IBM z13 Software Pricing Announcements

- IBM Collocated Application Pricing (ICAP)
- Country Multiplex Pricing
- Technology Update Pricing for z13

January 14, 2015

IBM z13 Software Pricing Announcements

Extending software price/performance for the z13 …

- **IBM continues its strategy to enhance software price/performance for the latest hardware**
  - Announcing "Technology Update Pricing for z13" called TU3
  - Published exhibit of AWLC price reductions for z13, delivers 5% price/performance on average

Major new structural enhancements coming … formal announcements in 1H15

- **IBM Collocated Application Pricing (ICAP) -** Run your systems the way you want to run them
  - For new applications, workloads priced as if in a dedicated environment while technically integrated with other workloads
  - Applicable to new applications on all zEnterprise and later machines, z196 to z13
  - ICAP eligible applications will have no effect on the reported MSUs for other subcapacity middleware, and reduced impact on z/OS (adjusts MSUs like an offload engine, similar to Mobile Workload Pricing)
  - ICAP enhancement to MWRT subcapacity tool coming

- **Country Multiplex Pricing -** Evolution from Sysplex pricing, a shift to greater flexibility and simplicity
  - A Multiplex is the collection of all zEnterprise and later machines in a country, measured like one machine for software subcapacity reporting (new multiplex sub-capacity reporting tool coming)
  - Flexibility to move and run work anywhere with the elimination of Sysplex pricing rules
  - A new way of measuring and pricing MSUs, as opposed to aggregating under current rules
  - For anyone selecting Multiplex Pricing there will be a pricing transition, shifting to this model is about growth and flexibility going forward (baseline + growth)

IBM Collocated Application Pricing (ICAP)

IBM Collocated Application Pricing (ICAP)

Next evolution of z Systems sub-capacity software pricing – Workloads priced as if in a dedicated environment while technically integrated with other workloads – Run your systems the way you want to run them

- Applicable to growth from new applications on all zEnterprise and later machines
  - z196, z114, zEC12, zBC12, and z13
- Approval process validates the workload is a new application on the z platform
- ICAP Defining Programs include key sub-capacity-eligible IBM programs
  - e.g. CICS, DB2, IMS, MQ, WAS, Broker, etc.
- Customer reports CPU time for ICAP Defining Programs, similar to Mobile but less complex
- Software pricing for other programs in the same LPAR:
  - No effect on the reported MSUs for other sub-capacity middleware programs (adjusts MSUs like an offload engine, similar to Mobile Workload Pricing for z/OS)
  - For z/OS, 50% of the ICAP-defining program MSUs will be removed … provides a price benefit similar to zNALC for z/OS, without the requirement for a separate LPAR
- Software pricing for ICAP Defining Programs:
  - Net-new ICAP program measured based on program usage MSUs (SMF89 records)
  - Incremental growth for pre-existing Defining Programs priced the standard way
- ICAP enhancement to MWRT sub-capacity reporting tool coming

ICAP Illustration – Net New MQ Application

Net New MQ Example = 100 MSUs of new MQ workload *

1. Existing LPAR

MSUs used for subcap billing:

z/OS	1,000
DB2 and CICS	1,000

2. New MQ, standard rules

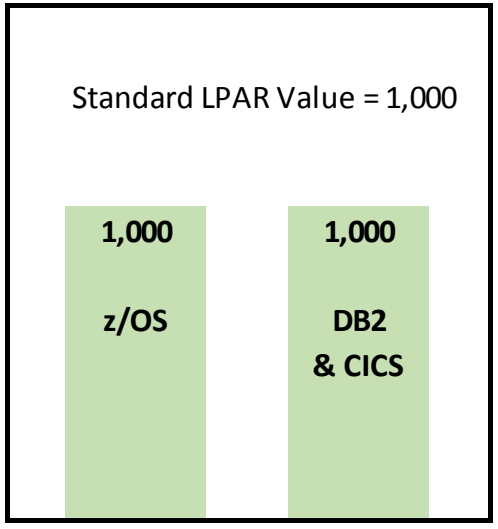
MSUs used for subcap billing:

