



TIVOLIDAY2010

Pulse Comes To You

12 października 2010, Hotel Sheraton

IBM Tivoli – fundament efektywnych rozwiązań IT
w architekturze „cloud”

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Chief Technologist

Business Analytics & Optimization SME

Go to jest Cloud Computing





Co to jest Cloud Computing według U.S. National Institute of Standards and Technology:

“Cloud computing is a model for enabling convenient, on-demand network access to a shared pool of configurable computing resources that can be rapidly provisioned and released with minimal management effort or service provider interaction.”

Characteristics

- Resource pooling
- Broad network access
- Rapid elasticity
- Measured service
- On-demand self service

Service Models

- Software as a Service
- Platform as a Service
- Infrastructure as a Service

Deployment Models

- Private cloud
- Public cloud
- Hybrid cloud
- Community cloud

Read more at: <http://csrc.nist.gov/groups/SNS/cloud-computing/index.html>

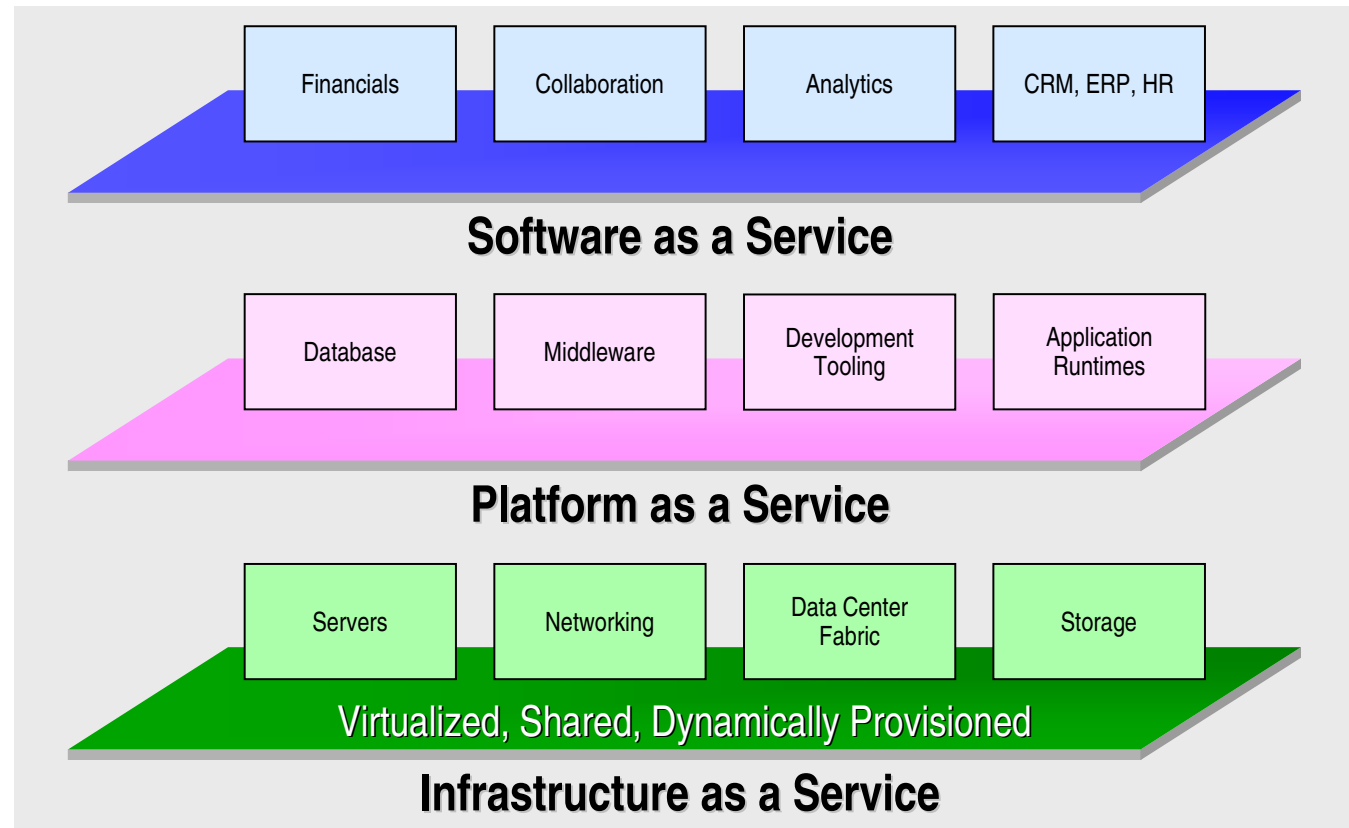
4 modele świadczenia usług

BPaaS

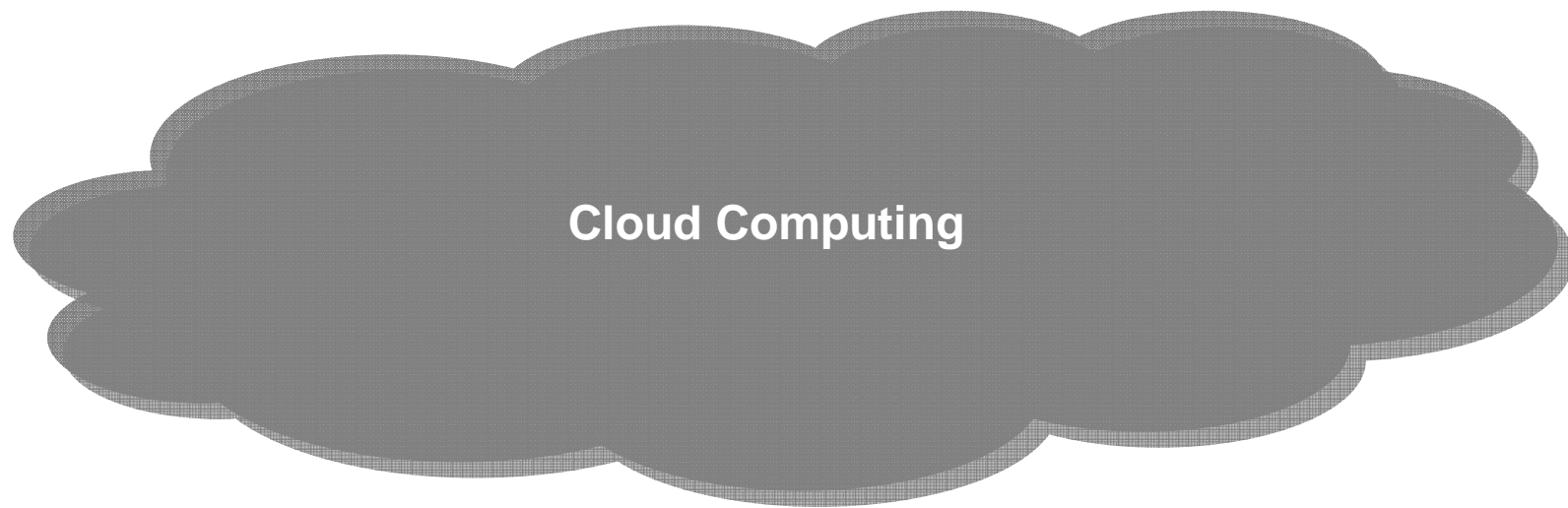
SaaS

PaaS

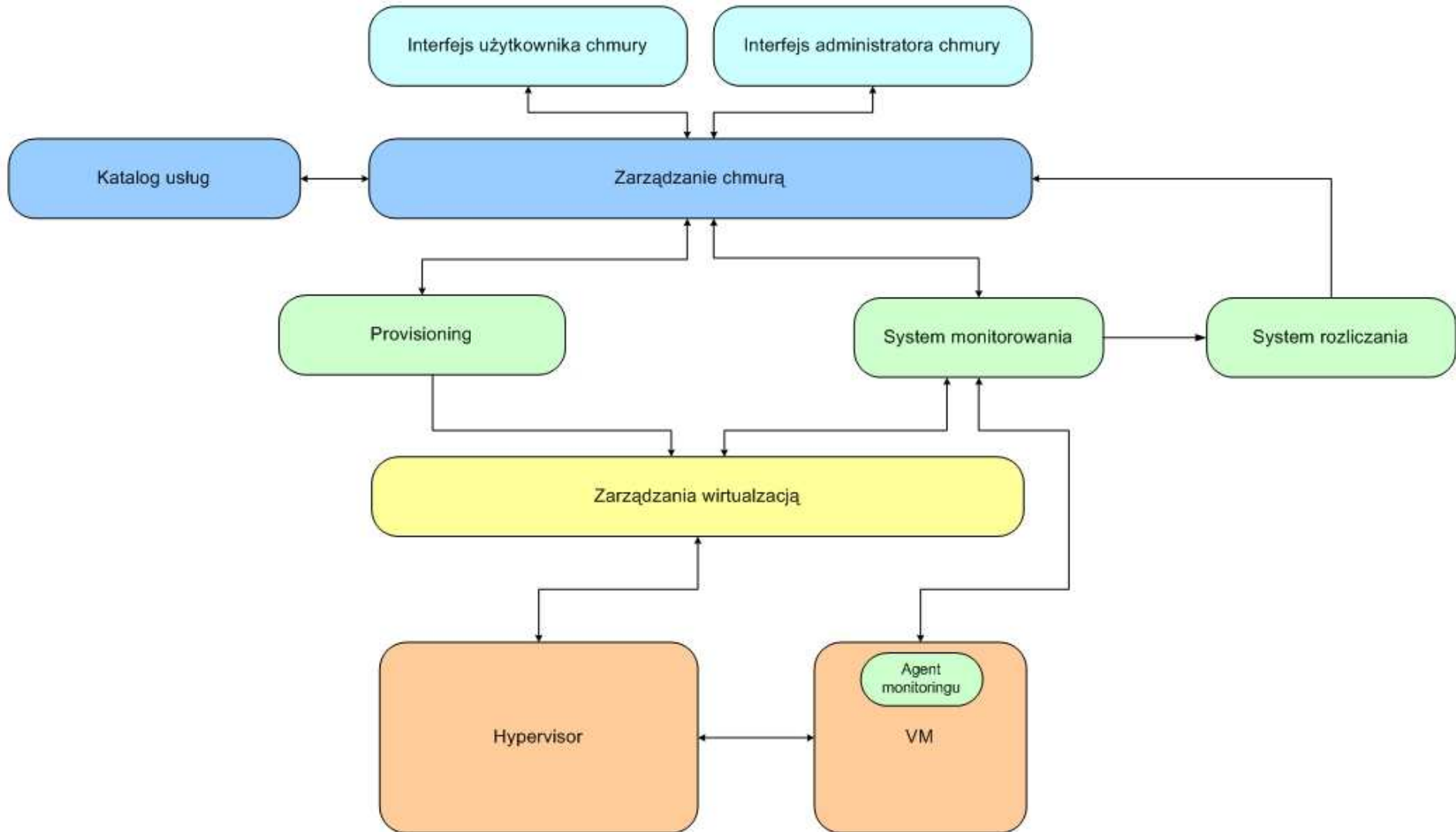
IaaS



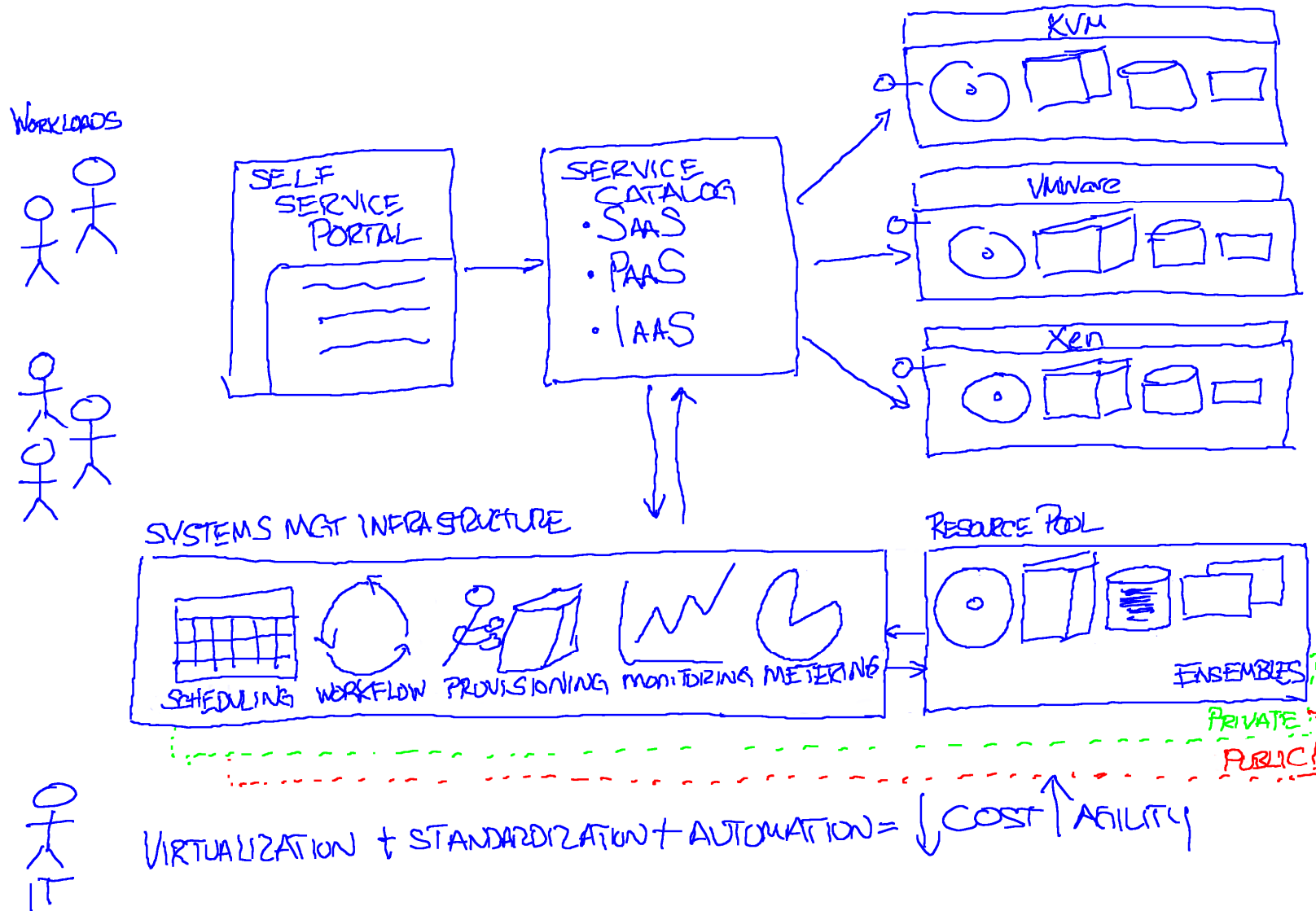
Założenie



Komponenty modelu Cloud Computing



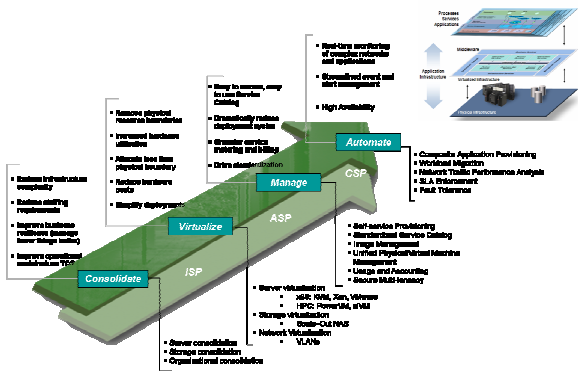
Cloud Computing na jednym rysunku



6 kroków do Cloud Computing

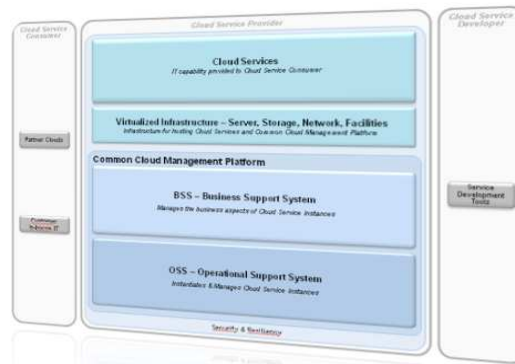
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Mapa drogowy



