



Avelyn

ICT Products and Services



Cost saving without pain for GSE zWerkgroep

Leen van Toor

Vianen, 15 april 2010





Avelyn

ICT Products and Services



Agenda

- **Introduction**
- IBM strategic scenario's
- Mainframe pricing
- How can Avelyn soften the pain?
 - zPrice Manager
 - IRS for DB2
 - DSPC
- Questions



Avelyn

ICT Products and Services



Avelyn a new company!

In the ICT market where a big pressure exists on management to cut costs, Avelyn provides the means to do so.

Avelyn's products and services are

- cost saving
- high quality
- green



Avelyn

ICT Products and Services



Partners

A software company can not work without partners, simple, because the demand is volatile in a qualitative and quantitative way. Avelyn is in close partnership with



DATA BASE
solutions AG

Matter of Fact Software

KRUSCHE & COMPANY



Avelyn

ICT Products and Services



Focus

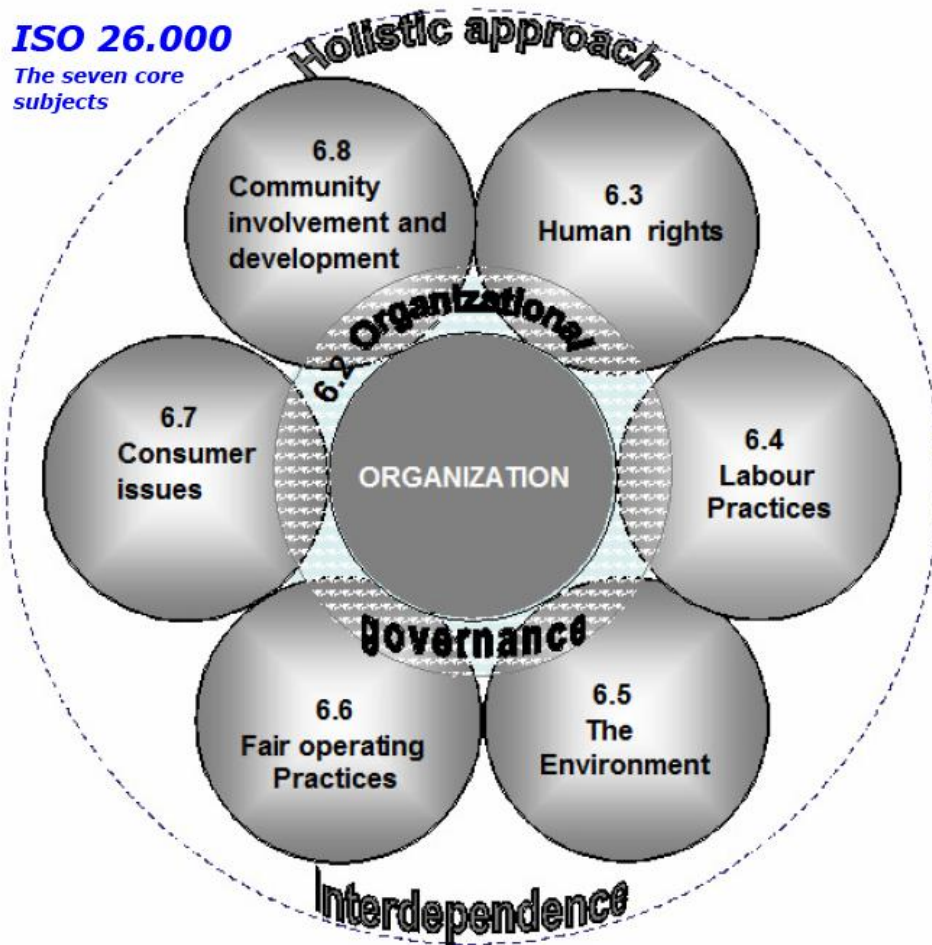
Avelyn's products and services are fit for large and very large organisations, like banks, insurance-, facilities-, telco-, energy- and automotive companies, and (international) government. Avelyn brings these products and services to you with

- no nonsense





ISO 26.000 A new guideline for social behavior of companies



Avelyn
complies to
this standard

and works
on certification



Avelyn

ICT Products and Services

Services

- **project services**
leading or running complete projects
- **managed services**
operational and adaptive software maintenance
- **professional services**
the right person on the right spot

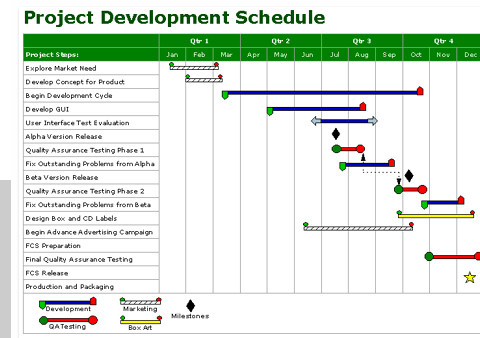




Project services

Project services solves capacity issues and gives the opportunity to outsource the complete cycle for software development.

- project can be executed on- or off site
- quick start-up with functional specifications
- functional- and technical synchronization meetings
- weekly progress reports
- fixed price is an option





Avelyn

ICT Products and Services

Managed services

Managed services relieves you from a complete business task. Authorise and assign responsibility for specific business processes and get relieved from the pressure.

- business process can be executed on- or off site
- quick start-up with specification of deliverables
- functional- and technical synchronization meetings
- weekly production reports
- pricing based on time and material is an option





Professional services

Professional services solves temporary capacity- and quality shortages in your IT and project department. Professional and skilled people who worked at many different sites are available on short notice and can add value to your enterprise.



- consultant (data storage, network, architecture, security, connectivity)
- project manager / leader
- business analyst
- analyst / programmer
- architect
- itil manager(s)



Avelyn

ICT Products and Services



Products

Avelyn's current product list is related to



DSPC



- mainframe
- middle tier
- network
- workplace



IRS for DB2

zPrice Manager



riverbed Think fast.®

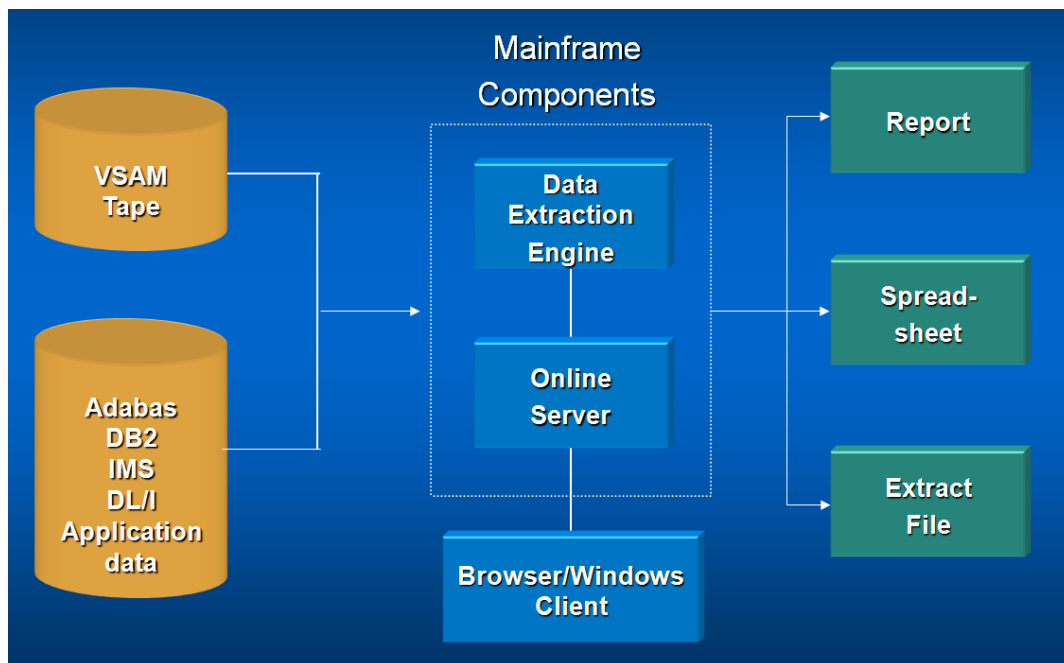
FUJITSU





Mainframe products

Decision Analyzer® – makes DB2, IMS and ADABAS data for users available Enables users to work directly and secure with mainframe data



- Decision Analyzer enables users to select and analyze life data residing on mainframe in a safe way
- Decision Analyzer provides online reports, extract files and fully functional spreadsheets
- Decision Analyzer is wizard aided to help end users to select, download and analyze mainframe data in a simple way



Mainframe products

PlexSpy – CICS application status monitor To give you instantly the information needed for helpdesk and CICS support

PlexSpy Application Status Monitor

MFICPLX2 - 19/09/2009 10:37:39

CICSPlex Region View

CICSPLEX: TESTPLEX

CICSName	SYSID	Jobname	Applid	MVSSysid	CICS Status	Startup	CURRTASKS	MAXTRCNT	MAXTask Now	SOS Count	SOSStatus	Total Tasks
CICXMF20	PF20	CICXMF20	CICXMF20	S0W1	ACTIVE	INITIAL	00000003	00000000	NO	0	NOTSOS	00003476
CICXMF21	PF21	CICXMF21	CICXMF21	S0W1	ACTIVE	INITIAL	00000004	00000000	NO	0	NOTSOS	00003952