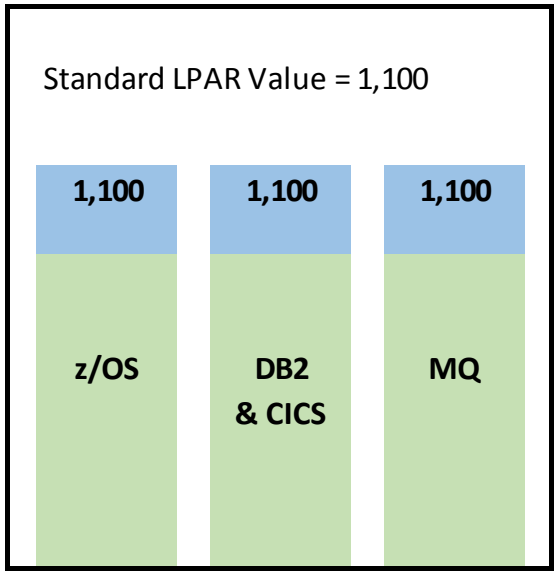
z/OS	1,100
DB2 and CICS	1,100
MQ (LPAR value)	1,100

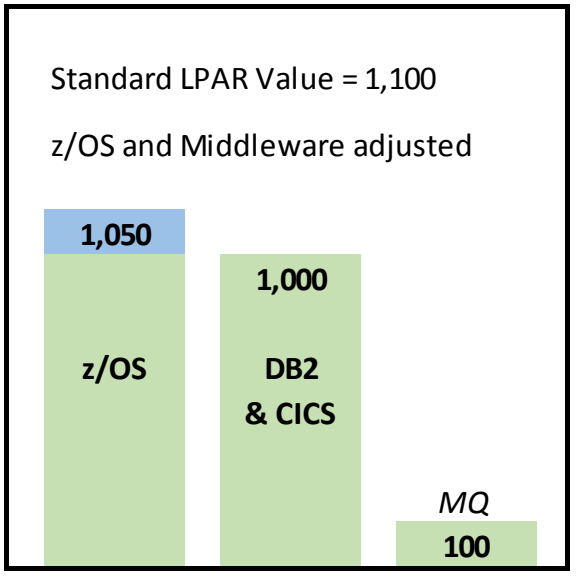
3. New MQ with ICAP pricing

MSUs used for subcap billing:

z/OS	1,050
DB2 and CICS	1,000
MQ (usage value)	100







* Assumes workloads peak at same time

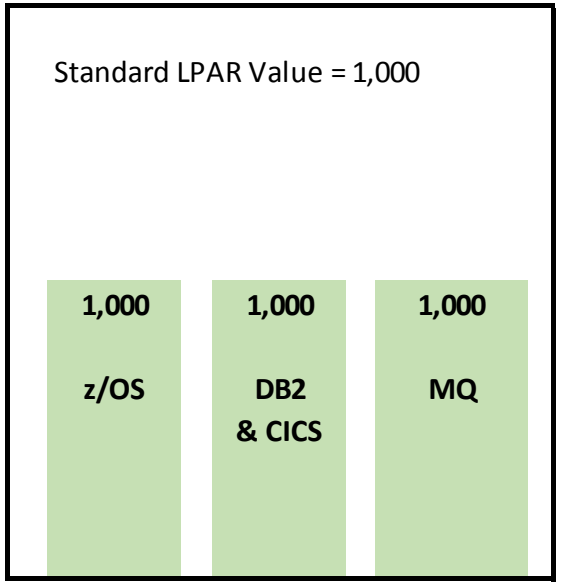
ICAP Illustration – Incremental MQ Growth

Incremental MQ Example = 100 MSUs of MQ growth *

1. Existing LPAR

MSUs used for subcap billing:

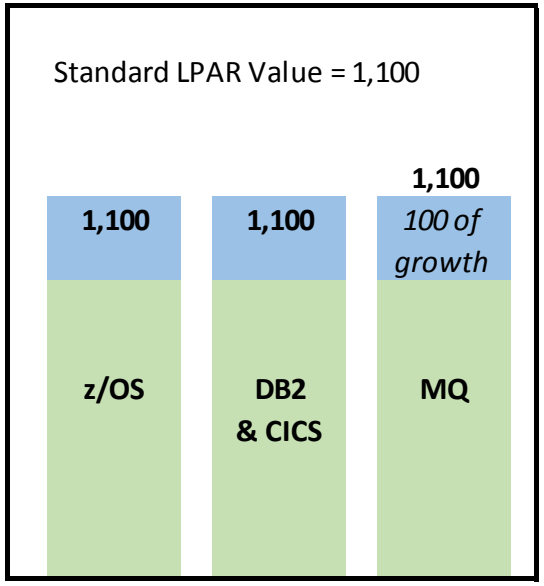
z/OS	1,000
DB2 and CICS	1,000
MQ	1,000



2. MQ growth, standard rules

MSUs used for subcap billing:

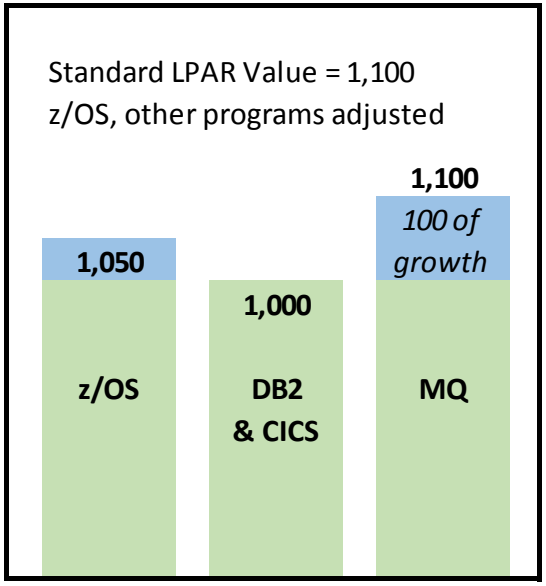
z/OS	1,100
DB2 and CICS	1,100
MQ w/growth	1,100



3. MQ growth with ICAP pricing

MSUs used for subcap billing:

z/OS	1,050
DB2 and CICS	1,000
MQ w/growth	1,100



* Assumes workloads peak at same time

Country Multiplex Pricing

Country Multiplex Pricing

Country Multiplex Pricing - Evolution from Sysplex pricing, a shift to greater flexibility and simplicity

