Z17

IBM z800/z890 Software Pricing Overview

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WorldWide zSeries Software Sales

zSeries® EXPO
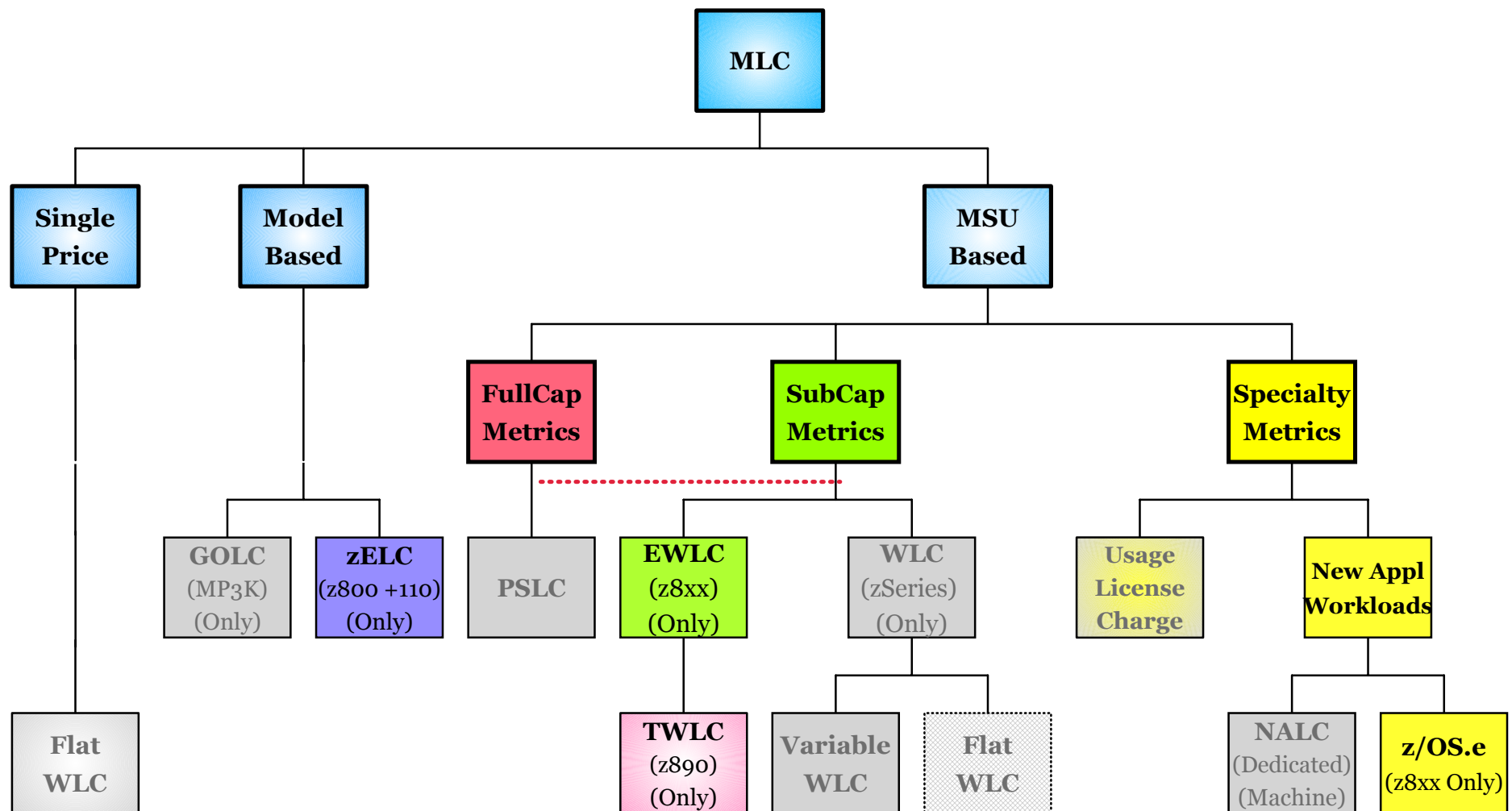
FEATURING Z/OS, Z/VM, Z/VSE AND LINUX ON ZSERIES

September 19 - 23, 2005   **San Francisco, CA**

z8xx SW Pricing Agenda

- **Monthly License Charge Metrics**
  - ► zELC
  - ► EWLC
  - ► TWLC

- **IPLA Software**
  - ► Execution Based
  - ► Reference Based
  - ► z/OS Based

- **Specialty Pricing**
  - ► z/OS.e
  - ► Divide-a-Box
  - ► zAAP

Monthly License Charge (MLC) Metrics

zELC (zSeries Entry License Charge)

Characteristics	zELC
Metric Type	**Model Based**
Aggregation	**None**

- zELC Applies to z800 & z890 Mdl110 ONLY
  - ► Original Announcement Letter 202-036; February 2002
  - ► Monthly license charge
  - ► Model-based Software Pricing
  - ► Logical migration path for Multiprise3000 Systems with GOLC

- Competitive Price Points for z/OS, OS/390, VM/ESA and VSE/ESA and Applicable Middleware

2066-001 @ 32 MSUs

LPARa	LPARb
	VS Fortran
	CICS TS
DB2	DB2
IMS	IMS
z/OS	z/OS

	Machine 1	zELC
IMS	yes	**MDL 001 License**
DB2	yes	**MDL 001 License**
CICS	yes	**MDL 001 License**
Fortran	yes	**MDL 001 License**
z/OS	yes	**MDL 001 License**

SubCapacity Eligible Metrics

What is "Sub-Capacity?"

sub- (prefix)

...

Subdivision: *subregion.*

Less than completely or normally; nearly;

zSeries @ 100 MSUs

30 MSUs	50 MSUs
DB2 CICS z/OS	IMS z/OS
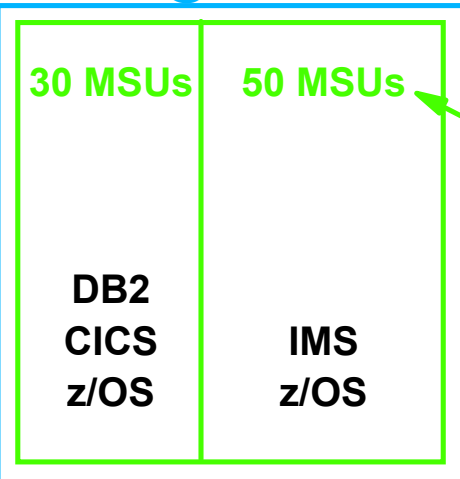
Full-Capacity Pricing Metrics:

Based on total rated capacity of the MACHINE where a product executes.

Ex: PSLC, FullCap WLC, zELC

Sub-Capacity Pricing Metrics:

Based on the utilization of the LPAR(s) where a product executes.