© Copyright 2009 Matter of Fact Software
All rights reserved

- PlexSpy provides a browser interface to monitor the important CICS Application resources
- PlexSpy saves Helpdesk and Specialist resources to investigate complex CICS related issues
- PlexSpy is fully configurable to tune in to the specialists information needs
- PlexSpy speeds up the troubleshooting process for your business critical applications



Avelyn

ICT Products and Services

Middleware products

Decision Centric® – Business Intelligence for less money BI directly from the source data delivers you more reliable information for tactical decisions

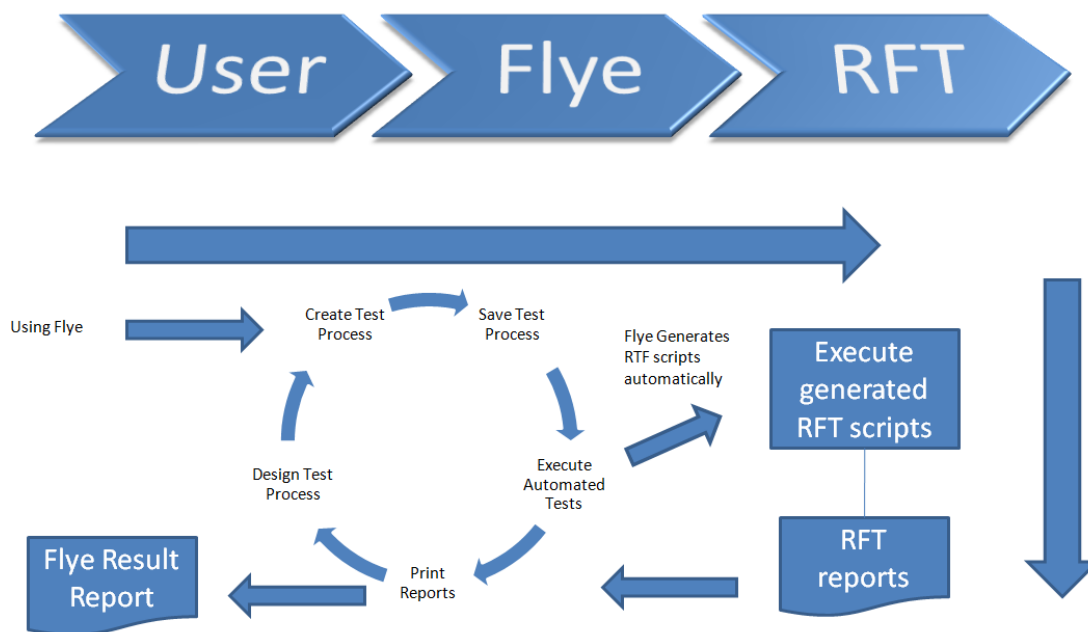


- Decision Centric provides Enterprise Information Integration (EII) based on Data Federation principles
- Decision Centric makes Business Intelligence real time and easy to use and maintain by simple interfaces
- Decision Centric supports cloud computing philosophy
- Decision Centric is very cheap in comparison with the popular BI tools



Middleware products

FLYe – the best assistant in automated test areas No test specialists required anymore for running automated tests, the functional owner is now able to do it himself



- FLYe makes creation and maintenance of Automated test script easy.
 - FLYe saves you to hire Automated test specialists
 - FLYe generates test reports which comply to the requirements and test cases defined.
 - FLYe will work with other than RFT
- Q4 2010.



Avelyn

ICT Products and Services



Network products

Riverbed/Steelhead appliances – WAN optimization at last

Save bandwidth and improve application response times which makes end-users smile

Alstom Power saved about \$3 Million dollars over three years by avoiding server refreshes and bandwidth upgrades. WAN optimization made this possible – with a low 6-month payback period.



riverbed® Think fast.®

- Riverbed/Steelhead appliances saves you upgrades of bandwidth of your WAN connections
- Riverbed/Steelhead appliances improves application performance of all users at a remote location
- Riverbed/Steelhead appliances saves you money instantly, without configuring. Further tuning is an option.



Avelyn

ICT Products and Services

Hardware products

Fujitsu hardware – reliable, well serviced, design and ‘green’
High quality pc’s, servers and laptops



- Fujitsu enables you to work with reliable hardware and fantastic warrantee
- Fujitsu is able to deliver tailor made solutions in high quantity in a short period of time.
- Fujitsu hardware is developed with a clean and proper use of our environment in mind.
- Fujitsu equipment is compact, robust and has style



Avelyn

ICT Products and Services

Why choose for Avelyn?

Avelyn provides Products and Services which are helpful for middle large and large organizations. Avelyn works with high quality partners. Avelyn is exclusive reseller for a number of products mentioned (in Benelux). Avelyn is able to provide you with fixed price project and managed services. Avelyn works as environmental friendly as possible. Avelyn is focused on cost saving for the customer. Avelyn is lead by an experienced ICT professional.

Leen van Toor
director

L.van.toor@avelyn.nl

www.avelyn.nl





Agenda

- Introduction
- **IBM strategic scenario's**
- Mainframe pricing
- How can Avelyn soften the pain?
 - zPrice Manager
 - IRS for DB2
 - DSPC
- Questions



Avelyn

ICT Products and Services

IBM strategic scenario's a personal view

Base mission of every company is to stay successful grow and generate more value for stockholders.

Base policy

- Blow with the winds of change and be ahead of it
- Continue to stay no.1 'partner' of global top 3000 companies
- Keep brand value very high (fight potential competitors)





IBM strategic scenario's

Strategic scenario's are dependend of the calculated risks and unexpected changes and innovations taking place.

Calculated Risks

- Intels new mainframe processor
- Microsofts mainframe conversion programme
- Google's secure cloud computing solution
- US new law forbids billion dollar companies

Unexpected changes and innovation

- Geo-political-financial crashes
- New faster mainframe technology patented by others
- ?



Avelyn

ICT Products and Services

IBM strategic scenario's

Scenario 1 Business as usual.

Risks under control

No unexpected changes and innovations harming

Policy: stay with your strengths

- continue mitigating risks
- innovate as usual
- keep focus on MF (cash cow), Rational (?) and Consultancy (star)





IBM strategic scenario's

Scenario 2 Microsoft's mainframe conversion programme.

Risks NOT (!) under control

No unexpected changes and innovations harming

Policy: fight Microsoft or fight and give up

- when is the break even point met for giving up the fight?
- innovate as much as possible and bring to the market asap
- focus on MF (dog?), Rational and Consultancy





IBM strategic scenario's

Scenario 3 New faster mainframe technology patented by others.

Risks under control

Unexpected changes and innovations harming (!)

Policy: damage control

- try to buy (them out)
- try to keep customers on mainframe as long as possible
- focus on Rational and Consultancy





IBM strategic scenario's



IBM's base mainframe mission

Stay in cash cow position!

Eminent risk.

Small and mid sized mf companies tend to migrate to other platforms because of technology, expertise and price.



Mainframe policy: keep customers connected and satisfied

- use monopoly, customer is used to high prices, introduce new price plans and make mf (cosmetic) cheaper with special engines
- make package deals, mainframe h/s + consultancy
- take control with 'datacenter in a box' approach.
- focus on innovation (hard and software), PR, and webify



Avelyn

ICT Products and Services



Your direction?



Questions to ask

How large is your site?

< 500 msu

Which percentage IT personnel is working on mainframe environments?

< 30%

Which percentage of new developments is mainframe oriented?

< 50%

And, what is the trend?

More developments without mf



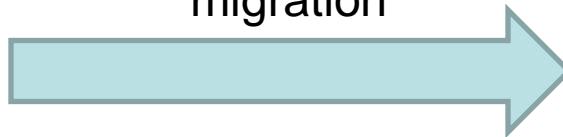
Avelyn

ICT Products and Services

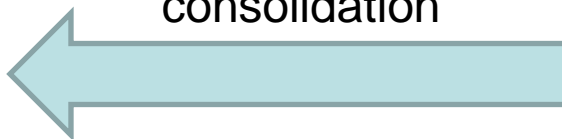


Your (company's) direction?

migration



consolidation





Agenda

- Introduction
- IBM strategic scenario's
- **Mainframe pricing**
- How can Avelyn soften the pain?
 - zPrice Manager
 - IRS for DB2
 - DSPC
- Questions



Mainframe pricing



ESSO

Global annual agreement for all products and services

Hardware lease, consultancy and vWLC is part of this agreement with specific pricing per msu.