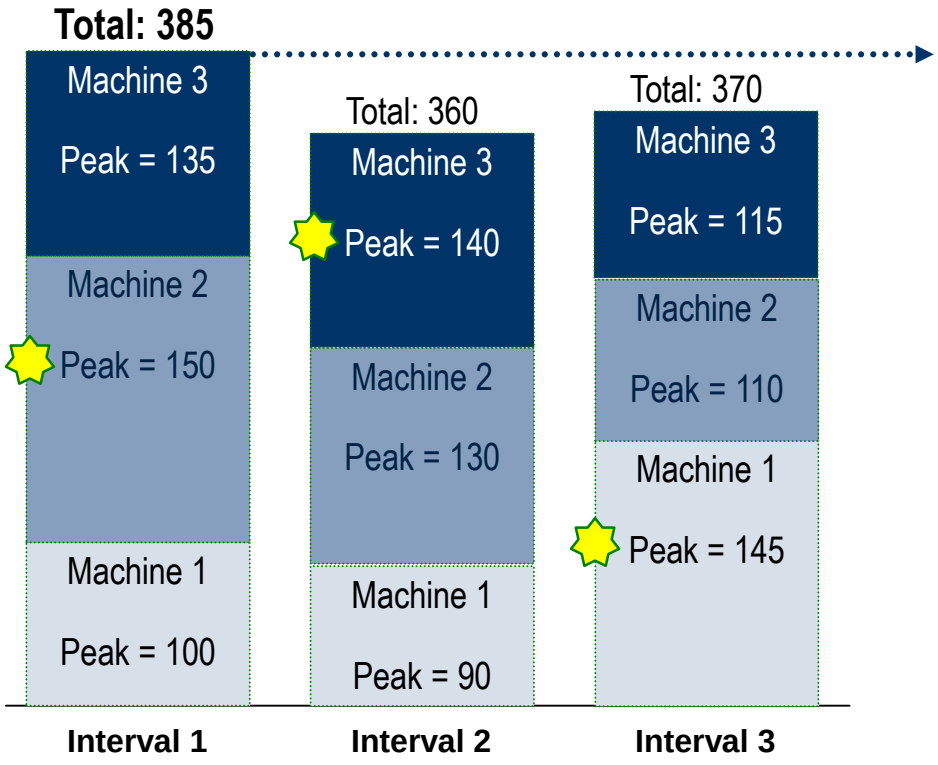
- A Multiplex is the collection of all zEnterprise and later machines in a country, measured like one machine for sub-capacity reporting
- Applicable to all z196, z114, zEC12, zBC12, and z13 machines
- A new way of measuring and pricing MSUs, as opposed to aggregating under current rules
- Unprecedented flexibility to move and run work anywhere
  - Elimination of Sysplex pricing rules
  - Elimination of duplicate peaks when workload moves between machines
- Cost of growth is reduced … one price per product for growth anywhere in the country
- Hardware and software migrations greatly simplified … Single Version Charging (SVC) and Cross Systems Waivers (CSW) will no longer be relevant
  - No time limit for version migrations, multiple versions reported with concurrent peaks
- For each customer selecting Multiplex Pricing there will be a required pricing transition, shifting to this model is about growth and flexibility going forward (baseline + growth)
- New Multiplex subcapacity reporting tool coming

Multiplex MSU Peak Reporting Illustration

- Each bar represents MSU measurements for a given time interval
- Assuming there were only 3 intervals in the month, then SCRT and Multiplex peak values would be:

Traditional Sub-Capacity Peak = Sum of individual SCRT machine peaks for the month:

Machine 1: 145
Machine 2: 150
Machine 3: 140
Sum of Peaks: 435



Multiplex Peak = Peak value of the hourly simultaneous totals of all machines
Peak of Simultaneous Totals: 385

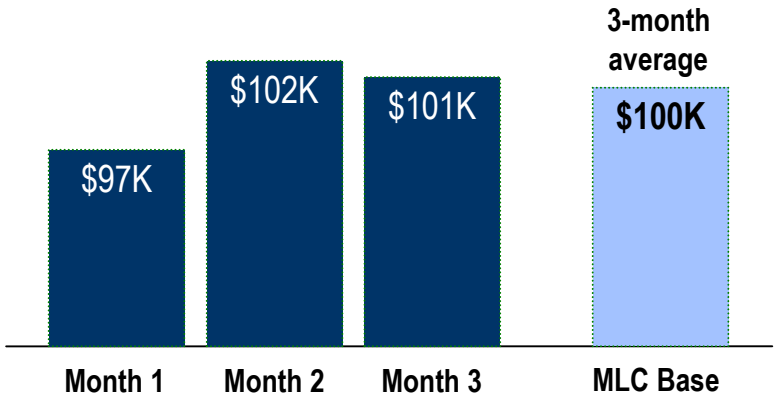
Reporting dynamics
Multiplex MSUs will be ***at or below SCRT values*** due to the smoothing effect of measuring all machines at the same time intervals

