

IBM Software Group

## Gain Quick IT ROI with Product and Application Discovery and Usage



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# TADz Product Evolution

## ***Tivoli Asset Discovery for z/OS (TADz) v7.5***

- Released in 2Q 2011
- Optimised Dorana foundation
- Better “out of the box” discovery quality
- Easier deployment
- Faster performance
- TCR with Cognos
- New Analyzer component
  - Interactive: PC Browser direct to z/OS based Analyzer
  - Batch: Generate spreadsheets via batch job

## ***Tivoli Asset Discovery for z/OS (TADz) v7.2***

- Released in 3Q 2009
- Based on Dorana acquisition with best of TLCMz added
- Significantly better “out of the box” discovery quality than TLCMz
- DB2 for z/OS database, Tivoli Common Reporting (TCR) with BIRT
- Bolt-on integration with Tivoli Asset Management for IT (TAMIT)
- 10% PMRs about discovery quality, 80% PMRs about deployment

## ***Tivoli License Compliance Manager for z/OS (TLCMz)***

- Based on Isogon SoftAudit acquisition
- End of Service has been announced for Sep 2012
- No middleware pre-reqs, Proprietary database
- 90% PMRs about discovery quality



## TADz Return On Investment

- z/OS products and applications are shared by many thousands of users and business processes
- Managing such a highly shared environment relies on site experience and educated guesswork unless you have TADz to show you who is using what, where and when
- Benefits from TADz discovery can be achieved in the first week and ROI increases with continual usage monitoring



**Protect against losing money**



**Get the most for your budget**



**Financial accountability**



## TADz ROI - Protect against losing money



- Reduce the risk of unexpected outages
  - See who would be impacted by an upgrade
  - See which products a job is using
  - See where different maintenance levels are deployed
  - See what needs to be replicated to Disaster Recovery systems
  
- Avoid license compliance violation penalties
  - If an audit finds unlicensed products being used, the customer usually needs to pay for 3 years retrospective license fees unless they can prove the usage was not sustained.  
What would you prefer ?:
    1. Ask senior management to somehow find millions of dollars that are not in the budget
    2. TADz to provide an audit trail
      - Be able to substantiate product usage history easily and accurately
      - Be able to detect trivial violations asap and stop them from becoming major
  - Tivoli Asset Management for IT (TAMIT) can also leverage the TADz audit trail data to provide more effective license management
  
- Assist planning for mergers, acquisitions and strategic outsourcing
  - Reduce the risk of taking over support for an inherited z/OS environment
    - TADz can show you who is using what, where and when. Being able to determine what is no longer being used is also valuable.
    - Most z/OS environments have evolved over 20-30 years and have lots of remnants still installed since it is hard to know what is no longer being used in a shared environment
  - Plan consolidations with accurate discovery and usage data.



## TADz ROI – Get the most from your budget

- Software license cost optimization
  - TADz provides the monitoring and reporting that enables you to:
    - Drop products that are no longer being used
    - Consolidate product versions
    - Consolidate similar products e.g. inherited from company mergers
    - Consolidate product machine/system coverage
- System z upgrade optimization
  - Hardware capacity upgrades usually involve Product license fee increases
  - Being able to examine product usage trends helps price negotiations and configuration planning
  - In order to safely move workload to different LPARs, it is important to know who is using what, where and when
- Assist planning for more efficient support team structures
- Less administration to prove license compliance
- Negotiate with vendors with the power of knowing usage trends
  - Understanding product usage trends is extremely important for contract renewal negotiations e.g.
    - Which products should be included in an Enterprise License Agreement (ELA)
    - Product LPAR capacity restricted licenses
    - Assess what would be impacted by a competitive product replacement





## TADz ROI – Financial accountability

- Operational costs:
  - Product license costs
  - Product support costs
  - Application support costs
  - Hardware costs
  
- Operational costs come out of a budget that needs to be accountable
  - TADz is able to show who (userid, job names, job account codes) is using what, where and when
  - Prove that operational costs are justified
  
- Some companies, particularly Outsourcers, recoup the costs from their clients via a charge-back process
  - TADz is able to provide valuable data that helps substantiate the charge-back.





PC Browser direct to z/OS based TADz Analyser

Analyze high level aggregated data e.g. Product Versions	
<a href="#">Machine Inventory</a>	System z Machine inventory summary
<a href="#">Product Inventory</a>	Product version inventory summary
<a href="#">Product Audit Trail</a>	Product version audit trail
<a href="#">Product by System</a>	Cross reference of product versions per System
<a href="#">Product by Sysplex</a>	Cross reference of product versions per Sysplex
<a href="#">Product by System Group</a>	Cross reference of product versions per System Group
<a href="#">Product by Repository</a>	Cross reference of product versions per Repository
<a href="#">Vendor Use by Month</a>	Cross reference of vendor products used per Month by System
<a href="#">Product Use by Month</a>	Cross reference of product versions used per Month by System
<a href="#">Product Use Trend</a>	Product version usage trend chart
<a href="#">Product Use by Machine</a>	Cross reference of product versions used per Machine
<a href="#">Product Use by Machine MSU</a>	Cross reference of product versions by Machine MSU capacity
<a href="#">Search User Ids</a>	Search product version usage details for user ids
<a href="#">Search Job Names</a>	Search product version usage details for job names
<a href="#">Search Job Account Codes</a>	Search product version usage details for job account codes

- Asset reports are good for people who reconcile z/OS product licenses
- See what product versions are being used, when, where and by whom.



**Analyze low level discovery data e.g. Product Releases, Libraries, Modules**

<a href="#">GKB Summary</a>	Summary of products in the Global Knowledge Base catalog
<a href="#">GKB Discovery Summary</a>	Summary of products in the Global Knowledge Base catalog showing which products have been discovered
<a href="#">Discovered Product Summary</a>	Summary of discovered products
<a href="#">Discovered Product Audit Trail</a>	Audit trail of discovered products
<a href="#">Discovered Product by System</a>	Cross reference of discovered products per System
<a href="#">Discovered Product by System Group</a>	Cross reference of discovered products per System Group
<a href="#">Discovered Product by Repository</a>	Cross reference of discovered products per Repository
<a href="#">Discovered Product Use by Month</a>	Cross reference of discovered products used per Month by System
<a href="#">End of Service Products</a>	Summary of discovered products that have a known End of Service date
<a href="#">Product Libraries</a>	Summary of discovered product libraries
<a href="#">Product Library Usage</a>	Summary of discovered product library usage
<a href="#">Volumes by System</a>	Summary of discovered library volumes by system
<a href="#">Dataset HLQs by System</a>	Summary of discovered dataset high level qualifiers by system
<a href="#">Libraries by System</a>	Summary of discovered libraries by system
<a href="#">Search Libraries</a>	Search Libraries, with optional filters for library name mask and containing module name mask
<a href="#">Search Modules</a>	Search Modules, with optional filters for module name mask and library name mask
<a href="#">Job Use by Product Library</a>	Product release usage summary per Job name and Product Library
<a href="#">Usage Monitor File Detail</a>	Inspect usage detail in Usage Monitor raw data zip files or ZCAT zip files

- Discovery reports are good for people who support z/OS systems
- See what product releases, libraries and modules are being used, when, where and by whom.