Ex: Variable WLC, EWLC

SubCapacity Eligible Products (as of 8/22/05)

Product ID	Product Name
5694A01	z/OS V1
5655G52	z/OS.e V1
5655018	CICS/ESA V4
5655147	CICS TS for OS/390
5697E93	CICS TS for z/OS V2
5655M15	CICS TS for z/OS V3
5695DB2	DB2 for MVS/ESA V4
5655DB2	DB2 for OS/390 V5
5645DB2	DB2 UDB for OS/390 V6
5675DB2	DB2 UDB for OS/390 V7
5625DB2	DB2 UDB for z/OS V8
5695176	IMS V5
5655158	IMS V6
5655B01	IMS V7
5655C56	IMS V8
5655J38	IMS V9
5695137	MQSeries for MVS/ESA
5655A95	MQSeries for OS/390 V2
5655F10	MQSeries for OS/390 V5
5655L82	MQSeries for z/OS V6

Product ID	Product Name
5655H32	Debug Tool for z/OS & OS/390
5655L24	Debug Tool for z/OS V4
5655M18	Debug Tool for z/OS V5
5648A25	COBOL for OS/390 & VM V2
5655G53	Enterprise COBOL for z/OS and OS/390
5655B22	Visual Age PL/I for OS/390
5655H31	Enterprise PL/I for z/OS and OS/390
5645005	System Automation for OS/390
5645006	System Automation for OS/390 V2
5697B82	Tivoli NetView for OS/390
5697ENV	Tivoli NetView for z/OS
5697MQZ	MQ Ext Security Edition for z/OS V5
5697OPC	Tivoli OPC V2
5697WSZ	Tivoli Workload Scheduler for z/OS
5655043	Tivoli Netview PM
5655B86	Lotus Domino for S/390 V5
5655K36	Lotus Domino for z/OS V6
5706254	QMF MVS V3
5695068	Airline Control System V2
5748T15	z/TPF V1
5748F15	z/TPFDF V1

http://ibm.com/zseries/library/swpriceinfo/mlc.html

z8xx SubCapacity (Entry Workload License Charge) Pricing

Characteristics	EWLC
Metric Type	Cumulative Tier
Aggregation	None

- **SubCapacity Prerequisites**
  - ► IBM @server™ zSeries® server, or equivalent
  - ► z/OS operating system in 64-bit mode
  - ► Meet all specified IBM terms

EWLC Structure

EWLC Level	Range	WLC Level
Base	3 MSUs	Base
Level 1	4 - 17 MSUs	Level 0
Level 2	18 - 30 MSUs	" "
Level 3	31 - 45 MSUs	" "
Level 4	46 - 87 MSUs	Level 1
Level 5	88 - 175 MSUs	" "
Level 6	176 - 260 MSUs	Level 2
Level 7	261+ MSUs	" "

- **SW Products divided into 2 categories**

  - ► SubCapacity Eligible Products
    - – Priced using SubCapacity Metric: <u>EWLC (Entry WLC)</u>
    - – Examples: z/OS, CICS, DB2, IMS, MQSeries, etc.
    - – No Aggregation Permitted
    - – To receive benefits of SubCapacity
      - • **Must be fully migrated to z/OS (no OS/390 LPARs)**
      - • **Must send in SCRT Reports every month**
    - – Can choose to implement at Full Capacity
      - • **z/OS LPARs can co-exist with OS/390 LPARs**
      - • **No reports required**

  - ► Non-SubCapacity Eligible Products
    - – Priced using SubCap Companion Metric
      - • <u>z800: zELC</u>
      - • <u>z890: TWLC</u>
    - – Examples: MVS Utilities, Older Compilers, VM/VSE Middleware
    - – No aggregation
    - – The same under both SubCap and FullCap implementations

Variable WLC Structure

Level	Range
Base	0 - 3 MSUs
Level 0	4 - 45 MSUs
Level 1	46 - 175 MSUs
Level 2	176 - 315 MSUs
Level 3	316 - 575 MSUs
Level 4	576 - 875 MSUs
Level 5	876 - 1315 MSUs
Level 6	1316 - 1975 MSUs
Level 7	1976+ MSUs

PSLC Lvl D →

TWLC (EWLC Tiered Pricing)

Characteristics	TWLC
Metric Type	**Simple Tier**
Aggregation	**None**

- Tiers are defined by a range of MSUs
- Each product has a **price for each tier**
- Lookup price based on rated MSUs of machine

z890 EWLC Tiered Price Structure (TWLC)

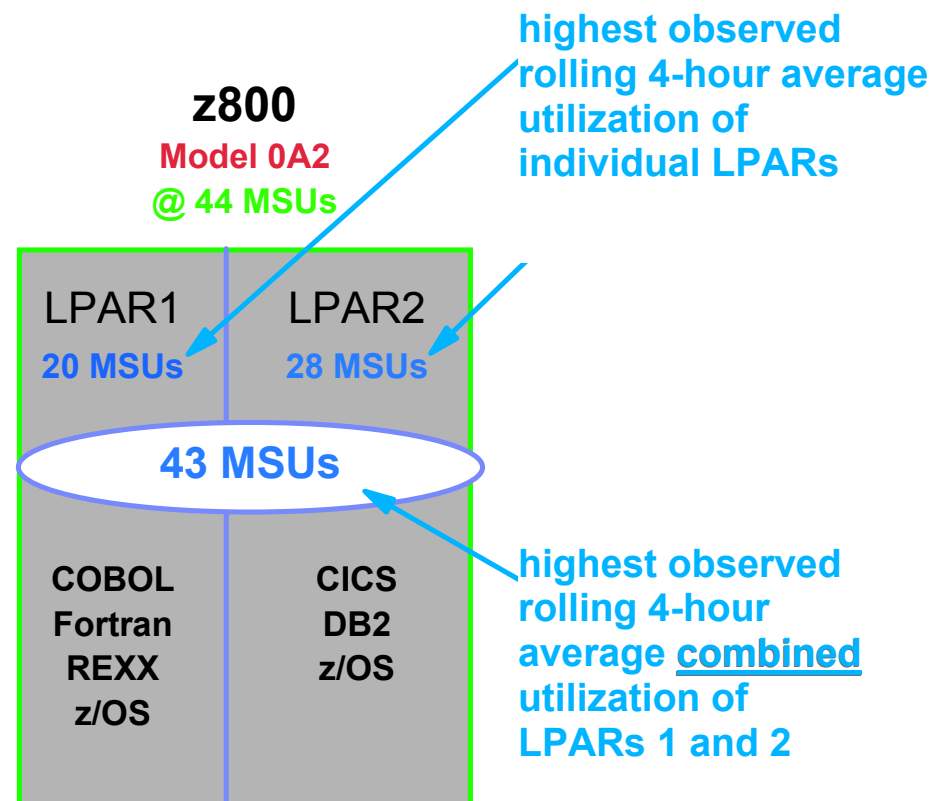| TWLC	MSU Range	z890 Models	Fortran	Rexx
Tier A or	1-11 MSUs	(110***), 120, 210, 310	197	530
Tier B or	12-15 MSUs	130, 220, 410	213	576
Tier C or	16-40 MSUs	140 150 160 230 240 320 330 420	253	691
Tier D or	41 - 75 MSUs	170 250 260 340 350 430 440	477	1335
Tier E or	76 - 1500 MSUs	270 360 370 450 460 470	636	1806
Tier F or	1501+ MSUs			

- Flat Price Structure
- Select the tier based on the MSU rating
- Billed monthly

