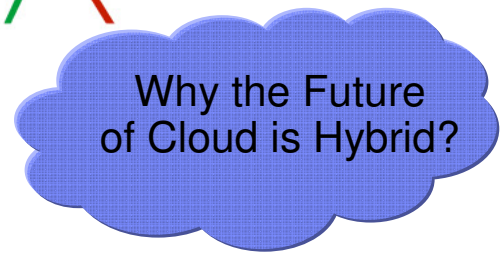
Preconfigured Templates (TIPs)



Library of Template Integration Processes = Best Practices



Category	Name	Source	Target	Version
USECASES	T0081 - NetSuite Customers to salesforce.com Accounts	NetSuite	salesforce.com	1.0
USECASES	T0053 - Salesforce Opportunities To SAP Sales Orders	salesforce.com	SAP	1.0
USECASES	T0044 - Salesforce Accounts to Microsoft CRM	salesforce.com	Microsoft CRM	1.0
USECASES	T0043 - Microsoft CRM Accounts to salesforce.com	MSCRM	salesforce.com	1.0
USECASES	T0032 - SQL Server Account to Salesforce Account	SQL Server	salesforce.com	1.0
USECASES	T0054 - Salesforce Opportunity to NetSuite Account	Salesforce.com	NetSuite	1.0
USECASES	T0066 - Netsuite Inventory Items to Salesforce Products	HTTP	NetSuite	1.0
USECASES	T0007 - RightNow Organizations to Salesforce Accounts	RightNow	salesforce.com	1.0
USECASES	T0003 - Salesforce Accounts To SAP Customers (Get Updated)	salesforce.com	SAP	1.0
USECASES	T0100 - Synchronize Customers from SAP to Salesforce.com	SAP	Salesforce.com	1.3
USECASES	T0031 - Post an XML file to salesforce.com Account	XML File (HTTP)	Salesforce.com	1.0
USECASES	T0005 - Salesforce to RightNow Contact Sync	Salesforce.com	RightNow	1.0
USECASES	T0004 - Salesforce Accounts to Netsuite Customer Synchronization	Salesforce.com	NetSuite	1.0
USECASES	T0006 - Synchronize Accounts between NetSuite and Salesforce.com	NetSuite	Salesforce.com	1.0
USECASES	T0042 - Attach PDF File to a Salesforce.com Account	PDF File (FTP)	Salesforce.com	1.0
USECASES	T0040 - Pick Up a CSV File and Load it into Salesforce.com	CSV File (FTP)	Salesforce.com	1.0



Hybrid model helps you …

- Offer the flexibility of the public cloud and the accountability of private cloud
  - Leveraging elasticity on demand (ex: seasonal peaks)
  - Controlling, securing, backing up data locally
  - Help client balancing level of autonomy and privacy
- Ease adoption of public cloud
  - Maintain data locally and processing in the cloud
  - Require less CAPEX

… but raises the bar for service management

- How to manage private and hybrid cloud configurations seamlessly?
- Which cloud computing reference architecture to rely on?
- Are automated tools and best practices available?

IBM Hybrid Cloud Solution – Core features

Application Data Integration	Ability to access public application data using the out-of-box capability of the WebSphere Cast Iron appliance
Resources provisioning	Ability to request and provision IBM SmartCloud Enterprise and Amazon EC2 hybrid resources through Tivoli Service Automation Manager GUI
Workload governance and management	Workload resources can be automatically balanced based on the dynamics of the system load. Resource Overflow and Underutilization thresholds on Event Correlation Service on Impact, TivSAM rules on ILOG BRMS*, and TSAM escalations and actions
Monitoring integration	Unified resource monitoring for off-premise resources in IBM SmartCloud Enterprise and Amazon EC2 through Tivoli Enterprise Monitoring Server. Integrated monitoring dashboard creates a single pane of glass for monitoring of off-premise resources
User Directory Synchronization	Unified user management between on-premise user directory and Lotus Live