The screenshot shows a Mozilla Firefox browser window titled "Analyzer Menu - Mozilla Firefox". The address bar contains "http://pthomu1:9019/". The page header includes "Tivoli Asset Discovery for z/OS", "Analyzer Menu", "New Window", and "Logoff ADMIN". Below the header are tabs for "Assets", "Discovery", "Administration", and "Custom". The "Administration" tab is active, displaying a list of links and their descriptions:

Administration tasks and trouble shooting	
<a href="#">Define Repository Name</a>	Define the Repository name, which is shown in the report header and Repository selection parameter
<a href="#">Define System Groups</a>	Define System Groups, which are used in the Product by System Group report
<a href="#">Libraries with unknown modules</a>	Libraries with modules that have not been identified to a product release
<a href="#">LKB Summary</a>	Summary of products in the Local Knowledge Base catalog
<a href="#">Database Statistics</a>	Database statistics, including space used.
<a href="#">SQL Select Query</a>	Ad hoc SQL Select query
<a href="#">Support</a>	Tivoli Asset Discovery for z/OS Support Portal
<a href="#">Download GKB</a>	Download the latest Global Knowledge Base from IBM Fix Central

DB2 Subsystem is DE91  
Analyzer Build Level is v7.5 D108 2011-02-01



# Report Parameters

Product Libraries - Parameters - Mozilla Firefox

http://pthomu1.au.ibm.com:9000/disc\_product\_libraries\_parms.htm?repschma=SIDEMO

Product Libraries - Parameters

Tivoli Asset Discovery for z/OS  
DEMO Corporation - Perth

Product Libraries - Parameters

New Window Home

Library name search criteria [?]:

Volume search criteria [?]:

Vendor [?]:

- All Vendors
- Allen Systems Group
- Applied Expert Systems Inc.
- Australian Systems Engineering
- BMC Software
- CA, Inc.
- Chicago Soft
- Compuware Corporation

Product Release [?]:

- All Product Releases
- Allen Systems Group - ASG-Alliance
- Allen Systems Group - ASG-AutoChange
- Allen Systems Group - ASG-Bridge
- Allen Systems Group - ASG-Encore
- Allen Systems Group - ASG-Estimate
- Allen Systems Group - ASG-ESW
- Allen Systems Group - ASG-Insight

Show Product Release Options:

Exclude Unknown Releases:

Result row limit:

Output format:

Submit

- Optional filter parameters
- Click Submit to run the report

Done



# High Level Summary Reports with easy hyperlinks to details

Product Inventory - Mozilla Firefox

http://pthomu1:9009/asset/product\_inventory?repschema=SIDEMO&system=&vendor=&product=&outfmt:

Product Inventory

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DEMO Corporation - Perth

Product Inventory

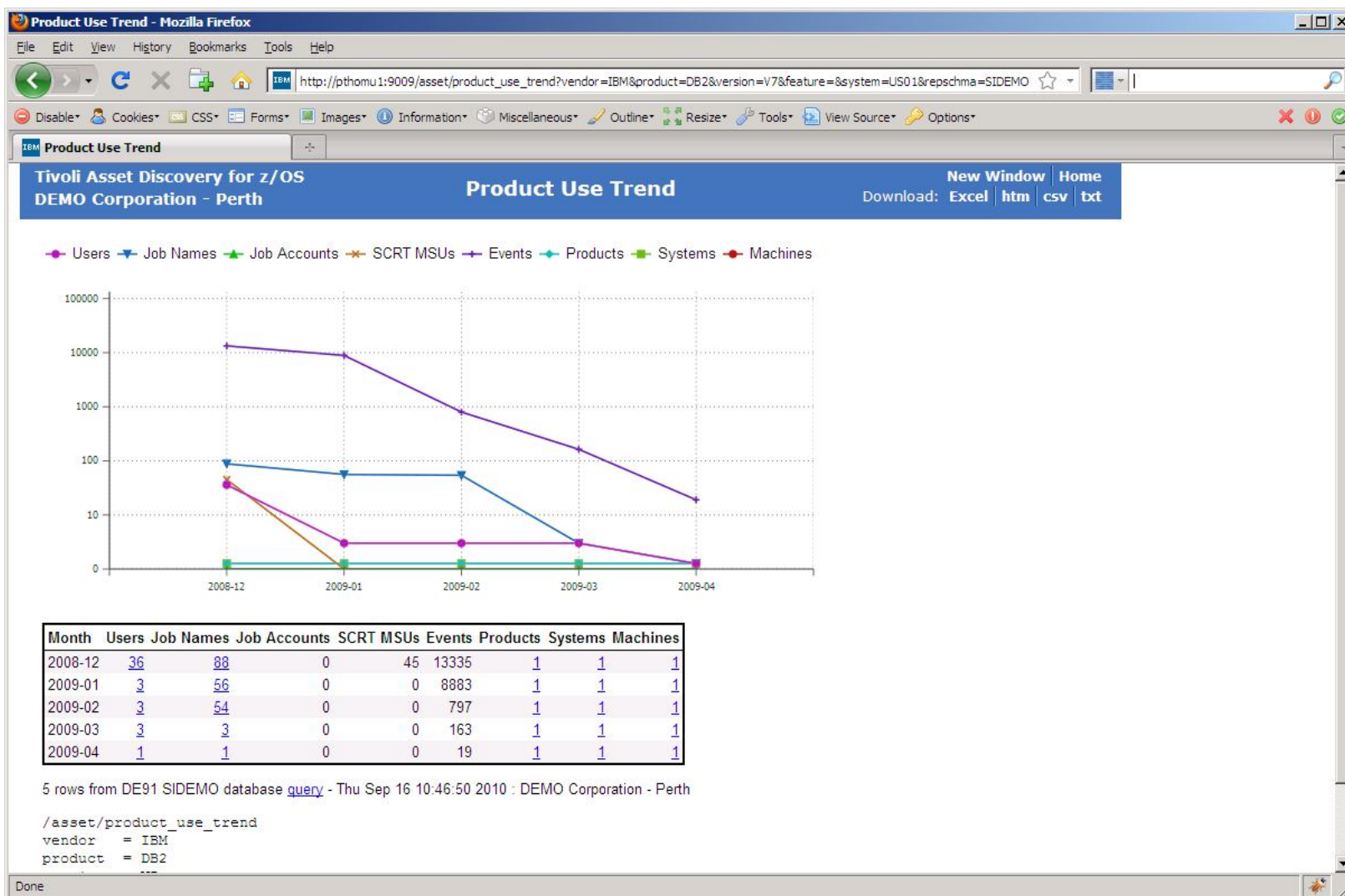
Download: Excel htm csv txt

Vendor	Product	Version PID	S&S PID	First Observed	Last Used	Systems	Machines
Allen Systems Group	ASG-Alliance	V7		<a href="#">2009-04</a>		0	0
Allen Systems Group	ASG-AutoChange	V7		<a href="#">2009-04</a>		0	0
Allen Systems Group	ASG-Bridge	V7		<a href="#">2009-04</a>		0	0
Allen Systems Group	ASG-Encore	V7		<a href="#">2009-04</a>		0	0
Allen Systems Group	ASG-Estimate	V7		<a href="#">2009-04</a>		0	0
Allen Systems Group	ASG-Insight	V7		<a href="#">2009-04</a>	<a href="#">2009-05</a>	1	1
Allen Systems Group	ASG-JOB/SCAN	V7		<a href="#">2009-04</a>	<a href="#">2009-05</a>	1	1
Allen Systems Group	ASG-Recap	V7		<a href="#">2009-04</a>		0	0
Allen Systems Group	ASG-SmartDoc	V7		<a href="#">2009-04</a>		0	0
Allen Systems Group	ASG-SmartEdit	V7		<a href="#">2009-04</a>	<a href="#">2009-03</a>	1	1
Allen Systems Group	ASG-SmartTest	V7		<a href="#">2009-04</a>	<a href="#">2009-05</a>	2	1
Applied Expert Systems Inc.	CleverTCP/IP	V7		<a href="#">2009-04</a>	<a href="#">2009-05</a>	2	2
Australian Systems Engineering	ISPZIP	V1		<a href="#">2009-04</a>	<a href="#">2009-05</a>	3	2
BMC Software	APPTUNE for DB2	V5		<a href="#">2009-04</a>	<a href="#">2009-04</a>	3	2
BMC Software	APPTUNE for DB2	V6		<a href="#">2009-04</a>	<a href="#">2009-05</a>	3	2
BMC Software	BMCDN for DB2	V2		<a href="#">2009-04</a>	<a href="#">2009-05</a>	2	2
BMC Software	CATALOG MANAGER for DB2	V8		<a href="#">2009-04</a>	<a href="#">2009-05</a>	3	2
BMC Software	CATALOG MANAGER for DB2	V9		<a href="#">2009-04</a>	<a href="#">2009-05</a>	3	2
BMC Software	CHANGE MANAGER for DB2	V8		<a href="#">2009-04</a>	<a href="#">2009-05</a>	3	2
BMC Software	CHECK PLUS for DB2	V8		<a href="#">2009-04</a>	<a href="#">2008-12</a>	3	2
BMC Software	CHECK PLUS for DB2	V9		<a href="#">2009-04</a>		3	2
BMC Software	CMF MONITOR	V5		<a href="#">2009-04</a>	<a href="#">2009-04</a>	3	2
BMC Software	COPY PLUS for DB2	V7		<a href="#">2009-04</a>	<a href="#">2009-05</a>	3	2
BMC Software	COPY PLUS for DB2	V8		<a href="#">2009-04</a>	<a href="#">2009-05</a>	3	2
BMC Software	CROSS-SYSTEM IMAGE MANAGER	V1		<a href="#">2009-04</a>		3	2
BMC Software	DASD Manager Plus for DB2	V8		<a href="#">2009-04</a>	<a href="#">2009-05</a>	3	2
BMC Software	DATA ACCELERATOR Compression	V1		<a href="#">2009-04</a>		0	0
BMC Software	DATA PACKER for DB2	V3		<a href="#">2009-04</a>		0	0
BMC Software	Database Administration for DB2	V4		<a href="#">2009-04</a>	<a href="#">2009-05</a>	3	2
BMC Software	EXTENDED BUFFER MANAGER for DB2	V5		<a href="#">2009-04</a>	<a href="#">2009-05</a>	3	2
BMC Software	High-speed Apply Engine	V4		<a href="#">2009-04</a>	<a href="#">2009-05</a>	3	2