VWLC = Variable Workload Licence Charging

Total and Sub-capacity Software licence costs are based on actual usage, but calculated on a 4 hour rolling average. If you use more than is agreed during the month, you pay the extra msu's used. (not budgeted costs)

Licencing on (total) capacity

Traditional agreement based on the power of the CP's

CP's and speciality engines

Need to be bought or leased



Variable Workload Licence Charging (VWLC)

- Full Capacity WLC
 - Charges are based upon the total installed capacity where each vWLC product runs

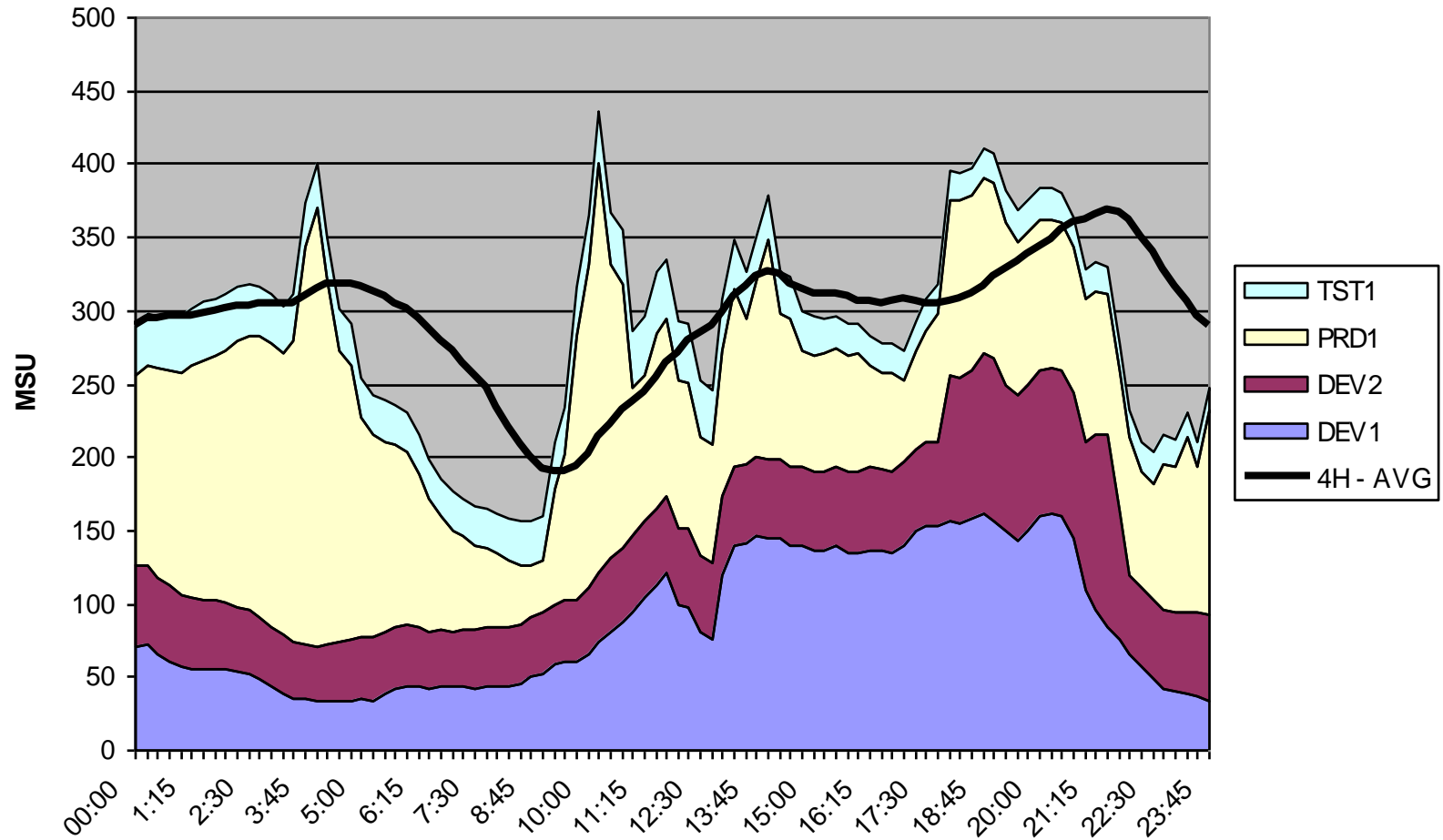
- Subcapacity WLC
 - Useful separation of hardware and software pricing
 - Charges are based on the usage of the LPAR or LPARs where a vWLC product runs
 - The monthly licence charge is based upon the top ,4 hour rolling average‘



Avelyn

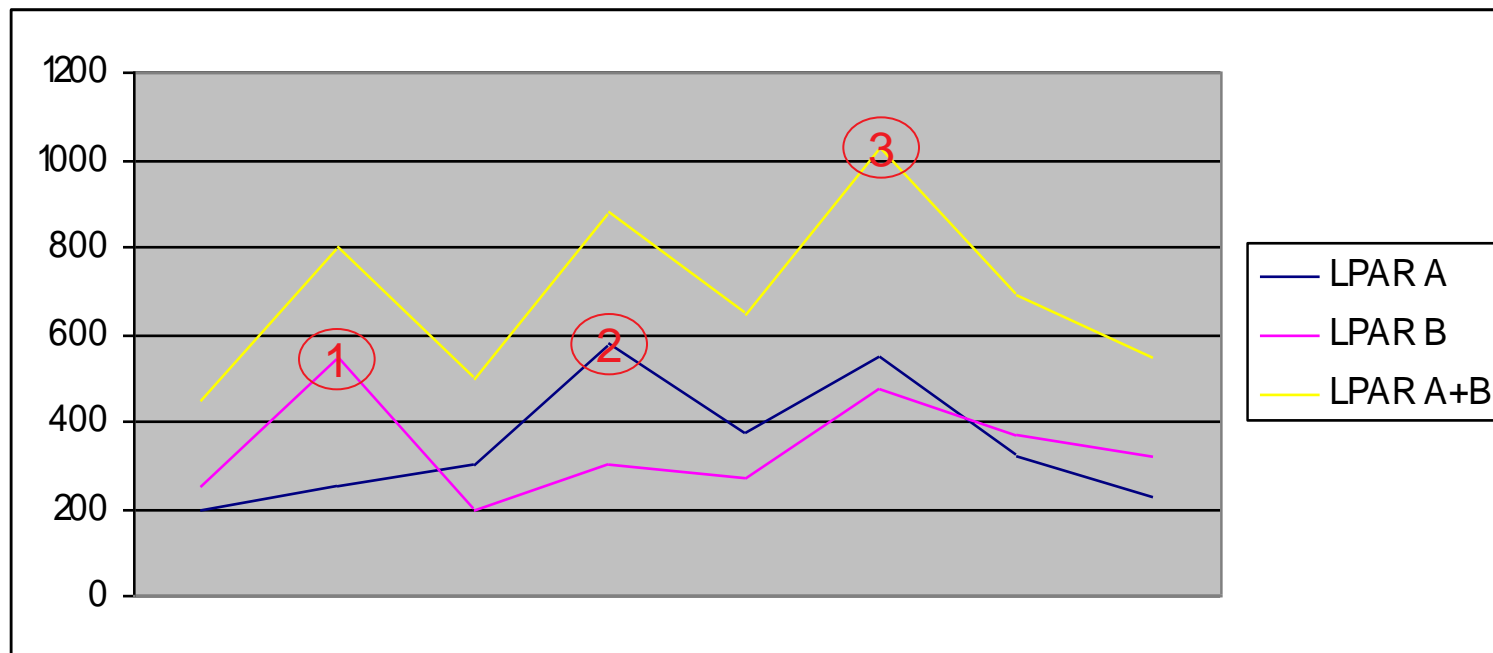
ICT Products and Services

VWLC – 4 hour rolling average





VWLC – combined usage



- Software that runs on LPAR A only, will be charged at Peak 2 level
- Software that runs on LPAR B only, will be charged at Peak 1 level
- Software that runs on LPAR A + B, will be charged at Peak 3 level



Mainframe customers change to VWLC because they want:

- Cost control, combined with maximum computing capacity
- To spread out costs over a period of time
- To use non peak time 'white space' during short peak periods
- To use the newest hardware, offering the best value for the money
- To reduce or at least stabilize the mainframe budget and to make (long term) mainframe costs more predictable



Cost trap Variable Workload Licence Charging (VWLC)

Why is Sub Capacity WLC often more expensive than predicted and budgeted?

- Lack of communication / lack of experience
- The monthly invoice is not transparent
- Lack of automated real time 24/7 monitoring and lack of automated reactions in case of exceptions



Disadvantages of VWLC

- Needs close permanent control to avoid unnecessary peak costs
- Small mistakes can cost substantial amounts of money
- WLM aims at permanent full usage of the available capacity of the LPARs, but that is not in the interest of low monthly invoices
- Workload needs to be balanced out to avoid unnecessary peaks: during (usage) peak periods that are money critical, *only* time critical workload should run.
- Dividing workload into time critical, less time critical and not time critical can be difficult, because all users believe their work is always time critical!