***NOTE Exception: The smallest z890 (2086-110) can only be priced using zSeries Entry License Charges (zELC).

z800 EWLC/zELC Pricing Example

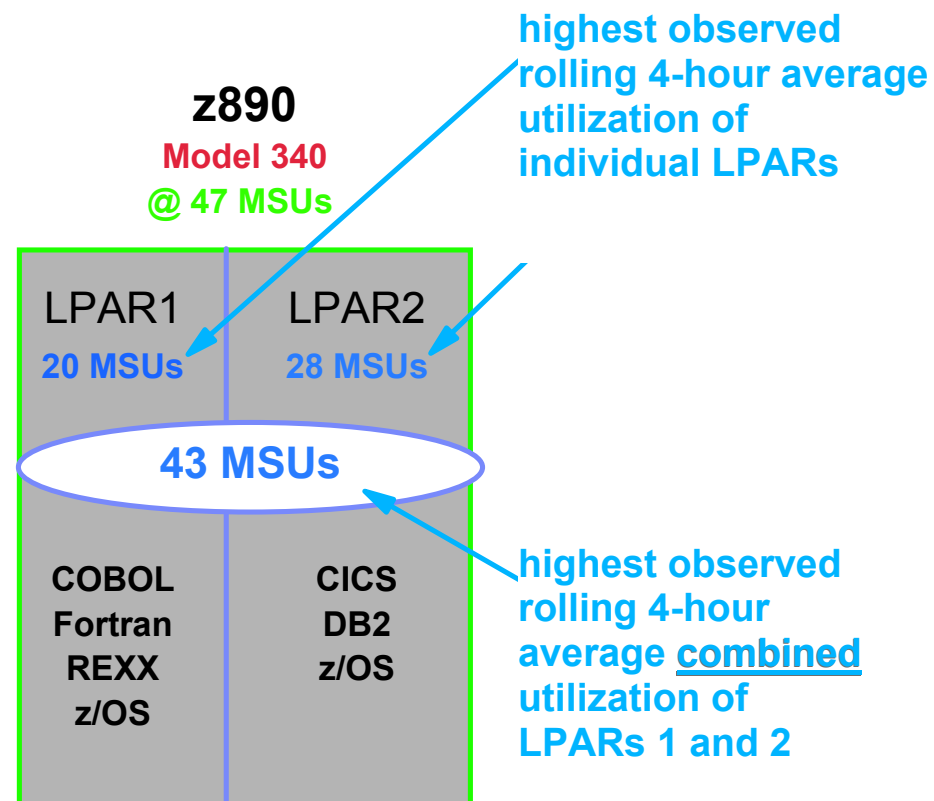| Product	EWLC Sub-Cap	EWLC Full-Cap	zELC 0A2
COBOL 5648A25	$1129 20 MSUs	$2459 44 MSUs	$2286 zELC 0A2
Fortran 5668805	477 zELC 0A2	477 zELC 0A2	477 zELC 0A2
REXX 5695013	1335 zELC 0A2	1335 zELC 0A2	1335 zELC 0A2
CICS TS 5655147	7209 28 MSUs	12513 44 MSUs	11193 zELC 0A2
DB2 V7 5675DB2	6908 28 MSUs	11616 44 MSUs	11448 zELC 0A2
z/OS 5694A01	16735 43 MSUs	17060 44 MSUs	18935 zELC 0A2
Monthly TOTAL	$33,793	$45,460	$45,674

**Prices in US$ as of 2Mar05
Validated with WLP**

z800

Model 0A2

@ 44 MSUs

highest observed rolling 4-hour average utilization of individual LPARs

LPAR1
20 MSUs

LPAR2
28 MSUs

43 MSUs

COBOL
Fortran
REXX
z/OS

CICS
DB2
z/OS

highest observed rolling 4-hour average combined utilization of LPARs 1 and 2

z890 EWLC + TWLC Pricing Example

Product	EWLC SubCap	EWLC FullCap
COBOL 5648A25	$1129 20 MSUs	$2548 20 MSUs
Fortran 5668805	477 TWLC TD	477 TWLC TD
REXX 5695013	1335 TWLC TD	1335 TWLC TD
CICS TS 5655147	7209 28 MSUs	13052 28 MSUs
DB2 V7 5675DB2	6908 28 MSUs	12118 28 MSUs
z/OS 5694A01	16735 43 MSUs	18035 43 MSUs
Monthly TOTAL	$33,793	$47,565

Prices in US$ as of 2Mar05
Validated with WLP

z890
Model 340
@ 47 MSUs

highest observed rolling 4-hour average utilization of individual LPARs

LPAR1
20 MSUs

LPAR2
28 MSUs

43 MSUs

COBOL
Fortran
REXX
z/OS

CICS
DB2
z/OS

highest observed rolling 4-hour average combined utilization of LPARs 1 and 2

z890 EWLC + EWLC Tiered Example: z/OS

SubCap!

- z890 with all OS/390 migrated to z/OS in 64-bit mode qualify for Sub-Capacity EWLC.
- SubCap Eligible Products are priced based on utilization of the LPAR(s) where the product executes.
- Non-SubCap Eligible Products are priced based on the EWLC Tier corresponding to the machine's MSU rated capacity.

Tier A or	1 - 11 MSUs
Tier B or	12 - 15 MSUs
Tier C or	16 - 40 MSUs
Tier D or	41 - 75 MSUs
Tier E or	76 - 1500 MSUs
Tier F or	1501+ MSUs

2086- 270 @ 107 MSUs

LPAR1	LPAR2
50 MSUs	42 MSUs

84 MSUs

Fortran REXX DB2 z/OS	CICS DB2 z/OS

Prod ID	Product Name	Metric	Price
5668806	VS FORTRAN Comp/Lib/Debug V2	TWLC Tier E	$2,523
5675DB2	DB2 UDB for OS/390	EWLC 84 MSUs	$15,707
5694A01	z/OS V1 Base	EWLC 84 MSUs	$30,060
5695013	IBM Compiler for REXX/370	TWLC Tier E	$1,806
5697E93	CICS TS for z/OS V2	EWLC 42 MSUs	$13,573
		Total	$63,669

No 64-bit? No Sub-Capacity Reports?
Then Full-Capacity EWLC (107 MSUs) applies... new cost = $80,589
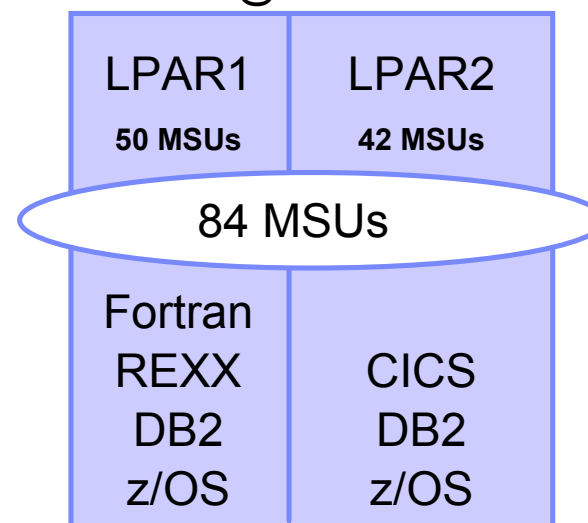
z890 EWLC + EWLC Tiered Example: OS/390

FullCap!

- z890 customers with OS/390 qualify for <u>Full-Capacity EWLC</u>
  - ► **Note:** on z890, OS/390 itself is priced using the EWLC Tiered Price Structure
- Sub-Capacity Eligible Products are priced based upon the Machine's rated MSU capacity.
- Non-SubCap Eligible Products are priced based on the EWLC Tier corresponding to the machine's MSU rated capacity.

Tier A or	1 - 11 MSUs
Tier B or	12 - 15 MSUs
Tier C or	16 - 40 MSUs
Tier D or	41 - 75 MSUs
Tier E or	**76 - 1500 MSUs**
Tier F or	1501+ MSUs

2086- 450 @ 97 MSUs

LPAR1	LPAR2
Fortran REXX DB2 OS/390	CICS DB2 OS/390

| Prod ID	Product Name	Metric	Price
5668806	VS FORTRAN Comp/Lib/Debug V2	TWLC Tier E	$2,523
5675DB2	DB2 UDB for OS/390	EWLC 97 MSUs	$16,968
5647A01	OS/390 V2 Base	TWLC Tier E	$31,735
5695013	IBM Compiler for REXX/370	TWLC Tier E	$1,806
5697E93	CICS TS for z/OS V2	EWLC 97 MSUs	$20,487
		Total	**$73,519**

z890 EWLC + EWLC Tiered Example: VM/VSE

- z890 customers with VM and VSE have non-SubCapacity Eligible Products
- Non-SubCap Eligible Products are priced based on the EWLC Tier corresponding to the machine's MSU rated capacity.