Hyperlinks to drill down for more details



# Trend Charts



# Crosstab reports

Product Use by System - Mozilla Firefox

http://pthomu1.au.ibm.com:9000/product\_use\_system?repschma=SIDEMO&system=&vendor=&product=&oi

Product Use by System

Tivoli Asset Discovery for z/OS  
DEMO Corporation - Perth

Product Use by System

New Window Home  
Download: Excel htm csv txt

Crosstab  Grid

Vendor	Product	Version	System				
			AU01	AU02	US01	US02	US03
Allen Systems Group	ASG-Insight	V7			<a href="#">2009-05</a>		
	ASG-JOB/SCAN	V7			<a href="#">2009-05</a>		
	ASG-SmartEdit	V7			<a href="#">2009-03</a>		
	ASG-SmartTest	V7			<a href="#">2009-05</a>	<a href="#">2009-05</a>	
Applied Expert Systems Inc.	CleverTCP/IP	V7	<a href="#">2009-05</a>			<a href="#">2009-05</a>	
Australian Systems Engineering	ISPZIP	V1	<a href="#">2009-05</a>		<a href="#">2009-05</a>	<a href="#">2009-04</a>	
BMC Software	APPTUNE for DB2	V5	<a href="#">2009-04</a>		<a href="#">2009-04</a>	<a href="#">2009-04</a>	
		V6	<a href="#">2009-05</a>		<a href="#">2009-05</a>	<a href="#">2009-05</a>	
	BMCDNS for DB2	V2	<a href="#">2009-05</a>		<a href="#">2009-04</a>	<a href="#">2008-12</a>	
	CATALOG MANAGER for DB2	V8	<a href="#">2009-05</a>		<a href="#">2009-05</a>	<a href="#">2009-05</a>	
		V9	<a href="#">2009-05</a>		<a href="#">2009-05</a>	<a href="#">2009-05</a>	
	CHANGE MANAGER for DB2	V8	<a href="#">2009-05</a>		<a href="#">2009-05</a>	<a href="#">2009-04</a>	
	CHECK PLUS for DB2	V8			<a href="#">2008-12</a>		
	CMF MONITOR	V5	<a href="#">2009-04</a>				
	COPY PLUS for DB2	V7	<a href="#">2009-05</a>		<a href="#">2009-04</a>	<a href="#">2009-05</a>	
		V8	<a href="#">2009-05</a>		<a href="#">2009-05</a>	<a href="#">2009-05</a>	
	DASD Manager Plus for DB2	V8	<a href="#">2009-05</a>		<a href="#">2009-05</a>	<a href="#">2009-05</a>	
	Database Administration for DB2	V4	<a href="#">2009-05</a>		<a href="#">2009-05</a>	<a href="#">2009-05</a>	
	EXTENDED BUFFER MANAGER for DB2	V5	<a href="#">2009-05</a>		<a href="#">2009-05</a>	<a href="#">2009-05</a>	
	High-speed Apply Engine	V4	<a href="#">2009-05</a>		<a href="#">2009-04</a>	<a href="#">2009-05</a>	
V8		<a href="#">2009-05</a>		<a href="#">2009-05</a>	<a href="#">2009-05</a>		
LOADPLUS for DB2	V8	<a href="#">2009-05</a>		<a href="#">2009-04</a>	<a href="#">2009-05</a>		

- Crosstabs are great for highlighting differences at a high level
- Hyperlinks to drill down for more details



# Color coded trend reports

Product Use By Month - Mozilla Firefox

http://pthomu1:9009/asset/product\_use\_month?repschma=SIDEMO&metric=EVENT&months=&system=&vendor=IBM&product=&=&ol

Product Use By Month

Tivoli Asset Discovery for z/OS  
DEMO Corporation - Perth

Product Use By Month

New Window Home  
Download: Excel htm csv txt

Aqua highlight % increase from previous month

Yellow highlight % drop from previous month

Red highlight % drop from previous month

Product	Sysplex	System	Month / Events				
			2008-12	2009-01	2009-02	2009-03	2009-04
IBM - ACF/SSP V4	<a href="#">USPLEX</a>	<a href="#">US01</a>			7		
IBM - Candle Command Centre V1	<a href="#">AUPLEX</a>	<a href="#">AU01</a>	2	3			1
	<a href="#">USPLEX</a>	<a href="#">US01</a>		13	2	4	
	<a href="#">US02</a>			2			
IBM - CICS TS V3	<a href="#">AUPLEX</a>	<a href="#">AU01</a>	207101	210190	200964	224408	219819
	<a href="#">AU02</a>		43502	43071	39034	45805	43100
	<a href="#">USPLEX</a>	<a href="#">US01</a>	783345	765877	738373	849694	807618
IBM - CICS VSAM Recovery V4	<a href="#">US02</a>		232226	225185	207565	234042	242689
	<a href="#">AUPLEX</a>	<a href="#">AU01</a>	7595	7590	6855	7595	7320
	<a href="#">USPLEX</a>	<a href="#">US02</a>	3720	3720	3360	3715	3580
IBM - DB2 Utilities Suite V8	<a href="#">AUPLEX</a>	<a href="#">AU01</a>	63364	61306	57750	66808	61348
	<a href="#">USPLEX</a>	<a href="#">US01</a>	248388	223888	228020	271824	232064
	<a href="#">US02</a>		87248	87192	70406	95004	86100
IBM - DB2 V7	<a href="#">AUPLEX</a>	<a href="#">AU01</a>	2856				
	<a href="#">USPLEX</a>	<a href="#">US01</a>	13335	8883	797	163	19
	<a href="#">US02</a>		2368				
IBM - DB2 V8	<a href="#">AUPLEX</a>	<a href="#">AU01</a>	762041	719032	800085	946443	1225978
	<a href="#">USPLEX</a>	<a href="#">US01</a>	1115449	1853842	1391005	1705842	2592883
	<a href="#">US02</a>		420571	343631	477026	550835	732138
IBM - DCF Document Composition Fac V1	<a href="#">AUPLEX</a>	<a href="#">AU01</a>	1071	1047	1032	1122	1032

Done

At a glance see which hyperlink is worth clicking to see a trend chart and details



# Exporting the reports to a spreadsheet

The screenshot shows a Mozilla Firefox browser window displaying a report titled "Product Use by System" from Tivoli Asset Discovery for z/OS. The report is a table with columns for Vendor, Product, Version, and System. A dialog box titled "Opening product\_use\_system.xls" is open over the table, indicating that the user has chosen to open the file "product\_use\_system.xls" as a Microsoft Excel Worksheet. The dialog box offers options to "Open with" Microsoft Excel (default), "Save File", or "Do this automatically for files like this from now on".