Disadvantages of VWLC - continued

- It is complicated to *optimally* translate the economic terms of a contract into LPAR definitions and software spread that minimize the monthly invoice: Defining the optimal system architecture requires lots of **contract interpretation**, combined with **technical experience**
- The optimal system architecture is likely to change when the workload shifts
- The (SMF based) billing process is “not very transparent” (SCRT Report)
- Controlling the monthly invoice means that controlling and sysprog have to sit together monthly



Generally available control mechanism for WLC

WLC control mechanisms are rudimentary and inflexible:

- limitation of number of physical CPUs
- limitation of average 4 hour usage (soft capping) per LPAR or per group
- limitation of maximum usage (hard capping) per LPAR or per group
- no dynamic MSU settings
 - once capped, MSU values are frozen and cannot be reset
- no automatic alerting



Agenda

- Introduction
- IBM strategic scenario's
- Mainframe pricing
- **How can Avelyn soften the pain?**
 - **zPrice Manager**
 - **IRS for DB2**
 - **DSPC**
- Questions



Avelyn

ICT Products and Services



Cost Control in VWLC through **zPrice Manager**



zPrice Manager – The Solution – Accounting

- zPrice Manager shows the combined usage of all LPARs and products real time and stores this information in an internal history data base
- zPrice Manager enables customers to compare the information stored in the historical data base with the monthly license report and enables customers to quickly find out how discrepancies may have been caused
- zPrice Manager lets customers exclude certain time ranges, thus showing the next peaks and enabling customers to reduce their reaction times in case of incorrect consumption reports
- zPrice Manager's historical information can be used as a basis for discussion between controlling, systems programming and IBM



zPrice Manager – The Solution – Monitoring

- zPrice Manager gives permanent, real time information about the actual usage of all defined LPARs
- zPrice Manager warns before a peak is about to be reached
- zPrice Manager has a rules data base and can automatically determine if and where available capacity exist
- zPrice Manager generates WTOs based upon the defined rules. These WTOs can be used in automation products to generate actions
- zPrice Manager enables customers to react and change their environment before everything ,freezes‘ because of group or other capping

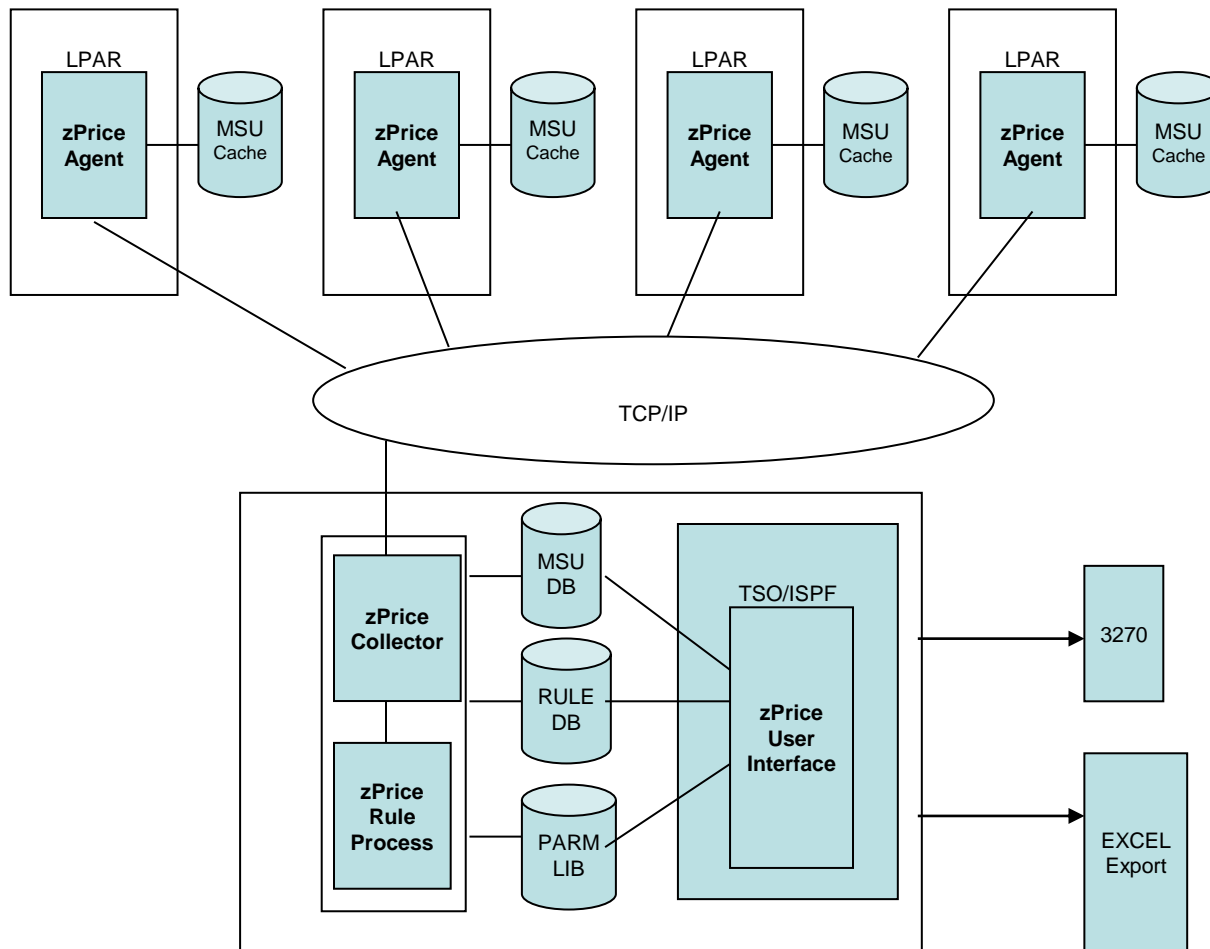


zPrice Manager – Use the information to

- Analyze the system behaviour
- Optimize the system architecture
- Optimize the WLM settings
- Introduce resource capping, avoiding unnecessary capping
- Reconsider the batch run schedules
- Tune peak time applications



zPrice Manager – The Solution – Architectural Overview





zPrice Manager – Functional Overview I

Examples of values that are permanently checked (actual and 4H):

- Product usage
- LPAR usage
- CPC usage
- SYSPLEX usage



zPrice Manager – Functional Overview II

Additional functions:

- Access to HMC via automation software
- Access to WLM resource groups
- SCRT report verification
- Free definition of exclude intervals, including recalculation of usage (what if analysis)
- Redefinition of LPAR groups, including recalculation of usage (what if analysis)
- Free Definition of LPAR Groups



zPrice Manager – Functional Overview III

More additional functions:

- Data Export (CSV Format)
- Through definition of rules:
 - Fixed alarming capability per Product, LPAR, CPC and SYSPLEX
 - Flexible, relative alarming capability per Product, LPAR, CPC and SYSPLEX
- Free definition of alarms thru Rexx Procs, enabling the definition of complex rules
- 5 Min Interval, independent of RMF/CMF
- Toggle between 5 Min and 1 Hr (actual view vs. VWLC view)



Avelyn – Consulting offer

We have extensive consulting experience in:

- Calculating MLC contract capacities
 - „as much as necessary and as little as possible”
- Calculating real OTC costs over time
- Optimizing LPAR/CPC/SYSPLEX layout
- Optimizing rules and definitions for zPrice Manager’s alarm function
- Optimizing capping decisions, avoiding unnecessary capping
- Checking the SCRT report, including forecasting
- Optimizing system settings and system parms (z/OS, CICS, DB2, etc.)

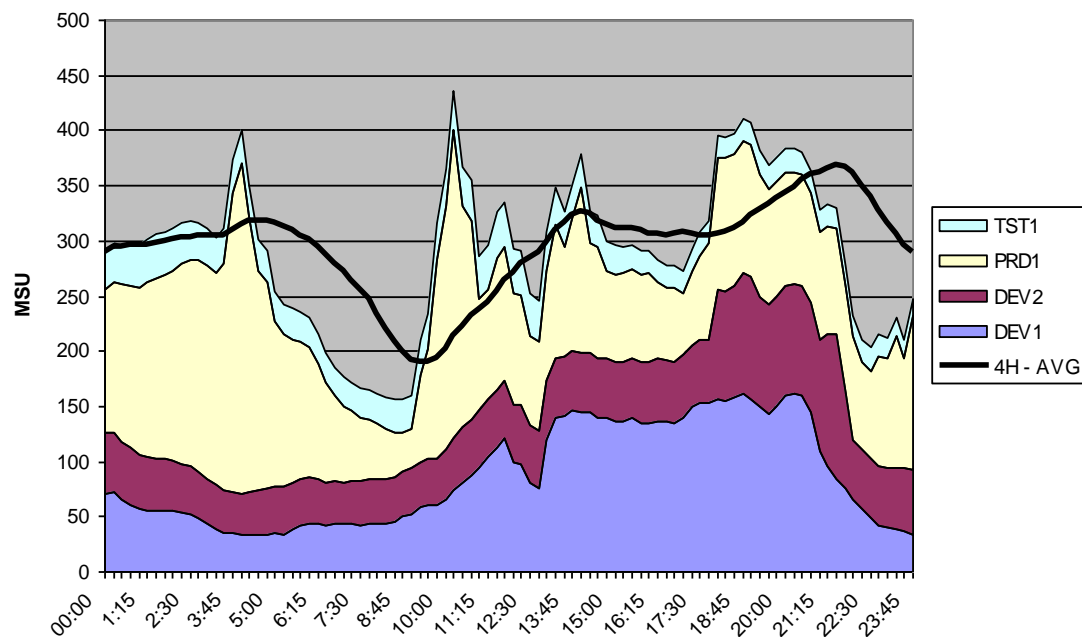


Avelyn

ICT Products and Services

zPrice Manager recap

zPrice Manager® – monitors pricing relevant thresholds for vWLC
Determines the information that is necessary to control vWLC (variable Workload License Charging) in real time.



- zPrice Manager gives permanent, real time information about the actual usage of all defined LPARs
- zPrice Manager warns before a peak is about to be reached
- zPrice Manager has a rules data base and can automatically determine if and where available capacity exist



Avelyn

ICT Products and Services



Reduce your Mainframe Costs

with

IRS[®] for DB2[®]

Install, Run, Save as easy as 1, 2, 3!