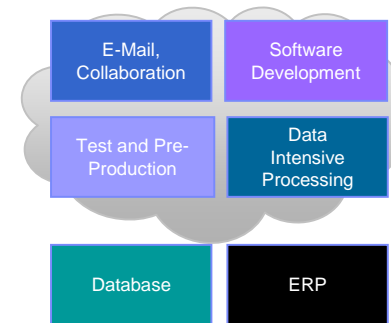
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Dostosowanie architektury referencyjnej



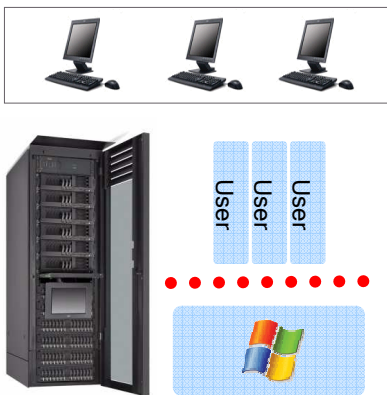
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Inwentaryzacja zadań



4

Określenie i identyfikacja KPI



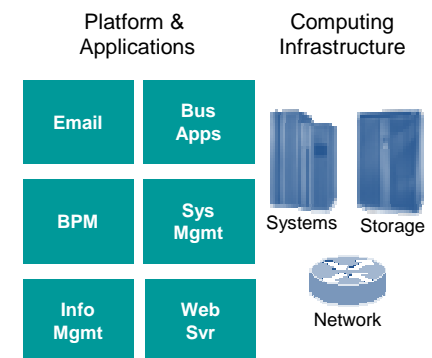
5

Kalkulacja ROI

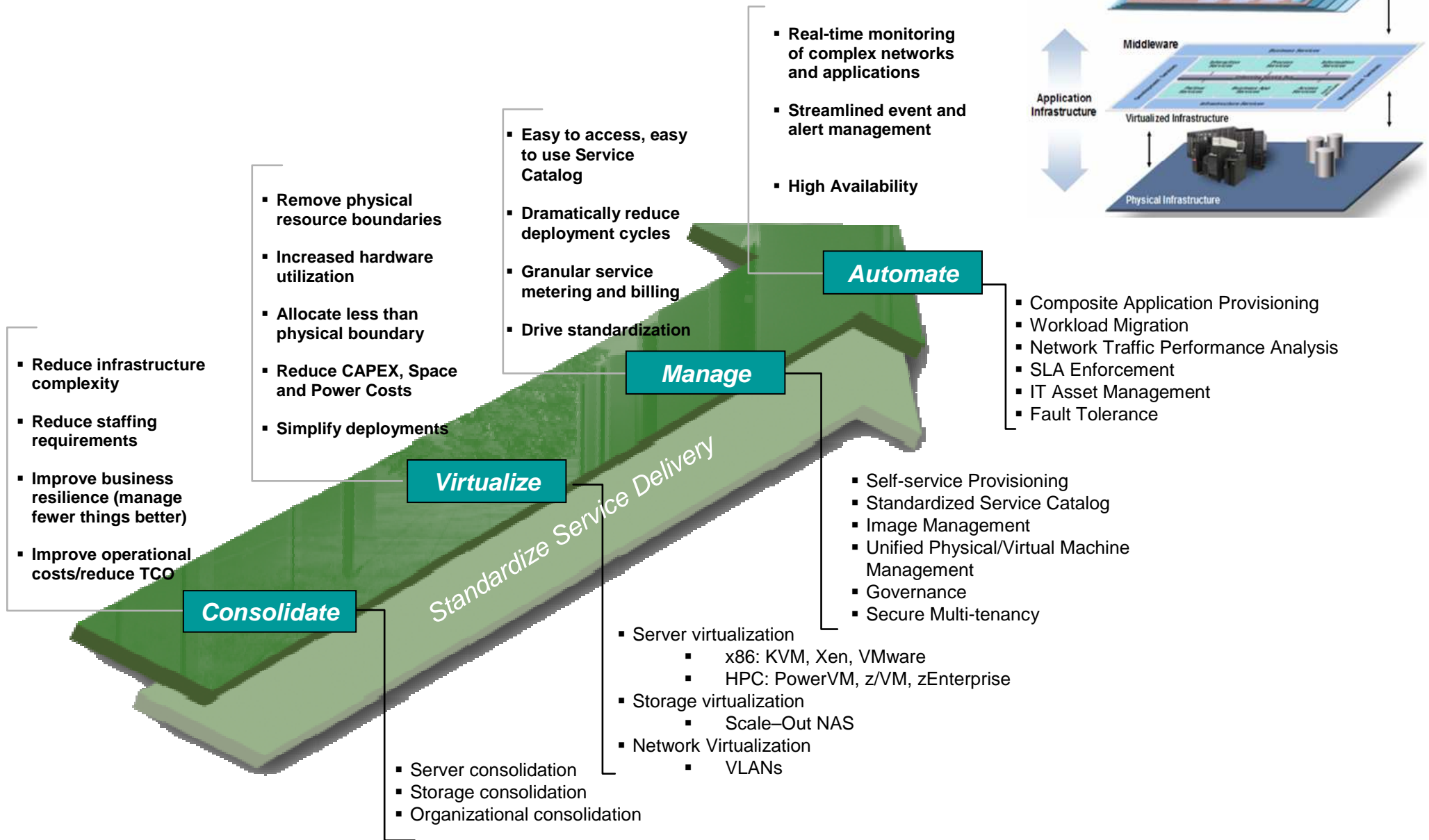
KPI	Actual	Target	% Change
Revenue	1000	1000	0%
Cost	500	500	0%
Profit	500	500	0%
ROI	50%	50%	0%