Vendor	Product	Version	System						
			Δ1101	Δ1102	11S01	11S02	US03		
Allen Systems Group	ASG-Insight								
	ASG-JOB/SCAN								
	ASG-SmartEdit								
	ASG-SmartTest								
Applied Expert Systems Inc.	CleverTCP/IP								
Australian Systems Engineering	ISPZIP								
BMC Software	APPTUNE for DB2								
	BMCDSDN for DB2								
	CATALOG MANAGE								
	CHANGE MANAGE								
	CHECK PLUS for DI								
	CMF MONITOR	V5	2009-04						
	COPY PLUS for DB2	V7	2009-05		2009-04	2009-05			
		V8	2009-05		2009-05	2009-05			
	DASD Manager Plus for DB2	V8	2009-05		2009-05	2009-05			
	Database Administration for DB2	V4	2009-05		2009-05	2009-05			
	EXTENDED BUFFER MANAGER for DB2	V5	2009-05		2009-05	2009-05			
	High-speed Apply Engine	V4	2009-05		2009-04	2009-05			
		V8	2009-05		2009-05	2009-05			
	LOADPLUS for DB2	V8	2009-05		2009-04	2009-05			

■ All reports can be exported to Excel, HTM file, CSV file or TXT file







# All Analyzer reports can also be run via z/OS batch job

Product Inventory - Mozilla Firefox: IBM Edition

Product Inventory

Download: Excel | htm | csv | txt

Vendor	Product	Version	PID	S&S	Feature	EID	Discovered	Systems	Last	Systems	Machines
							Installed	Installed	Used	Used	Used
Chicago Soft	MVS/Quick-Ref	V6			BASE	2009-04-01	4	2009-05	4	2	
Compuware Corporation	Abend-AID for CICS	V5			BASE	2009-04-01	4	2009-05	4	2	
Compuware Corporation	Abend-AID for CICS	V5			CICS TS 1.3 Support	2009-04-01	4	2009-05	4		
Compuware Corporation	Abend-AID for CICS	V5			CICS TS 2.2 Support	2009-04-01	4	2009-05	4		
Compuware Corporation	Abend-AID for CICS	V5			CICS TS 2.3 Support	2009-04-01	4	2009-05	4		
Compuware Corporation	Abend-AID for CICS	V5			CICS TS 3.1 Support	2009-04-01	4	2009-05	4		
Compuware Corporation	Abend-AID for CICS	V5			CICS TS 3.2 Support	2009-04-01	4	2009-05	4		
Compuware Corporation	CICS Abend-AID/FX for DB2	V4			BASE	2009-04-01	4		0		
Compuware Corporation	File-AID/MVS	V8			BASE	2009-04-01	4	2009-05	4		
Compuware Corporation	File-AID/MVS	V9			BASE	2009-04-01	4	2009-05	4		
Compuware Corporation	Host Communications Interface	V2			BASE	2009-04-01	4	2009-05	4		
Compuware Corporation	XPEDITER/DevEnterprise	V4			BASE	2009-04-01	4	2009-05	4		
Delta Software	ADSpPlus	V5			BASE	2009-04-01	4		0		

13 rows from database query - DE91 09:23:35 2011-04-13

```

/asset/product_inventory
vendor      = Chicago Soft
vendor      = Compuware Corporation
vendor      = Delta Software
showfeature = on
repository  = SIDEMO
  
```

```

EDIT      MPRES.V750D120.MP120.JCLLIB(HSISANLB) - 01.02
Command ==>
*****
000001 //HSISANLB JOB (),'TADz Analyzer-Batch',REGION=0M,
000002 // CLASS=A,MSGCLASS=X,MSGLEVEL=(1,1),NOTIFY=&SYSUID
000003 //*
000004 //*****
000005 //*
000006 //* TADz Analyzer batch mode job
000007 //*
000008 //*****
000009 //*
000010 // SET OUTFMT=TXT
000011 //* SET OUTFMT=XLS
000012 //* SET OUTFMT=CSV
000013 //* SET OUTFMT=HTM
000014 //*
000015 // SET OUTDSN=&SYSUID..TADZANLZ.&OUTFMT Output dsn
000016 //*
000017 //ALLOC EXEC PGM=IEFBR14
000018 //OUTDSN DD DISP=(MOD,CATLG),DSN=&OUTDSN,
000019 // DCB=(DSORG=PS,RECFM=VB,LRECL=1000,BLKSIZE=0),
000020 // UNIT=SYSALLDA,SPACE=(CYL,(5,10))
000021 //*
000022 //ANALYZER EXEC PGM=HSICANLZ
000023 //STEPLIB DD DISP=SHR,DSN=HSIDEV.V720.D120.SHSIMOD1
000024 // DD DISP=SHR,DSN=DB2V910.DE91.SDSNEXIT
000025 // DD DISP=SHR,DSN=DB2.V910.SDSNLOAD
000026 // DD DISP=SHR,DSN=CEE.SCEERUN
000027 // DD DISP=SHR,DSN=CBC.SCLBDLL
000028 //SYSPRINT DD SYSOUT=*,HOLD=YES,LRECL=500
000029 //HSIANL1 DD DISP=SHR,DSN=HSIDEV.V720.D120.SHSIANL1
000030 //HSIANL2 DD DISP=SHR,DSN=HSIDEV.V720.D120.SHSIANL2
000031 //DSNA0INI DD DISP=SHR,
000032 // DSN=MPRES.V750D120.MP120.PARMLIB(HSISCLI)
000033 //HSICUST DD DISP=SHR,
000034 // DSN=MPRES.V750D120.MP120.PARMLIB(HSISANCQ)
000035 //TPARAM DD DUMMY
000036 //OUTPUT1 DD DISP=OLD,DSN=&OUTDSN
000037 //SYSIN DD *
000038 /asset/product_inventory
000039 vendor      = Chicago Soft
000040 vendor      = Compuware Corporation
000041 vendor      = Delta Software
000042 showfeature = on
000043 repository  = SIDEMO
000044 /*
*****
  
```

- Batch report syntax is shown at the bottom of each report for easy cut & paste into batch SYSIN deck
- Batch is good for automation and intensive searches



Analyzer Menu - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://pthomu1:9019/

IBM Analyzer Menu Problem loading page New Window Logoff ADMIN

Tivoli Asset Discovery for z/OS **Analyzer Menu**

Assets Discovery Administration **Custom**

Custom queries

[Usage Data Summary](#) Summary of usage data gathered per system

[User Appl Code Product Usage](#) Product Usage Summary per Appl Code in 2-3 chars of userid