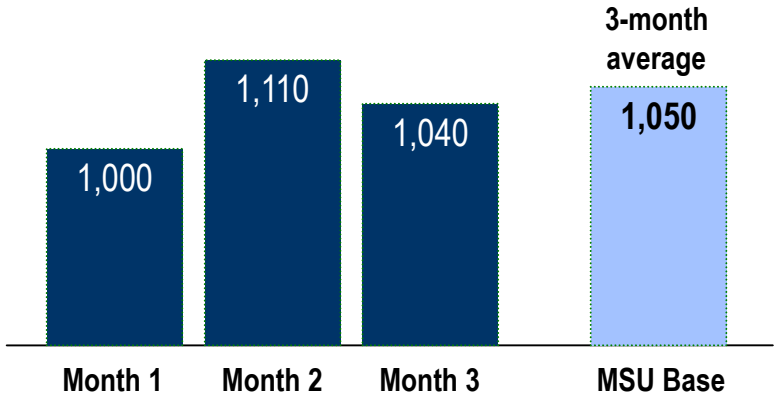
Allows for dynamic workload movement with no duplicate MSU peaks since machine boundaries are no longer critical

Multiplex MLC & MSU Base Illustration

Setting the initial MLC Base & MSU Base
(one-time exercise)

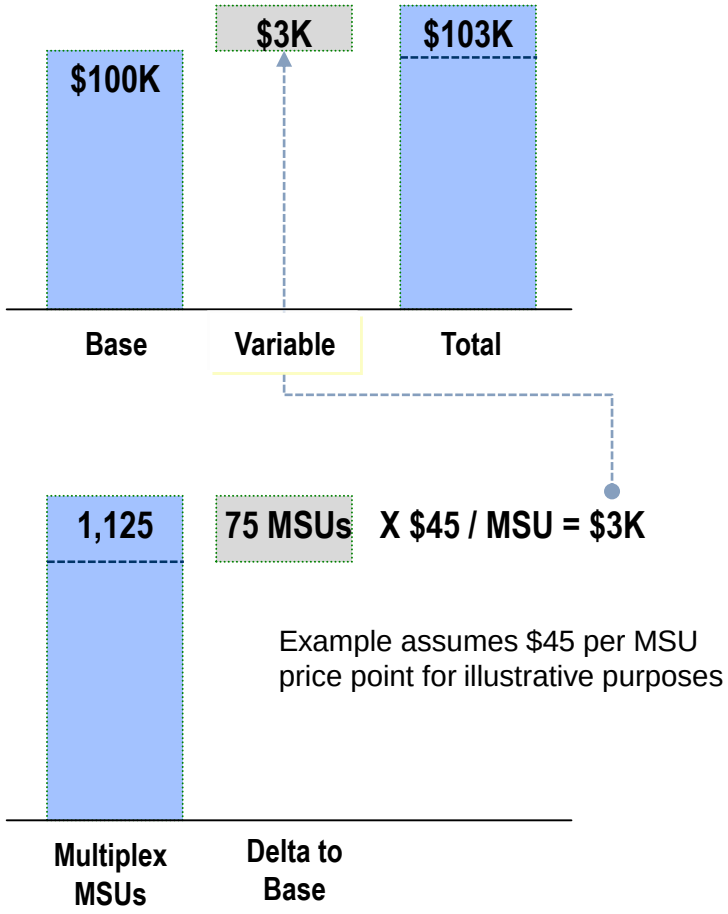
- MLC & MSU bases set for each subcapacity product
  - *Most recent 3-month average*
- MSU Base set with new Multiplex Report output
  - not traditional SCRT Report output





Ongoing MLC Reporting & Billing Example
(monthly process)

- For each product, monthly MLC charges equal to base plus variable charge
- Variable charge = Delta MSUs vs. MSU base (up or down), multiplied by applicable price per MSU