6

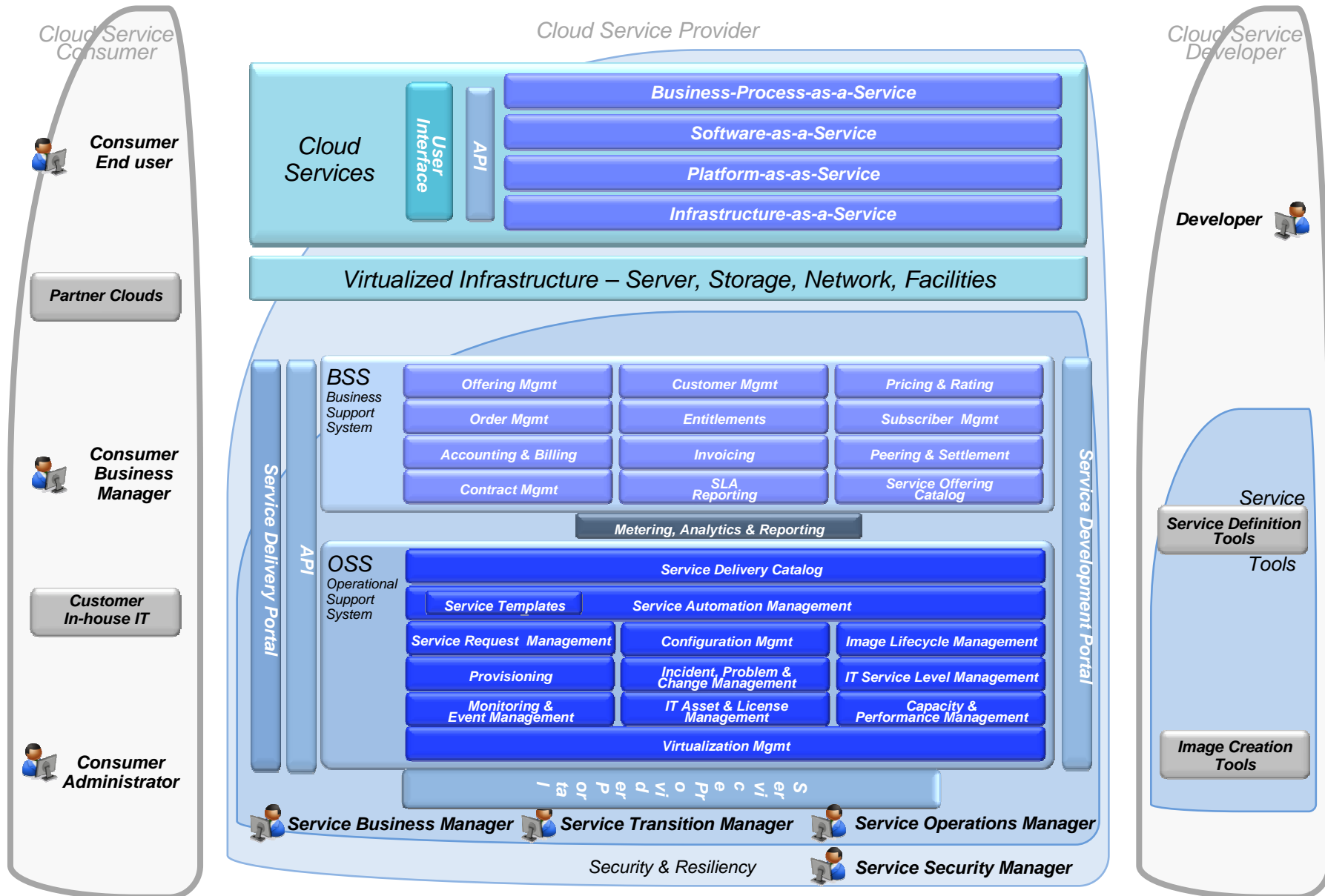
Definicja planu migracji



Mapa drogowa

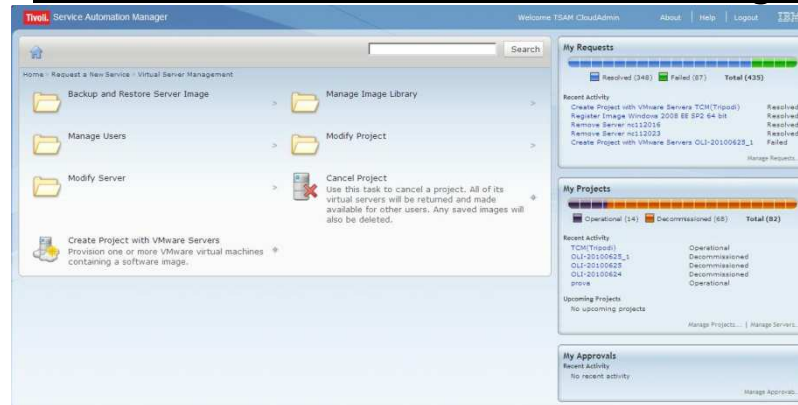


Architektura referencyjna



Podstawowe komponenty zarządzania usługami

Tivoli Service Automation Manager



Portal, Katalog usług, automatyczny provisioning,
zarządzanie obrazami

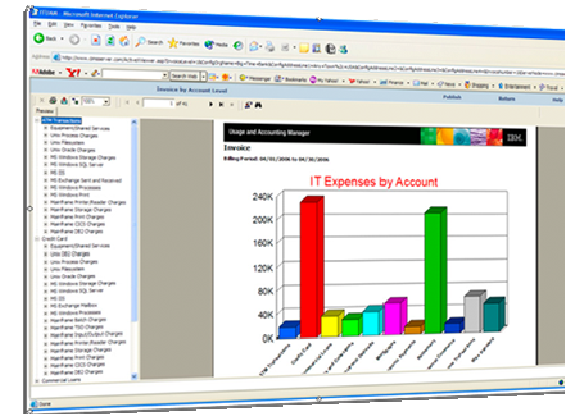


Tivoli Monitoring



Monitoring

Tivoli Usage and Accounting Manager



Pomiar



TSAM Web UI TSAM Admin UI Mail Client Linux VM TUAM UI

Your request to start a new Project has been processed - IBM Lotus Notes

File Edit View Create Actions Text Tools Window Help

Open Home Replication and Sync Outgoing Mail Your request to start a new Project...

Default Serif 10 b i u A

Send Send and File... Save As Draft Address... Delivery Options... Follow Up Show Thread Tools

Brian Naylor/UK/IBM To: maxadmin@us.ibm.com
 16/02/2010 10:47 cc:
 bcc:
 Subject: Your request to start a new Project has been processed

Dear Brian Naylor

You have started a new Project j2 with the following topology:

The server splnapp79004 has been added with the following parameters:
Hostname of Server: splnapp79004
 Number of CPU(s): 1
 Number of tenths of physical CPUs: 10
 Amount of Memory: 1024 MB
 Swap Size: 0 MB
 Disk Space Size: 8
Admin Password: X1HCd1j3
 Link to the Server: <http://slnlapp79004:80>

The user of group ACCOUNT has been notified.

Regards,
 Your Service Automation Team

CPU Memory Disc Network CPU Memory Disc Network

TSAM Portal Samoobsługowy

Tivoli Service Automation Manager Welcome Bill Man [About](#) [Help](#) [Logout](#)

Home » Request a New Service » Virtual Server Management

Backup and Restore Server Image >

Manage Users >

Modify Server >

Cancel WebSphere CloudBurst Project
The virtual system created upon WebSphere CloudBurst Pattern deployment and all of its virtual servers are deleted.

Create Project with System p LPAR Servers
Provision one or more System p LPARs containing a software image.

Create Project with Xen Servers
Provision one or more Xen virtual servers containing a software image.

Create Project with z/VM Linux Servers
Provision one or more z/VM Linux virtual servers containing a software image.

Manage Image Library >

Modify Project >

Cancel Project
Use this task to cancel a project. All of its virtual servers will be returned and made available for other users. Any saved images will also be deleted.

Create Project with KVM Servers
Provision one or more KVM virtual servers containing a software image.

Create Project with VMware Servers
Provision one or more VMware virtual machines containing a software image.

Create Project with a WebSphere CloudBurst Pattern
Provisions a WebSphere CloudBurst Pattern to a set of virtual servers in a WebSphere CloudBurst cloud group.

My Requests

Progress bar: [Progress]

Resolved (104) Failed (27) Queued (2)
In Progress (1) Waiting on Approval (1) **Total (135)**

Recent Activity

Modify User PMRDPCAUSR	Resolved
Create User abc	Resolved
Create Project with VMware Servers CCard Processing 3.4	Resolved
Create User uthe2	Resolved
Create User uthe1	Resolved

[Manage Requests...](#)

My Projects

Progress bar: [Progress]

Operational (22) Draft (2) In Transition (1) **Total (25)**

Recent Activity

CCard Processing 3.4	Operational
swaptest01	Operational
swaptest00	Operational
foobarbaz	Draft
other test	Operational

Upcoming Projects

a project that starts tomorrow	10/26/2009
Set this one to run in the future, with monitorint	10/21/2009

[Manage Projects...](#) [Manage Servers...](#)

My Approvals

Recent Activity

Modify User wally	10/14/2009
-------------------	------------

[Manage Approvals...](#)

Zamówienie przez katalog usług

Create Project with VMware Servers

Provision one or more VMware virtual machines containing a software image.

General

*Project Name *Team to Grant Access

Project Description

*Start Date *End Date

Requested Image

Resource Group Used to Reserve Resources Monitoring Agent to be installed

*Image to be Deployed

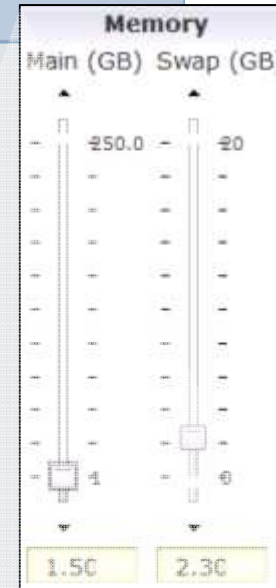
Select	Name	Hypervisor	CPUs	Memory	Storage
<input checked="" type="radio"/>	Master IL Image (Win	VMware	2	1.5 GB	30 GB

Resources

To adjust the settings of the requested resources, press the setting button. After making the necessary adjustment, press the setting button to save the configuration.