IRS is a registered trademark of Data Base Solutions AG
IBM, DB2, zIIP and z/OS are registered trademarks of International Business Machines Corporation
All other trademarks are trademarks or registered trademarks of their respective owners

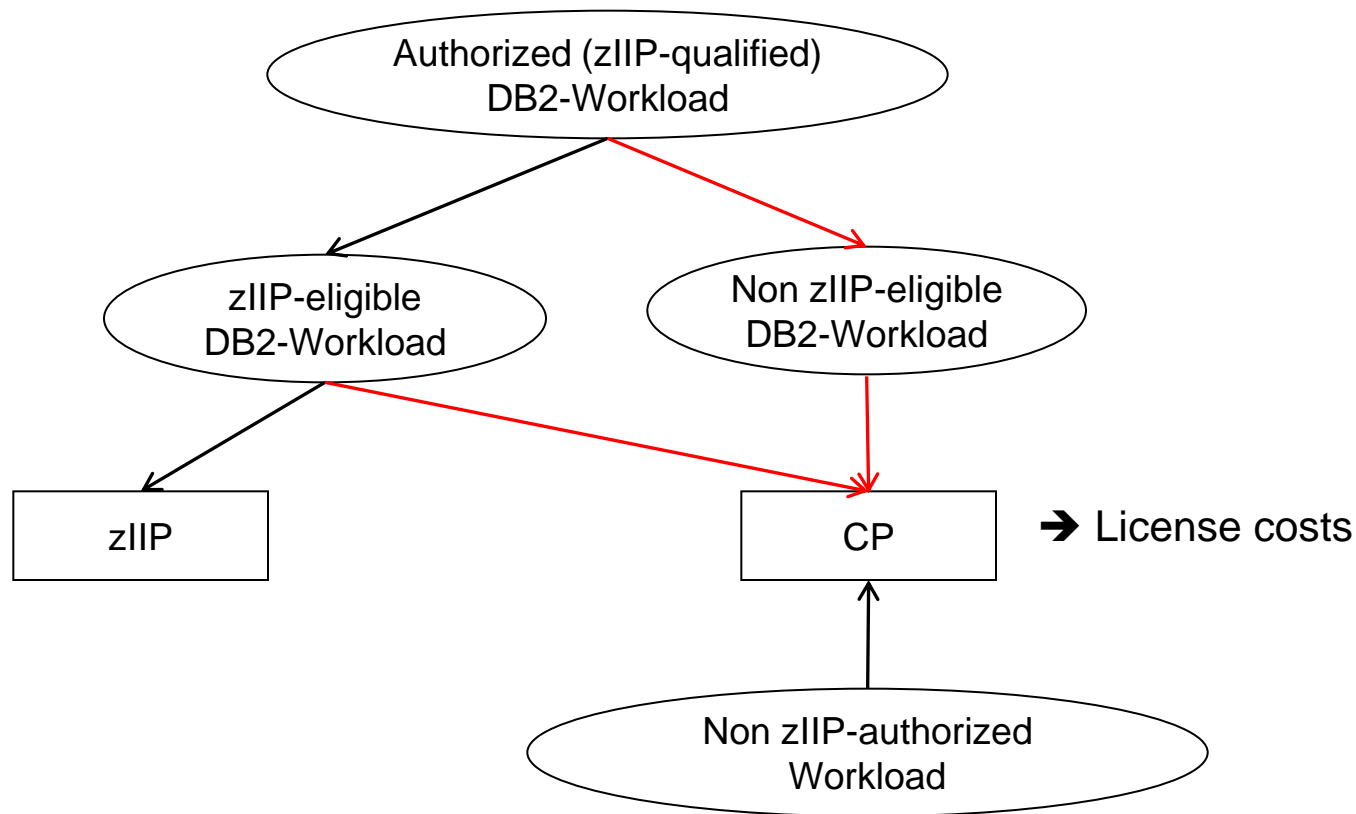


zIIP: System z Integrated Information Processor

- zIIPs are defined as ‘speciality processor’
- ‘zIIP-qualified’ (‘authorized’) DB2-workload:
 - Besides specifically licensed workload, only authorized DB2 workload is allowed
 - Basically that consist of ‘enclave SRB work’
 - z/OS marks the appropriate workload for DRDA-Transactions as authorized (zIIP-qualified)
- ‘zIIP-eligible’ DB2-workload:
 - The part of the zIIP-qualified workload that is marked as zIIP-dispatchable
- zIIP-eligible workload is divided into two different parts:
 - zIIP-eligible workload running on zIIP
 - zIIP-eligible workload overflowing on CP
- The above values can be extracted from the SMF30-Recs