Tier A or	1 - 11 MSUs
Tier B or	12 - 15 MSUs
Tier C or	**16 - 40 MSUs**
Tier D or	41 - 75 MSUs
Tier E or	76 - 1500 MSUs
Tier F or	1501+ MSUs

Prod ID	Product Name	Metric	Price
5648054	CICS TS for VSE/ESA	TWLC Tier C	$3,056
5686066	VSE Central Functions	TWLC Tier C	$4,998
5697F42	DB2 Server for VSE&VM	TWLC Tier C	$3,088
5739A03	z/VM Version 4	IPLA Engines	$45,000
		Total	**$56,142**

2086- 150 @ 26 MSUs

guest1	guest2	guest3
CICS DB2 VSE/ESA	**CICS DB2 VSE/ESA**	**CICS DB2 VSE/ESA**

z/VM V4
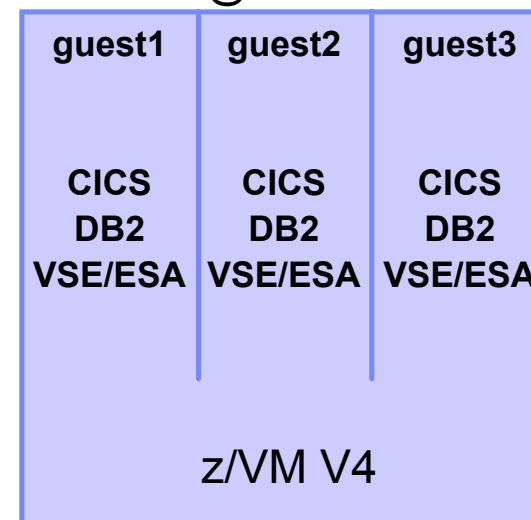
SALC
(Select Application License Charge)

Characteristics	SALC
Metric Type	**Cumulative Tier**
Aggregation	**Sysplex**

- Applies to MQSeries only
- Benefits ONLY when product usage is low compared to standard billable MSUs
- Charges Based on product CPU 'consumption' as measured in MSUs
  - ► Reported on an Annual basis via "Usage Report"
  - ► Report created by IBM supplied IFAURP "Usage Reporting Program"
- $/MSU Decreases as Capacity Increases
- Sysplex Aggregation applies
- To Price: Price each MSU based on "Tier" and add the "Tier" prices together

Utilization Measurement

12 mo highest sets level for 2005
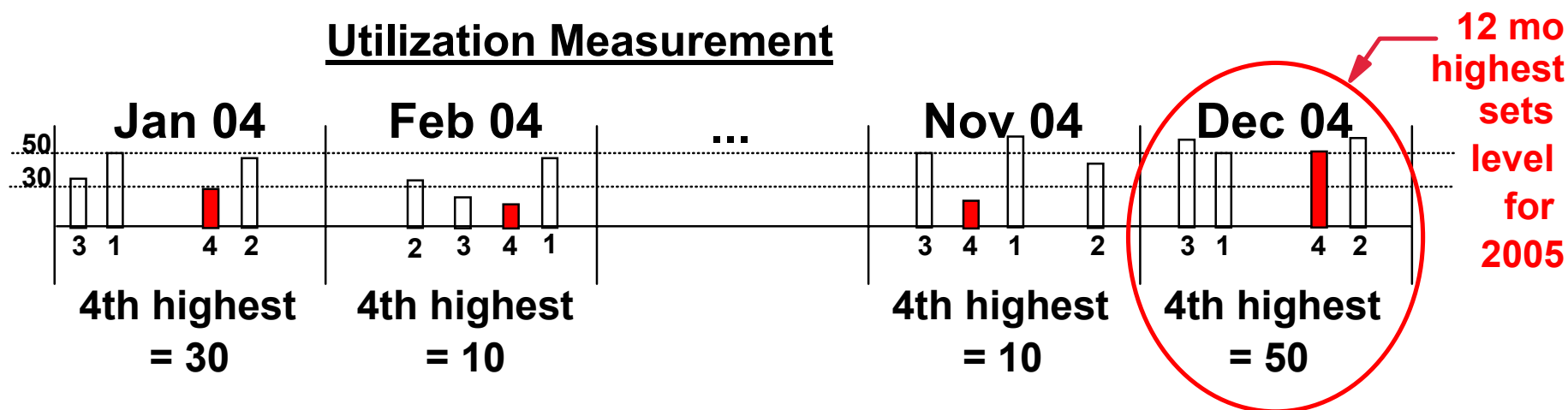
Terms & Conditions Define Metric Combinations

	Apr04	Entry WLC + Tiered	Sep03	Entry WLC + zELC	Sep01	WLC VWLC + FWLC	Apr02
Eligible Machines		z890 Only (not mdl 110)		z800 z890-110		z900, z990, z9109 z800**, z890** **Sysplex Only	
SubCap Eligible Products		EWLC		EWLC		Variable WLC	
Non Sub-Cap Eligible Products		Tiered EWLC		zELC		Flat WLC	
Implementation Options		SubCap EWLC FullCap EWLC		SubCap EWLC FullCap EWLC		SubCap WLC FullCap WLC	
LPAR SubCap Measurement		Rolling 4-Hour Average LPAR Utilization		Rolling 4-Hour Average LPAR Utilization		Rolling 4-Hour Average LPAR Utilization	
Aggregation		None		None		Sysplex	
Planning Tool		SubCapacity Planning Tool		SubCapacity Planning Tool		SubCapacity Planning Tool	
Implementation Tool		SubCapacity Reporting Tool		SubCapacity Reporting Tool		SubCapacity Reporting Tool	

Specialty Pricing Metrics
for
New Application Workloads

z/OS.e New Application Terms & Conditions

## Eligibility:

- Hardware: z800

- At least one LPAR dedicated to:

    A. Server consolidation of Unix or NT platform print or

    B. File server workloads or to one or more of the following qualifying applications (called "Qualifying Application(s)"):

        1. Lotus Domino
        2. Net.Commerce
        3. Payment Server
        4. Payment Gateway
        5. WebSphere Payment Manager
        6. Intelligent Miner for OS/390
        7. SAP
        8. PeopleSoft
        9. Baan ERP
        10. Oracle Applications for OS/390
        11. DB2 OLAP Server for OS/390
        12. WebSphere Application Server for OS/390 or z/OS
        13. Siebel
        14. WebSphere Commerce
        15. Lawson ERP Applications
        16. Walker e-Business Applications
        17. Intelligent Miner for Data for OS/390

This new software price makes it attractive for customers to implement new applications, or consolidate, non-S/390, UNIX or NT print and/or file server workloads by providing a value-priced alternative to UNIX platforms allowing customers to grow the industry¢s hottest application set in a dedicated S/390 environment.