Servers	CPU	Memory	Disk
*Number of Servers to be Provisioned <input type="text" value="1"/> 50 available at above configuration and schedule	Virtual 2 Physical 2.0	Main 1.5 GB Swap 2.3 GB	Local 30 GB

OK Cancel



Rezerwacja zasobów

Użytkownicy mogą zobaczyć, jakie zasoby są dostępne w katalogu usług, posiadają możliwość zamówienia usługi i jej uruchomienia w czasie w którym jej potrzebują.

Harmonogramowanie

Home » Request a New Service » Virtual Server Management » Modify Project

- Add KVM Servers**
Add one or more KVM virtual servers to the project.
- Add VMware Servers**
Add one or more VMware virtual machines to the project.
- Add z/VM Linux Servers**
Add one or more z/VM Linux virtual servers to the project.
- Add System p LPAR Servers**
Add one or more System p LPAR virtual servers to the project.
- Add Xen Servers**
Add one or more Xen virtual servers to the project.
- Modify Reservation**
This task allows you to modify the start date if the project is not active and the end date of the project.

Modify Reservation

This task allows you to modify the start date if the project is not active and the end date of the project.

*Deployment Name
Reservation Project 4cd2

Project Details		OPERATION
Project Name	Reservation Project 4cd2	
Project Description	Create Future Deployment Test Description	
Project Type	RDP	
Team Access	MYTuamAccountR	

*Start Date: 9/10/2009

*End Date: Until this date
12/31/2011

OK Cancel

Obieg zlecenia i wymagane zgody

Tivoli Service Automation Manager | Welcome Bill Man | About | Help | Logout | IBM

Home » Request » New Service » Virtual Server Management

Task Catalog:

- Backup and Restore Server Image
- Manage Image Library
- Manage Users
- Modify Project
- Modify Server
- Cancel Project
Use this task to cancel a project. All of its virtual servers will be returned and made available for other users. Any saved images will also be deleted.
- Cancel WebSphere CloudBurst Project
The virtual system created upon WebSphere CloudBurst Pattern deployment and all of its virtual servers are deleted.
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Provision one or more KVM virtual servers containing a software image.
- Create Project with System p LPAR Servers
Provision one or more System p LPARs containing a software image.
- Create Project with VMWare Servers
Provision one or more VMware virtual machines containing a software image.
- Create Project with Xen Servers
Provision one or more Xen virtual servers containing a software image.
- Create Project with a WebSphere CloudBurst Pattern
Provisions a WebSphere CloudBurst Pattern to a set of virtual servers in a WebSphere CloudBurst cloud group.
- Create Project with z/VM Linux Servers
Provision one or more z/VM Linux virtual servers containing a software image.

My Requests

Resolved (104) | Failed (27) | Queued (2) | In Progress (1) | Waiting on Approval (1) | **Total (135)**

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My Projects

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My Approvals

Recent Activity

Modify User wally	10/14/2009
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Zlecenie serwisowe

Obieg zgodny z ITIL prosto z pudełka z możliwością personalizacji ustawień

The screenshot displays the IBM Service Requests management interface. At the top right, a workflow diagram illustrates the process flow from START 1 through various stages: PRE-APPR, AUTOAPPR, WAPPR, THISINST, APPRDECLIN, COLLECT, DECLINE, STOP 9, CHGPRJREST, CHGSRVREST, COLLEC, APPROVE, and CHKSTATUS. Below the diagram, a detailed view of a service request is shown. The request ID is 1064, titled 'Create Project with System p LPAR Servers'. The status is 'CLOSED'. The user information section shows the reporter and affected person as PMRDPCAUSR. The service request details include a summary and classification path. A table of specifications is provided below, listing attributes such as Service Deployment Instance ID, Project Account, Service Definition Revision, Service Definition Number, Management Plan, Project Name, Project Identifier, Project Description, Number of Servers to be Provisioned, and Amount of Memory (in MBs).

Attribute	Description	Data Type	Alphanumeric Value	Numeric Value	Unit of Measure	Section
PMRDPCLCPR_SERVICENSTANCED	Service Deployment Instance ID	HUMERIC		31.0000000000		
PMRDPCLCPR_PROJECTACCOUNT	Project Account	ALN				
PMRDPCLCPR_SERVICDEFINITIONREVISION	Service Definition Revision	NUMERIC		2.0000000000		
PMRDPCLCPR_SERVICDEFINITIONNUM	Service Definition Number	ALN	RDPVS			
PMRDPCLVSRV_MFNUM	Management Plan	ALN	NEWPROJECT			
PMRDPCLCPR_PROJECTNAME	Project Name	ALN	AIX61POC-Dec10-3			
PMRDPCLCPR_PROJECTID	Project Identifier	ALN	/cloudrest/projects/1030/			
PMRDPCLCPR_DESCRIPTION	Project Description	ALN				
PMRDPCLCPR_SERVREQTY	Number of Servers to be Provisioned	NUMERIC		1.0000000000		
PMRDPCLCVS_MEMORY	Amount of Memory (in MBs)	NUMERIC		2,048.00000000	MBYTE	

Monitoring

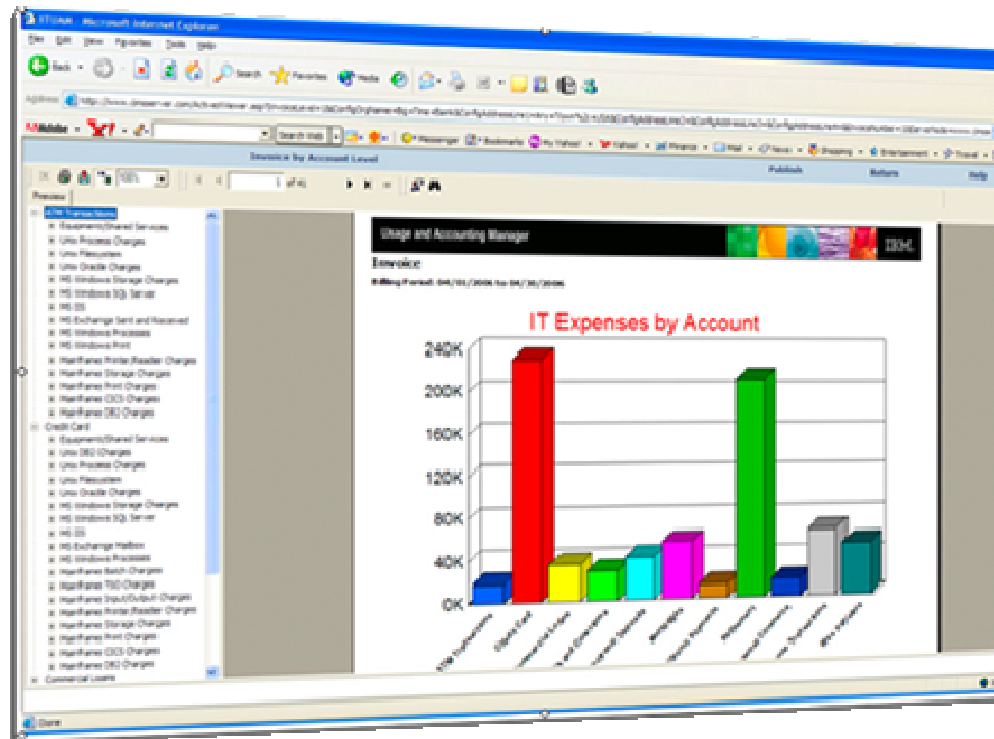
The screenshot displays the Tivoli Monitoring interface for a system named 'fac2w2k3.raleigh.ibm.com'. The main window shows a 'Topology' view of the physical infrastructure, including clusters like 'Cluster F', 'Cluster A', and 'Cluster H', and various virtual machines (VMs) such as 'VM:bt-itm64vm1.tivlab:ESX' through 'VM:bt-itm64vm9.tivlab:ESX'. A status bar at the bottom indicates 'Total: 32 Selected: 0' and 'Last refreshed: 06/16/2010 11:30 AM'.