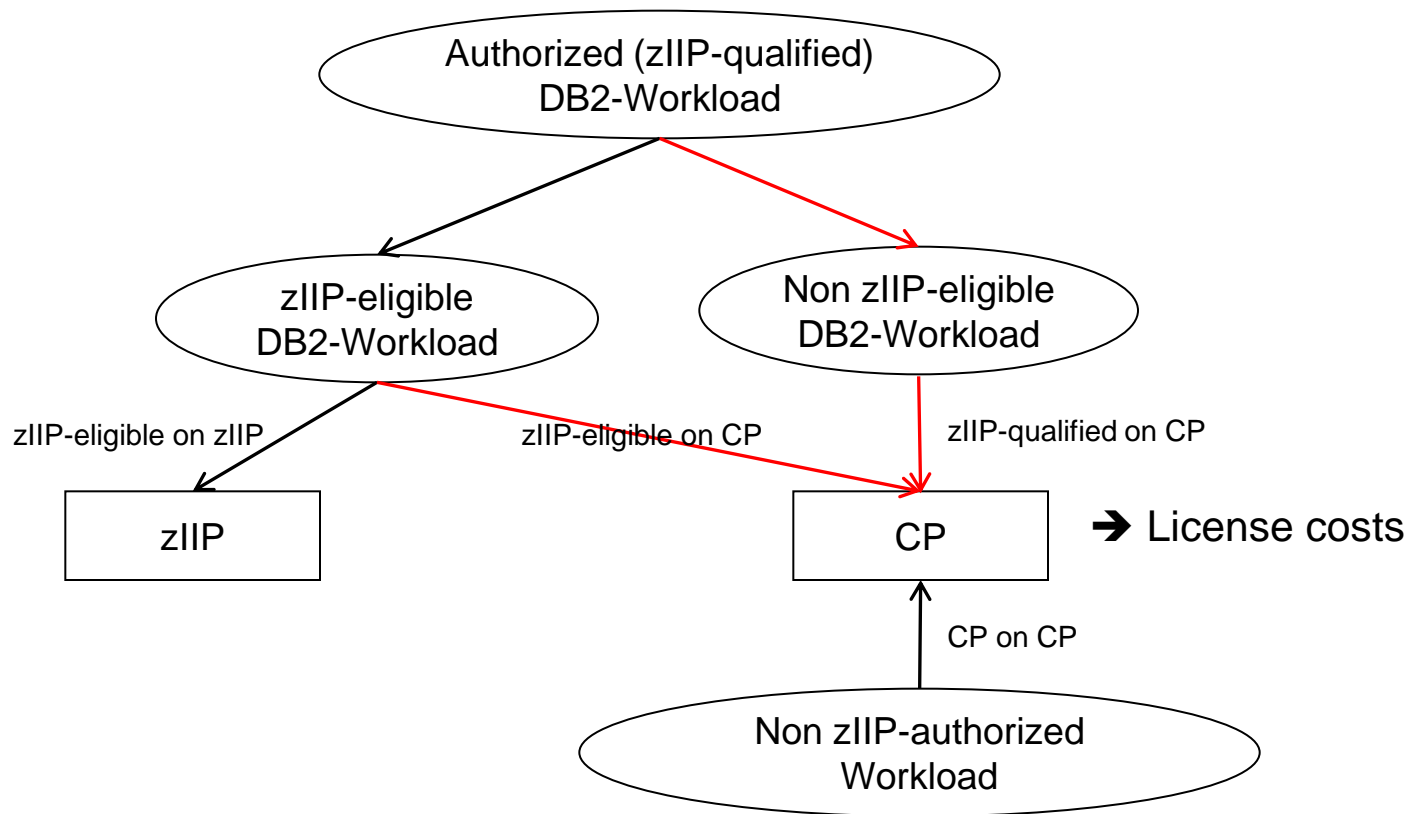


Authorized and zIIP-eligible DB2-Workload



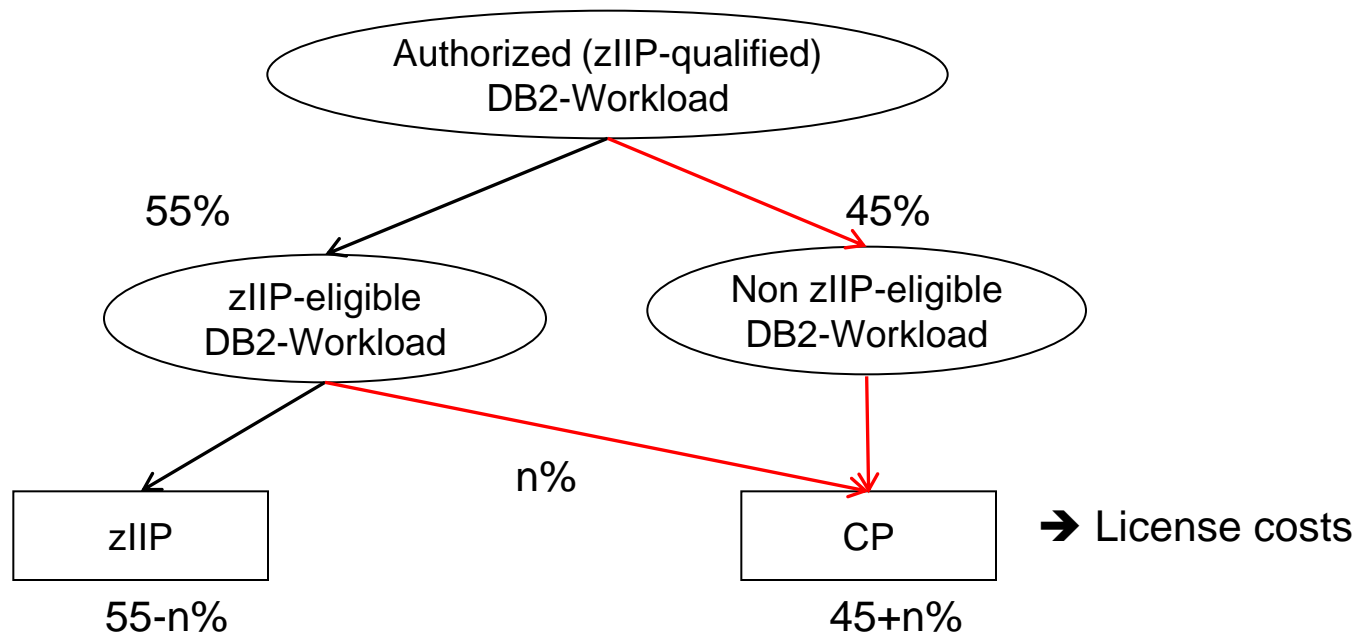


Authorized and zIIP-eligible DB2-Workload





Authorized and zIIP-eligible DB2-Workload



- Our experience: about 55% of the qualified time really runs on zIIP



zIIP-qualified and zIIP-eligible DB2-Workload

TIME	JOBNAME	ZIIP-CP	ENCLAVE ZIIP	ENCLAVE-ZIIP QUAL	BF
12:10	DB01DIST	3,07	286,26	526,06	54,999%
12:25	DB01DIST	2,56	281,79	516,97	55,003%
12:40	DB01DIST	2,30	263,89	483,93	55,006%
12:55	DB01DIST	2,68	269,94	495,51	55,018%
13:10	DB01DIST	2,46	254,38	466,82	55,019%
13:25	DB01DIST	2,21	296,36	542,48	55,038%
13:40	DB01DIST	1,91	243,33	445,82	55,009%
13:55	DB01DIST	2,42	265,45	487,00	55,004%
14:10	DB01DIST	2,25	300,33	549,94	55,021%
14:25	DB01DIST	2,84	334,62	613,55	55,001%
14:40	DB01DIST	3,96	354,18	650,99	55,015%
14:55	DB01DIST	4,70	420,26	772,58	55,005%
15:10	DB01DIST	4,31	415,29	762,76	55,011%
15:25	DB01DIST	3,56	326,68	600,39	55,004%
15:40	DB01DIST	3,44	304,57	559,86	55,016%
15:55	DB01DIST	2,92	291,62	535,41	55,012%



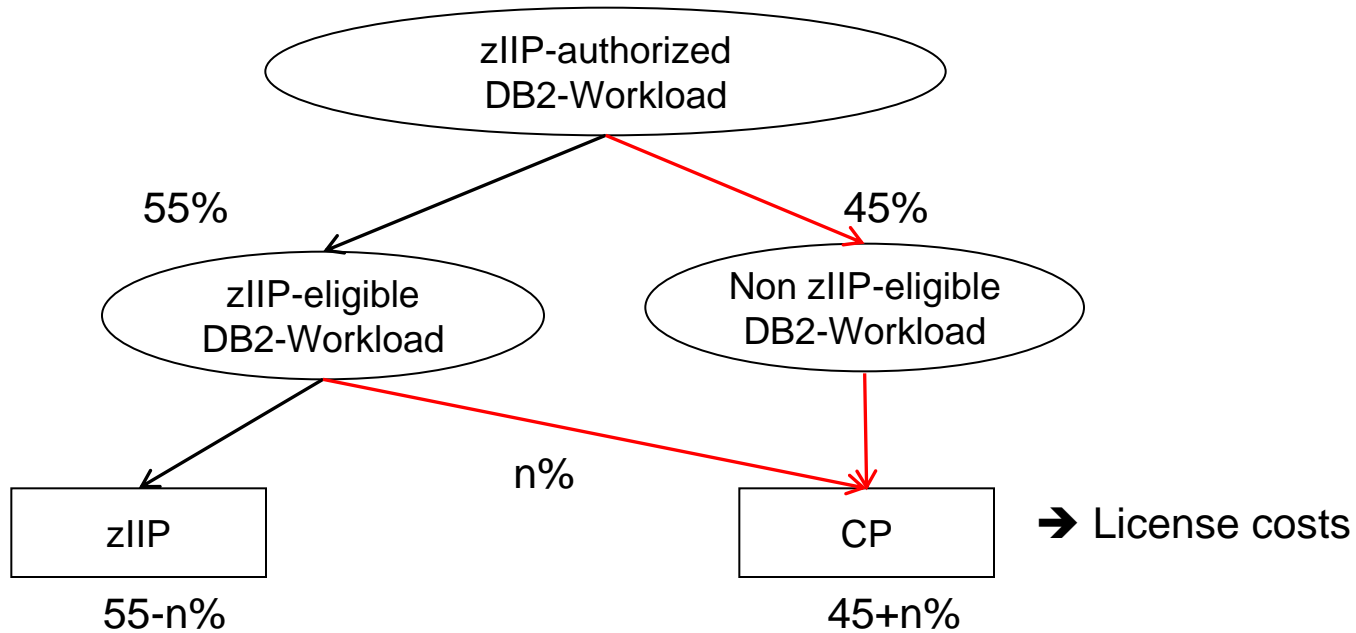
IRS for DB2 – Improved zIIP-usage

- Recognizes zIIP-authorized DB2 workload only(!)
- Improves the balancing factor: more zIIP-authorized DB2 workload runs on zIIPs
- The improved zIIP-usage normally leads to a reduction of licensable MSUs and as a result thereof to a reduction of the monthly license charge

IRS: Install, Run, Save, as easy as 1, 2, 3!