Customers can add their own custom queries

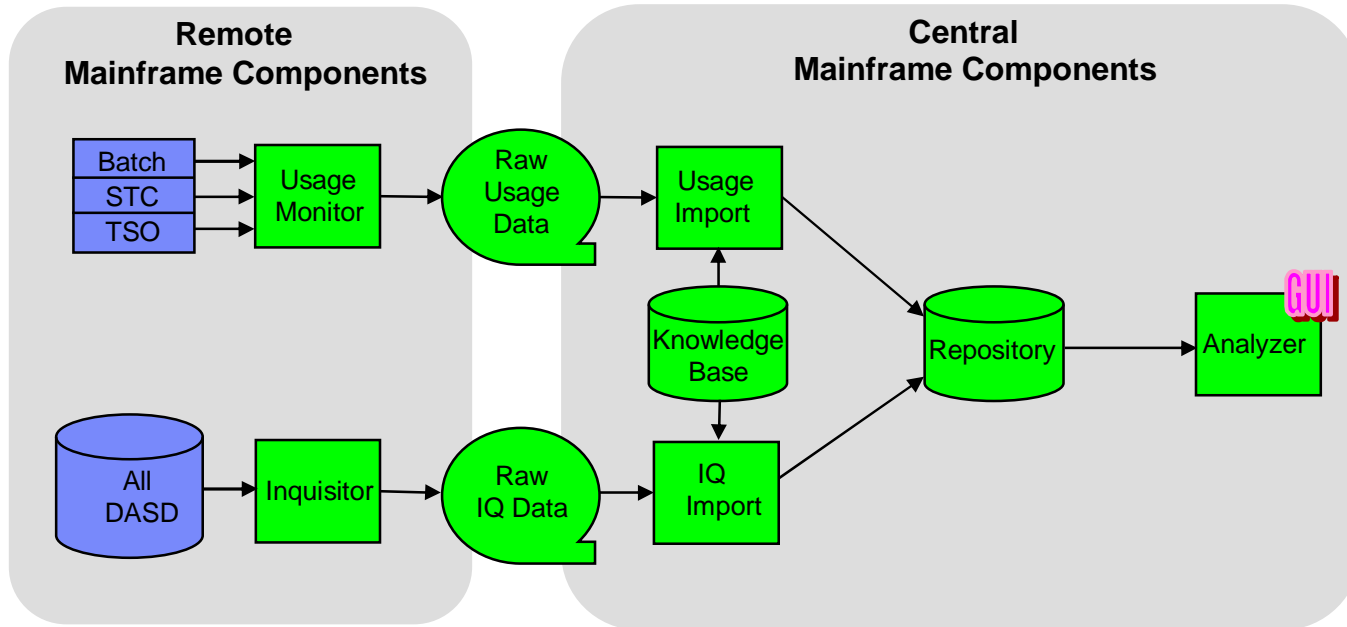
```

EDIT      MPRES.V750D125.MP75L3.PARMLIB(HSISANCQ) - 01.01      Columns 00001 00080
Command ==> _____ Scroll ==> CSR
***** ***** Top of Data *****
000001 <tadz_analyzer custom="Usage Data Summary"
000002      desc="Summary of usage data gathered per system" >
000003
000004 SELECT LP.FLPARNAME      AS "System"
000005      , MIN(UP.FFIRSTUSED) AS "First Date"
000006      , MAX(UP.FLASTUSED) AS "Last Date"
000007      , SUM(UP.FEVENTCNT1) AS "Events"
000008 FROM TLPAR      AS LP
000009 JOIN TUSEPOV AS UP ON UP.FLPARID = LP.FLPARID
000010 WHERE LP.FLPARID >= 1
000011 GROUP BY LP.FLPARNAME
000012 ORDER BY LP.FLPARNAME
000013
000014 </tadz_analyzer>
000015
000016 <tadz_analyzer custom="User Appl Code Product Usage"
000017      desc="Product Usage Summary per Appl Code in 2-3 chars of userid" >
000018
000019 SELECT SUBSTR(PUD.USERNAME, 2, 2)      AS "Appl Code"
000020      , P.VENDOR_NAME      AS "Vendor"
000021      , P.PRODUCT_NAME      AS "Product"

```



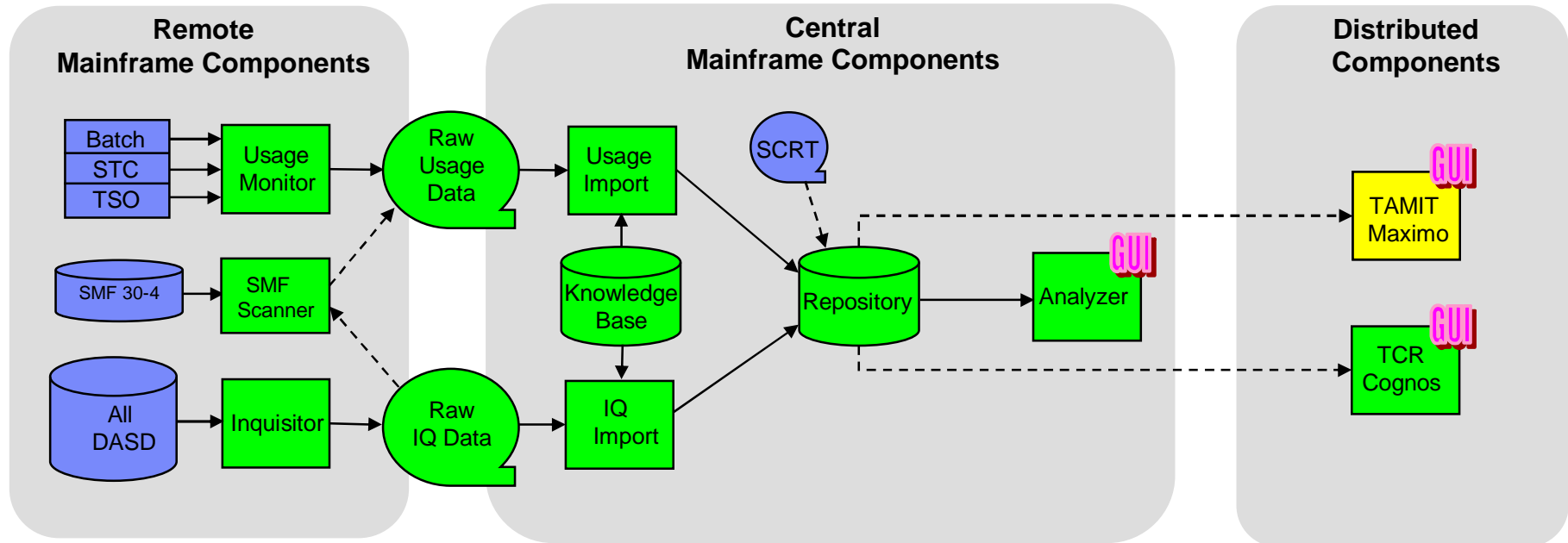
# TADz 7.5 Core Architecture



- TADz uses DB2 for z/OS on a central z/OS
  - One DB2 subsystem with one or more repository databases
  - Designed to keep overhead on production (remote) LPARs as low as possible
- z/OS based TADz Analyzer:
  - No pre-reqs on any middleware or config e.g. Websphere and Java are not required
  - Interactive analysis from your PC Browser (IE, Firefox) directly to the z/OS based TADz Analyzer running as a batch job or Started Task. Easy download to Excel.
  - Batch reporting - Run a batch job to generate spreadsheets