A secondary window, 'VM Datastore Utilization - fac2w2k3.raleigh.ibm.com - SYSADMIN *ADMIN MODE*', provides a detailed view of the VM Datastore Utilization for 'iSCSI Disk 1'. It includes a table with the following columns: Name, Virtual Machine, and Commitment status.

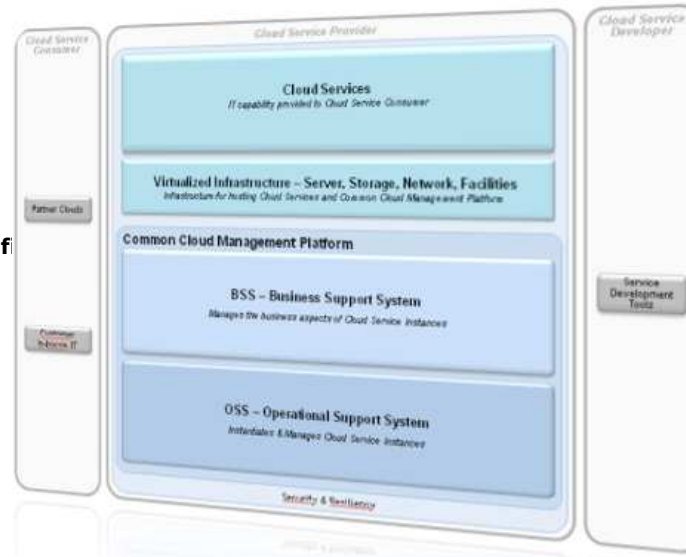
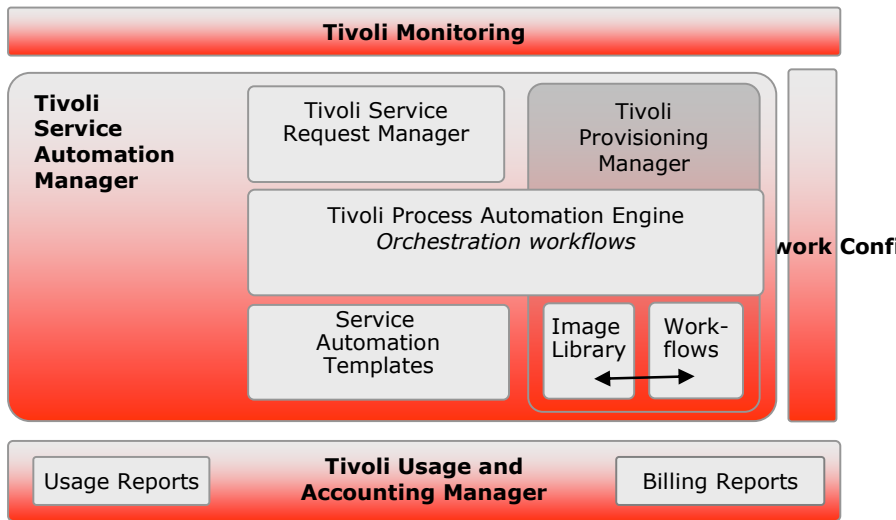
Name	Virtual Machine	Commitment
iSCSI Disk 1	testDS	Unavailat
iSCSI Disk 1	itm64suse1	Unavailat
iSCSI Disk 1	vi5win2k3	Unavailat
iSCSI Disk 1	itmrlh1	Unavailat
iSCSI Disk 1	s-catdemo-rtt-2-16-10	Unavailat
iSCSI Disk 1	s-catsysp-3.1.4	Unavailat
iSCSI Disk 1	itm64rh1	Unavailat
iSCSI Disk 1	zz_003	Unavailat
iSCSI Disk 1	zz_007	Unavailat
iSCSI Disk 1	zz_002	Unavailat
iSCSI Disk 1	zz_017	Unavailat
iSCSI Disk 1	p5steps	Unavailat
iSCSI Disk 1	kvm2rhe15	Unavailat
iSCSI Disk 1	itmwin1	Unavailat
iSCSI Disk 1	zz_004	Unavailat
iSCSI Disk 1	vi1rh3	Unavailat
iSCSI Disk 1	kvm1rhe15	Unavailat
iSCSI Disk 1	fred	Unavailat

Below the table, there are two charts: 'VM Datastore Provisioned Space' (a line graph showing Committed and Uncommitted space in Giga Bytes) and 'Total IO by VM' (a bar chart showing Total Read and Total Write in KBps for various VMs like itm2rh15, itmrlh1, s-catsysp-3.1.4, itmrlh3, itmrlh1, and zz00m).