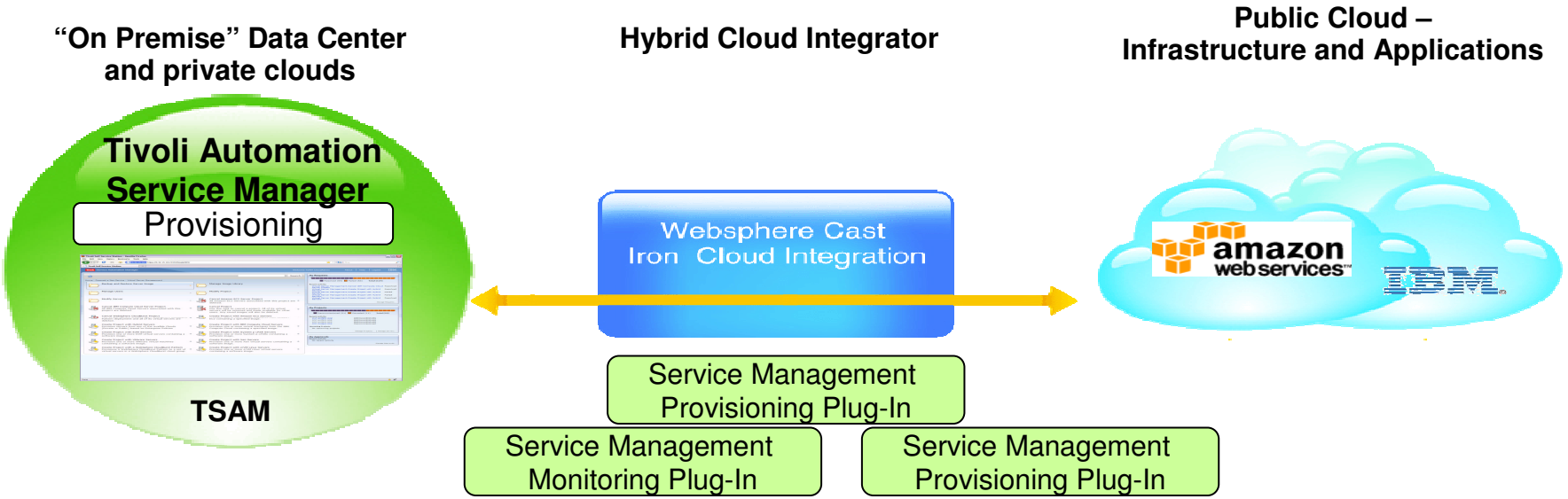
Tivoli Service Automation Manager

Provides the software capabilities to request, fulfill, and manage cloud and virtualization services

- Simplifies user interaction with IT
  - User friendly **self-service interface** accelerates time to value
  - **Service catalog** enables standards to drive consistent service delivery
- Delivers provisioning to enable automation to lower cost
  - **Automated provisioning** and de-provisioning speeds service delivery
  - Provisioning **policies** allow release and reuse of assets
- Integrates with key offerings to deliver advanced capabilities
  - Included with **IBM CloudBurst**
  - Integrated with **WebSphere CloudBurst Appliance**
  - Integrated with **Tivoli Usage and Accounting Mgr**

IBM Hybrid cloud solution: Provisioning using Tivoli Automation Service Manager and Websphere Cast Iron