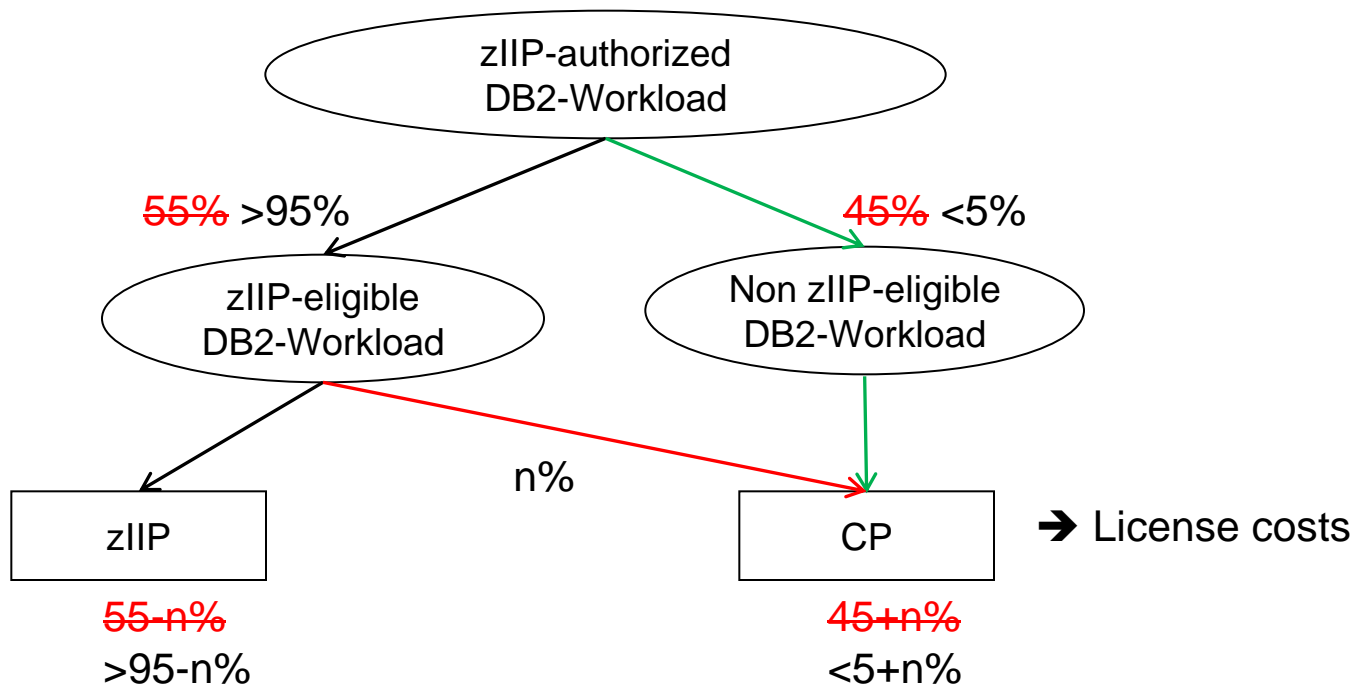


Authorized DB2 workload vs. zIIP-eligible without IRS for DB2



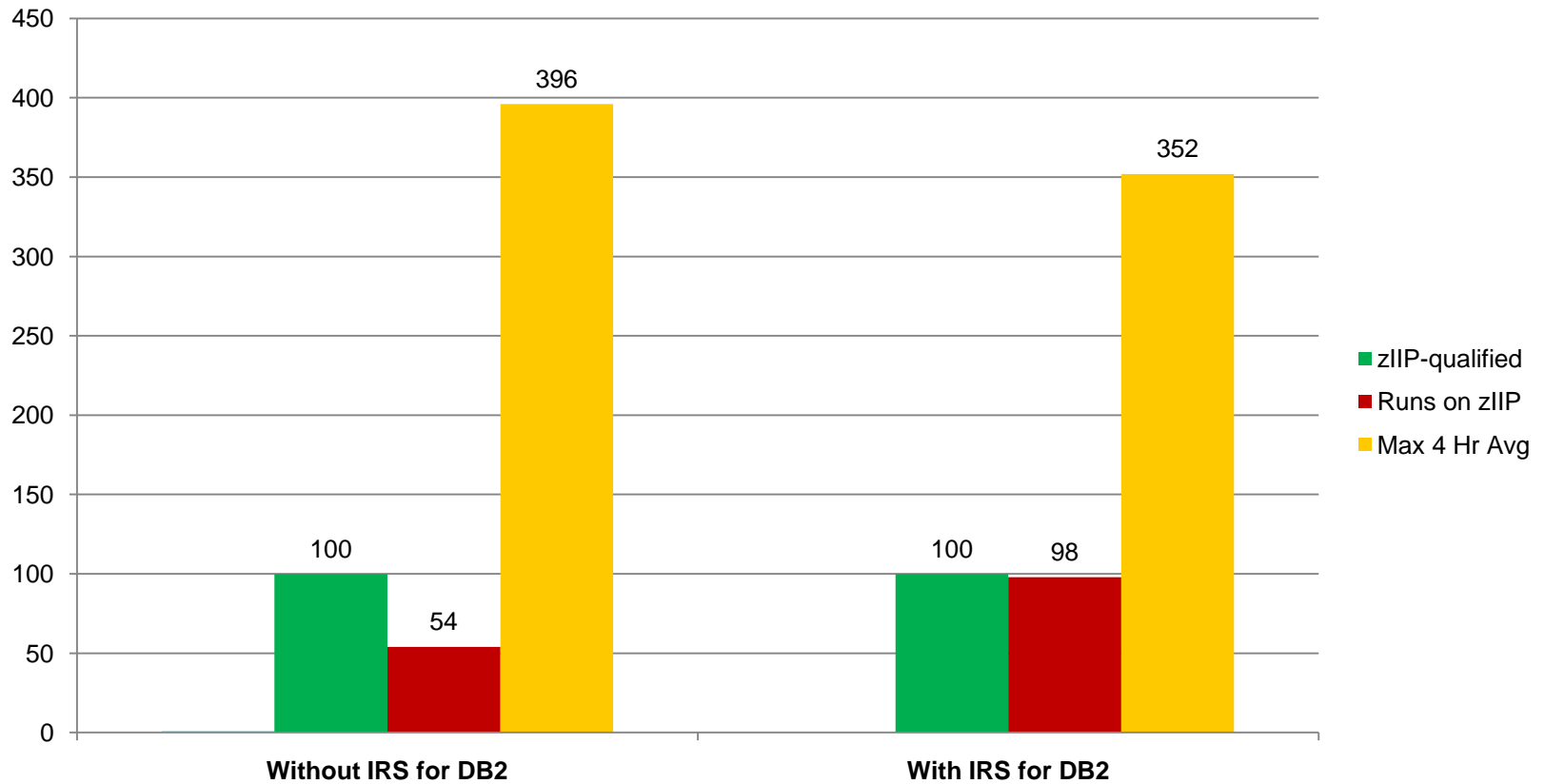


Authorized DB2 workload vs. zIIP-eligible using IRS for DB2





IRS for DB2 – Unload more zIIP-authorized workload onto zIIP





IRS for DB2 – Unload more zIIP-authorized workload onto zIIP

Result – Improved zIIP-usage of (dynamic) DB2 calls on zIIP

- Over 98% of the zIIP-authorized workload is routed to zIIP (default 55%)
- In many environments 80% of the CPU usage is caused by less than 20% of the calls
- It is unpredictable when these costly calls are executed, but ‘Murphy’s Law’ applies
 - IRS for DB2 takes the risk out of zIIP-qualified dynamic SQL ruining your monthly software bill
- Improved zIIP-usage can even lead to financial justification of an additional zIIP

IRS: Install, Run, Save, as easy as 1, 2, 3!



IRS for DB2 – IRS Sample Output

```
19.24.52 348 IEF403I IRSJOB - STARTED - TIME=19.24.52
19.24.53 348 MIRS0100I: IRS V1.4 (C) 2010 DATABASE SOLUTIONS AG
19.24.53 348 MIRS0101I: COMMAND INTERFACE ESTABLISHED
19.25.00 348 MIRS0303I: DSNNDIST: ZIIP TRX DETECTION STARTED
19.25.11 348 MIRS0400I: SUBSYSTEM STATISTICS:
19.25.11 348 MIRS0401I: SUBSYS CP-TIME ZIIP-TIME ZIIP %
19.25.11 348 MIRS0402I: DSNNDIST 1393421 1420677 55.04%
19.25.21 348 MIRS0400I: SUBSYSTEM STATISTICS:
19.25.21 348 MIRS0401I: SUBSYS CP-TIME ZIIP-TIME ZIIP %
19.25.21 348 MIRS0402I: DSNNDIST 1431647 1339953 54.98%
```

→ **Start IRS**

```
19.25.51 348 MIRS0400I: SUBSYSTEM STATISTICS:
19.25.51 348 MIRS0401I: SUBSYS CP-TIME ZIIP-TIME ZIIP %
19.25.51 348 MIRS0402I: DSNNDIST 111421 2478931 98.69%
19.26.00 348 MIRS0400I: SUBSYSTEM STATISTICS:
19.26.00 348 MIRS0401I: SUBSYS CP-TIME ZIIP-TIME ZIIP %
19.26.00 348 MIRS0402I: DSNNDIST 103843 2347951 98.76%
19.26.10 348 MIRS0400I: SUBSYSTEM STATISTICS:
19.26.10 348 MIRS0401I: SUBSYS CP-TIME ZIIP-TIME ZIIP %
19.26.10 348 MIRS0402I: DSNNDIST 103439 2451104 98.95%
```



Avelyn

ICT Products and Services

IRS™ for DB2® – Install Run Save – Easy savings

➤ **Install**

- Download the software
- Change the JCL to run in your environment
- Enter the product key and the names of the DIST regions

➤ **Run**

- Start the STC

➤ **Save**

- Monitor the savings

IRS: Install, Run, Save, as easy as 1, 2, 3!

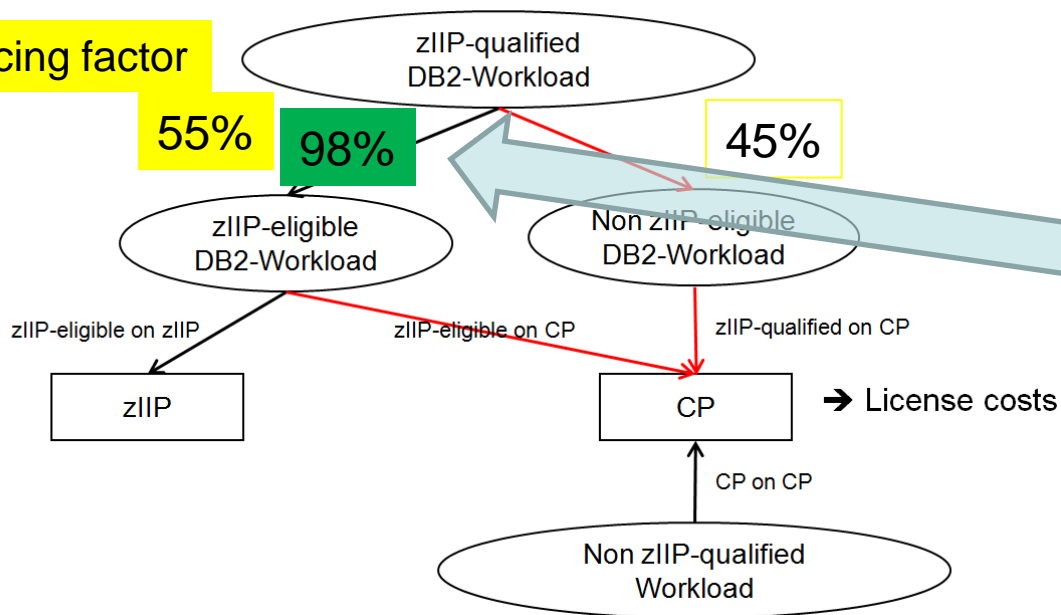


IRS for DB2 recap

IRS for DB2® – analyzes your DB2 CPU consumption

Install Run and Save by optimized (till 95% more) usage of zIIP processors

Balancing factor



➤ Usage of officially described IBM interfaces only

➤ Recognizes zIIP-qualified DB2-workload and causes a improved zIIP-usage

➤ The improved zIIP-usage leads to a reduction of licensable MSUs

➤ IRS™ for DB2® does not touch any non-zIIP-qualified workload



Avelyn

ICT Products and Services



Complete Cost Control in Dynamic SQL through

DSPC[®]



Increasing dynamic SQL workload under DB2

- Standard Software (i.e. ERP Software)
 - Almost all standard software (SAP, Peoplesoft, Oracle) uses some flavor of DB2, mostly using dynamic SQL because of its flexibility
- Multiplatform home-grown applications
 - Many new application run on “non-z” platforms, accessing DB2 through (ODBC, JDBC) by means of dynamic SQL
- Dynamic SQL statements offer high flexibility
 - Run the exact statement at the time it is needed without having to cater for many different possible inquiry combinations



Increasing dynamic SQL performance problems under DB2 I

- Different performance requirements
 - Different platforms have different performance requirements: applications that run with many relational data bases will most likely not run optimal under DB2
 - Programmers often know too little about DB2 performance requirements
- Functionality is the primary focus
 - Resource consumption and performance are secondary, at least until the costs become transparent
- Time To Market
 - No time for performance improvements, because the time to market was fixed and cannot be changed



Increasing dynamic SQL performance problems under DB2 II

- Usage of DB2 code generators
 - Code generators will often not generate the optimal statement and offer little chances of tuning
 - It often takes a considerable time (years!) for Code Generators to use new techniques (like Multi Row Fetch under DB2 V8)
- Standardization: general access modules
 - Usage of “one size fits all” access modules: often all columns of too many rows are accessed, just to avoid having to write a dedicated (but tuned) specific statement
- Insufficient time or inadequate environment for performance testing before the application goes into production



Increasing dynamic SQL performance problems under DB2

Results:

- Service Level Agreements cannot be met or only with major efforts
- Upgrades cannot be deferred, new applications cause new unexpected costs
- Performance issues and software costs on zSeries become unpredictable, incalculable and unmanageable
- DB2 and the mainframe gets the blame!
- Existing and newer applications are moved to supposedly cheaper platforms



Avelyn

ICT Products and Services



Complete Cost Control in Dynamic SQL Through

DSPC[®]

A product of:

DATA BASE
solutions AG



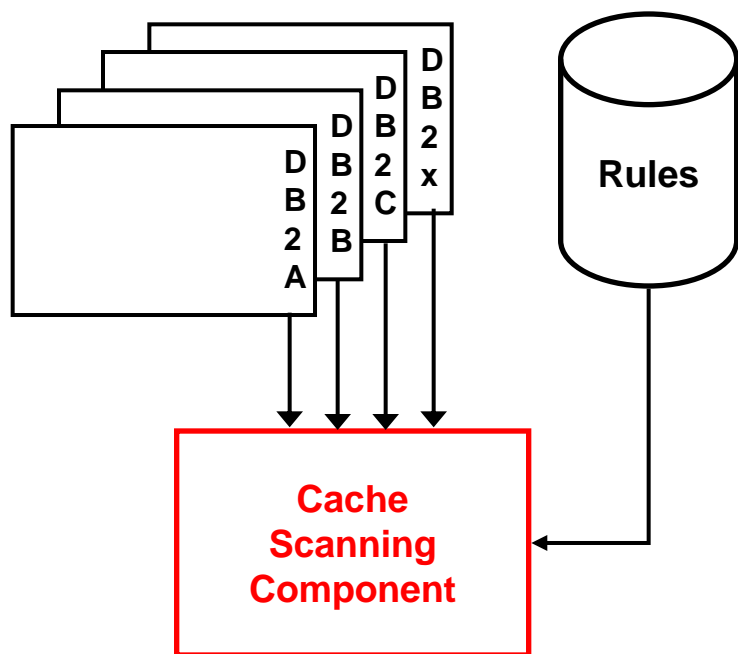


DSPC – The Solution

- Efficient, real-time monitoring all dynamic SQL activities
- Extreme low permanent costs: no extensive trace technology, only Class1 performance trace is used – normally already active for DB2 monitors
- Intuitive and easy to use ISPF interface
- Detailed information about single statements, improving the usage of the statement cache, and much more
- Because of the low overhead it can be used to monitor 24/7
- Specializes on dynamic SQL only, so no other measurement and information overhead: focus on the issue at hand.



DSPC – Functional Overview

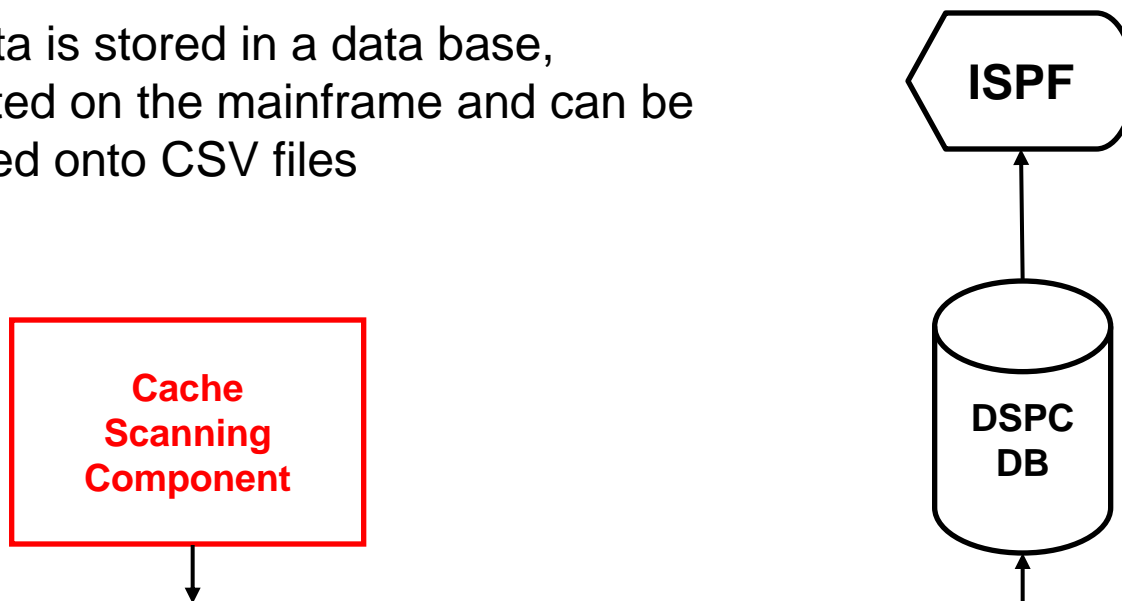


Different DB2 systems are scanned, processed periodically



DSPC – Functional Overview

The data is stored in a data base, presented on the mainframe and can be extracted onto CSV files





DSPC – Data Overview

- Detailed Statement Cache Information

- Per SQL-Statement:
 - Original and ‘normalized’ Statement Text (no literals)
 - Number of executions
 - Per statement total and averages for:
 - Elapsed Time
 - CPU Time
 - Number of getpages
 - Number of rows examined
 - Number of rows processed
 - Number of sorts per statement
 - Number of index scans
 - Number of table space scans
 - Client ID
 - Isolation Level
 - Package Name
 - Wait Information



DSPC – Use the information to

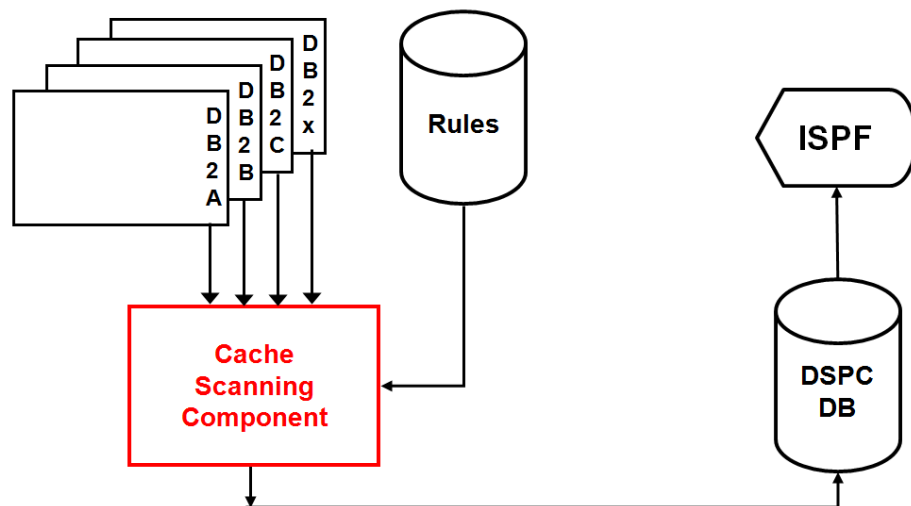
- Analyze the behavior of all dynamic SQL statements on DB2
- Optimize the usage of the statement cache
- Monitor the dynamic DB2 statements without gaps
- Determine the cause of performance problems fast and with minimal overhead
- Reduce the CPU usage of dynamic SQL statement fast
- Determine if statements show decreased performance over time
- Enable end users to find out the impact of their statements on performance



DSPC recap

Dynamic SQL Performance Control (DSPC®) – analyzes your DB2 CPU consumption

Allows a “transparent” view on dynamic SQL CPU usage



- Analyze the behavior of all dynamic SQL statements on DB2
- Optimize the usage of the statement cache
- Monitor the dynamic DB2 statements without gaps
- Determine the cause of performance problems fast and with minimal overhead
- Reduce the CPU usage of dynamic SQL statement fast



Agenda

- Introduction
- IBM strategic scenario's
- Mainframe pricing
- How can Avelyn soften the pain?
 - zPrice Manager
 - IRS for DB2
 - DSPC
- **Questions**



Avelyn

ICT Products and Services



Thank you!

Interested in a demo or trial installation?
Contact:

Leen van Toor

L.van.Toor@avelyn.nl

www.avelyn.nl