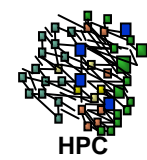
Pomiar: Rozliczanie za użycie



Typowa platforma do zarządzania



Web



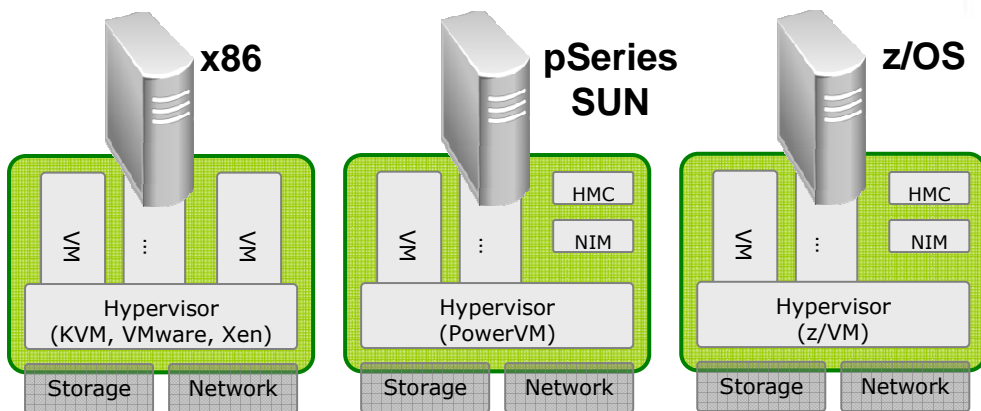
HPC



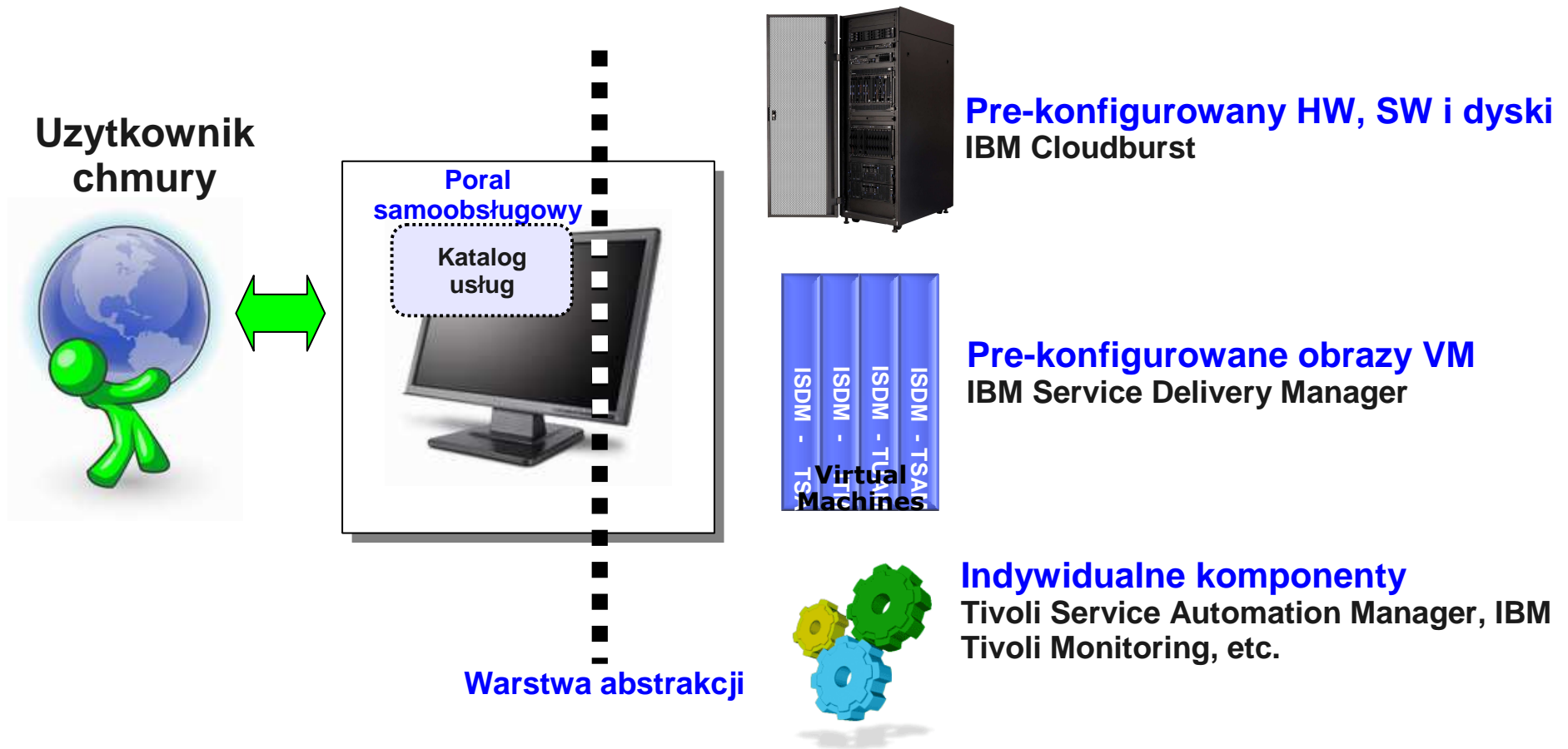
Transakcje



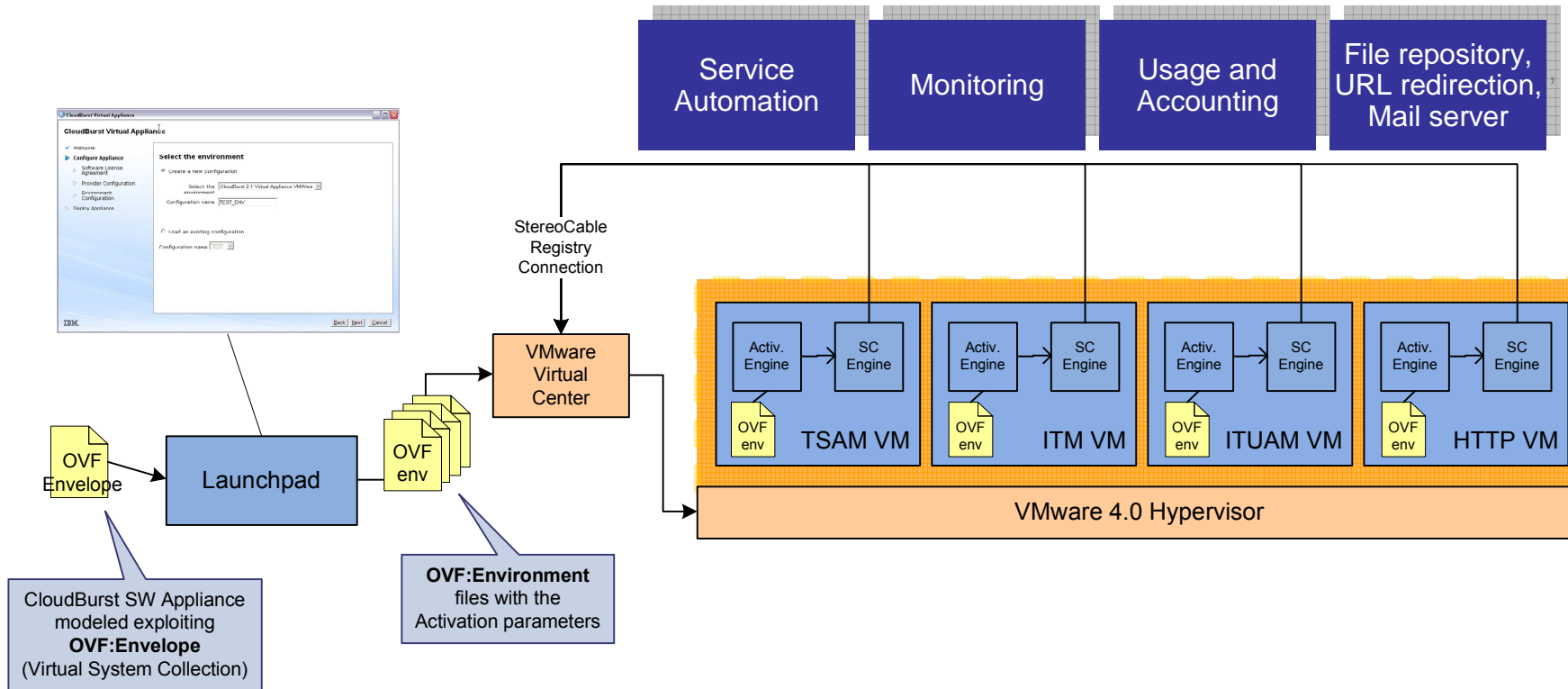
BA



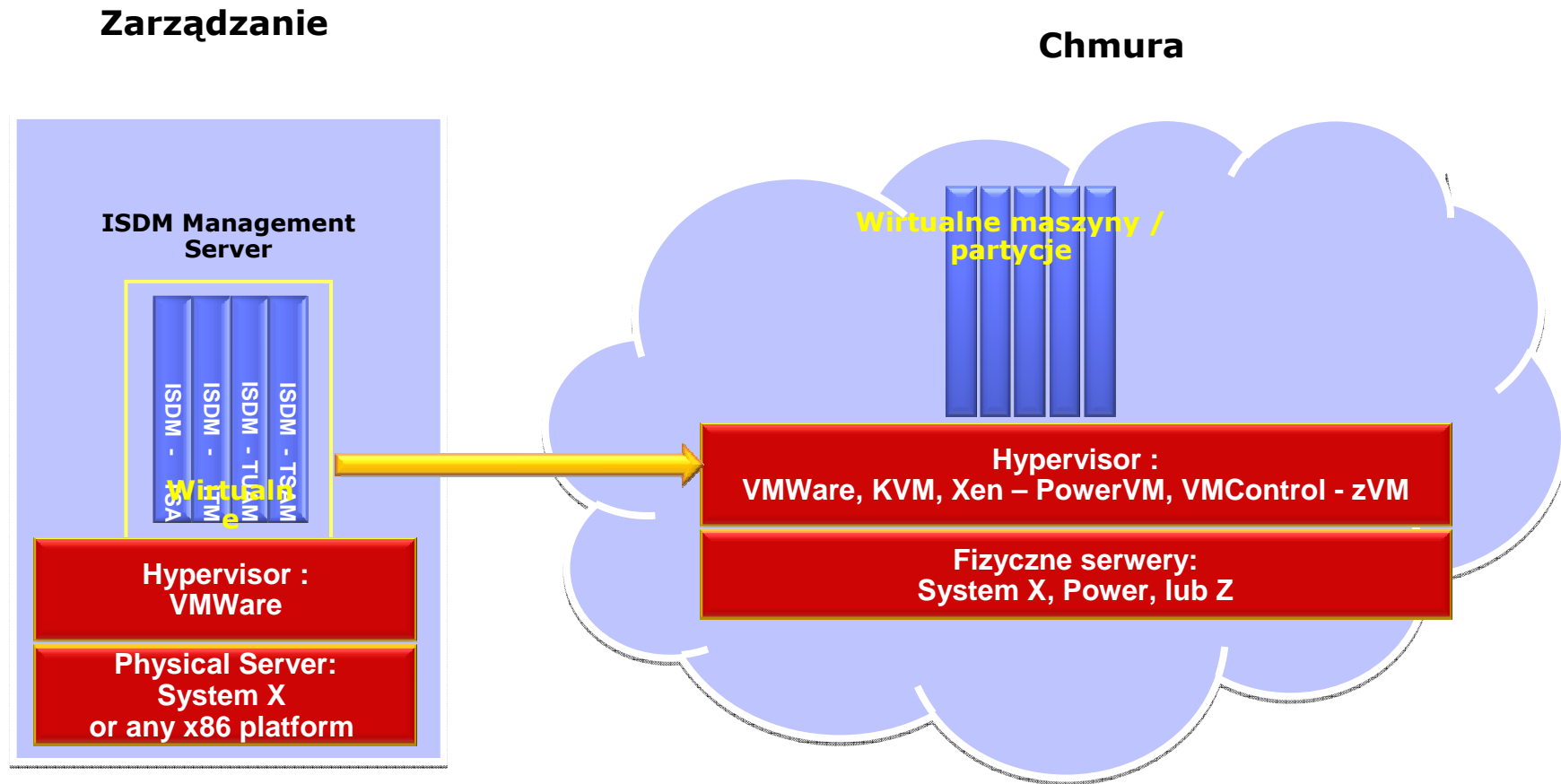
Różne możliwości implementacji