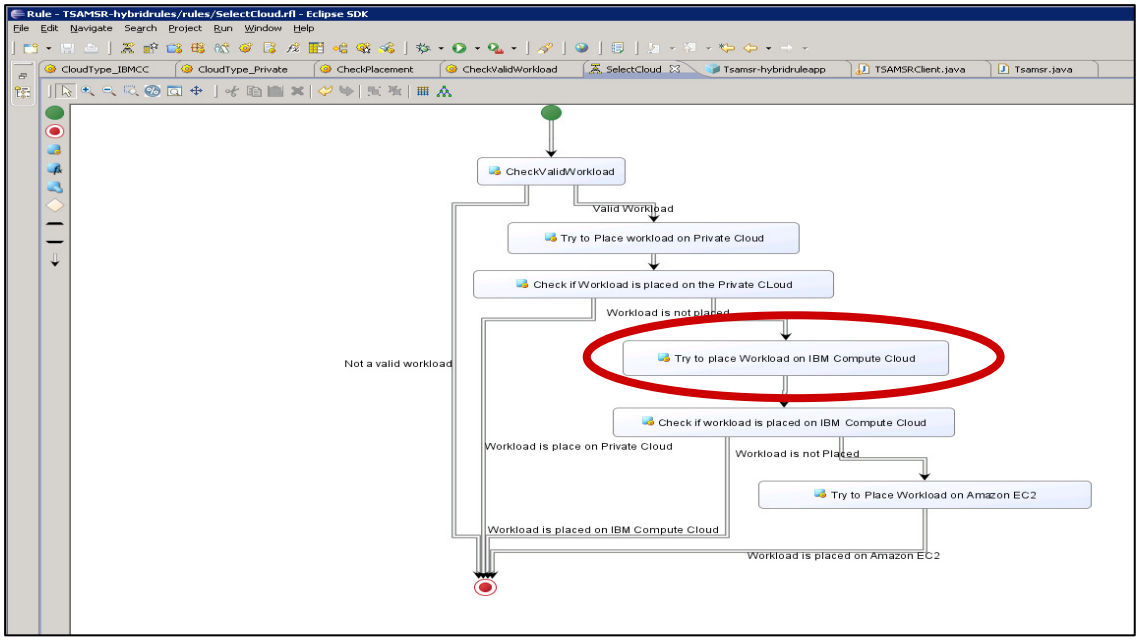
Client wants to begin provisioning off-premise resources using their existing on-premise service automation installation:



IBM Value: Client extends service request automation into their off-premise "cloud" infrastructure using the same TSAM service automation management solution as those on premise.

enabled by Federated Service Catalog

… enables policy-based provisioning



IF

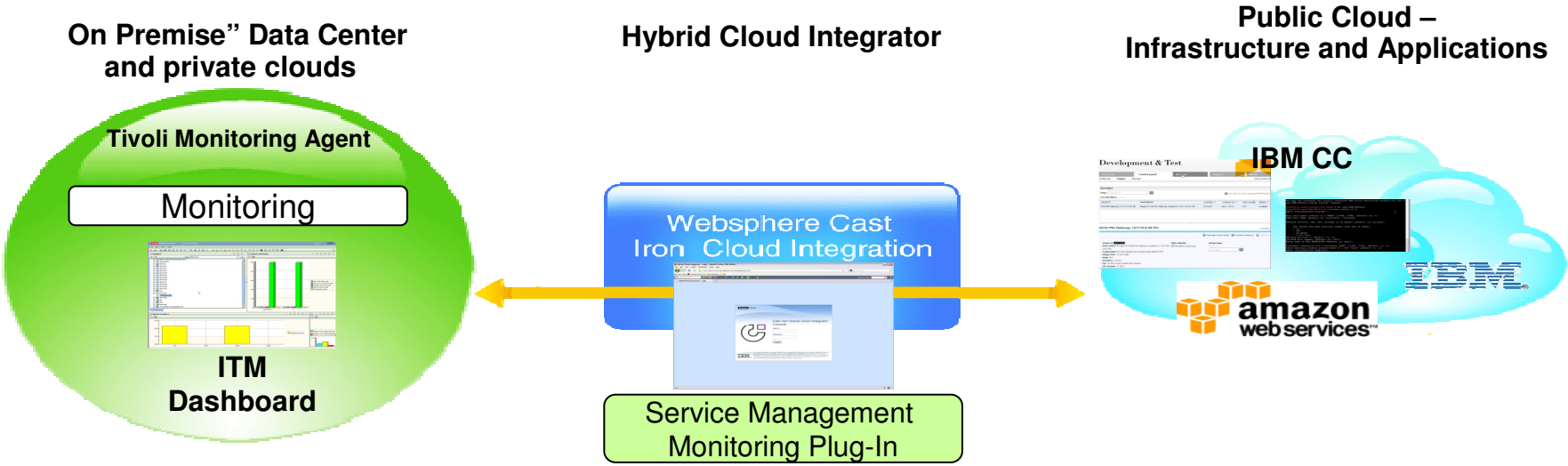
PMRDPCLCPR WORKLOADTYPE of ‘the Service Request’ contains ‘Linux OS for Test’