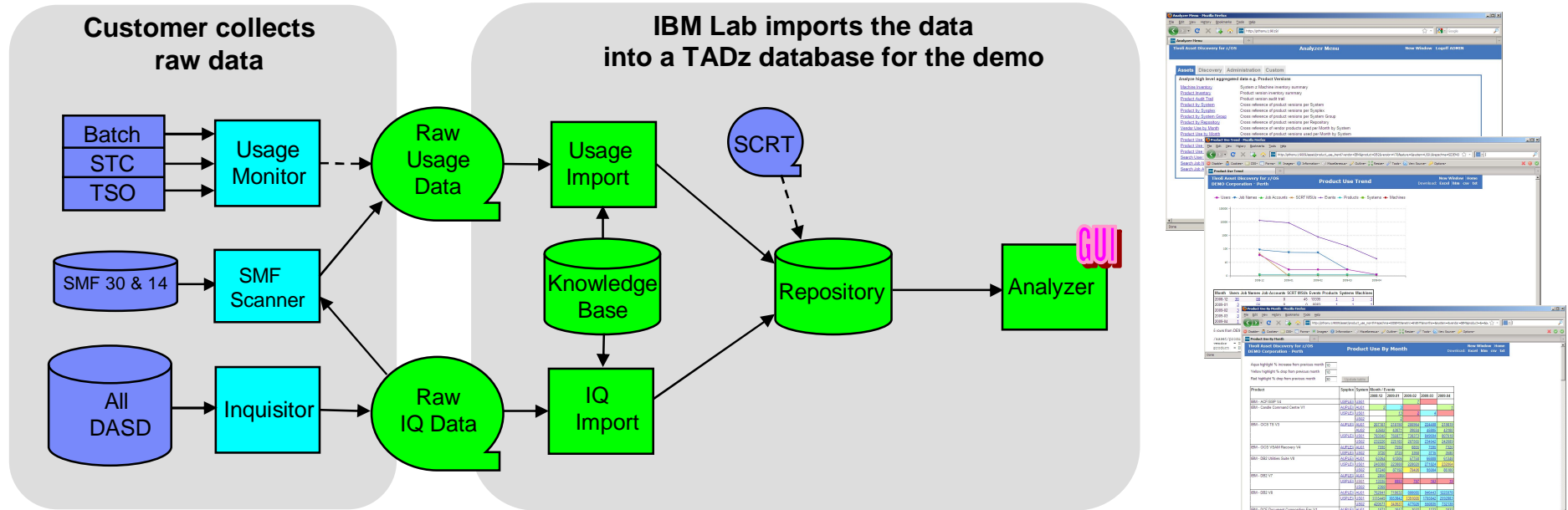
# TADz 7.5 Extended Architecture



- Optionally scan SMF 30 records for historical usage that has occurred before TADz has been deployed
  - Subset of data that Usage Monitor collects but great for quick time to value
- Optionally import Sub-Capacity Reporting Tool (SCRT) data
  - Combines with TADz collected data to show trends and details, enabling you to better optimize sub-capacity license charges
- Optionally integrate TADz with Tivoli Asset Management for IT (TAMIT)
  - TAMIT provides License contract management, Financial management, Lifecycle management etc
  - Bolt-on integration. No changes required for TADz. Just point TAMIT to the TADz database !
- Optionally deploy TCR Cognos for custom reporting
  - Packaged for free with TADz
  - This is particularly good when you want a report that combines TADz data with other data sources



# TADz 7.5 Proof of Concept can be done very quickly



- Customer collects raw data (usually only takes 2-4 hours) and sends it to IBM to import into a TADz database
  - Possible to demo results the next day if lab resources have been booked in advance, since TADz largely works “out of the box”.
- Simple non-SMPE package that contains the raw data collection TADz components and JCL for PoC
  - All output data can be browsed to validate that it does not contain customer sensitive data
- Inquisitor scans DASD for product inventory discovery
- SMF Scanner collects historic usage data, which covers products that are invoked directly via Job EXEC PGM
  - The TADz SMF Scanner coverage is a subset of what the TADz Usage Monitor collects but is good for PoC and new customers since it leverages historic SMF usage data collected before TADz has been deployed
- Optionally run the TADz Usage Monitor to capture a sample of new usage data for all modules
  - The TADz Usage Monitor usually runs as a Started Task and started early in the IPL start up. In a PoC it is only practical to run it as a batch job for a short period to show that TADz can monitor all modules, not just the EXEC PGM modules
- Optionally send SCRT CSV data



## Customer z/OS environments have been growing for decades

Year Library Created	Libraries still installed	Libraries still being used
1978	2	0
1981	5	0
1982	6	2
1983	10	1
1984	21	0
1985	31	3
1986	35	1
1987	143	10
1988	221	19
1989	158	14
1990	288	25
1991	349	24
1992	394	43
1993	546	57
1994	636	63
1995	735	71
1996	671	126
1997	1175	201
1998	1762	194
1999	1234	146
2000	1094	159
2001	2311	169
2002	1444	226
2003	1416	238
2004	1595	333
2005	1678	260
2006	2781	335
2007	3466	389
2008	10998	1295
2009	114140	10614
2010	46843	6556

- This is a report from a new TADz customer database, which shows they have libraries that were created 30 years ago and are still being used !
- z/OS upgrades typically add new software releases but also retain the old too – evolutionary
  - Different to Distributed where hardware upgrades are common every few years with software freshly installed – revolutionary
- How can you safely move users off old product releases in an environment SHARED by thousands of users ?
  - Non-TADz customers
    - Rely on site experience and educated guesswork
    - Exposed to license compliance violations
    - Exposed to product support difficulties
  - TADz customers
    - TADz shows what is being used, where, when and by who
    - Most new TADz customers find 20-30 year old libraries that are still being used

IBM Software Group

## Extending the value...distributed world and IT Asset Mgt





# IT Asset Management Portfolio version

## ■ Tivoli Asset Management for IT

- ▶ Full Asset Lifecycle Management support for Hardware and Software License Management
- ▶ Identifies under or over utilized software to reduce costs due to over-purchasing and to reduce risk to under-purchasing

## ■ Tivoli Asset Discovery for Distributed

- ▶ Provides discovery and identification services for distributed platforms (VRMF) and virtual environments
- ▶ Monitors software usage and trends as applicable
- ▶ Provides reporting for inventory and consumption

## ■ Tivoli Asset Discovery for z/OS

- ▶ Provides discovery and identification services for the z/OS platform
- ▶ Monitors software usage and trends
- ▶ Provides reporting for inventory and usage

## ■ Software Knowledge Base Tool

- ▶ A collection of information about software products, their components, dependencies between them and the means to discover them
- ▶ Shared component that is used by all related IBM products

Tivoli Asset Management for IT

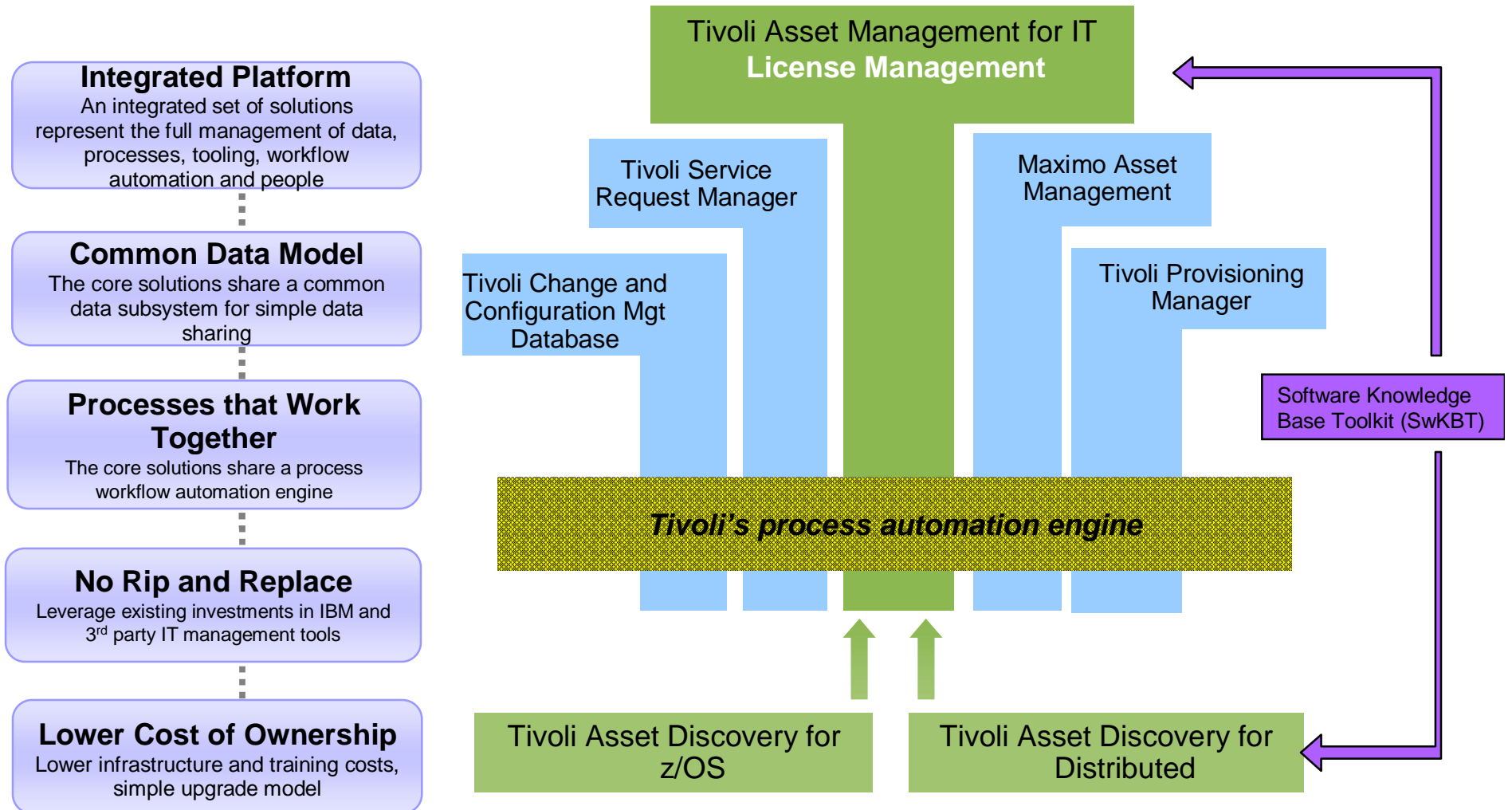
Tivoli Asset  
Discovery for  
Distributed