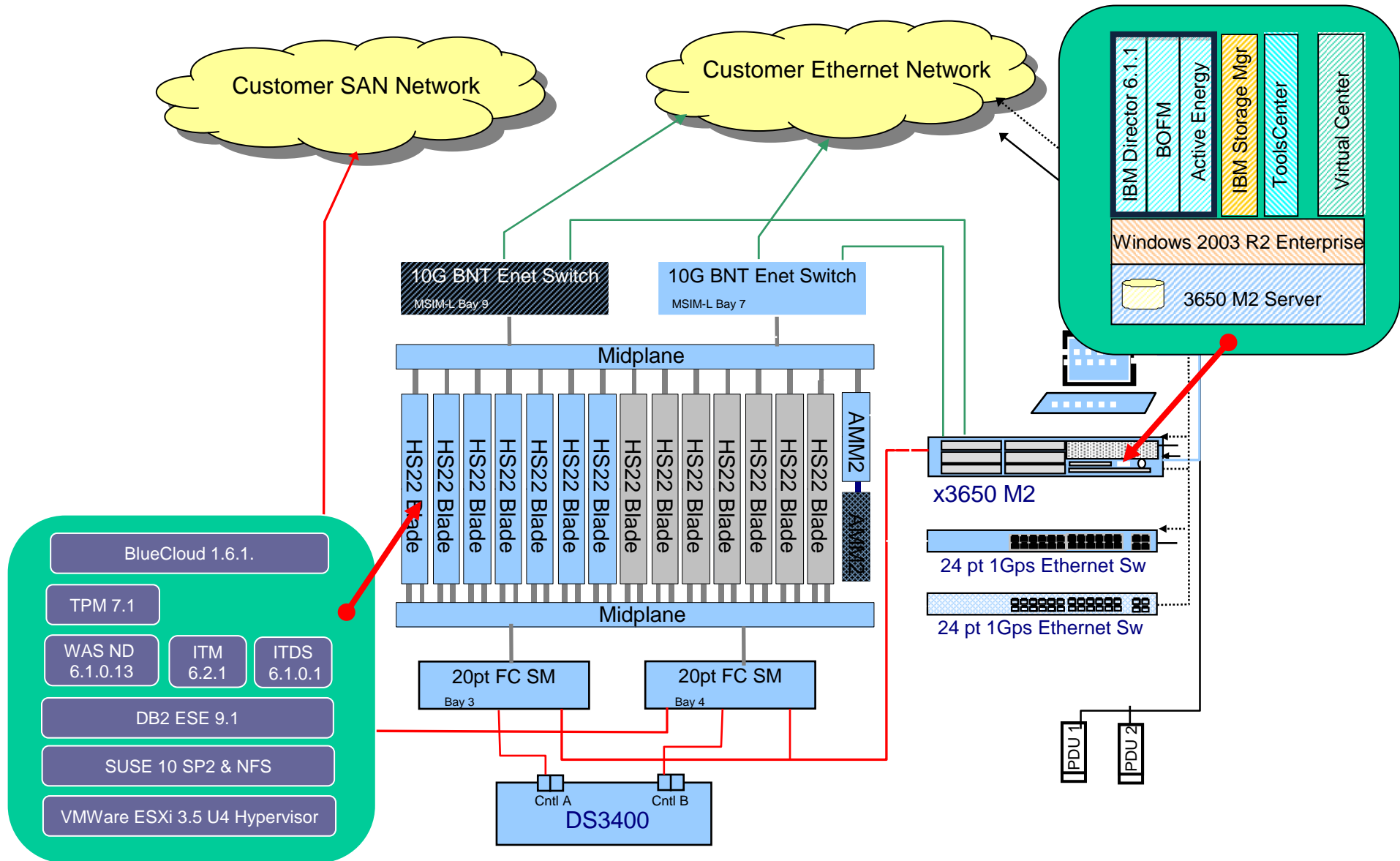
IBM Service Delivery Manager



Zarządzanie

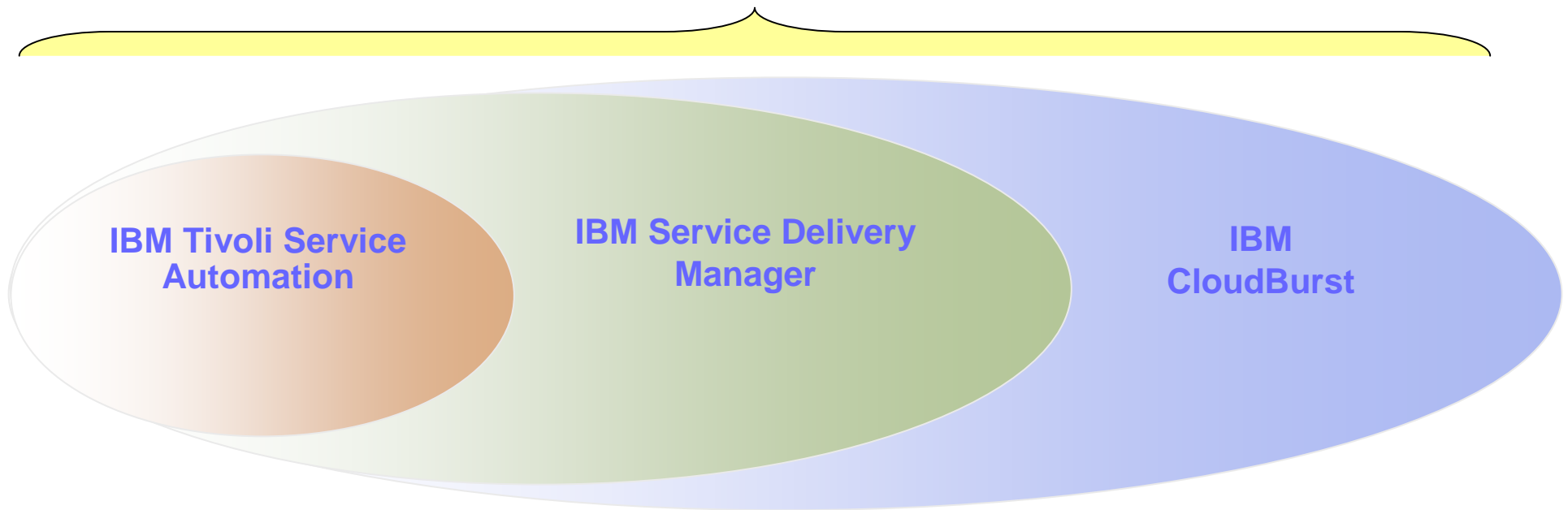


Cloudburst 2.1 - architektura



Jak zacząć ?

Automatyzacja działań, w zależności od zlecenia użytkownika opartego o katalog usług



Pytania...?

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