Technology Transition Offerings for the IBM z13

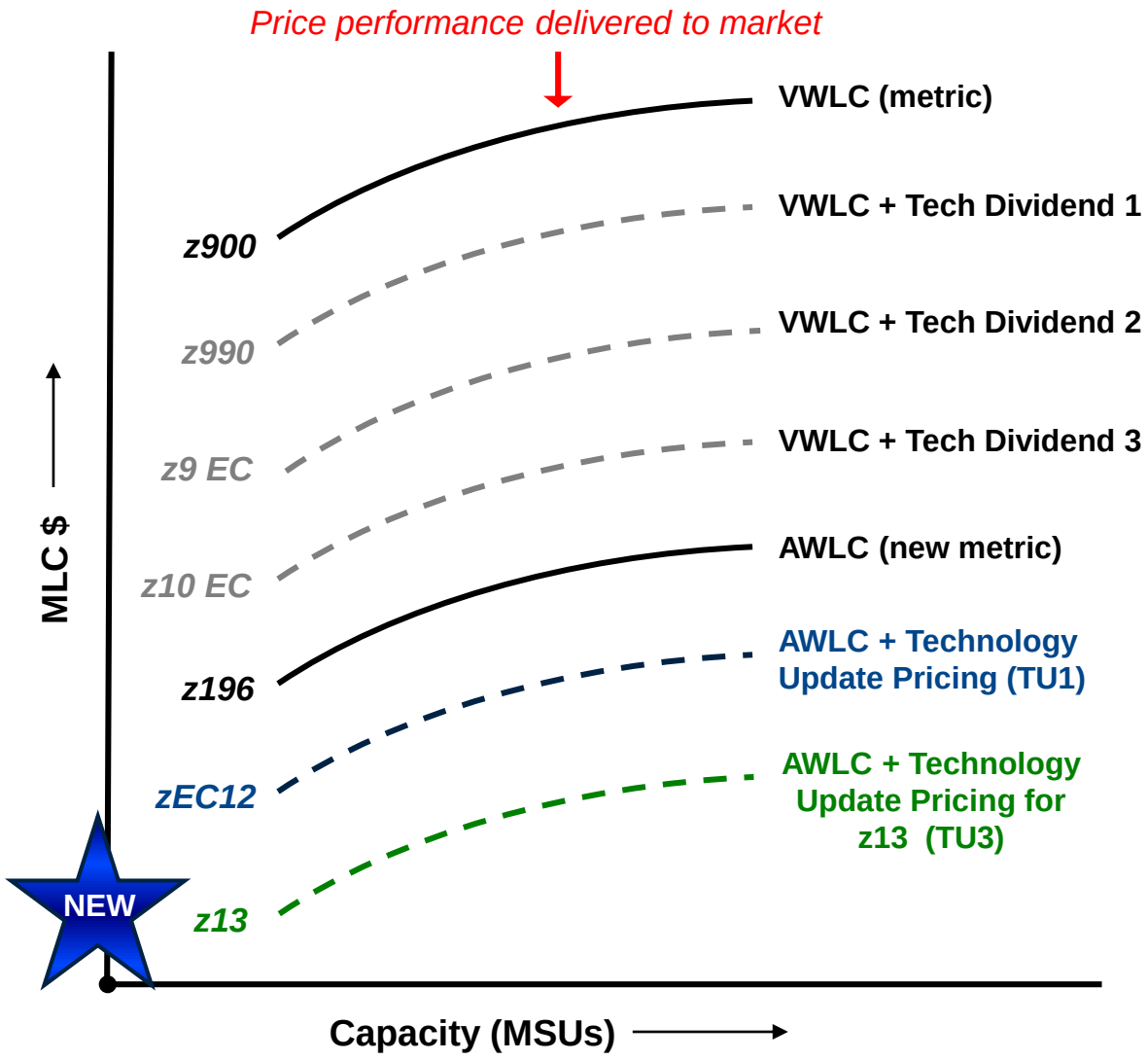
z13 Software Pricing Strategy

Technology Transition Offering Updates

- Additional MLC price performance (p/p) for z13 via enhanced AWLC pricing
  - Announcing *"**Technology Update Pricing for z13**"* called TU3
  - Maintain existing AWLC software metric, list prices and existing AWLC contract
  - Publish a new exhibit of AWLC price reductions applicable to z13
  - Continues zEC12 p/p delivery strategy
- Deliver 5% MLC price/performance on average (with flat capacity)
  - Price/performance compared to Tech Update Pricing for AWLC on zEC12 (TU1)
  - Price/performance scales with increased capacity (0% to 7%) vs zEC12
- Offer Transition Charges for Sysplexes pricing for plexes migrating to z13
  - Charges for Sysplexes (TC1) unchanged – z13 will not be supported in a sysplex with z10
  - Transition Charges for Sysplexes (TC2) – z13 added to existing zEC12 transition program and will deliver partial MLC savings from AWLC for N-2 upgrades and mixed technology plexes (z196, zEC12 and z13)
  - New Transition Charges for Sysplexes (TC3) – Delivers partial MLC savings from Technology Update Pricing for AWLC (TU1) as customers migrate zEC12 plexes to z13 machines
    - Updated transition offering with simplified approach
    - Provides one "Step" interim price point regardless of the percent of the sysplex migrated
    - Savings available as soon as migration begins, continues until sysplex is fully migrated to z13 machines

Technology Update Pricing for z13

Leverages the existing AWLC pricing metric while delivering p/p for z13



Technology Update Pricing for z13