Tivoli Asset  
Discovery for  
z/OS





# ITAM Portfolio - Architectural Overview





## Tivoli Asset Discovery for distributed 7.2

### *Discover - Analyze - Report*

- Discovers detailed information on installed hardware, software, and software use for distributed platforms
- Provides IBM approved sub-capacity processor value unit (PVU) reports for IBM software suitable for capacity analysis, PVU audit preparation, and PVU audit reporting
- Delivers flexible options for software use monitoring including 'Last Used', 'Summary and Trend', and 'Details' which provides all software use information
- Extensive IBM and third party software catalog spanning multiple platforms
- Chargeable component of Tivoli Asset Management for IT 7.2 used as a source of inventory data



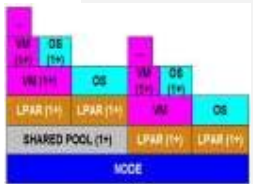
# Introduction - Product Highlights

## TAD4D Features



### Architecture and Installation

- Two tier architecture
- Native install packages for agents
- Scalable installation options to suit client's environment



### Virtualization Technology Support

- Expansive operating system and partitioning technology support
- New x86 virtualization sub capacity counting rules
- Expanded VMware support (VMotion, VMware clusters, ESX, ESXi)
- Expanded POWER support (MSP, SDP, WPAR, LPAR and WPAR mobility)



### Integration and Extension

- Export discovered data into Tivoli Asset Management for IT 7.2
- Integrated family software catalog provided by the Software Knowledge Base Toolkit
- Export collected data into Tivoli Common Reporting for custom reports

TAD4D only  
TAD4D only  
TAD4D only



### Usability

- Tabbed panels, Hourglass Time Indicators, etc.
- Improved work flows
- Dashboard Home panel view for quick assessment of infrastructure health



# Tivoli IT Asset Lifecycle Management

*Visibility and Control over Assets and their Impact to the Business*

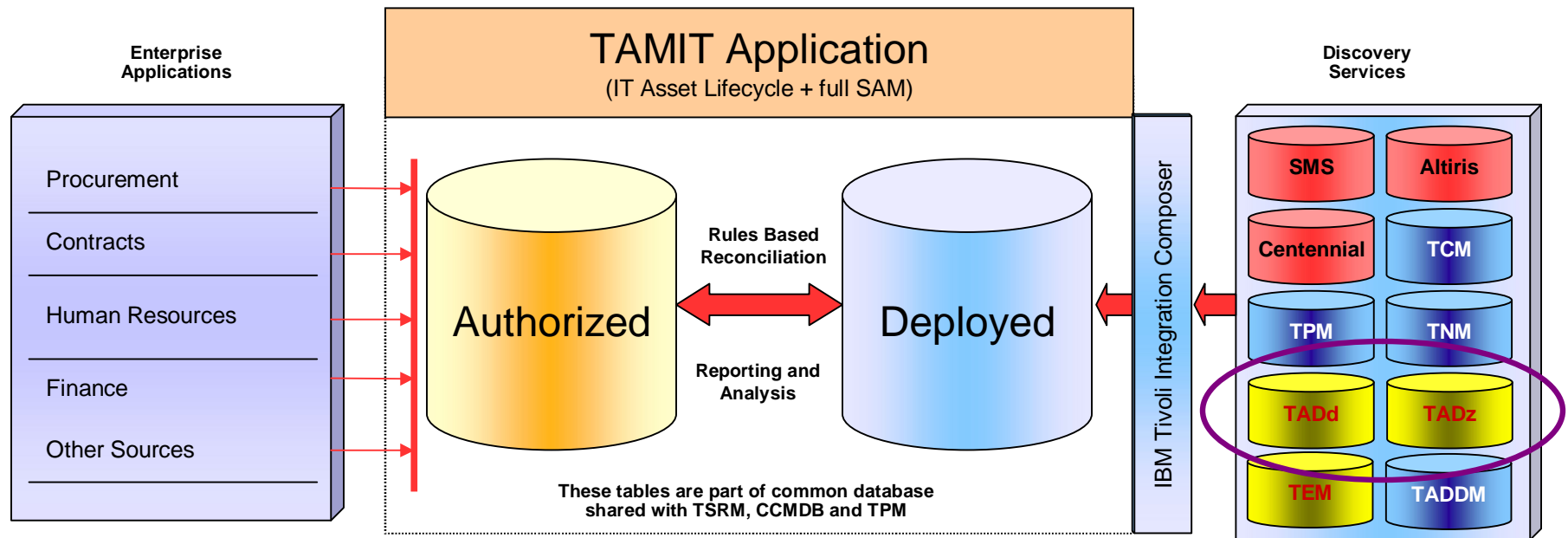


## IT Assets in Operational or Productive Use

- |  |  |  |  |   |
|--|--|--|--|---|
| <ul style="list-style-type: none"><li>▪ Align IT to corporate strategy</li><li>▪ Plan technology for new initiatives</li><li>▪ Plan technology refresh</li><li>▪ Plan for asset purchase or lease</li><li>▪ Negotiate vendor contracts</li><li>▪ Check inventory and plan for asset reuse</li><li>▪ Determine asset reliability</li><li>▪ Support IT budgeting</li><li>▪ Determine license reuse</li></ul> | <ul style="list-style-type: none"><li>▪ Negotiate agreements to maximize value</li><li>▪ Manage contracts with vendors</li><li>▪ Procurement</li><li>▪ Approvals of PRs and POs</li><li>▪ Receive assets</li><li>▪ Validate invoices against POs and contracts</li><li>▪ Manage hardware leases</li><li>▪ Line of Business support</li></ul> | <ul style="list-style-type: none"><li>▪ Processes to ensure standardized ROI</li><li>▪ Creation of assets via procurement, inventory or vendor data</li><li>▪ Create license entitlements</li><li>▪ Asset assignment</li><li>▪ Asset tracking</li><li>▪ Notification of asset receipt to end user</li><li>▪ Built-in tools to add asset attributes based on Asset Type</li><li>▪ Create deployment service tickets with Tivoli Service Request Manager</li></ul> | <ul style="list-style-type: none"><li>▪ Enhance productivity and satisfaction with support infrastructure and process</li><li>▪ Standard Install, Move, Add, Change (IMAC)</li><li>▪ Asset reconciliation</li><li>▪ Risk assessment</li><li>▪ Software license compliance &amp; audit readiness</li><li>▪ Govern changes &amp; control configurations</li><li>▪ Track warranty and contract renewals</li></ul> | <ul style="list-style-type: none"><li>▪ Provide for orderly disposition of assets: disposed, auctioned, donated and employee purchase</li><li>▪ Manage end of life</li><li>▪ Track end of life options</li><li>▪ Adhere to regulatory requirements</li><li>▪ Manage disposed assets</li><li>▪ Reallocate un(der) utilized assets</li><li>▪ Provide finance with accurate end of life data</li></ul> |
|--|--|--|--|---|



# Tivoli Asset Management for IT



## Authorized Entitlements

- Authorized assets and Licenses are the inventory of record
- They are populated via the procurement process and other business processes
- Assets/Software may or may not be deployed and are central to managing purchases, leases, warranties, service agreements, stockrooms and more.