THEN

set the PMRDPCLCPR PLACEMENT of ‘the Service Request’ to ‘IBM SCE’;

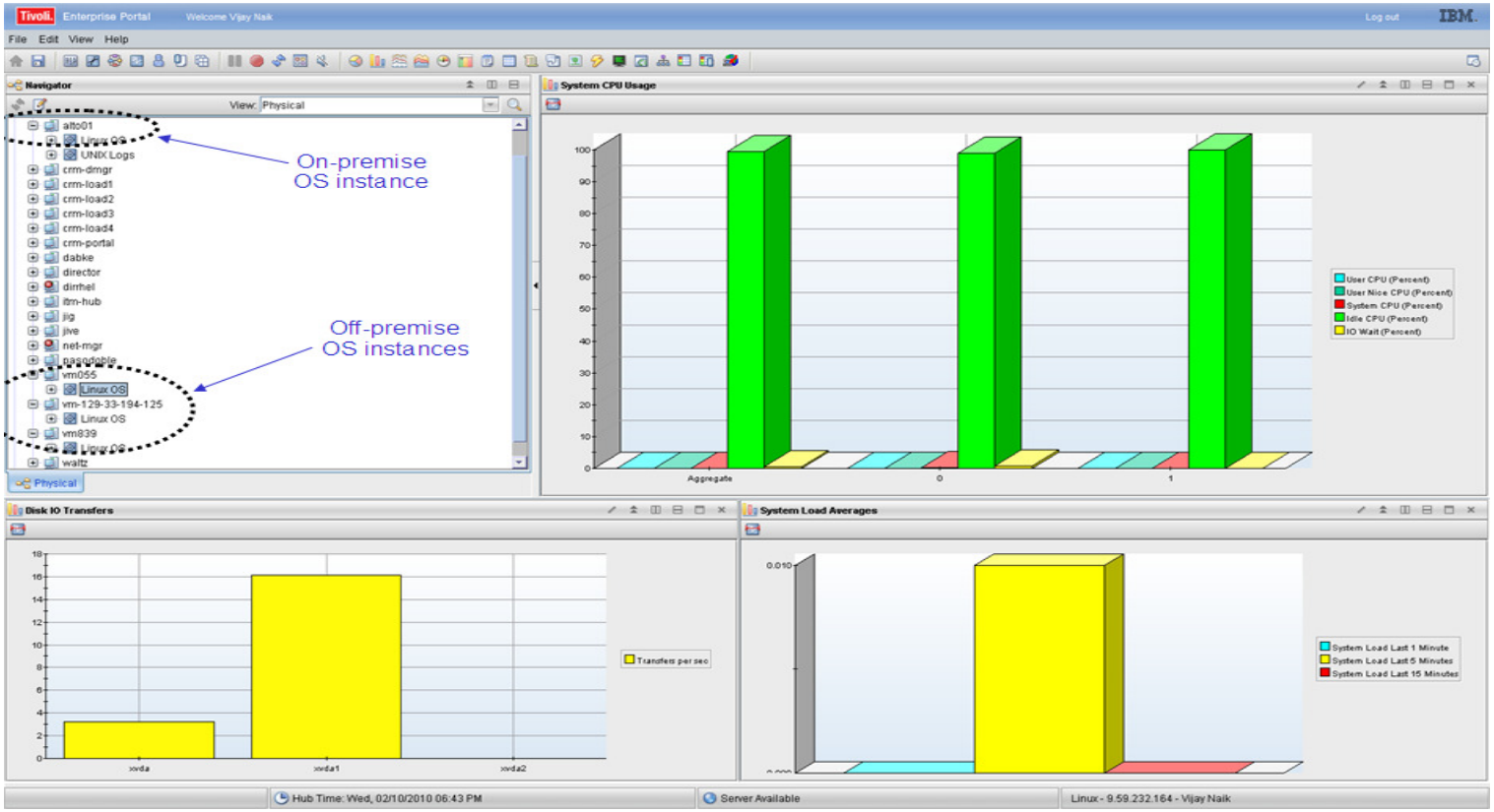
IBM Hybrid cloud solution : Monitoring using Tivoli Monitoring agents