Exhibit 3 (TU3) - z13 Pricing

Machine rated MSUs	Reduction to AWLC
1-3	0.0%
4-45	4.0%
46-315	8.0%
316-1315	9.0%
1316-2676	10.0%
2677-5476	12.0%
5477+	14.0%

NOTE:

Approximate Reduction over TU1 For AWLC

0.0%
2.0%
4.0%
4.5%
5.0%
6.0%
7.0%

- Visible price savings
- Targeted price performance
- No impact to OTC price points
- No new contract required
- Continues zEC12 delivery strategy

Technology Update Pricing for z13

Provides savings over AWLC based on total MSU capacity of the z13 machine or z13 Sysplex

z System processor
Total rated MSUs = 400

	MSUs	AWLC MLC $K
z/OS	375	$126
DB2	350	$52
CICS	350	$60
MQ	300	$24
Compilers	WF	$11
Total Stack		$273

Savings vs. AWLC

Technology Update Pricing for z13
Exhibit 3 (TU3)

HW MSU Range	Reduction to AWLC
1-3	0.0%
4-45	4.0%
46-315	8.0%
316-1315	9.0%
1316-2676	10.0%
2677-5476	12.0%
5477 +	14.0%

Resulting MLC pricing for z13 (TU3)

	MSUs	z13 MLC $K	AWLC Savings	*Approx. savings vs zEC12 (TU1)*
z/OS	375	$115	9.0%	*4.5%*
DB2	350	$47	9.0%	*4.5%*
CICS	350	$55	9.0%	*4.5%*
MQ	300	$22	9.0%	*4.5%*
Compilers	WF	$11	0.0%	*0.0%*
Total Stack		$250	8.6%	*4.3%*

Sample SW Stack Example

All pricing systems / tools automated

- No manual calculations or inputs required
- System calculates AWLC price points
- Determines Tech Update (TU3) savings % *
- Applies savings to SW stack by product

Client invoice reflects final price

- No visible discount tables or interim steps

* % savings from AWLC are calculated using the **Full Capacity MSUs** of z13 Machine

- Compilers = legacy COBOL & PL/I (Flat priced)

Transition Charges for Sysplexes

Different Transition Charges methods for different combinations of hardware generations

NA	**z196 Transition - Transition Charges 1 (TC1)**		**Reduction to VWLC**
			Price between VWLC & AWLC
	Original	N & N-1	z196 & z10
	Modified with zEC12	N & N-1 and N-2	zEC12 & z196 & z10 *
	Not applicable - z13 will not be supported in a sysplex with z10		
ADD	**zEC12 Transition - Transition Charges 2 (TC2)**		**Reduction to AWLC**
			Price between AWLC & Tech Update TU1
	Original (new for zEC12)	N & N-1	zEC12 & z196
	Modified with z13	*N & N-1 and N-2*	*z13 & zEC12 & z196*
NEW	**z13 Transition - Transition Charges 3 (TC3)**		**Reduction to AWLC ****
			Price between Tech Updates TU1 and TU3
	New for z13	*N & N-1*	*z13 & zEC12*

** *Larger reduction to AWLC in effect gives reduction to Tech Update Pricing (TU1) for AWLC*

*** *In sysplexes Business Class servers assume characteristics of same generation of Enterprise Class servers*
z10 BC = z10 EC & z114 = z196 & zBC12 = zEC12

- Introduce Transition Charges 3 (TC3) for sysplexes of z13 mixed with zEC12
- Add z13 to Transition Charges 2 (TC2) – “Reduced” metric remains the same

Transition Charges for Sysplexes

New transition (TC3) provides simplified approach, provides customers with partial savings when migrating zEC12 to z13 sysplexes

Technology Update Pricing For AWLC

Exhibit 1 (TU1) - zEC12 Pricing

Machine rated MSUs	Reduction to AWLC
1-3	0.0%
4-45	2.0%
46-315	4.0%
316-1315	4.5%
1316-2676	5.0%
2677-5476	6.0%
5477+	7.0%

Transition Charges for Sysplexes

TC3 - z13 & zEC12 plex pricing

Machine rated MSUs	Reduction to AWLC
1-3	0.0%
4-45	2.8%
46-315	5.6%
316-1315	6.3%
1316-2676	7.0%
2677-5476	8.4%
5477+	9.8%

Transition = 40% reduction to TU1

Technology Update Pricing For z13

Exhibit 3 (TU3) - z13 Pricing

Machine rated MSUs	Reduction to AWLC
1-3	0.0%
4-45	4.0%
46-315	8.0%
316-1315	9.0%
1316-2676	10.0%
2677-5476	12.0%
5477+	14.0%

zEC12 Pricing
% Reduction to AWLC

→

TC3 transition Pricing
% Reduction to AWLC

→

z13 Pricing
% Reduction to AWLC

- Customers receive an additional 40 % reduction to Tech Update for AWLC (TU1) price points
- Benefit begins as soon as the sysplex begins migrating from zEC12 to z13
- Sysplexes receive the same savings percent % regardless of % hardware migrated
- Provides larger savings up front as sysplexes begin to migrate vs. prior transition programs
- Capping benefit provides more incentive to complete partial migrations

AWLC Contract is Required

All z13 software pricing benefits are tied to AWLC

- ICA Attachment for IBM System z Advanced Workload License Charges
  - AWLC Attachment number Z125-8538 / INTC-8538
    - With accompanying Exhibit Z125-8539 / INTC-8539
    - Optional IWP Addendum to AWLC Attachment: Z125-8702 / INTC-8702
    - Optional MWP Addendum to AWLC Attachment: Z126-6300
    - Future Addenda for both ICAP and Multiplex will be announced

- AWLC Contract is Required in order to provide:
  - AWLC price metric
    - Without AWLC the pricing on z13 is full-capacity PSLC
  - AWLC with Technology Update Pricing (TU3) benefits
    - For stand-alone z13 machine or sysplex with all z13 machines
  - Transition Charges for Sysplexes (TC3) benefits
    - For mixed sysplex with zEC12/zBC12/z13 machines
  - Sub-Capacity Pricing for any z13 machine
    - For z13 machine either stand-alone or in a sysplex

The End