z/OS NALC (z/OS.e) Price Curve Comparison
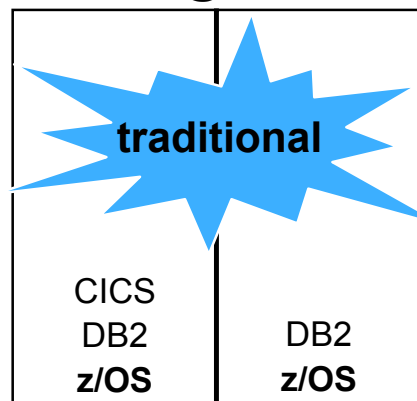
NALC (z/OS.e) Price Curve Comparison
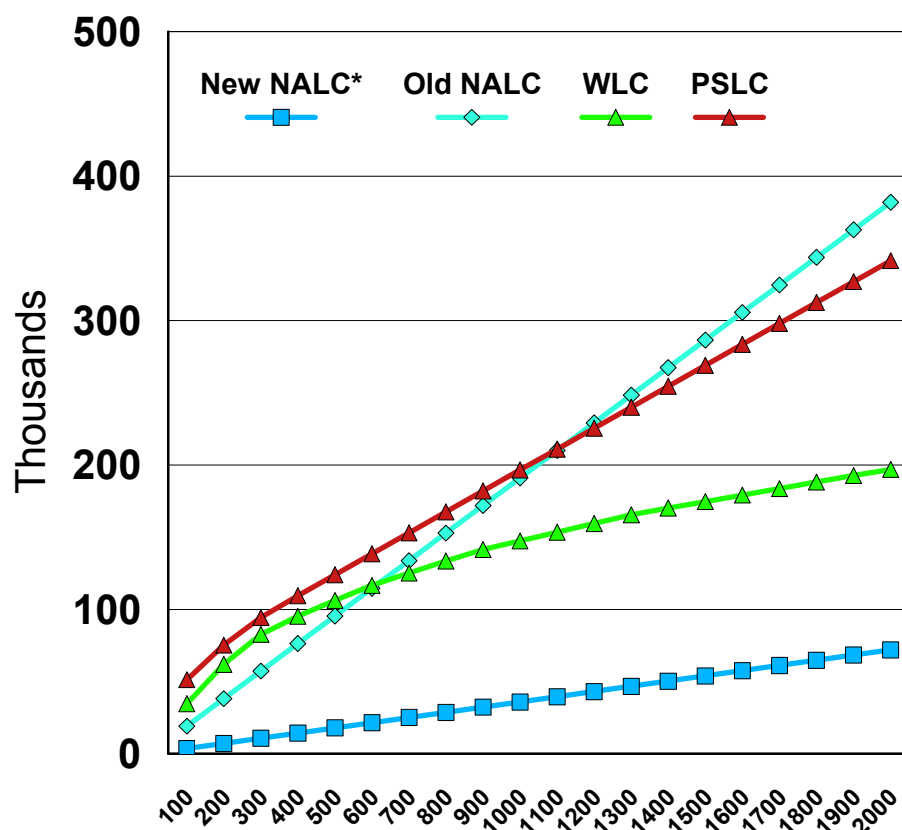
Savings with NALC (z/OS.e)

z/OS	vs PSLC	vs WLC
100 msu	93%	90%
500 msu	85%	83%
1000 msu	82%	76%
1500 msu	80%	69%
2000 msu	70%	63%

Review: z800 and zELC "Divide a Box" with z/OS.e

Example One
2066-002 @ 60 MSUs

traditional	
CICS DB2 **z/OS**	DB2 **z/OS**

Product	License Type
z/OS	zELC 002
DB2	zELC 002
CICS	zELC 002
REXX	zELC 002

Example Two
2066-002 @ 60 MSUs

new	
MQ DB2 **z/OS.e**	DB2 **z/OS.e**

Product	License Type
z/OS.e	2 Engines
DB2	zELC 002
MQ	zELC 002

Example Three
2066-002 @ 60 MSUs

LPAR A (001) trad	LPAR B (0C1) new
IMS CICS DB2 **z/OS**	MQ DB2 **z/OS.e**
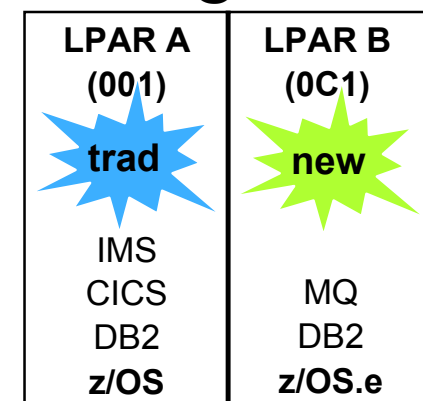
Product	License Type
z/OS.e	1 Engine
DB2	zELC 002
CICS	zELC 001
IMS	zELC 001
MQ	zELC 0c1

Review: zELC "Divide a Box" Terms

z800 Machine Model	zELC Licensing Model for New Wkload (z/OS.e) Middleware	zELC Licensing Model for Traditional Wkload Middleware
1 Engine of z/OS.e		
0X2 with 1 z/OS.e engine	**0C1**	**0A1**
0A2 with 1 z/OS.e engine	**0C1**	**0B1**
002 with 1 z/OS.e engine	**0C1**	**001**
003 with 1 z/OS.e engine	**0C1**	**002**
004 with 1 z/OS.e engine	**0C1**	**003**
2 Engines of z/OS.e		
003 with 2 z/OS.e engines	**0A2**	**001**
004 with 2 z/OS.e engines	**0A2**	**002**
3 Engines of z/OS.e		
004 with 3 z/OS.e engines	**003**	**0B1**

Example 1: z800 EWLC and z/OS.e

EWLC Divide-a-Box

z800 model 003 @ 84 MSU   (34 + 50 = 84)

34 MSU provided by customer	50 MSU provided by customer
z/OS DB2 CICS	z/OS.e DB2 Domino
Fortran	REXX

Next Mdl=0A2@44msu   Next Mdl=002@60msu

Product	License Type	Based on	Max MSU
z/OS	EWLC	SCRT	34
z/OS.e	EWLC	SCRT	50
DB2	EWLC	SCRT	84
CICS	EWLC	SCRT	34
Domino	EWLC	SCRT	50
Fortran	zELC	zELC 0A2	n/a
REXX	zELC	zELC 002	n/a

MSUs provided by Customer must sum to capacity of the z800

- z/OS partition:
  - EWLC products >> SCRT reported MSUs
  - Non-EWLC products >>34 MSUs, rounded up to closest zELC model >> zELC 0A2

- z/OS.e partition:
  - EWLC products >> SCRT reported MSUs
  - Non-EWLC products >>50 MSUs, rounded up to closest zELC model >> zELC 002

Example 2: z800 EWLC and z/OS.e

migration from z800 model 003 to model 004

MSUs provided by Customer must sum to capacity of the z800

z800 model 004 @ 108 MSU

48 MSUs provided by customer	60 MSUs provided by customer
z/OS DB2 CICS Fortran	z/OS.e DB2 Domino REXX
Next Mdl=002@60msu	Next Mdl=002@60msu

- z/OS partition:
  - EWLC products >> SCRT reported MSUs
  - Non-EWLC products >>48 MSUs, rounded up to closest zELC model >> zELC 002 (60 MSUs)

- z/OS.e partition:
  - EWLC products >> SCRT reported MSUs
  - Non-EWLC products >>60 MSUs, rounded up to closest zELC model >> zELC 002 (60 MSUs)

Product	License Type	Based on	Max MSUs
z/OS	EWLC	SCRT	48
z/OS.e	EWLC	SCRT	60
DB2	EWLC	SCRT	108
CICS	EWLC	SCRT	48
Domino	EWLC	SCRT	60
Fortran	zELC	zELC 002	n/a
REXX	zELC	zELC 002	n/a

Example 3: z890 EWLC and z/OS.e

MSUs provided by Customer must sum to capacity of the z800

z890 model 270 @ 107 MSU

40 MSU provided by customer	67 MSU provided by customer
z/OS	z/OS.e
DB2	DB2
CICS	Domino
Fortran	REXX
TWLC Tier C	TWLC Tier D

Product	License Type	Based on
z/OS	EWLC	SCRT
z/OS.e	EWLC	SCRT
DB2	EWLC	SCRT
CICS	EWLC	SCRT
Domino	EWLC	SCRT
Fortran	TWLC	40msu =Tier C
REXX	TWLC	67msu =Tier D

- z/OS partition:
  - **EWLC SubCap products use SCRT reported MSUs**
  - **Non-SubCap products use TWLC based on LPAR Definition**

- z/OS.e partition:
  - **EWLC SubCap products use SCRT reported MSUs**
  - **Non-SubCap products use TWLC based on LPAR Definition**

zSeries Application Assist Processor (zAAP)