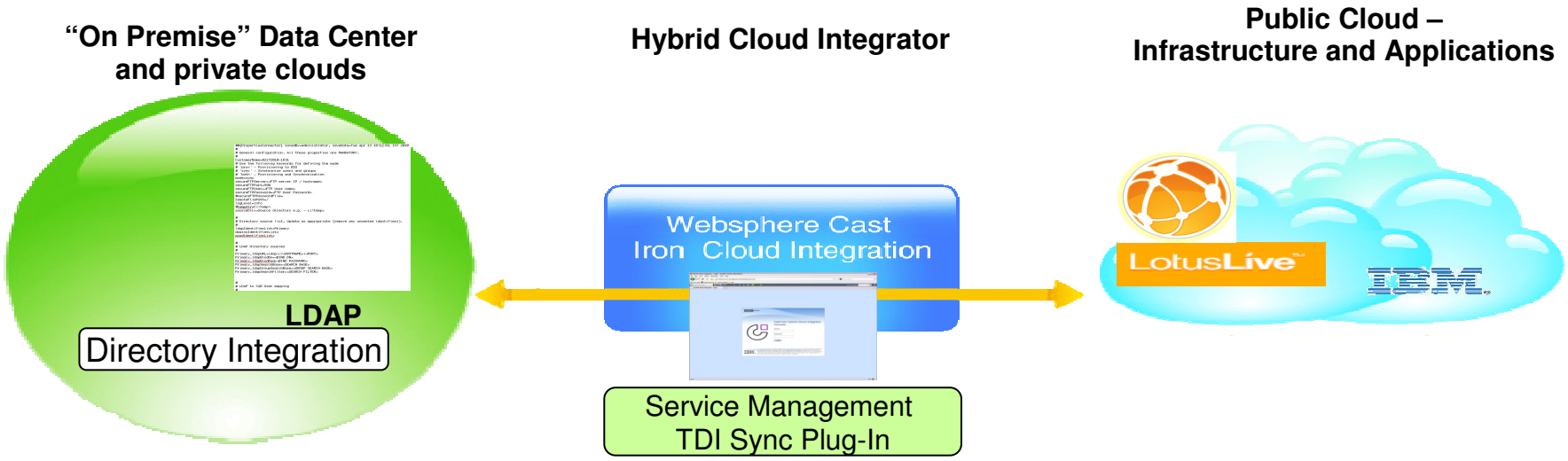
Client wants to begin monitoring off-premise resources using their existing on-premise monitoring installation:



IBM Value: Client gains visibility into their off-premise "cloud" infrastructure using the same ITM monitoring solution as those on premise.

… enables Unified Workload Monitoring



IBM Hybrid cloud solution : Directory Integration

Client wants to manage access to off-premise resources and data using the user directory maintained on premise: