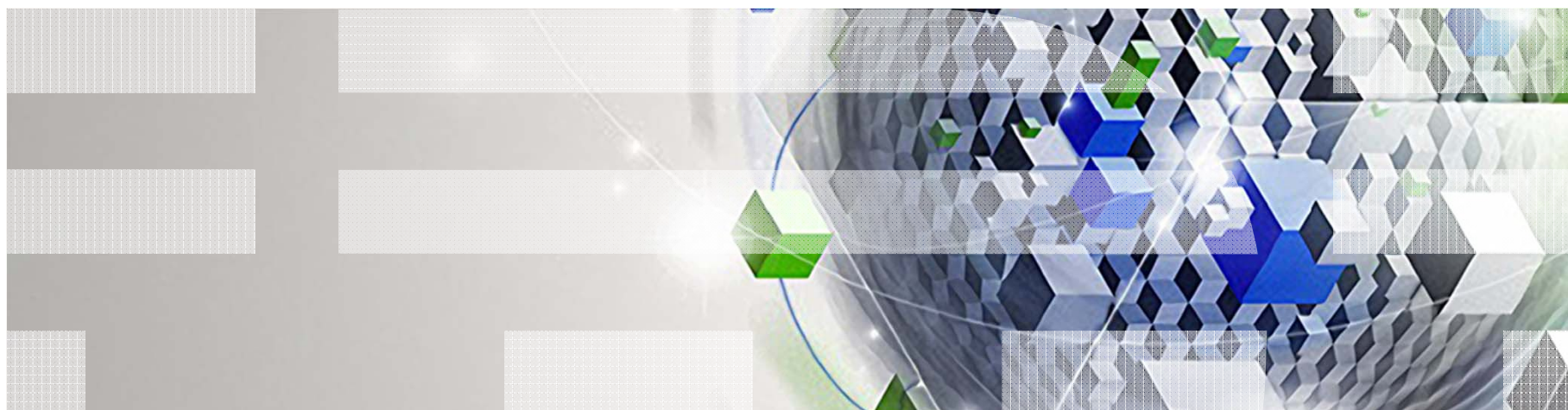




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# IBM Systems Director Enterprise Edition: High-Level Overview

Presented by:  
Franklin Almonte  
IBM Advanced Technical Skills



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# Agenda

- Systems Director Enterprise Edition High-Level Overview
  - Systems Director Edition Overview
  - Systems Director Enterprise Edition Components
  - Systems Director Base Overview
  
- IBM Tivoli Monitoring High-Level Overview
  - ITM Component Overview
  - Tivoli Data Warehouse
  - IBM Tivoli Performance Analyzer Agent
  - IBM Tivoli Monitoring for Energy
  - ITM Samples
  
- Tivoli Common Reporting for Asset and Performance Management
  - TCR Overview
  - TCR Samples
  
- Tivoli Application Discovery and Dependency Manager Overview
  - Feature Overview
  - TADDM Samples

## Agenda Cont.

- IBM DB2 High-Level Overview
- Systems Director & ITM Integration
  - Integration Overview
- System Director Enterprise Edition Requirements
- ATS Systems Director Enterprise Edition Lab
- Links to More Information

# IBM Systems Director Editions

- **IBM® Systems Director Express Edition**
  - Remotely monitor, configure and update servers and OS's
  - Troubleshoot problems faster for higher system availability
  - Reduce time to execute administrator tasks
- **IBM Systems Director Standard Edition**
  - Use Systems Director Express Edition features
  - Monitor and manage energy use and thermal output
  - Get a single view and status of networking systems
  - Reduce time to configure and deploy virtual images (AIX/Linux only)
- **IBM Systems Director Enterprise Edition**
  - Use Systems Director Standard Edition features
  - Deploy workloads faster with improved reliability in system pools
  - Increase operator productivity with prioritized information and context, real-time and historical health status
  - Use predictive capabilities to help with capacity estimation
- **AIX Enterprise Edition**
  - Includes AIX and Systems Director Enterprise Edition
  - Increase deployment flexibility with Workload Partitions





# IBM Systems Director Enterprise Edition Overview

**Tivoli.** software



- The Systems Director Enterprise Edition provides:
  - All features of the Systems Director Express and Standard Editions
  - Creation/removal of system pools and resource management in AIX and Linux system pools as if they were a single system
  - Addition/removal of physical servers within system pools
  - **Visualization of the relationships of LPARs to servers to applications**
  - **Proactive real-time and predictive monitoring of the virtualized environment**
  - **Predictive performance management and capacity estimation**
  - **Application & Dependency Discovery**
  - **Enhanced Reporting Capabilities**

# IBM Systems Director Enterprise Edition for Power V6.2

5765-EEP

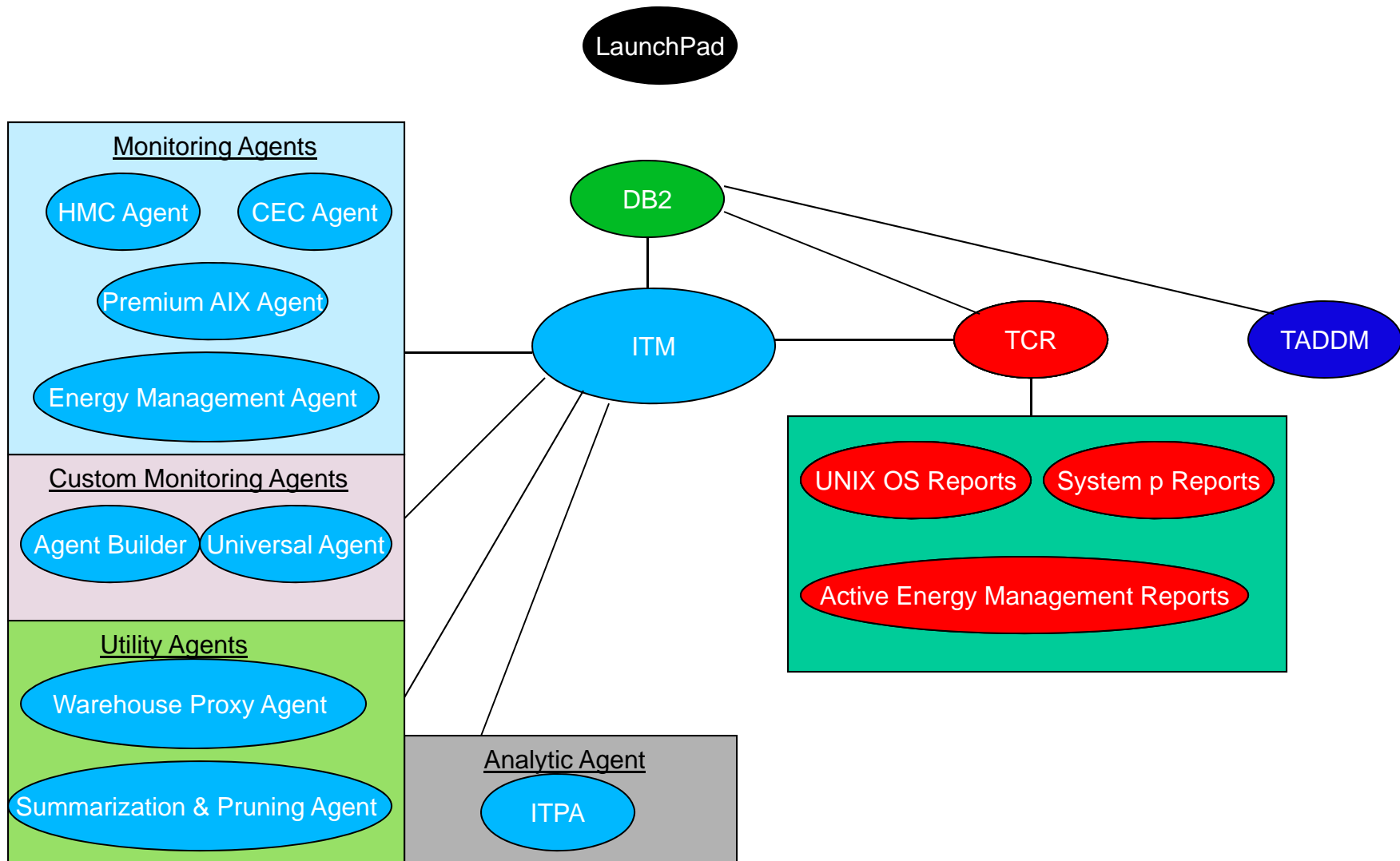
## Pieces and Parts:

- IBM Systems Director products
  - IBM Systems Director (ISD) 6.2
  - ISD VMControl **Enterprise** Edition for Power, V2.3
  - ISD Service & Support Manager V6.2
  - ISD Transition Manager for HP SIM V6.2
  - ISD Active Energy Manager V4.3
  - ISD Network Control V1.2
  
- Tivoli products (plus DB2 & Launchpad):
  - IBM Tivoli Monitoring (ITM) V6.2.2 FP2 plus OS,CEC,HMC and System p Agents
  - IBM Tivoli Monitoring for Energy Management V6.2.1
  - IBM Tivoli Application Discovery and Dependency Manager (TADDM) V7.2
  - IBM Tivoli Performance Analyzer V6.2.2
  - IBM Tivoli Common Reporting for Asset and Performance Management V1.2
  - DB2 Enterprise Server Edition V9.7 FP1
  - ISD Enterprise Edition Installation Launchpad V6.2

**Note:** Arrows indicate plug-ins (not standalone products) to IBM Systems Director



# IBM Systems Director Enterprise Edition Middleware Components



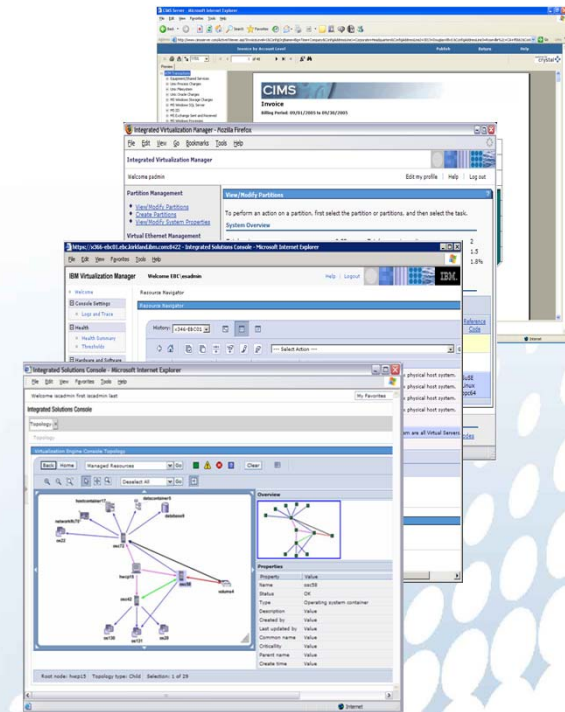
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# IBM Systems Director Base



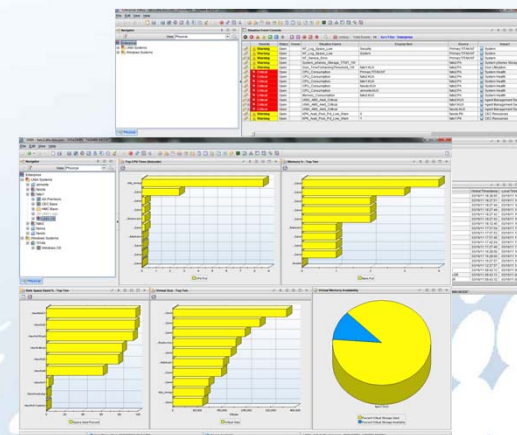
- Consolidation of Platform Management Tools
  - Single consistent cross-platform management tool
  - Simplified tasks via Web based interface
  - Manage many systems from one console
- Integrated Physical and Virtual Management
  - Discovery and inventory of physical and virtual resources
  - Configuration and provisioning of platform resources
  - Status, health and monitoring of platform resources
  - Visualization of server resource topologies
  - Move virtual servers between systems without disruption to running workloads
- Platform Update Management
  - Simplified consistent cross-platform tools to acquire, distribute and install firmware and OS updates



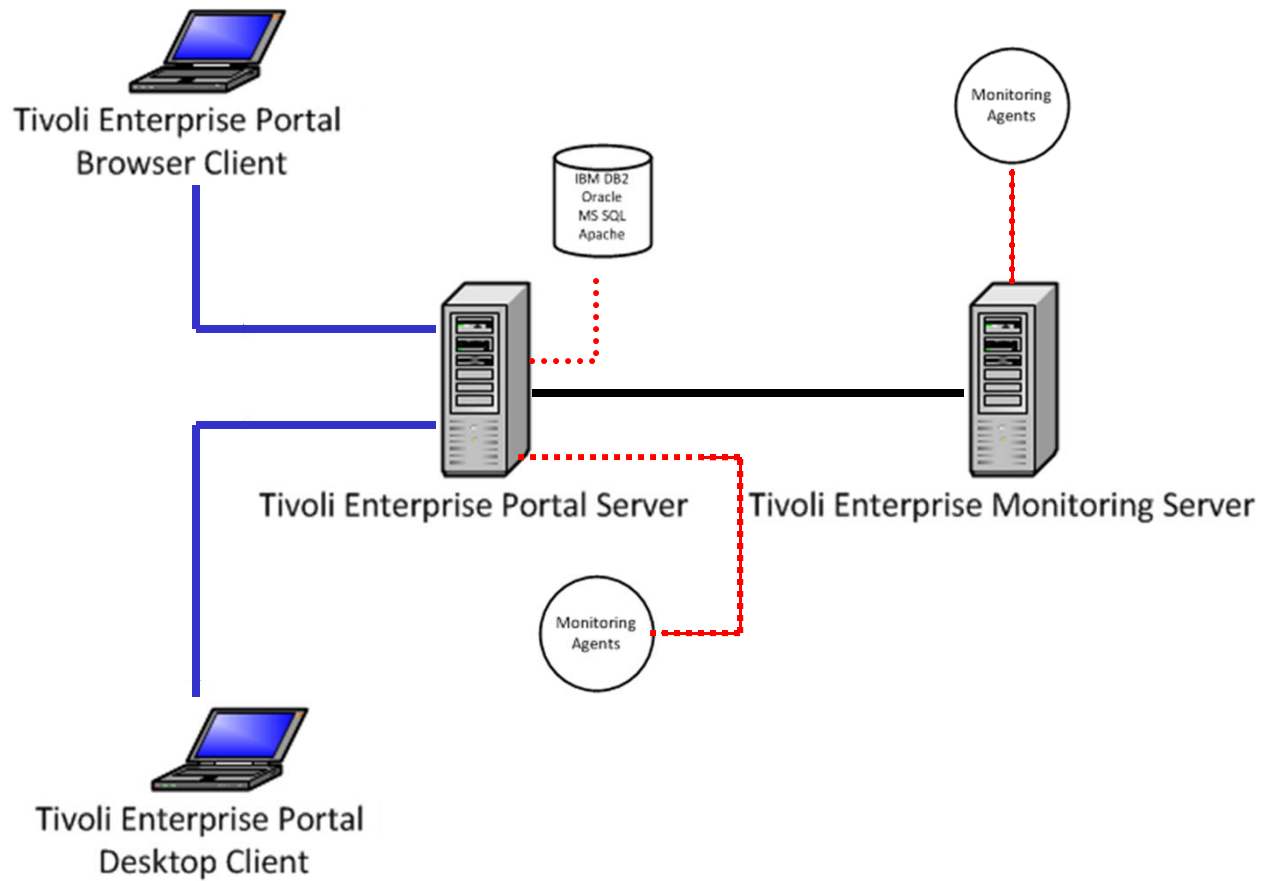
# IBM Tivoli Monitoring



- Monitoring Software to Help Improve IT Department Effectiveness & Efficiency
  - Optimize IT infrastructure performance and availability
  - Simplified tasks via Web based or Java Webstart interface
  - Monitor many systems from one console
  - Includes, as part of the system monitoring software package, easy-to-use warehouse and advanced reporting capability
  - Open Systems Support
  - Oracle & DB2 Monitoring Support
  - Virtualization Aware: PowerVM, VIOS, WPAR, AMS, AME

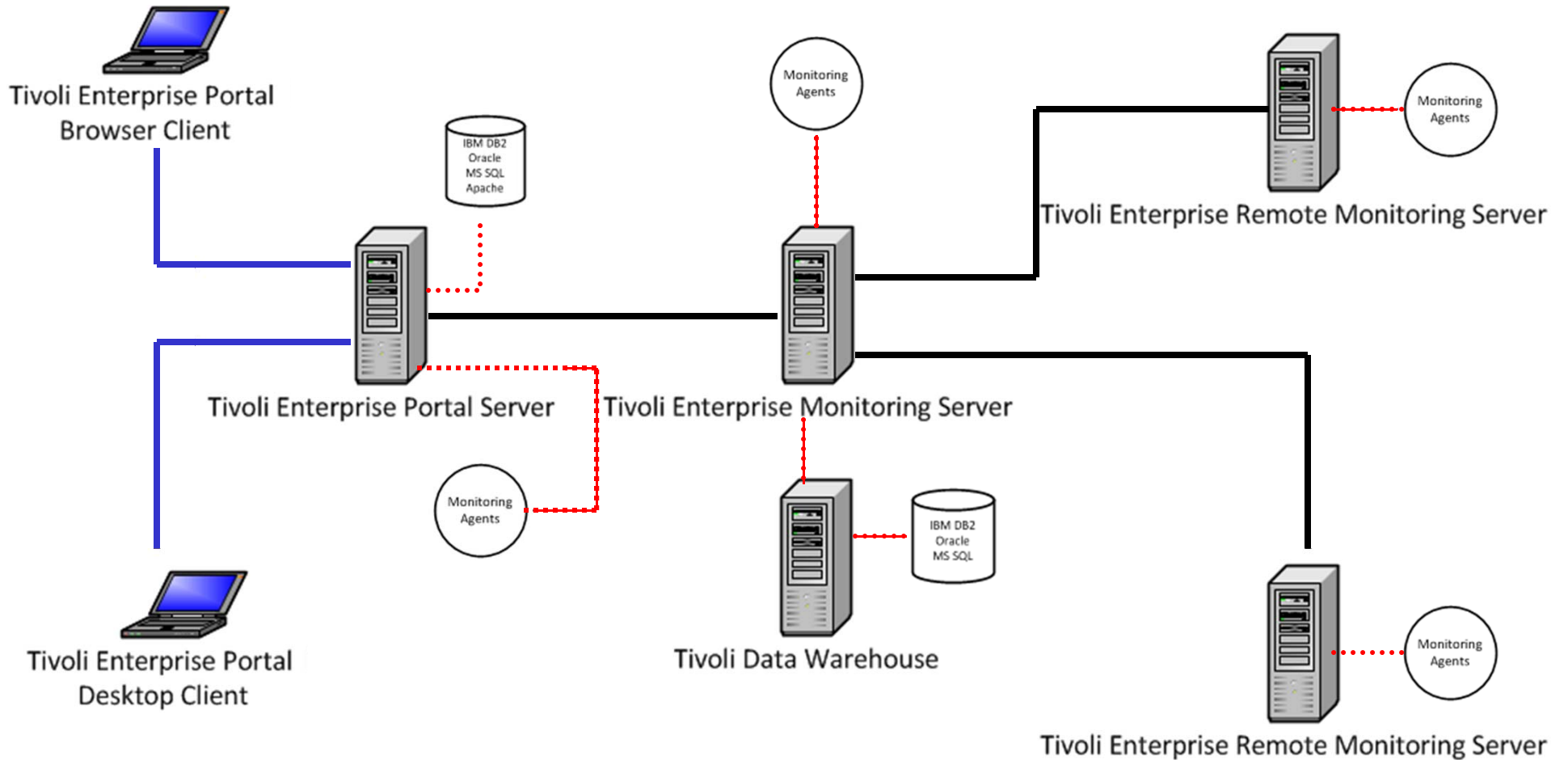


# Tivoli Monitoring Topology: Basic





# Tivoli Monitoring Topology: Advanced



# Tivoli Monitoring Components Details

Every installation requires the following components:

- Tivoli Enterprise Monitoring Server(s)
  - Act as a collection and control point for alerts received from the agents, and collect their performance and availability data.
  - The monitoring server also manages the connection status of the agents.
  - One server in each environment must be designated as the *hub*.
- A Tivoli Enterprise Portal Server
  - Provides the core presentation layer for retrieval, manipulation, analysis, and pre-formatting of data.
  - The portal server retrieves data from the hub monitoring server in response to user actions at the portal client, and sends the data back to the portal client for presentation.
  - The portal server also provides presentation information to the portal client so that it can render the user interface views suitably.
- Tivoli Enterprise Portal Clients
  - Java-based user interface for viewing and monitoring your enterprise
  - Tivoli Enterprise Portal offers two modes of operation: desktop and browser.

# Tivoli Monitoring Components Details

- Tivoli Enterprise Monitoring Agents
  - Installed on the systems or subsystems you want to monitor.
  - Collect data from monitored, or managed, systems and distribute this information to a monitoring server.
- IBM Eclipse Help Server
  - for presenting help for the portal and all monitoring agents for which support has been installed.

An installation optionally includes the following components:

- Tivoli Data Warehouse
  - Repository for historical data collected from agents in your environment.
  - The data warehouse is located on a DB2 on the workstation, DB2 on z/OS, Oracle, or Microsoft® SQL database.
  - To store data in this database, you must install the Warehouse Proxy agent.
  - To perform aggregation and pruning functions on the data, you must also install the Summarization and Pruning agent.

# ITM Samples

Enterprise UNIX Systems Summary - fativ2.dfw.ibm.com - SYSADMIN \*ADMIN MODE\*

File Edit View Help

Navigator View: Physical

- Enterprise
  - UNIX Systems
  - Windows Systems

**UNIX Systems Summary**

System Name	Type	Version	Total Real Memory (K-Bytes)	Free Virtual Memory (K-Bytes)	Total Virtual Memory (K-Bytes)	Number of User Sessions	Number of System Procs	Net Address	Timestamp	Idle CPU (Percent)	Load Average (1)
faisds.KUX	AIX	7.1	2,392,064	2,847,860	6,586,368	2	119	9.19.51.217	03/21/11 17:24:27	80	1.52
fativ1.KUX	AIX	6.1	1,048,576	433,256	6,291,456	1	143	9.19.51.215	03/21/11 17:31:22	0	23.66
fativ2.KUX	AIX	7.1	2,883,584	2,317,580	8,126,464	2	184	9.19.51.216	03/21/11 17:31:10	72	3.06

**UNIX Systems Online**

Status	Name	Version
*ONLINE	fativ2.KUX	06.22.02
*ONLINE	faisds.KUX	06.22.02
*ONLINE	fativ1.KUX	06.22.02

**UNIX Systems Offline**

Status	Name	Version
*OFFLINE	almonte.KUX	06.22.02

**Memory Usage Summary**

**Load Average Summary**

**CPU % Summary**

Hub Time: Mon, 03/21/2011 05:41 PM Server Available Enterprise UNIX Systems Summary - fativ2.dfw.ibm.com - SYSADMIN \*ADMIN MODE\*

Performance Summary of all UNIX Systems

UNIX Systems Root Workspace

Memory Usage Summary

Load Average Summary

CPU % Summary

# ITM Samples Cont

**UNIX Systems Historical Summarized Performance Workspace**

**Network Interface Performance (avg over 3 months)**

System	AVG Transfer Rate Counts Per Sec (°)
fativ1:KUX	~90,000,000
fativ2:KUX	~80,000,000
faisds:KUX	~20,000,000
loopback:KUX	~5,000,000
almonre:KUX	~5,000,000

**Load Average (avg over 3 months)**

System	Load AVG: 15 Mins - Number of Processes
almonre:KUX	~1.5
faisds:KUX	~4.5
fativ2:KUX	~4.5
loopback:KUX	~6.5
fativ1:KUX	~12.5

**Processor Performance (avg over 3 months)**

System	AVG Idle CPU %
loopback:KUX	~35
faisds:KUX	51.98 (faisds:KUX)
fativ2:KUX	~35
almonre:KUX	~15
fativ1:KUX	~15

**Memory Performance (avg over 3 months)**

System	AVG Pages Paged In	AVG Pages Paged Out
loopback:KUX	~100	~50
fativ2:KUX	~350	~100
fativ1:KUX	~850	~150
faisds:KUX	~100	~50
almonre:KUX	~50	~20

**Disk Performance (avg over 3 months)**

System	MAX Disk Busy %
almonre:KUX	~10
loopback:KUX	~25
faisds:KUX	~45
fativ2:KUX	~85
fativ1:KUX	~95

# ITM Samples Cont

The screenshot displays the CEC View interface with several key components:

- Navigator:** A tree view on the left showing the system hierarchy, including HMC Base, UNIX Logs, UNIX OS, and various agents like CEC Base, CEC Resources, and CEC Utilization.
- CEC Number of LPARs:** A 3D bar chart showing the number of partitions. A callout points to this chart with the text "CEC Number of LPARs".
- CEC Memory Allocation:** A 3D stacked bar chart showing memory allocated (yellow) and unallocated (blue) in MB. A callout points to this chart with the text "CEC Memory Allocation".
- CEC CPU Allocation:** A 3D bar chart showing CPU allocated (yellow), unallocated (blue), total (red), and shared pool size (green). A callout points to this chart with the text "CEC CPU Allocation".
- CPU Allocation to LPARs:** A 2D bar chart showing CPU allocated to various LPARs. A callout points to this chart with the text "CPU Allocation to LPARs".
- Memory Allocation to LPARs:** A 2D bar chart showing memory allocated to various LPARs. A callout points to this chart with the text "Memory Allocation to LPARs".
- Callouts:** A callout on the left points to the Navigator tree with the text "CEC Base Agent CEC Resources Workspace".

At the bottom of the interface, there is a status bar showing "Hub Time: Thu, 04/28/2011 04:33 PM", "Server Available", and "CEC View - fativ2.dfw.ibm.com - SYSADMIN \*ADMIN MODE\*". A small notification in the bottom right corner says "10 of 24 - Clipboard item collected."



# ITM Samples Cont

**CEC Resource Inventory: Total Aggregate Frame Usage**

Name	Number of Partitions	CPU Total	CPU Allocated	CPU Unallocated	CPU Allocated Pct	CPU Unallocated Pct	CPU Shared Pool Size	Num Dedicated Mem LPARs	Num Shared Mem LPARs	Num AMS Pools	Memory Total MB	Memory Allocated MB	Memory Unallocated MB	Memory Allocated Pct	Memory Unallocated Pct	Machine ID	CPU Units Allocated	CPU Units UnAllocated	CPU Shared Pool Size Units	Shared Processor Pools	Sha Phy
Zeus	32	32.0	26.5	5.5	83	17	30.0	23	0	0	262144	131584	130560	50	50	8000002D	26.50	5.50	30.00	1	3.76

**CPU Shared Pools: Available Pools & Utilization**

CPU Pool ID	CPU Units Consumed	Available CPU Units in Pool	Avail Shared Pool Pct	Pool Entitlement	Maximum Pool Capacity	LPARs Using Pool
0	3.64	26.37	87.90	Undefined	30.00	53

**AMS Pools: Available Pools & Utilization**

AMS Pool ID	Available Memory Pool Pct	AMS Mempool Size	AMS Total Mem Inus	LPARs Using Pool
0	Not Collected	6.00	79.00	0

**CEC LPAR Metrics: State, OS, Hostname, Memory/CPU Allocations, Etc.**

Name	ID	State	Monitoring Status	Environment	PoolID	Entitlement	CPU Allocated Pct	Memory Allocated MB	Memory Allocated Pct	Capped Mode	Shared Mode	Machine ID	OS Version	Hostname	CPU Capacity Weight
mob77	33	Not Activated	unmonitored	aixlinux	0	0.00	0	1024	0	uncapped	shared	-	-	mob77.dfw.ibm.com	Not Collected
sq13	27	Running	monitored	vioserver	0	2.00	6	4096	2	uncapped	shared	8000002d	AIX6.1	sq13.dfw.ibm.com	128
IBM_I_SA...	8	Running	unmonitored	aixlinux	0	0.40	1	1024	0	uncapped	shared	-	AIX6.1	-	Not Collected
mob76	23	Running	monitored	aixlinux	0	0.20	1	2048	1	uncapped	shared	8000002d	AIX7.1	mob76.dfw.ibm.com	128
sq14	22	Running	monitored	aixlinux	0	0.40	1	2048	1	uncapped	shared	8000002d	AIX7.1	sq14.dfw.ibm.com	128
IBMi71_mm	21	Not Activated	unmonitored	os400	0	0.00	0	4096	2	capped	shared	-	AIX7.1	-	Not Collected
IBMi611_mm	20	Not Activated	unmonitored	os400	0	0.00	0	4096	2	uncapped	shared	-	AIX7.1	-	Not Collected
ceisen_test...	19	Running	monitored	aixlinux	0	1.00	3	4096	2	capped	dedicated	8000002d	AIX6.1	demo3.dfw.ibm.com	0
rg106	18	Running	unmonitored	aixlinux	0	0.50	2	2048	1	uncapped	shared	-	AIX6.1	-	Not Collected
rg105	17	Not Activated	unmonitored	aixlinux	0	0.00	0	2048	1	uncapped	shared	-	AIX6.1	-	Not Collected
rg104	16	Running	unmonitored	aixlinux	0	0.50	2	2048	1	uncapped	shared	-	AIX6.1	-	Not Collected
ec15_mm	15	Running	unmonitored	aixlinux	0	1.00	3	4096	2	uncapped	shared	-	AIX7.1	-	Not Collected
ec14_mm	14	Running	monitored	aixlinux	0	1.00	3	4096	2	uncapped	shared	8000002d	AIX7.1	ec14.dfw.ibm.com	128
rg103	13	Running	unmonitored	aixlinux	0	1.00	3	2048	1	uncapped	dedicated	-	AIX7.1	-	Not Collected

CEC Base Agent  
CEC Resource  
Inventory  
Workspace

AMS Pools: Available Pools  
& Utilization

CEC LPAR Metrics:  
State, OS, Hostname,  
Memory/CPU  
Allocations, Etc.

# ITM Samples Cont

**CEC Base Agent  
CEC Utilization  
Workspace**

**Physical CPU Busy Time for Partitions**

**Physical Memory Consumed by Partitions**

**Average CPU & Memory Utilization Among Monitored Partitions**

Total Monitored CPU Used Pct	Total Monitored Memory Used Pct	Monitored Shared LPARs	Monitored Dedicated LPARs	UnMonitored Active LPARs	Total Monitored CPU	Total Unmonitored CPU	Total Monitored CPU Used Units	Inactive LPARs	Total Monitored Memory MB	Total UnMonitored Memory MB
12	25	21	2	6	27.6	4.4	3.71	5	94464	37120

# ITM Samples Cont

File System Sizes & Utilization 3D Pie Charts

AIX Premium Agent Top Resources Workspace

File System Metrics

The screenshot displays the AIX Premium Agent Top Resources Workspace. It is divided into four main sections:

- File System Sizes:** A 3D pie chart visualization showing the utilization of various file systems. The legend indicates 'Used Pct' in yellow and 'Free Pct' in blue.
- File System Metrics:** A table providing detailed metrics for each file system.
- Top CPU Processes:** A table listing the processes with the highest CPU usage.
- Top Memory Processes:** A table listing the processes with the highest memory usage.

Mount Point	Volume Group Name	Size MB	Free MB	Used MB
/var/adm/ras/livedump	rootvg	256	256	0
/home	rootvg	16	16	0
/updates	rootvg	8976	1548	7428
/opt	rootvg	9328	460	8868
/usr	rootvg	2272	78	2194
/	rootvg	512	195	317
/var	rootvg	448	79	369
/tmp	rootvg	1536	55	1481
/admin	rootvg	128	128	0

Name	ID	CPU Pct	Owner
slp_snreg	7405588	43.5	root
kcawd	9306252	37.2	root
java	8388626	15.3	root
firefox-bin	14221432	1.2	root
lrud	262152	0.6	root
java	7274508	0.4	cmdbuser
java	3997882	0.3	cmdbuser
java	8585300	0.3	cmdbuser
java	10420294	0.2	cmdbuser
java	6881314	0.2	cmdbuser
java	5701800	0.1	cmdbuser
kdsmain	16646180	0.1	root
java	5570792	0.1	cmdbuser
dtlile	18546764	0.1	root
kuxagent	11796622	0.0	root
kuxagent	16252998	0.0	root
kcawd	12583152	0.0	root
gll	1441836	0.0	root
random	3539104	0.0	root
ainDataProvider-61	6291510	0.0	root
java	3801248	0.0	pconsole
kpxagent	7602396	0.0	root
nfsd	3866788	0.0	root
Xmcc	14024844	0.0	root
getty	5832932	0.0	root
syncd	2162840	0.0	root
topasrec	4718782	0.0	root
cmiserver	7209182	0.0	root
etl_daemon	1004440	0.0	root

Name	ID	Memory KB	Owner
firefox-bin	14221432	139203	root
java	3997882	93900	cmdbuser
java	8388626	80762	root
java	5570792	59091	cmdbuser
kdsmain	16646180	50322	root
java	7274508	47770	cmdbuser
java	8585300	40153	cmdbuser
java	10420294	35579	cmdbuser
java	5701800	33290	cmdbuser
slp_snreg	7405588	26228	root
java	6881314	18964	cmdbuser
kpxagent	7602396	12720	root
java	3801248	10478	pconsole
cmiserver	7209182	6135	root
kuxagent	16252998	5273	root
kuxagent	11796622	5253	root
kcawd	12583152	2639	root
ainDataProvider-61	6291510	2556	root
cmistener	9371894	1776	root
kpxagent	8519770	1765	root
dirsnmpd	5439654	1744	root
rmcd	8650782	1690	root
kcawd	9306252	1502	root
kphagent	8323156	1353	root
kphagent	6619366	1320	root
lter1slp	3276924	1297	root
j2pg	2228292	928	root
Xmcc	14024844	898	root
IBM_CSMAppDM4	7884298	810	root

Top CPU Processes

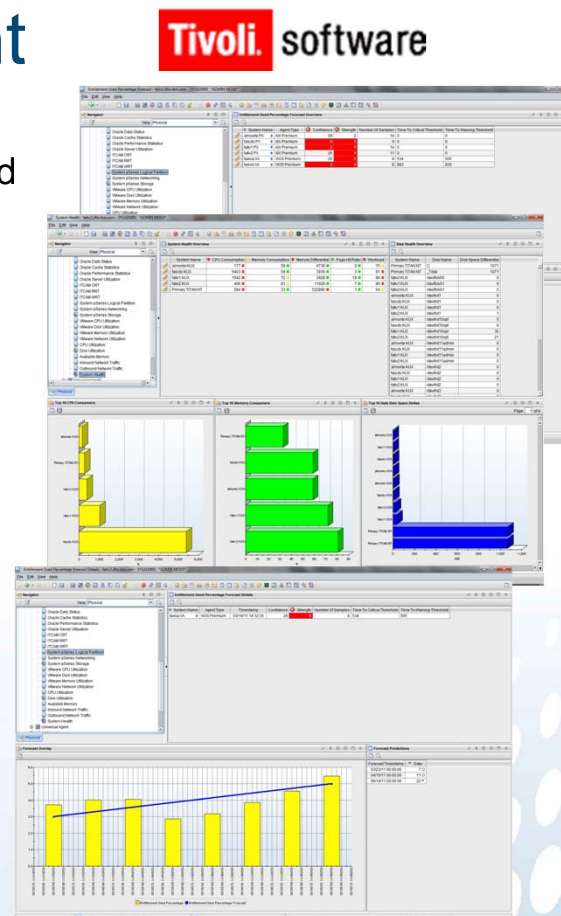
Top Memory Processes

# Tivoli Data Warehouse

- Optional database that allows ITM components to interact to collect and manage historical data.
- The components that make up the Tivoli Data Warehouse solution are:
  - Tivoli Enterprise Monitoring Server
  - Tivoli Enterprise Portal Server
  - Warehouse Proxy Agent
  - Summarization and Pruning Agent
- TWD requires ITM Base environment to be properly installed and properly configured.

# IBM Tivoli Performance Analyzer Agent

- Tivoli Performance Analyzer extends the capability of Tivoli Monitoring by analyzing and enriching the data that is collected by its monitoring agents and by providing reports about the performance and capacity of your systems.
- Tivoli Performance Analyzer enhances ITM with Predictive Capabilities
  - Monitor resource consumption trends
  - Anticipate future performance issues
  - Predict application bottlenecks and create alerts for potential service threats
- Tivoli Performance Analyzer performs the following functions for individual IT components:
  - Gathers and stores IT components such as CPU, disk, and memory utilization in a central data repository
  - Provides a predictive analysis component that indicates trends in IT component utilization
  - Retains the analyzed data in a central repository for reporting purposes





# ITPA Samples

System Health Overview

Disk Health Overview

ITPA System Health Workspace

Top 10 Memory Consumers

Top 10 CPU Consumers

Top 10 Disk Space Deltas

System Name	CPU Consumption	Memory Consumption	Memory Differential	Page Hit Ratio	Workload
almonite:KUX	177	59	9736	0	75
faisds:KUX	5403	59	3936	3	81
fativ1:KUX	1042	72	3928	18	84
fativ2:KUX	406	81	11028	7	89
Primary:TITAN:NT	284	33	522896	1	64

System Name	Disk Name	Disk Space Differential
Primary:TITAN:NT	C:	1071
Primary:TITAN:NT	_Total	1071
fativ2:KUX	/dev/fslv00	0
fativ1:KUX	/dev/fslv01	0
fativ2:KUX	/dev/fslv01	0
almonite:KUX	/dev/hd1	0
faisds:KUX	/dev/hd1	0
fativ1:KUX	/dev/hd1	0
fativ2:KUX	/dev/hd1	1
almonite:KUX	/dev/hd10opt	5
faisds:KUX	/dev/hd10opt	6
fativ1:KUX	/dev/hd10opt	35
fativ2:KUX	/dev/hd10opt	21
almonite:KUX	/dev/hd11admin	0
faisds:KUX	/dev/hd11admin	0
fativ1:KUX	/dev/hd11admin	0
fativ2:KUX	/dev/hd11admin	0
almonite:KUX	/dev/hd2	0
faisds:KUX	/dev/hd2	0
fativ1:KUX	/dev/hd2	0
fativ2:KUX	/dev/hd2	0
almonite:KUX	/dev/hd3	0

System Name	CPU Consumption (%)
faisds:KUX	5403
Primary:TITAN:NT	284
fativ1:KUX	1042
fativ2:KUX	406
almonite:KUX	177

System Name	Memory Consumption
fativ2:KUX	11028
fativ1:KUX	3928
faisds:KUX	3936
almonite:KUX	9736
Primary:TITAN:NT	522896

System Name	Disk Space Differential (MB)
Primary:TITAN:NT	1071
fativ1:KUX	35
fativ2:KUX	21
almonite:KUX	5
faisds:KUX	6



# ITPA Samples Cont.

The screenshot displays the IBM Tivoli Monitoring interface for Physical Busy Percentage Forecast Details. The main window shows a table with the following data:

System Name	Agent Type	Timestamp	Confidence	Strength	Number Of Samples	Time To Critical Threshold	Time To Warning Threshold
almontr.PX	AIX Premium	08/03/11 09:00:00	6	1	116	3070	2885

Below the table, a context menu is open, highlighting 'Physical Busy Percentage Forecast Details'. A blue callout box points to this menu item with the text: "Physical Busy % Forecast Details Workspace".

The bottom section of the interface features a 'Forecast Overlay' graph. The graph plots 'Physical Busy Percentage' (yellow bars) and 'Physical Busy Percentage Forecast' (blue line) over time. A blue callout box points to the forecast line with the text: "Forecast Overlay".

To the right of the graph is a 'Forecast Predictions' table:

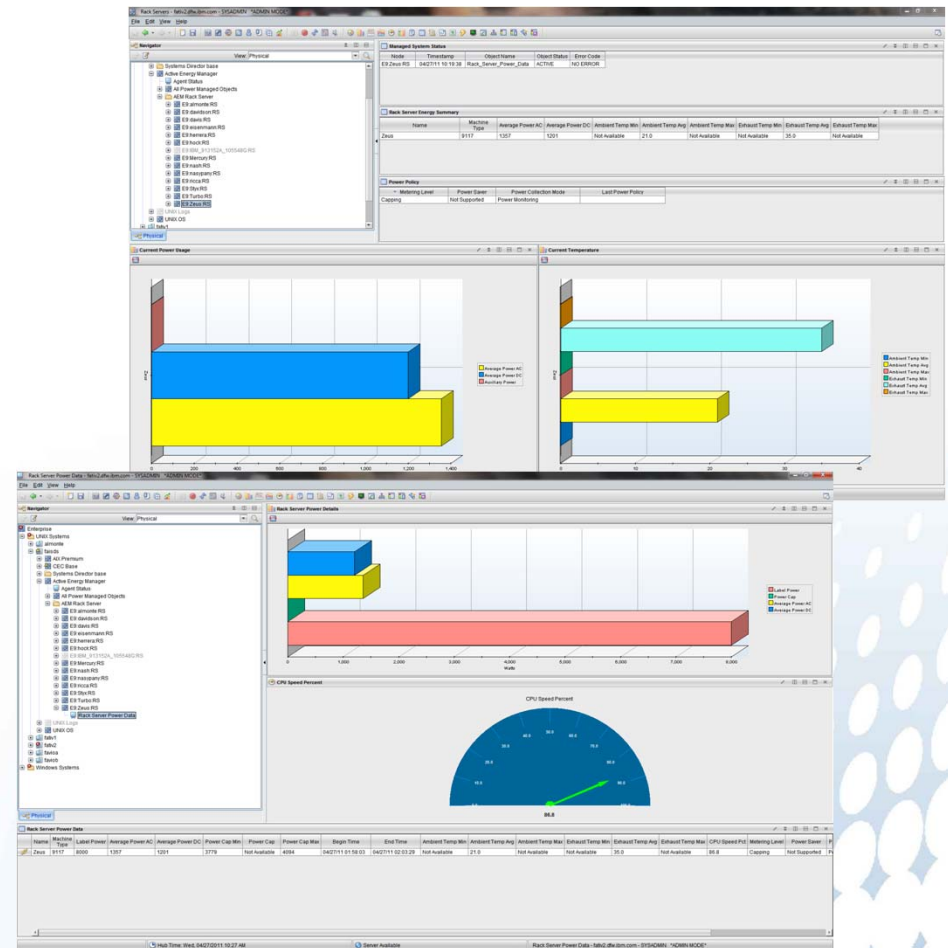
Forecast Timestamp	Data
08/10/11 00:00:00	12
09/02/11 00:00:00	13
11/01/11 00:00:00	15

A blue callout box points to this table with the text: "Forecast Predictions".

# IBM ITM Monitoring for Energy



- ITM Systems Director Application Agent leverages Systems Director Active Energy Manager to report and alert on energy related events from within ITM
- Allows for the following active management tasks:
  - Changing the Power Mode
  - Changing the Power Cap for Rack Servers
  - Changing the Power Saver Mode
  - Anticipate future performance issues
- Predefined Reports available for import into Tivoli Common Reporting



# IBM ITM Monitoring for Energy Samples



The screenshot displays the IBM ITM monitoring interface for a rack server. The left pane shows a tree view of the system hierarchy, with 'Rack Server Power Data' selected. The main area contains two charts: a 3D bar chart for 'Rack Server Power Details' and a gauge for 'CPU Speed Percent'. The 3D chart shows four bars: Label Power (red, ~8000W), Power Cap (green, ~3779W), Average Power AC (yellow, ~1357W), and Average Power DC (blue, ~1201W). The gauge shows a CPU speed of 86.8%.

**Rack Server Power Details**

Category	Value (Watts)
Label Power	8000
Power Cap	3779
Average Power AC	1357
Average Power DC	1201

**CPU Speed Percent**

86.8

**Rack Server Power Data**

Name	Machine Type	Label Power	Average Power AC	Average Power DC	Power Cap Min	Power Cap	Power Cap Max	Begin Time	End Time	Ambient Temp Min	Ambient Temp Avg	Ambient Temp Max	Exhaust Temp Min	Exhaust Temp Avg	Exhaust Temp Max	CPU Speed Pct	Metering Level	Power Saver
Zeus	9117	8000	1357	1201	3779	Not Available	4094	04/27/11 01:58:03	04/27/11 02:03:29	Not Available	21.0	Not Available	Not Available	35.0	Not Available	86.8	Capping	Not Supported

# IBM ITM Monitoring for Energy Samples



The screenshot displays the IBM ITM monitoring interface with several key components:

- Managed System Status:** A table showing system details for E9:Zeus.RS.
 

Node	Timestamp	Object Name	Object Status	Error Code
E9:Zeus.RS	04/27/11 10:19:38	Rack_Server_Power_Data	ACTIVE	NO ERROR
- Rack Server Energy Summary:** A table providing energy metrics for the Zeus server.
 

Name	Machine Type	Average Power AC	Average Power DC	Ambient Temp Min	Ambient Temp Avg	Ambient Temp Max	Exhaust Temp Min	Exhaust Temp Avg	Exhaust Temp Max
Zeus	9117	1357	1201	Not Available	21.0	Not Available	Not Available	35.0	Not Available
- Power Policy:** A table showing power management settings.
 

Metering Level	Power Saver	Power Collection Mode	Last Power Policy
Capping	Not Supported	Power Monitoring	
- Current Power Usage:** A 3D bar chart showing power consumption in Watts. The x-axis ranges from 0 to 1,400 Watts. The bars represent Average Power AC (yellow), Average Power DC (blue), and Auxiliary Power (red).
- Current Temperature:** A 3D bar chart showing temperatures in Degrees Celsius. The x-axis ranges from 0 to 40 Degrees Celsius. The bars represent Ambient Temp Min (blue), Ambient Temp Avg (yellow), Ambient Temp Max (red), Exhaust Temp Min (green), Exhaust Temp Avg (cyan), and Exhaust Temp Max (orange).
- Navigator:** A tree view on the left showing the system hierarchy, including Systems Director base, Active Energy Manager, and various AEM Rack Servers like E9:almonite.RS, E9:davidson.RS, etc.

# IBM Tivoli Common Reporting



- Robust reporting tool which is available to users of Tivoli Products
  - Consistent approach to viewing and administrating reports
  - Simplified reporting via intuitive Web based interface
  - Tivoli products can provide report packages designed for use with TCR
  - Reports have consistent look and feel
  - Ability to schedule reports
  - Reports available in different formats
  - Ability to email reports



# TCR Samples

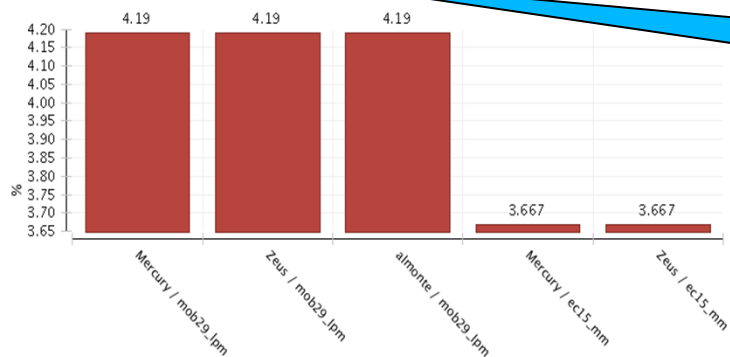
System P:  
Top/Bottom  
LPARs by  
Physical CPU  
Utilization

Tivoli

System P: Top/Bottom LPARs by Physical CPU Utilization

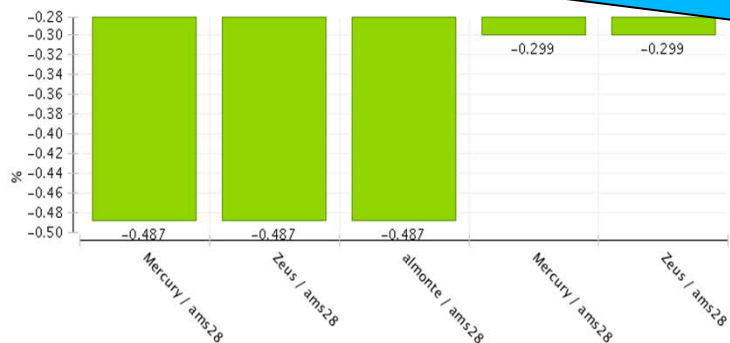
Start Date	Mar 28, 2011 12:00 AM	End Date	Apr 27, 2011 11:59 PM
Report Period	Last 30 days	Top LPARs	5
CEC	%	Bottom LPARs	5

Top LPARs by Average CPU Utilization



Top LPARs by  
Average CPU  
Utilization

Bottom LPARs by Average CPU Utilization



Bottom LPARs  
by Average  
CPU Utilization



# TCR Samples Cont.

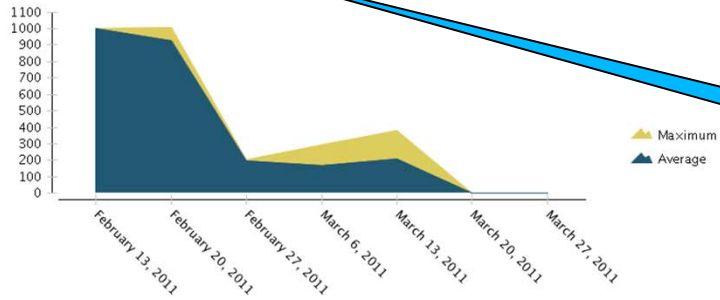
System P: Server Resource Utilization

Server Resource Utilization for Single LPAR

Start Date	Jan 1, 2011 12:00 AM	End Date	Apr 27, 2011 11:59 PM
Report Period	Year to date	Selected Summarization Type	Default (Weekly)
CEC	Mercury	LPAR	TIV1

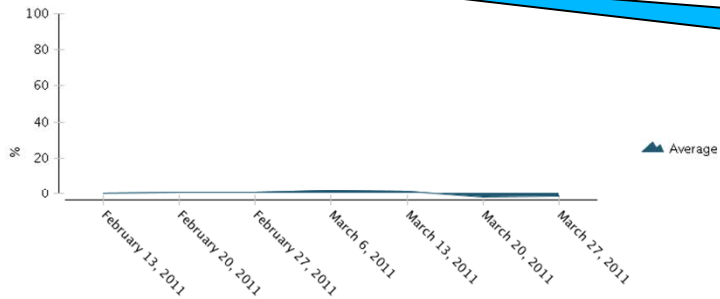
CPU Entitlement Percent Used

CPU Entitlement Percentage Used



Physical CPU Utilization

Physical CPU Utilization



Physical Memory Utilization

Physical Memory Utilization



# TCR Samples Cont.

Tivoli Performance Analyzer



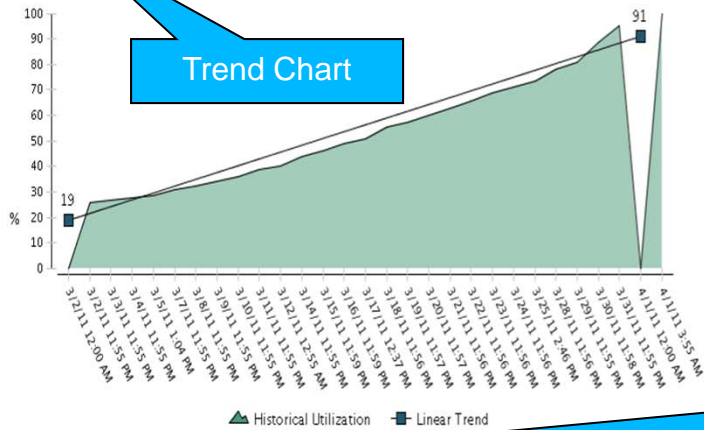
## Disk Utilization Detailed Forecast

System name fativ2:KUX Disk name /dev/hd1  
 Operating system UNIX

ITPA Report: Disk Utilization Detailed Forecast Report

### Trend Chart

Trend Chart



Forecast Overview

### Forecast Overview

System name	Disk name	Timestamp	Confidence	Strength	Number of samples	Time to critical threshold (days)	Time to warning threshold (days)
fativ2:KUX	/dev/hd1	Apr 26, 2011 10:29 AM	97	3	27	0	0

### Forecast Details

Forecast Details

Forecast timestamp	Used disk space (%)
May 3, 2011 12:00 AM	167
May 26, 2011 12:00 AM	222
Jul 25, 2011 12:00 AM	366

This report presents the forecast details of used disk space (in %) for the monitored item outlined at the top of this report. The chart depicts the current trend inclination (blue line), and historical data (green line). The first table (Forecast Overview) displays the general trend information, for example 'Number of samples' on which the trend is calculated, 'Confidence' showing how certain the outcome is, or 'Time to critical/warning threshold' that indicates when a particular limit will be exceeded. Forecast Details table presents the values for 7, 30 and 90 day forecast.

# Systems Director Integration



- ITM for Systems Director Base V6.2.2 FixPack 2
  - Monitoring and management for Systems Director V6.1.2.2 and above
  - Core Director functionality: Hardware Inventory, real-time Events and Jobs
  - Inventory covers approximately 60 device, physical, network and system types
  - 3 Tier Reporting structure
    - All Systems currently managed by Systems Director
    - System Groups, as defined by Systems Director
    - Individual Systems
  - Core Director tasks are available as TEP Take Actions such as:
    - System Discovery
    - Inventory collection
    - System, event, job and discovery job removal
  - 90+ workspaces and 140 workspace views



# Systems Director Integration Samples

The screenshot displays the Systems Director interface with a callout box labeled "Systems Director Base Workspace" pointing to the left-hand navigation pane. A second callout box labeled "All Managed Endpoints" points to the main table area.

Name	System Type	Access State	Health State	Operating State	Communication State	Changed Date	Last Boot Up Time	OS Type	OS Version	Architecture	Machine Typ
AIX53-ML4	Virtual Server	OK	Unknown	Started	Communication OK	06/18/11 10:29:55				ppc64	9131
AIX53-ML4	Virtual Server	OK	Unknown	Started	Communication OK	06/21/11 09:24:00				ppc64	9131
AIX53-ML4	Virtual Server	OK	Unknown	Started	Communication OK	06/20/11 20:46:18				ppc64	9131
AIX53ML5	Virtual Server	OK	Unknown	Started	Communication OK	06/11/11 04:33:26				ppc64	9131
aix61	Virtual Server	OK	Unknown	Started	Communication OK	06/02/11 18:11:11				ppc64	9131
aimonte	Server	OK	Unknown	Started	Communication OK	04/17/11 23:55:50				ppc64	9131
aimonte.dfw.ibm.com	Operating System	OK	OK	Unknown	Communication OK	06/16/11 20:42:42		AIX	7.1	ppc64	9131
ams28	Virtual Server	OK	Unknown	Started	Communication OK	06/22/11 06:08:57				ppc64	9179
ams28	Virtual Server	OK	Unknown	Started	Communication OK	08/03/11 11:09:58				ppc64	9117
ams30_71ga	Virtual Server	OK	Unknown	Started	Communication OK	06/24/11 15:58:02				ppc64	9117
ce154_vios_ceisen	Virtual Server	OK	Unknown	Started	Communication OK	06/17/11 00:18:33				ppc64	9179
ceisen_testing	Virtual Server	OK	Unknown	Started	Communication OK	08/03/11 11:09:57				ppc64	9117
client1	Virtual Server	OK	Unknown	Stopped	Communication OK	05/04/11 12:54:16				ppc64	9131
client1-53ML5	Virtual Server	OK	Unknown	Started	Communication OK	06/19/11 15:16:40				ppc64	9131
client2	Virtual Server	OK	Unknown	Stopped	Communication OK	04/17/11 23:56:01				ppc64	9131
client2-53TL7	Virtual Server	OK	Unknown	Started	Communication OK	06/05/11 15:14:01				ppc64	9131
client3	Virtual Server	OK	Unknown	Stopped	Communication OK	04/17/11 23:56:05				ppc64	9131
connor	Virtual Server	OK	Unknown	Started	Communication OK	08/03/11 11:06:14				ppc64	9131
davidson	Server	OK	Unknown	Started	Communication OK	04/17/11 23:55:52				ppc64	9131
davis	Server	OK	Unknown	Started	Communication OK	04/17/11 23:56:04				ppc64	9131
demo5_Dilley	Virtual Server	OK	Unknown	Started	Communication OK	06/21/11 03:21:06				ppc64	9179
ec01.dfw.ibm.com	Operating System	No access	OK	Unknown	Communication OK	06/15/11 19:55:59	03/24/11 13:24:33	IBM VIOS	2.2.0.10		
ec02.dfw.ibm.com	Operating System	No access	Unknown	Unknown	Unknown	06/15/11 19:55:56			2.2.0.10-PP-24		
ec07_sn	Virtual Server	OK	Unknown	Started	Communication OK	06/28/11 13:00:58				ppc64	9117
ec09_mm	Virtual Server	OK	Unknown	Started	Communication OK	06/24/11 06:53:22				ppc64	9117
ec10_mm	Virtual Server	OK	Unknown	Started	Communication OK	06/22/11 22:44:55				ppc64	9117
ec11_mm	Virtual Server	OK	Unknown	Started	Communication OK	06/22/11 22:44:55				ppc64	9117
ec12_mm	Virtual Server	OK	Unknown	Started	Communication OK	06/22/11 22:44:55				ppc64	9117
ec14_mm	Virtual Server	OK	Unknown	Started	Communication OK	08/03/11 11:09:57				ppc64	9117
ec15_mm	Virtual Server	OK	Unknown	Started	Communication OK	06/28/11 13:00:58				ppc64	9117
echmct1.dfw.ibm.com	Operating System	No access	OK	Unknown	Communication OK	06/21/11 10:52:33		IBM HMC	7.7.2.0.1		
eisenmann	Server	OK	Unknown	Started	Communication OK	04/14/11 13:59:11				ppc64	9131
EisenTest	Virtual Server	OK	Unknown	Started	Communication OK	06/22/11 06:08:56				ppc64	9179
Eth_sk_11-Mercury	VirtualSwitch	OK	Unknown	Unknown	Unknown	06/17/11 07:18:10					9117
Eth_sk_12-Mercury	VirtualSwitch	OK	Unknown	Unknown	Unknown	06/17/11 12:18:57					9117
ETHERNET0-Mercury	VirtualSwitch	OK	Unknown	Unknown	Unknown	06/17/11 10:28:57					9117
ETHERNET0-Styx	VirtualSwitch	OK	Unknown	Unknown	Unknown	06/17/11 18:59:40				8203	
ETHERNET0-Turbo	VirtualSwitch	OK	Unknown	Unknown	Unknown	06/17/11 04:38:20					9179
ETHERNET0-Zeus	VirtualSwitch	OK	Unknown	Unknown	Unknown	06/17/11 15:44:40					9117
ETHERNET1-Mercury	VirtualSwitch	OK	Unknown	Unknown	Unknown	06/17/11 10:28:59					9117
Ethernet1-Zeus	VirtualSwitch	OK	Unknown	Unknown	Unknown	06/18/11 01:00:00					9117
faisds.dfw.ibm.com	Operating System	OK	OK	Unknown	Communication OK	05/08/11 02:53:47		AIX	7.1	ppc64	9131
fatv1	Virtual Server	OK	Unknown	Started	Communication OK	06/18/11 01:07:08				ppc64	9117
fatv1.dfw.ibm.com	Operating System	OK	OK	Unknown	Communication OK	06/16/11 09:21:43		IBM AIX	6.1.0.0		
fatv2	Virtual Server	OK	Unknown	Started	Communication OK	06/18/11 01:07:08				ppc64	9117
fatv2.dfw.ibm.com	Operating System	OK	OK	Unknown	Communication OK	06/16/11 21:20:22		AIX	7.1		
favioa.dfw.ibm.com	Operating System	OK	OK	Unknown	Communication OK	06/28/11 13:11:35	01/22/11 10:01:01	IBM VIOS	2.2.0.10	ppc64	9131
faviob.dfw.ibm.com	Operating System	OK	OK	Unknown	Lost Communication	06/28/11 14:52:04		IBM VIOS	2.2.0.10	ppc64	9131
full-system	Virtual Server	OK	Unknown	Started	Communication OK	04/17/11 23:55:59				ppc64	9131
full-system-test	Virtual Server	OK	Unknown	Stopped	Communication OK	04/17/11 23:55:52				ppc64	9131
herrera	Server	OK	Unknown	Started	Communication OK	04/17/11 23:56:07				ppc64	9131
hock	Server	OK	Unknown	Started	Communication OK	04/17/11 23:56:04				ppc64	9131
IBM 9111520 10C1C1C 5	Virtual Server	No access	OK	Unknown	Communication OK	08/05/11 11:48:10				ppc64	9111



# Systems Director Integration Samples

**Systems Discovery Workspace**

**Most Recent Systems without Access**

Name	System Type	Access State	Communication State	Changed Date	IPv4 Address	IPv6 Address	Host Name	Description
IBM 9111520 10C1C1C 5	Virtual Server	No access	Communication OK	08/05/11 11:48:10	9.19.51.87		sq05.dfw.ibm.com	Represents the single node container of an Operati
VIOb	Virtual Server	No access	Communication OK	06/28/11 14:52:04	9.19.51.214		faviob.dfw.ibm.com	
ISDS62	Virtual Server	No access	Communication OK	06/28/11 14:32:25	9.19.51.217		faisds.dfw.ibm.com	
tbvio2_Production	Virtual Server	No access	Communication OK	06/28/11 14:00:39	9.19.51.108		tbvio2.dfw.ibm.com	
sawio2_production	Virtual Server	No access	Communication OK	06/28/11 10:45:32	9.19.51.145		sawio2.dfw.ibm.com	Represents the single node container of an Operati
tbvio1_Production	Virtual Server	No access	Communication OK	06/28/11 09:19:43	9.19.51.107		tbvio1.dfw.ibm.com	
echmc1.dfw.ibm.com	Operating System	No access	Communication OK	06/21/11 10:52:33	9.19.51.40		echmc1.dfw.ibm.com	
Styx	Server	No access	Communication OK	06/17/11 18:40:04				
Zeus	Server	No access	Communication OK	06/17/11 18:40:03				
mob26.dfw.ibm.com	Operating System	No access	Unknown	06/17/11 00:12:51	9.19.51.226		mob26.dfw.ibm.com	Represents the running OperatingSystem.
ec01.dfw.ibm.com	Operating System	No access	Communication OK	06/15/11 19:55:59	9.19.51.41		ec01.dfw.ibm.com	
sq01.dfw.ibm.com	Operating System	No access	Unknown	06/15/11 19:55:58	9.19.51.27		sq01.dfw.ibm.com	Represents the running OperatingSystem.
isd190.dfw.ibm.com	Operating System	No access	Unknown	06/15/11 19:55:57	9.19.51.190		isd190.dfw.ibm.com	
sq02.dfw.ibm.com	Operating System	No access	Unknown	06/15/11 19:55:57	9.19.51.84		sq02.dfw.ibm.com	
ec02.dfw.ibm.com	Operating System	No access	Unknown	06/15/11 19:55:56	9.19.51.42		ec02.dfw.ibm.com	

**Current Discovery Jobs**

Latest Update	Percentage Complete	Status	Systems	Resource Types
---------------	---------------------	--------	---------	----------------

**Take Action**

Name: <Select Action>  
Command: <Select Action>  
CollectSystemInventory  
DiscoverSystems  
RemoveDiscoveryJob  
RemoveEvent  
RemoveJob  
RemoveSystem

Destination Systems

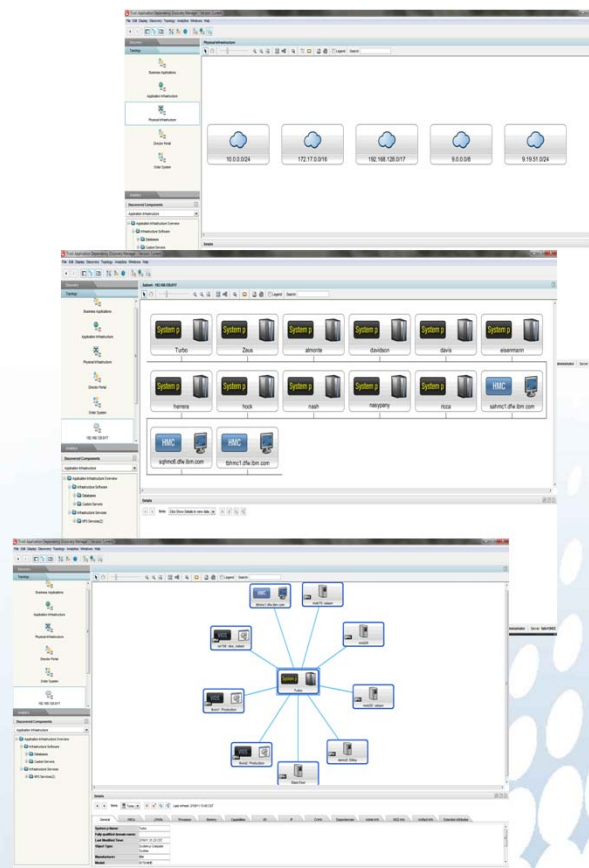
**Certain Systems Director Tasks can be Executed with ITM**



# Tivoli Application Discovery Dependency Manager

**Tivoli.** software

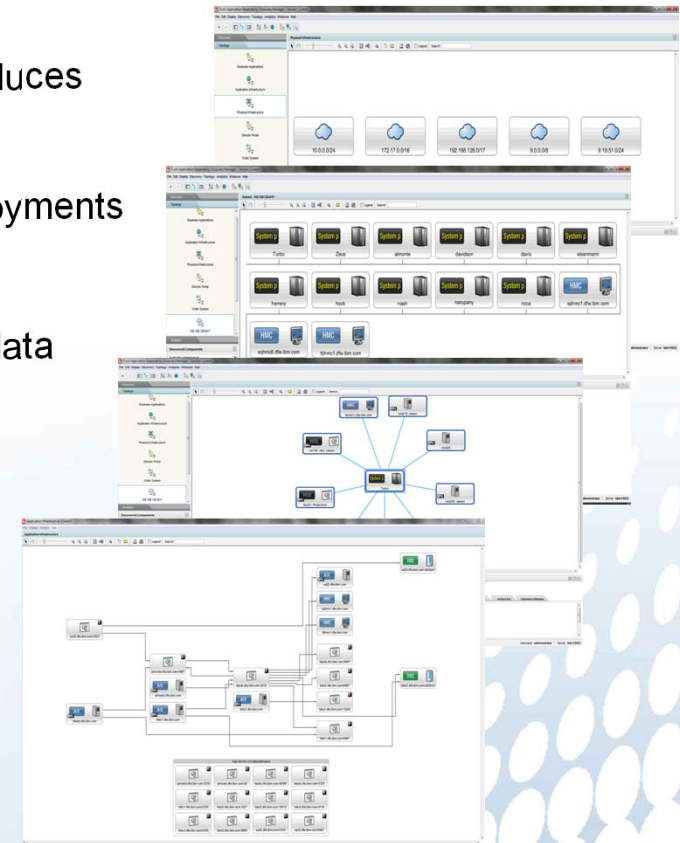
- Visualize interdependencies and relationships between applications, computer systems and network devices through application mapping and agentless, credential-free discovery capabilities
- Configuration items are configured and changing over time by capturing the configuration of each CI, tracking changes to it and providing analytics to report on the history of configuration changes
- Determine if configurations comply with your policies by comparing discovered configurations to a “reference master” to reveal policy compliance violations



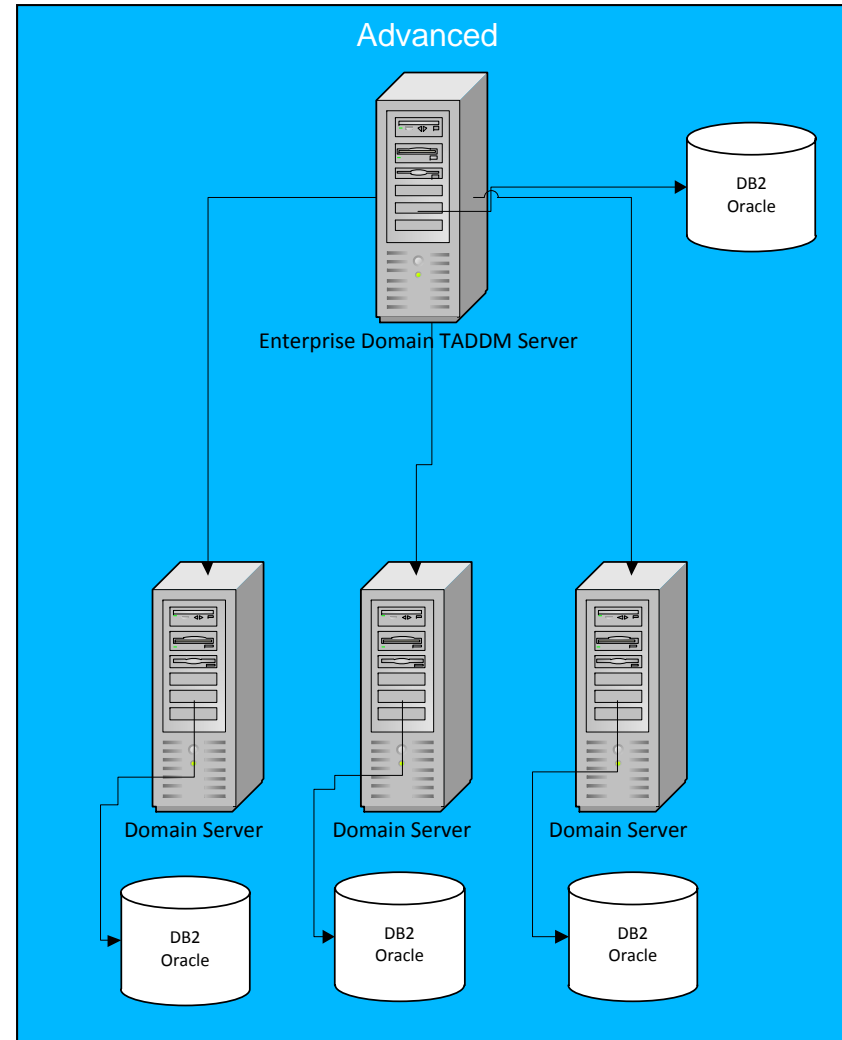
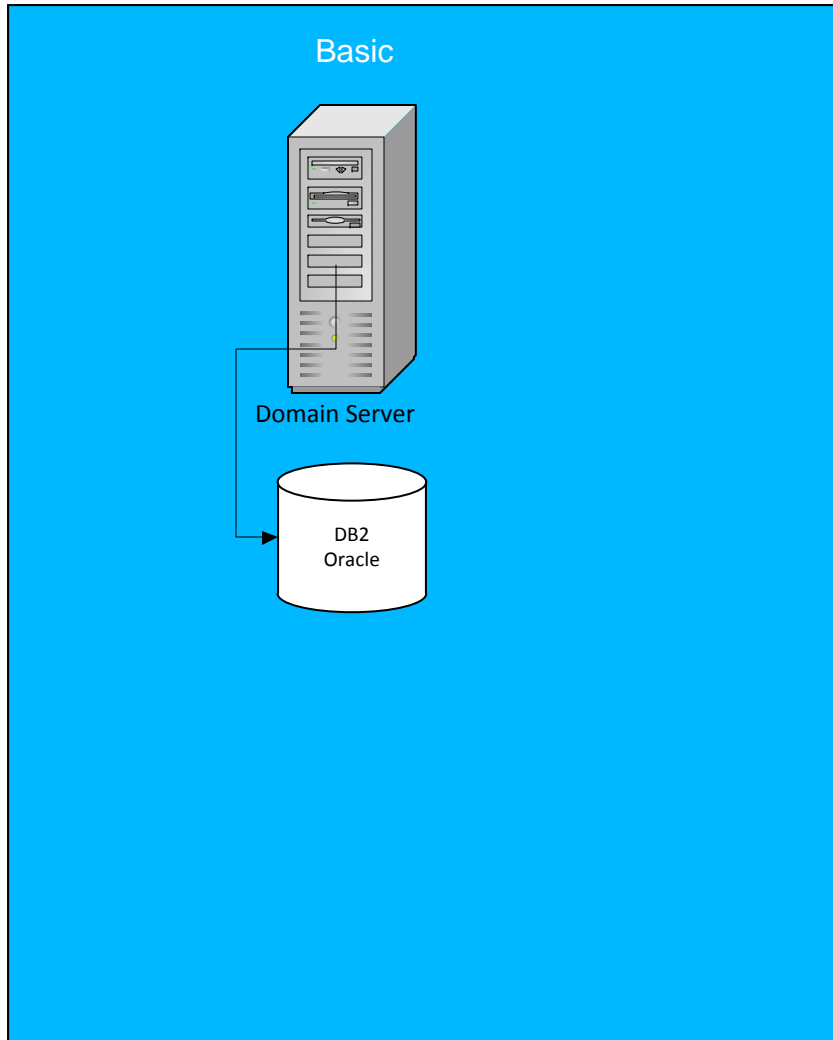


# Tivoli Application Discovery Dependency Manager

- Understand the structure of interdependent and complex applications
- Rapidly isolate configuration-related application problems, which reduces troubleshooting time from hours and days to minutes
- More effectively plan change so that application upgrades and deployments can occur without disruptions
- In summary, you can use TADDM to accomplish four tasks in your data center environment:
  1. Discover components
  2. Discover the configuration of components
  3. Discover the relationship of components
  4. Discover and track the changes



# TADDM Topology: Basic & Advanced



# TADDM Discovery Process

TADDM provides you with three levels of discovery:

## Level 1 Discovery

A Level 1 discovery does not require credentials and scans the TCP stack, discovers computer systems and network devices. It is a very shallow discovery that captures the host name, OS, Internet Protocol (IP) interface, and fully qualified domain name (FQDN). This discovery discovers the Media Access Control (MAC) address on Windows® and zLinux computers.

## Level 2 Discovery

A Level 2 discovery requires computer system credentials and captures deep host configurations. It is a shallow application discovery that does not require additional application credentials. This discovery captures application names, ports, and computer systems on which it is running. If the application has an established TCP session with another application, it is discovered as a dependency.

## Level 3 Discovery

A Level 3 discovery does not require application credentials and is the TADDM standard deep-dive discovery. It captures network devices, host configurations, application configurations and web services.

# TADDM Samples

**Topology Physical Infrastructure View**

System p	System p	System p	System p	System p	System p
Turbo	Zeus	almonite	davidson	davis	eisenmann
System p	System p	System p	System p	System p	HMC
herrera	hock	nash	nasypany	ricca	sahmc1.dfw.ibm.com
HMC	HMC				
sqhmc6.dfw.ibm.com	tbhmc1.dfw.ibm.com				

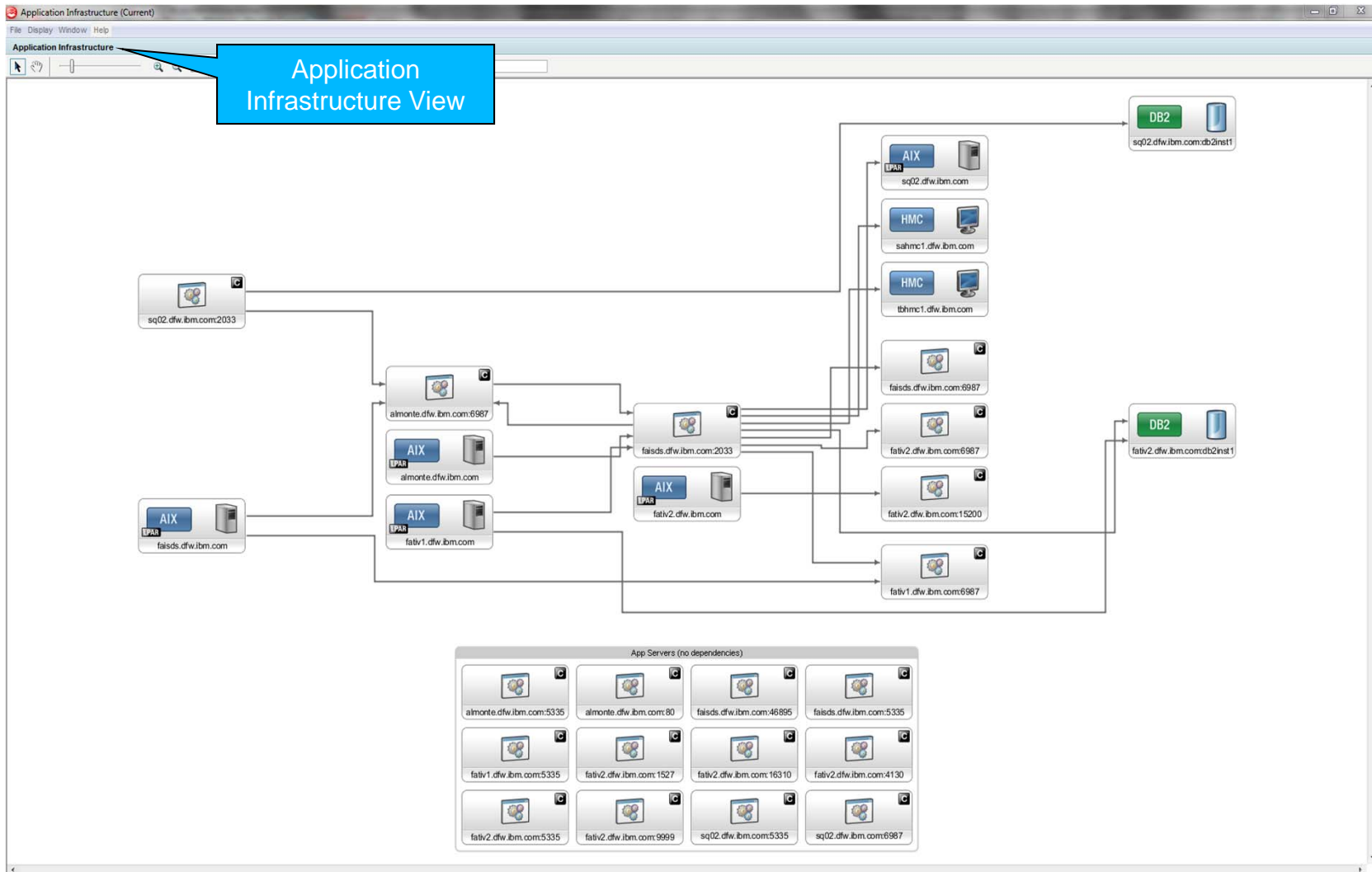
# TADDM Samples Cont.

The screenshot displays the TADDM interface with a topology diagram of a System p Turbo system. The central node is 'System p Turbo'. It is connected to several other components: HMC (ibhmc1.dfw.ibm.com), VIOS (ce154:vios\_caisen), VIOS (tbvio1: Production), VIOS (tbvio2: Production), EisenTest, LPAR (mob75: caisen), LPAR (mob26), LPAR (mob20: caisen), and LPAR (demo5: Dilley). Two callout boxes are present: 'Managed System Drill-Down' pointing to the central System p Turbo node, and 'Managed System Details' pointing to the details pane at the bottom.

**Managed System Details**

Category	Value
System p Name:	Turbo
Fully qualified domain name:	
Last Modified Time:	2/18/11 21:23 CST
Object Type:	System p Computer System
Manufacturer:	IBM
Model:	9179-M4B

# TADDM Samples Cont.





# TADDM Samples Cont.

The screenshot displays the TADDM web interface. On the left, a navigation pane shows the 'Analytics' section with 'Change History' selected. The main area is titled 'Change History' and contains a 'Date Range' section with 'Relative Timeframe' selected and a 'From' field set to '1 Weeks ago, until present'. Below this is an 'Include Components' section with a 'Component Type' dropdown menu. The main content area shows a tree view of component categories: Infrastructure Software (Databases, DB2, Custom Servers, JavaServer, KfwServices), Infrastructure Services (NFS Services), Network Tier (IP Subnets), and Systems Tier (Virtual Systems, LPAR, System p, Other Computer Systems, Virtual I/O Server, AIX, Hardware Management Console). A 'Run Report' button is visible at the bottom of the main area. The 'Details' section at the bottom is currently empty. The status bar at the bottom right shows 'Username: administrator | Server: fativ1:9433'.

Date Range

Component Type

Analytics: Change History

# TADDM Samples Cont.: System Change History

The screenshot displays the Tivoli Application Dependency Discovery Manager interface. The main window shows a 'Change History' table with the following columns: Component, Type, Change, Date, Attribute, Old Value, New Value, and Id. The table lists various system changes, including updates to configuration files, NFS file systems, and data files, as well as the addition and deletion of software components. A callout box labeled 'Date' points to the 'Date' column of the table.

Component	Type	Change	Date	Attribute	Old Value	New Value	Id
sq02.dfw.ibm.com	AIX Computer System	Updated	3/28/11 17:35 CDT				
/etc/environment	ConfigFile	Updated	3/28/11 17:35 CDT	lastModified	1/20/11 9:55 CST	3/28/11 15:19 CDT	3/28/11 15:19 CDT
/etc/inittab	ConfigFile	Updated	3/28/11 17:35 CDT	lastModified	2/16/11 16:11 CST	3/28/11 14:41 CDT	3/28/11 14:41 CDT
/mnt	NFSFileSystem	Updated	3/28/11 17:35 CDT	exportName	/export/linux	/export/dir	Temp
AixComputerSystemTemplate/sysAttributes	DataFile	Updated	3/28/11 17:35 CDT	lastModified	3/9/11 14:41 CST	3/28/11 17:35 CDT	Temp
AixComputerSystemTemplate/susers	DataFile	Updated	3/28/11 17:35 CDT	content	root id=0 pgrp=system ...	root id=0 pgrp=system groups=s...	root id=0 pgrp=sys...
AixComputerSystemTemplate/susers	DataFile	Updated	3/28/11 17:35 CDT	checksum	PIEH0VBuTYvgeSbx...	8hg4JC2MYmmJsMHubX1w==	8hg4JC2MYmmJs...
AixComputerSystemTemplate/susers	DataFile	Updated	3/28/11 17:35 CDT	lastModified	3/9/11 14:41 CST	3/28/11 17:35 CDT	3/28/11 17:35 CDT
sq02.dfw.ibm.com	Aix	Member added	3/28/11 17:35 CDT	softwareComponents		X11.apps.xterm:7.1.0.0	X11.apps.xterm.7...
sq02.dfw.ibm.com	Aix	Member deleted	3/28/11 17:35 CDT	softwareComponents	artex.base.agent.7.1.0.0		
sq02.dfw.ibm.com	Aix	Member deleted	3/28/11 17:35 CDT	softwareComponents	DirectorCommonAgent...		
sq02.dfw.ibm.com	Aix	Member deleted	3/28/11 17:35 CDT	softwareComponents	cas.agent.1.4.2.30		
sq02.dfw.ibm.com	Aix	Member added	3/28/11 17:35 CDT	softwareComponents		DirectorCommonAgent 6.2.0.0	DirectorCommonA...
sq02.dfw.ibm.com	Aix	Member added	3/28/11 17:35 CDT	softwareComponents		X11.fnt.xorg.bh-htf:7.1.0.0	X11.fnt.xorg.bh-htf...
sq02.dfw.ibm.com	Aix	Member added	3/28/11 17:35 CDT	softwareComponents		X11.fnt.xorg.misc:7.1.0.0	X11.fnt.xorg.misc...
sq02.dfw.ibm.com	Aix	Member added	3/28/11 17:35 CDT	softwareComponents	cas.agent.1.4.2.2		cas.agent.1.4.2.2
sq02.dfw.ibm.com	Aix	Member added	3/28/11 17:35 CDT	softwareComponents	vnc-3.3.3r2-6:3.3r2-6		vnc-3.3.3r2-6:3.3...
sq02.dfw.ibm.com	Aix	Member added	3/28/11 17:35 CDT	softwareComponents		X11.apps.clients:7.1.0.0	X11.apps.clients:7...
sq02.dfw.ibm.com	AIX Computer System	Updated	3/28/11 17:35 CDT	name	sq02.dfw.ibm.com	isd	isd
sq02.dfw.ibm.com	AIX Computer System	Updated	3/28/11 17:36 CDT	name	isd	sq02	sq02
sq02.dfw.ibm.com	AIX Computer System	Updated	3/28/11 17:35 CDT	name	isd	sq02	sq02

# TADDM Samples Cont.: DB2 Change History

The screenshot shows the 'Change Results' window in TADDM. The table below represents the data shown in the window:

Component	Type	Change	Date	Attribute	Old Value	New Value	Id
sq02.dfw.ibm.com.db2inst1	Db2Instance	Created	3/9/11 14:42 CST				
sq02.dfw.ibm.com.db2inst1	Db2Instance	Updated	3/28/11 17:36 CDT				
TPCDB	Db2Database	Updated	3/28/11 17:36 CDT				
PCKCACHESZ	Db2DatabaseConfigValue	Updated	3/28/11 17:36 CDT	value	AUTOMATIC(1204)	AUTOMATIC(1215)	AUTOMATIC...
All committed transactions have been writ...	Db2DatabaseConfigValue	Updated	3/28/11 17:36 CDT	value	NO	YES	YES
DATABASE_MEMORY	Db2DatabaseConfigValue	Updated	3/28/11 17:36 CDT	value	AUTOMATIC(100200)	AUTOMATIC(95904)	AUTOMATIC...
IBMDR	Db2Database	Updated	3/28/11 17:36 CDT				
sq02.dfw.ibm.com.db2inst1	Db2Instance	Updated	3/30/11 12:13 CDT				
sq02.dfw.ibm.com.db2inst1	Db2Instance	Updated	3/31/11 15:01 CDT				
fatv2.dfw.ibm.com.db2inst1	Db2Instance	Created	2/11/11 16:53 CST				
fatv2.dfw.ibm.com.db2inst1	Db2Instance	Updated	2/11/11 20:39 CST				
fatv2.dfw.ibm.com.db2inst1	Db2Instance	Member add...	2/17/11 10:55 CST				
fatv2.dfw.ibm.com.db2inst1	Db2Instance	Updated	3/3/11 20:47 CST				
fatv2.dfw.ibm.com.db2inst1	Db2Instance	Updated	3/9/11 14:43 CST				
fatv2.dfw.ibm.com.db2inst1	Db2Instance	Updated	3/9/11 17:09 CST				
fatv2.dfw.ibm.com.db2inst1	Db2Instance	Updated	3/9/11 17:21 CST				
fatv2.dfw.ibm.com.db2inst1	Db2Instance	Updated	3/28/11 17:36 CDT				
fatv2.dfw.ibm.com.db2inst1	Db2Instance	Updated	3/30/11 12:12 CDT				
fatv2.dfw.ibm.com.db2inst1	Db2Instance	Updated	3/31/11 15:01 CDT				
fatv2.dfw.ibm.com.db2inst1	Db2Instance	Updated	4/26/11 11:54 CDT				

# TADDM Samples Cont.: Managed System Comparison

The screenshot shows the Tivoli Application Dependency Discovery Manager (TADDM) interface. The main window is titled "Tivoli Application Dependency Discovery Manager - Version: Current". The interface includes a menu bar (File, Edit, Display, Discovery, Topology, Analytics, Windows, Help) and a toolbar. The left sidebar contains navigation options: Discovery, Topology, and Analytics. The main content area is divided into several sections:

- Component Comparison:** A section with a "Version" dropdown set to "Current" and a "Component Type" dropdown set to "System p Computer System".
- Available Components:** A table listing components: Mercury, nash, nasypany, ricca, and Styx. The "Styx" component is highlighted.
- Included Components:** A table listing components: almonte (Current) and Zeus (Current). A "Set as Key" button is visible.
- Options:** A section with radio buttons for "Level" (Basic selected, Deep), "Include Infrastructure Services" (Yes selected, No), and "Include System" (Yes selected, No).
- Run Report:** A button at the bottom of the main content area.
- Details:** A section at the bottom with a "Items" dropdown set to "Click Show Details to view data" and several icons.

Annotations in blue boxes point to various elements:

- Component Comparison:** Points to the main section header.
- Version:** Points to the "Version" dropdown.
- Component Type:** Points to the "Component Type" dropdown.
- Available Components:** Points to the "Available Components" table.
- Options:** Points to the "Options" section.
- Selected Components:** Points to the "Included Components" table.