- zAAP – New processor type dedicated exclusively for Java workloads under z/OS – e.g. WebSphere
  - ► z/OS 1.6 required (available 9/04)
  - ► Java SDK 1.4.1 required

- Enabled by zSeries innovative PR/SM virtualization
  - ► CPs and zAAPs in the same z/OS LPAR
  - ► Java work ONLY directed to zAAPs by z/OS 1.6+

- Can lower cost of computing for Java technology-based application servers
  - ► Attractively priced at $125K USD per zAAP.
  - ► z990 and z890
  - ► No IBM software charges on zAAPs
  - ► zAAP HW feature available June 30, 2004; enabled with z/OS 1.6 (9/04)

BEFORE zAAP

2086-350 @ 74 MSUs

LPARA

Java
Java
Java
Java

box highly utilized
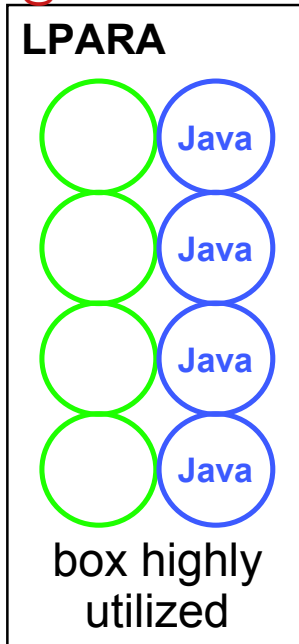
AFTER zAAP

2086-350 @ 74 MSUs

zAAP

LPARA

Java
Java
Java
Java

box less utilized

IBM
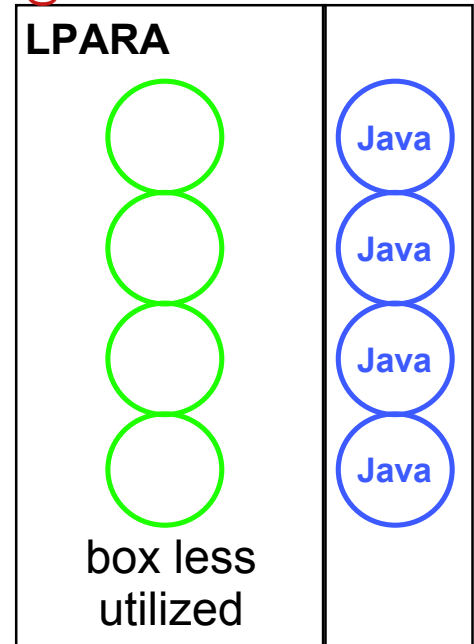
zAAP w/ FullCap EWLC

BEFORE
2086-350
@ 74 MSUs

AFTER
2086-350
@ 74 MSUs

box highly
utilized

box less
utilized
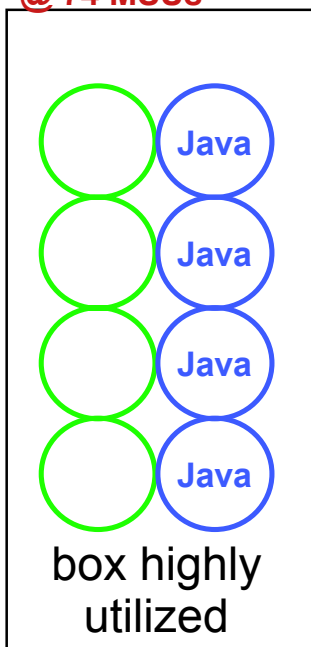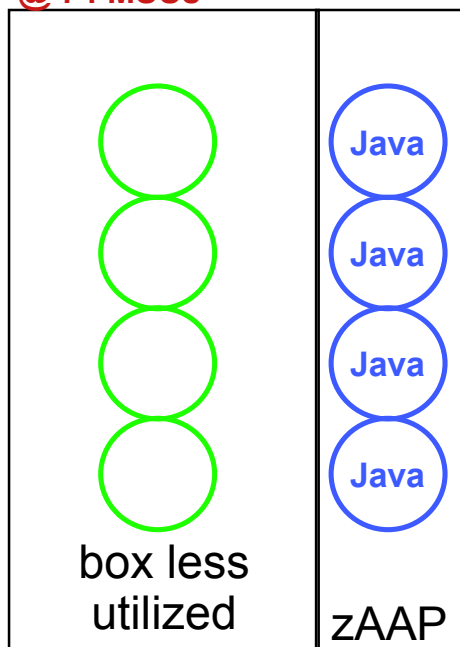
zAAP
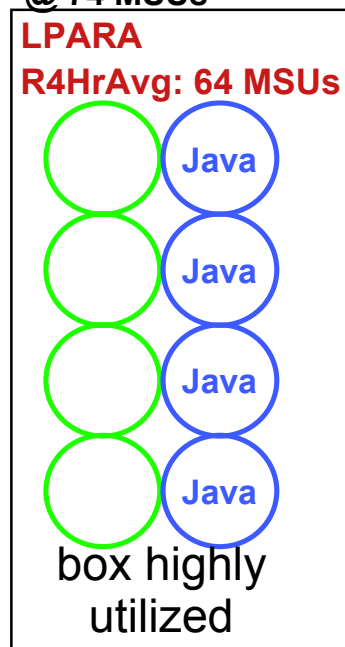
✓ **Full-Capacity EWLC**
✓ **adds zAAP instead of upgrading to 360 or 450**
✓ **Java workload runs on zAAP engine**
✓ **Full-Capacity EWLC charges remain at 74 MSUs**
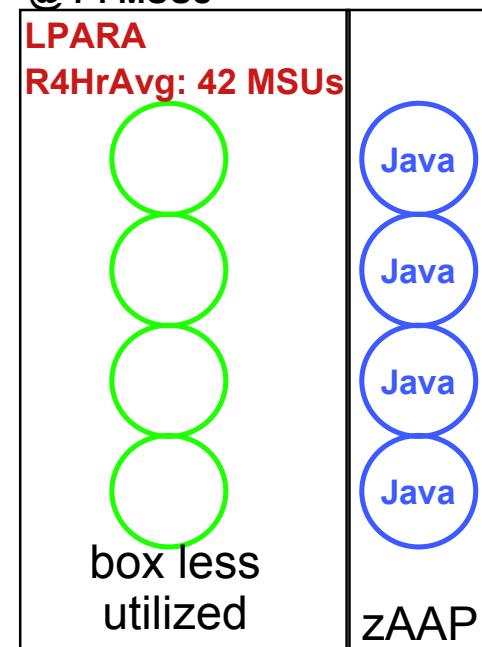
zAAP w/SubCap EWLC

BEFORE
2086-350
@ 74 MSUs
LPARA
R4HrAvg: 64 MSUs

AFTER
2086-350
@ 74 MSUs
LPARA
R4HrAvg: 42 MSUs

box highly
utilized

box less
utilized

zAAP

✓ **Sub-Capacity EWLC**
✓ **adds zAAP instead of upgrading to 360 or 450**
✓ **Java workload runs on zAAP engine**
✓ **LPARA's rolling 4-hour avg decreases from 64 to 42 MSUs**
   (only utilization of general purpose CPs is measured)
✓ **Sub-Cap Products in LPARA = 42 MSUs**

Similar SW pricing concepts apply to z990 + zAAP

Monthly License Charges Machine Summary

	Metric Type	Aggr	z9109 (2094)	z990 (2084)	z900 (2064)	z890 (2086)	z800 (2066)	MP3K (7060)	Other
PSLC: Parallel Sysplex License Charge *- allows ULC* *- allows NALC*	Cumulative Tiered	Y	x	x	x	x (plex)	x (plex))		x
(V)WLC: Variable Workload License Charge *- allows SALC* *- allows NALC*	Cumulative Tiered	Y	x	x	x	x (plex)	x (plex)		
(F)WLC: Flat WLC - with VWLC	Single Price	N	x	x	x	x (plex)	x (plex)		
EWLC: Entry Workload License Charge *- allows SALC* *- allows z/OS.e (eWLC)*	Cumulative Tiered	N				x	x		
TWLC: Tiered EWLC - with EWLC	Simple Tiered	N				x	x		
zELC: zSeries Entry License Charge *- allows z/OS.e (engine)*	Model Based	N				x (110 Only)	x		
GOLC: Growth Opportunity License Charge *- allows ULC*	Model Based	N						x	

ULC = Usage License Charges = available only for MQSeries, DB2, CICS, IMS; used when product has low utilization
SALC = Special Application License Charges = available ONLY for MQ Series; used when product has low utilization
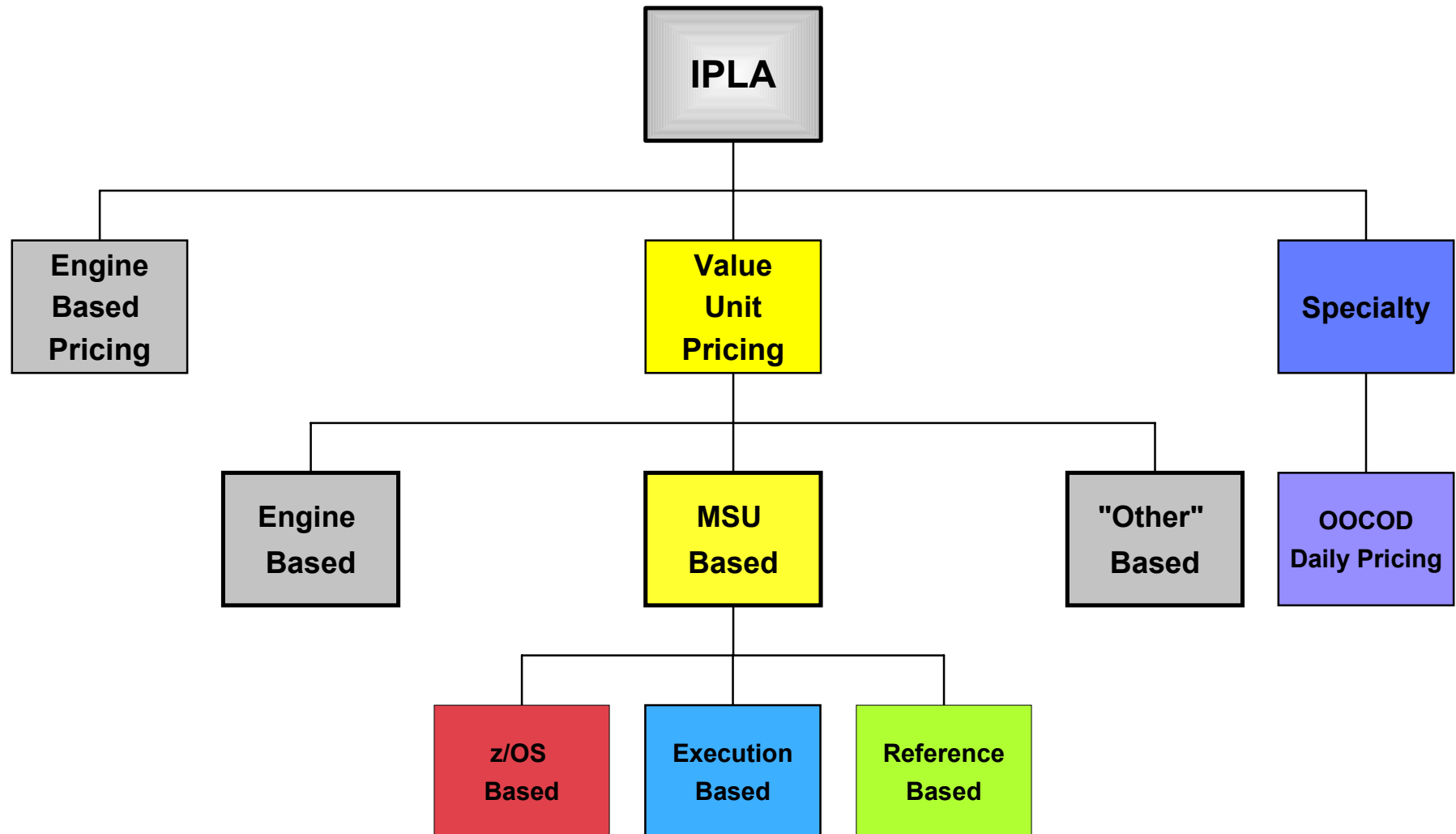NALC = New Application License Charges = available only for z/OS, OS/390, Domino V5; associated w/ ebusiness
z/OS.e = low cost / reduced function version of z/OS for ebusiness; CICS and IMS cannot run on z/OS.e

One Time Charge Software
IPLA

IPLA Pricing Structures

zSeries IPLA Terminology

IPLA	International Program License Agreement The contract that governs IBM "one time charge" software (zSeries & PPA)
Value Unit	Pricing Unit: IPLA prices are stated as a $/VU
Value Unit Basis	The measurable entity that is used to determine the amount (in Value Units) of Required License Capacity (e.g., MSUs, engines, concurrent users, etc)
Required License Capacity	The # of Value Units a Customer must license to meet the IBM Ts & Cs
Entitled License Capacity	The # of Value Units of zSeries IPLA license the Customer has acquired
Environment	A single/standalone machine OR A qualified Parallel Sysplex. Customers may have multiple environments.
Parent	A zSeries MLC program (e.g., DB2, CICS, IMS) that is supported by a zSeries IPLA program with Reference Based terms

zSeries IPLA Characteristics

- IBM IPLA Contracts online at **ibm.com**/software/sla
  - ▶ Generic "base" IPLA Contract & product-specific "License Information" contracts available
  - ▶ **IPLA Amendment for zSeries Platform Programs Sub-Capacity Pricing (Z125-6929).**

- IPLA Programs have a One-Time-Charge for License Acquisition
  - ▶ New and/or existing entitlements may be used in a Full-Capacity or a Sub-Capacity environment
  - ▶ Aggregate across entire Enterprise

- (Optional) Recurring Annual Charge for Subscription & Support (S&S)
  - ▶ S&S provides version-to-version upgrades <u>at no charge</u>
  - ▶ S&S provides break/fix support
  - ▶ S&S is optional, but strongly encouraged
  - ▶ S&S is an annual charge called "Annual License Charge"
  - ▶ If purchased, S&S capacity MUST equal license capacity
  - ▶ S&S automatically renews each year
  - ▶ Existing S&S cannot be cancelled except at renewal date

- For each zSeries IPLA Product...
  - ▶ there is a unique product ID per version
  - ▶ there is a common S&S product ID across all versions

Product ID	Product
5697-F19	Fault Analyzer V1
5655-G74	Fault Analyzer V2
5655-J47	Fault Analyzer V3
5655-L25	Fault Analyzer V4
5697-G59	Fault Analyzer S&S

Value Unit Overview

- Value Unit Pricing Converts various other measurements to Value Units
  - **The most common conversion is MSUs to Value Units**
    - It is also possible to convert engines, messages and other measurements to Value Units
  - For each Value Unit Priced program, there is a single price per Value Unit
  - For each Value Unit Priced program, there is a specific 'Value Unit Exhibit' (VUEXXX)
 - The 'Value Unit Exhibit' establishes the appropriate Value Unit conversion

Value Unit Exhibit 007 (VUE007):

MSUs 1 - 3, need 1 VU per MSU
MSUs 4 - 45, need .45 VUs per MSU
MSUs 46 - 175, need .36 VUs per MSU
MSUs 176 - 315, need .27 VUs per MSU
MSUs 316+, need .20 VUs per MSU

Value Unit Exhibit 001 (VUE001):

MSUs 1 - 3, need 5.25 VUs per MSU
MSUs 4 - 45, need .83 VUs per MSU
MSUs 46 - 175, need .35 VUs per MSU
MSUs 176 - 315, need .26 VUs per MSU
MSUs 316+, need .20 VUs per MSU

Value Unit Curve
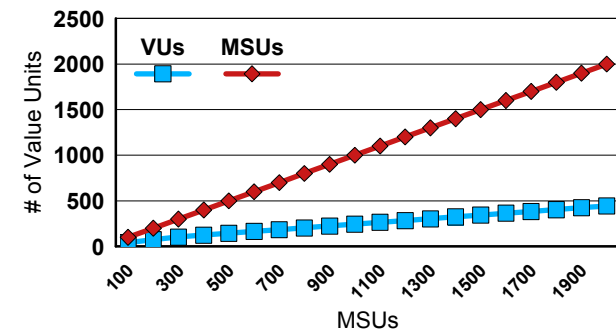
Product ID	Product	Price per VU
5697-F19	Fault Analyzer V1	$2,325/VU
5655-G74	Fault Analyzer V2	$2,325/VU
5655-J47	Fault Analyzer V3	$2,325/VU
5655-L25	Fault Analyzer V4	$2,325/VU
5697-G59	Fault Analyzer S&S	$349/VU

Value Unit Exhibit 007 (VUE007)

Fault Analyzer (VUE007) Examples:
*Fault Analyzer 100 MSUs => 42 VUs =>
$98K ($980/MSU)*

*Fault Analyzer 2000 MSUs => 444 VUs =>
$1.03M ($515/MSU)*

**Value Unit Converter Tool from ibm.com/zseries/swprice
will convert MSUs to Value Units**

They are presented here for illustrative purposes only.

zSeries IPLA Characteristics

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5655-L25	Fault Analyzer V4
5697-G59	Fault Analyzer S&S

IPLA Value Unit Enterprise Aggregation

- Applies to **all** IPLA Metrics
- Combines Value Unit Basis (e.g., MSUs) for all machines in **ENTERPRISE** before calculating # of VUs needed
- Calculation of additional capacity uses Current Entitlement as starting point

Denver

> 2066-003
> 84 MSUs
>
> Fault
> Analyzer
> (5655-L26)

Customer One:

Deploying Fault Analyzer on 2066-003

Use VUConverter to Convert total MSUs (84) to Value Units (36)

Total for 36 VUs @ $36/VU = $83,700 lic ($12,564 S&S)

New York

> 2066-003
> 84 MSUs
>
> Fault
> Analyzer
> (5655-L26)

Atlanta

> 2064-116
> 441 MSUs
>
> Fault
> Analyzer
> (5655-L26)

Customer Two:

Deploying Fault Analyzer on 2066-003, 2064-116

Use VUConverter to Convert total MSUs (525) to Value Units (149)
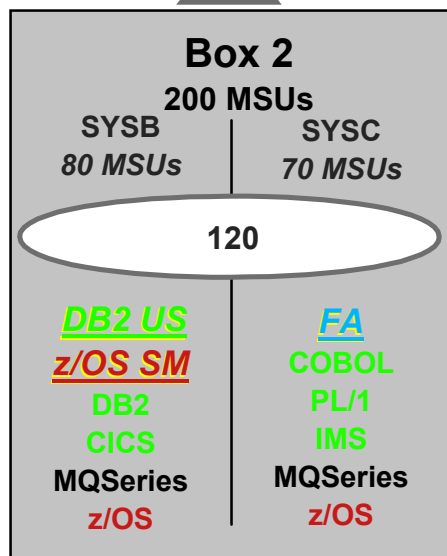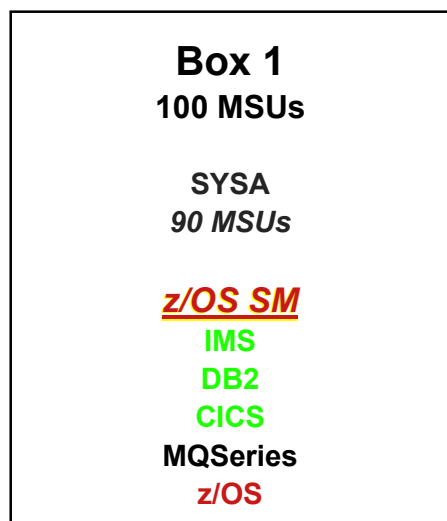
Total for 149 VUs @ $36/VU = $346,425 lic ($52,001 S&S)

Summary of MSU Based Value Unit Ts & Cs

**Most zSeries IPLA Programs with MSU based Value Unit Pricing
will fall into one of the following categories...**

	z/OS Based	Execution Based	Reference Based
Full Capacity **For machines w/ PSLC, zELC or FullCap EWLC/WLC**	Required license capacity equals the capacity of the **machine(s)** where the IPLA program **executes**	Required license capacity equals the capacity of the **machine(s)** where the IPLA program **executes**	Required license capacity equals the capacity of the **parent program** across the **environment**
Sub Capacity **For machines w/ SubCap EWLC/WLC**	Required license capacity equals the **z/OS capacity** of the **machine(s)** where the IPLA program **executes**	Required license capacity equals the capacity of the **LPAR(s)** where the IPLA program **executes**	Required license capacity equals the capacity of the **parent program** across the **environment**

**For products which are "unclassified",
the product announcement materials will outline the applicable Ts & Cs.**

IPLA Pricing Examples

Box 1
100 MSUs

SYSA
90 MSUs

z/OS SM
IMS
DB2
CICS
MQSeries
z/OS

Box 2
200 MSUs

SYSB   SYSC
80 MSUs   *70 MSUs*

120

DB2 US   *FA*
z/OS SM   COBOL
DB2   PL/1
CICS   IMS
MQSeries   MQSeries
z/OS   z/OS

CHECKLIST

Desired Programs

Terms for each Program
- ✓ **z/OS-based**
- ✓ **execution-based**
- ✓ **reference-based**

Deployment Plan
- ✓ Full-Cap or Sub-Cap
- ✓ Standalone or Sysplex
- ✓ For execution-based, which LPARs?
- ✓ For z/OS-based, which boxes?

Required License Capacity
- ✓ Combine checklist data to determine required license capacity

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Desired Programs
1. Fault Analyzer, execution-based terms
2. DB2 Utilities Suite, reference-based terms
3. z/OS Session Manager, z/OS-based terms

IPLA Product	FullCap	SubCap
Fault Analyzer	Box 2 200 msu	SYSC 70 msu
DB2 Util Suite	Box 1, 2 300 msu	SYS A, B 170 msu
z/OS SMgr	Box 1, 2 300 msu	SYS A,B,C 210 msu

Reference Materials

More Information

- zSeries Software Pricing Website
  - ► http://ibm.com/zseries/swprice
  - ► Announcement News, Complete WLC Product Listing
    - – z/OS and S/390 Software Pricing Reference Guide
    - – Mainframe MSU Ratings
    - – ISV Press Releases
    - – IBM Announcement Letters
  - ► SubCapacity Reporting Tool
  - ► WLC Planning Tool
  - ► Value Unit Converter

- Questions on Software Pricing or Tool Usage
  - ► email scrt@us.ibm.com

- Data Management Tools Website
  - ► http://ibm.com/software/data/db2imstools

- CICS Tools Website
  - ► http://ibm.com/cics/tools.html

IBM

T h e   E n d

Thank You

Visit the zSeries Software Pricing Website

ibm.com/zseries/swprice