## Out of the Box Reconciliation

- Linkage based on unique attribute(s), like serial number
- Identification of 'authorized' Assets missing in Deployed Asset Inventory
- Identification of Deployed Assets missing in 'authorized' Asset Inventory
- Comparison of attributes/specifications



# Reports – 150+ Delivered

### SLA Details

1003: IT Email - Respond 2 hrs, Resolve 4 hrs.

Status	ACTIVE	Vendor		Start Date	8/9/04
Applies To	INCIDENT	Service Group	IT	End Date	8/12/06
Type	CUSTOMER	Service	EMAIL	Review Date	8/12/05
Ranking	50	Organization	EAGLENS	SLA Admin	NEWTON
Classification		Site	BEDFORD	Customer Vendor	Contact

**Comments**

Comment	Replied
1003	Replied
1006	Replied

**Assets, Locations, and Asset Types**

Asset	Location	Asset Type

**Supporting SLAs**

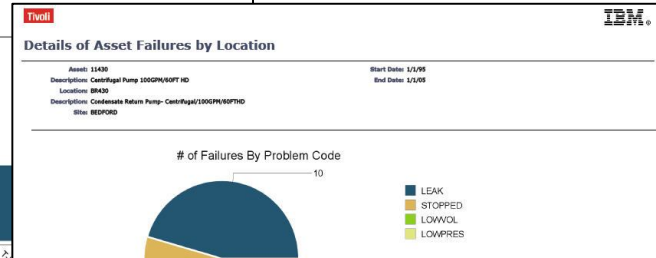
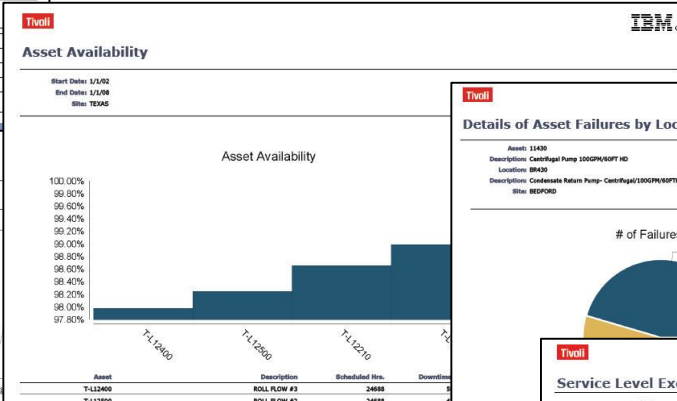
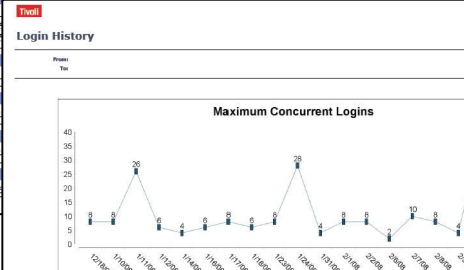
SLA	Description

**SLAs that current SLA Supports**

SLA	Description

**KPIs**

KPI	Check



### Assignment Manager Monthly Format

Laborer: BARRY, Month: JANUARY, Year: 2006

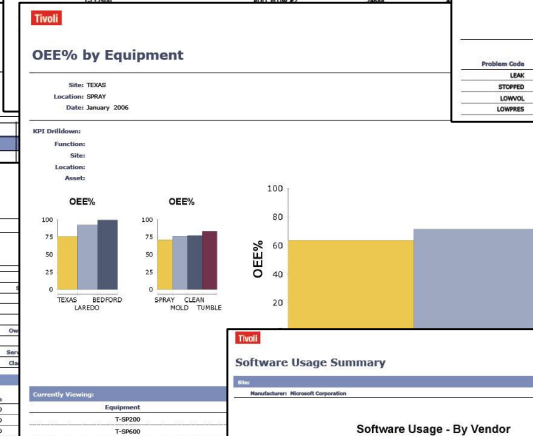
Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2	3	4
		6			
		12			
		20			
		27			

8:39 AM 1000 Release, 7:00 AM 1000 Release

### Work Order Details

Asset: 12289, Location: BR090PG, Site: BEDFORD

Sched Start	Sched Finish	Target Start	Target Finish	Actual Start	Actual Finish	Report Date	Reported By
		12/31/06	12/31/06			12/31/06	Joe Jones



### Service Level Exception

SLA: 1001, Applies To: INCIDENT, Status: ACTIVE, Service Group: IT, Date From: , Description: IT Generic P1 - Respond in 30 mins, Resolve in 2 hrs.

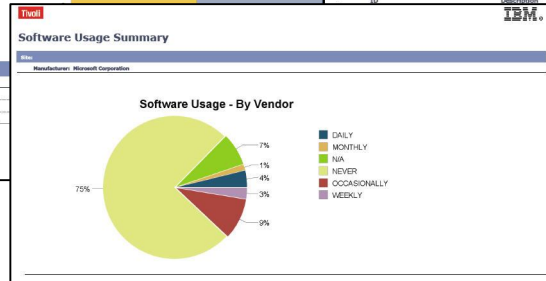
Performance	# of Times SLA Applied within Time Frame	# of Times Commitments Met	# of Times Commitments were Violated	% of Compliance	% of Violations
	3	3	0	100%	0%

### Tickets

ID	Description	Type	Status	Classification	Contact Violation	Response Violation	Resolution Violation
1049	Failure when connecting to Moon Server	INCIDENT	RESOLVED	End User Issue \ Network \ Connection	N	Y	Y
1050	Error when trying to login to the network	INCIDENT	RESOLVED	End User Issue \ Network \ Connection	N	Y	Y
1051	Error message: Can't login to the network	INCIDENT	RESOLVED	End User Issue \ Network \ Connection	N	Y	Y

### Resolution Commitment

ID	Description	Status	Classification	Target Response	Actual Response	Commet	Delta
1049	Failure when connecting to Moon Server	RESOLVED	End User Issue \ Network \ Connection	10/6/04 12:35:58 PM	10/6/04 2:45:00 PM	1:49	
1050	Error when trying to login to the network	RESOLVED	End User Issue \ Network \ Connection	10/6/04 12:37:10 PM	10/6/04 4:30:00 PM	2:33	
1051	Error message: Can't login to the network	RESOLVED	End User Issue \ Network \ Connection	10/6/04 12:38:12 PM	10/6/04 2:20:00 PM	2:12	



### Planned Labor

Task ID	Code	Shift Level	Labor	Vendor	Contract	Qty	Hours	Rate	Unit Cost
MECH	FIRSTCLASS	1				1	1.00	18.50	18.50

Total Planned Labor: 18.50

### Planned Materials

Task ID	Item	Description	Shorthand	Qty	Unit Cost	Unit Cost
GL0VES		Gloves, Disposable Latex	CENTRAL	1	3.52	3.52



## Learn More from SMEs and Websites

- TADz 7.5 documentation

- [http://publib.boulder.ibm.com/infocenter/tivihelp/v29r1/index.jsp?topic=/com.ibm.tad4z.doc\\_7.5/homepage/ic-homepage.html](http://publib.boulder.ibm.com/infocenter/tivihelp/v29r1/index.jsp?topic=/com.ibm.tad4z.doc_7.5/homepage/ic-homepage.html)
- Screen prints for every Analyzer report are in the appendix
  - [http://publib.boulder.ibm.com/infocenter/tivihelp/v29r1/topic/com.ibm.tad4z.doc\\_7.5/r\\_machineinventoryrpt.html](http://publib.boulder.ibm.com/infocenter/tivihelp/v29r1/topic/com.ibm.tad4z.doc_7.5/r_machineinventoryrpt.html)

- IT Asset Management Wiki

- <https://w3.tap.ibm.com/w3ki07/display/IBMSM/IT+Asset+Management>



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