# TADDM Samples Cont.: Managed System Comparison

The screenshot displays the 'Component Comparison: Results' window in Tivoli Application Dependency Discovery Manager. The interface includes a left-hand navigation pane with options like Inventory, Change History, Dormant Components, Component Comparison (highlighted), Switch Topology, and Unknown Processes. Below this is a 'Discovered Components' section showing 'Application Infrastructure Overview' with sub-items: Infrastructure Software, Databases, Custom Servers, Infrastructure Services, and NFS Services(4).

The main area shows a table comparing components between two managed systems. Callouts identify the columns as 'Component', 'Managed System #1', and 'Managed System #2'.

Component	Managed System #1 (almonite - Version: Current)	Managed System #2 (Zeus - Version: Current)
ec09_mm	[Not Set]	ec09_mm
mhoracle1_herrera	[Not Set]	mhoracle1_herrera
sq13	[Not Set]	sq13
sq14	[Not Set]	sq14
VIDb	VIDb	[Not Set]
savio4: Mehboob	[Not Set]	savio4: Mehboob
VIDa	VIDa	[Not Set]
rg103	[Not Set]	rg103
ceisen_testing	[Not Set]	ceisen_testing
ams27_barker	[Not Set]	ams27_barker
mob77	[Not Set]	mob77
ec07_sn	[Not Set]	ec07_sn
jpmc_demo_ceisen	[Not Set]	jpmc_demo_ceisen
mhnnode2_herrera	[Not Set]	mhnnode2_herrera
IBM71_mm	[Not Set]	IBM71_mm
fatv2.dfw.ibm.com	fatv2.dfw.ibm.com	[Not Set]
faisds.dfw.ibm.com	faisds.dfw.ibm.com	[Not Set]
mhoracle3_herrera	[Not Set]	mhoracle3_herrera
ec11_mm	[Not Set]	ec11_mm
IBM_I_SA_mm	[Not Set]	IBM_I_SA_mm
CoD Memory Capable	false	true
Name	almonite	Zeus
CPU Cores Installed	4	32
LHEA Capable	false	true
Available System Processing Units	0.5	4.3
Maximum Number of Processors per LPAR	4	256
Maximum Number of Shared Processor Pools	1	64
CPU Cores Enabled	4	32
Number of CPUs	4	32
i5/OS Capable	false	true
Memory Available For Partitions	0	136096776192
Memory Size	8.00 GB	256.00 GB
Model	9131-52A	9117-MMB

At the bottom, a 'Details' section shows 'Items: Click Show Details to view data.' with navigation icons.

# TADDM Samples Cont.: DB2 Comparison

The screenshot displays the Tivoli Application Dependency Discovery Manager (TADDM) interface. The main window shows a 'Component Comparison: Results' table comparing two DB2 systems. The left sidebar contains navigation options like 'Inventory', 'Change History', 'Dormant Components', 'Component Comparison', 'Switch Topology', and 'Unknown Processes'. The bottom left shows 'Discovered Components' with a tree view of 'Application Infrastructure' including 'Infrastructure Software', 'Databases', 'Custom Servers', 'Infrastructure Services', and 'NFS Services(4)'.

Component	fatv2.dfw.ibm.com:db2inst1 - Version: Current	sq02.dfw.ibm.com:db2inst1 - Version: Current
Product Id	SQL09071	SQL09070
Product Version	DB2 v9.7.0.1	DB2 v9.7.0.0
Build Level	s091114	s090521
DBM Config Values		
DFT_MON_TIMESTAMP		
Value	ON	OFF
SPM_NAME		
Value	fatv2_d	
DIAGSIZE		
Value	0	64
CPUSPEED		
Value	5.117063e-07	2.676617e-07
SVCENAME		
Value	50000	db2c_db2inst1
Databases		
BMDR	[Not Set]	BMDR
TEPS	[Not Set]	[Not Set]
CMDB	CMDB	[Not Set]
WAREHOUS	WAREHOUS	[Not Set]
SAMPLE		
Buffer Pools		
IBMDEFAULTBP	IBMDEFAULTBP	[Not Set]
Config Values		
MON_PKGLIST_SZ	MON_PKGLIST_SZ	[Not Set]
SQL_CCFLAGS	SQL_CCFLAGS	[Not Set]
Path to log files		
Value	/home/db2inst1/db2inst1/NODE0000/SQL00001/SQLLOGDR/	/home/db2inst1/db2inst1/NODE0000/SQL00002/SQLLOGDR/
SECTION_ACTUALS	SECTION_ACTUALS	[Not Set]
DATABASE_MEMORY		
Value	AUTOMATIC(36160)	AUTOMATIC(36080)
MON_LCK_MSG_LVL	MON_LCK_MSG_LVL	[Not Set]
Schemas		
SQLJ	SQLJ	[Not Set]
SYSCAT	SYSCAT	[Not Set]
SYSIBMADM	SYSIBMADM	[Not Set]
SYSIBMTS	SYSIBMTS	[Not Set]



# IBM DB2 9.7

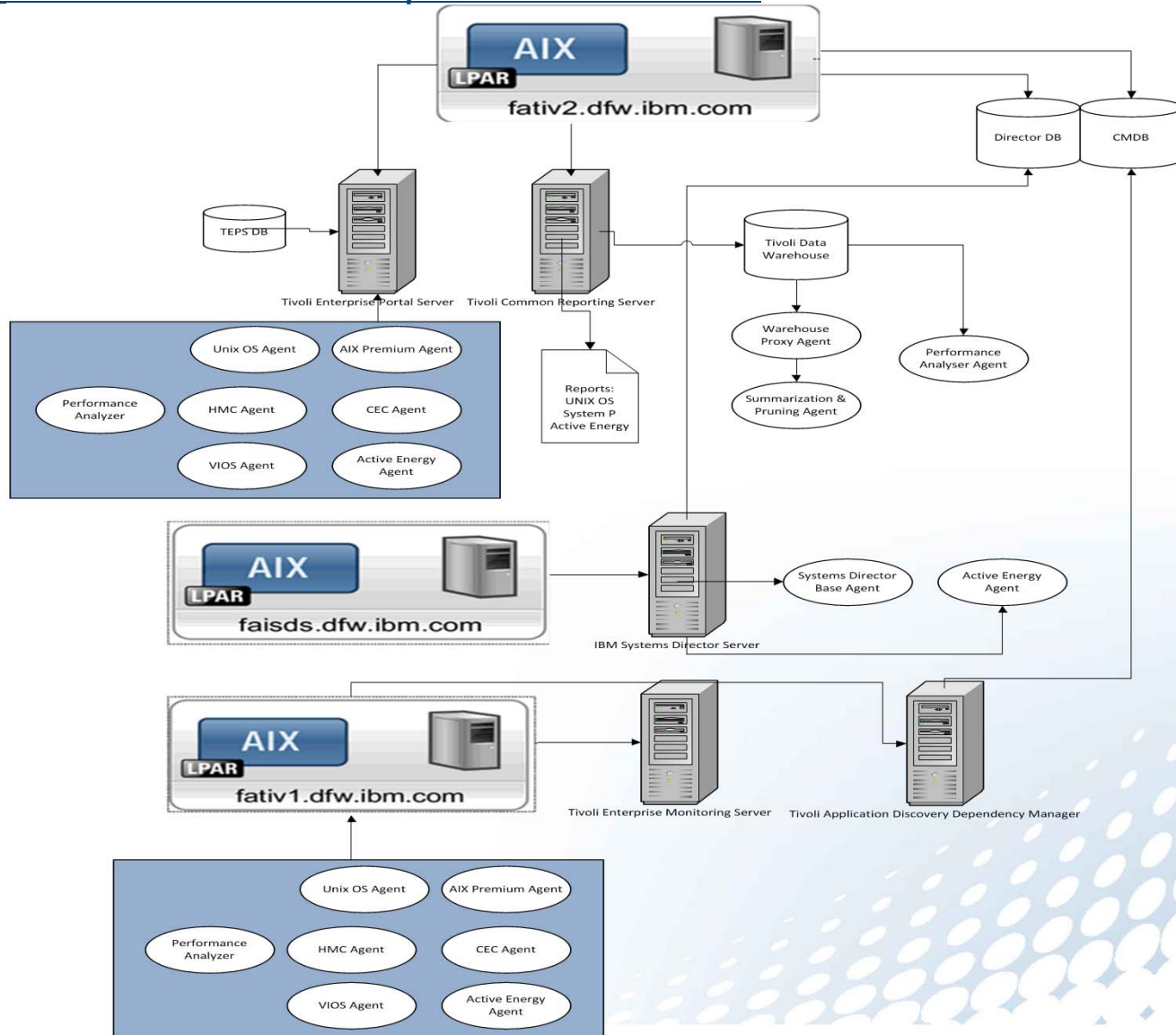


- A DB2 database system consists of a DB2 server and IBM® data server clients.
- A DB2 server is a relational database management system (RDBMS) that delivers data to its IBM data server clients.
- An IBM data server client is an application that allows you to run commands and SQL statements against a DB2 server, connect to a remote DB2 server, and access its databases.
- IBM DB2 is the backbone of the IBM Systems Director Enterprise Edition solution and used with the following components:
  - IBM Systems Director
  - IBM Tivoli Monitoring
  - Tivoli Data Warehouse
  - IBM Tivoli Performance Analyzer Agent
  - Tivoli Common Reporting
- Restricted DB2 enterprise license allows for the use of DB2 ESE 9.7 with the components included with Systems Director Enterprise Edition

# Systems Director Enterprise Edition Requirements

Product/component	Memory	Disk
Launchpad GUI	10 MB	10 MB
DB2	1 GB	Review InfoCenter for guidance
Tivoli Application Dependency Discovery Manager	4-8 GB	100 GB
Tivoli Enterprise Monitoring Server	400 MB	1.3 GB
Tivoli Enterprise Portal Server	650 MB	1.2 GB
UNIX OS Agent	55 MB	380 MB
Tivoli Data Warehouse database	8 GB	Review InfoCenter for guidance
Warehouse Proxy Agent	200 MB	150 MB
Summarization and Pruning Agent	200 MB	150 MB
IBM Tivoli Performance Analyzer agent	Review InfoCenter for guidance	Review InfoCenter for guidance
Tivoli Common Reporting	2 GB	662 MB
Monitoring Agent for IBM Systems Director Enterprise Edition Integration	5 MB	5 MB
Eaton Power Xpert Agent	3 MB	20 MB
Active Energy Manager Agent	3 MB	55 MB

# ATS Systems Director Enterprise Edition Lab



## Links to More Information

- Systems Director Enterprise Edition Links
  - ISDEE Planning and Implementation Guide
    - [http://publib.boulder.ibm.com/infocenter/director/v6r2x/topic/com.ibm.director.editions.doc/sdee\\_install\\_guide.pdf](http://publib.boulder.ibm.com/infocenter/director/v6r2x/topic/com.ibm.director.editions.doc/sdee_install_guide.pdf)
  - ISDEE Users' Guide
    - [http://publib.boulder.ibm.com/infocenter/director/v6r2x/topic/com.ibm.director.editions.doc/sdee\\_users\\_guide.pdf](http://publib.boulder.ibm.com/infocenter/director/v6r2x/topic/com.ibm.director.editions.doc/sdee_users_guide.pdf)
- Information on how to use and install ITM
  - [http://publib.boulder.ibm.com/infocenter/tivihelp/v15r1/topic/com.ibm.itm.doc\\_6.2.2fp2/welcome.htm](http://publib.boulder.ibm.com/infocenter/tivihelp/v15r1/topic/com.ibm.itm.doc_6.2.2fp2/welcome.htm)
- Information on how to use and install ITM Energy Management Reporting & Optimization
  - <http://publib.boulder.ibm.com/infocenter/tivihelp/v15r1/topic/com.ibm.itmem.doc/welcome.htm>
- Information on how to use and install TADDM
  - [http://publib.boulder.ibm.com/infocenter/tivihelp/v10r1/topic/com.ibm.taddm.doc\\_7.2/welcome\\_page/welcome.html](http://publib.boulder.ibm.com/infocenter/tivihelp/v10r1/topic/com.ibm.taddm.doc_7.2/welcome_page/welcome.html)

## Links to More Information Cont.

- Information on how to use and install Tivoli Common Reporting
  - [http://publib.boulder.ibm.com/infocenter/tivihelp/v3r1/topic/com.ibm.tivoli.tcr\\_cog.doc/tcr\\_welcome.html](http://publib.boulder.ibm.com/infocenter/tivihelp/v3r1/topic/com.ibm.tivoli.tcr_cog.doc/tcr_welcome.html)
- Information on how to use and install IBM Tivoli Performance Analyzer Agent
  - [http://publib.boulder.ibm.com/infocenter/tivihelp/v15r1/topic/com.ibm.kpa.doc/itpa\\_welcome.html](http://publib.boulder.ibm.com/infocenter/tivihelp/v15r1/topic/com.ibm.kpa.doc/itpa_welcome.html)