February 2007

MAINFRAME MARKET BULLETIN

MARKET OVERVIEW

z9 replacement: definitely (or definitely not) this year

So far this has been a very quiet quarter for the mainframe market. Apart from the new zNALC pricing announcement from IBM (reviewed below) there has been little activity and it appears that IBM may be going through yet another major re-organization.

During this 'quiet' period it is interesting to listen to the various stories emanating from the IBM account teams. Some talk openly of the z9 replacement later this year whilst others claim that it will not happen. After careful evaluation of each discrete example, it becomes clear that the story is being tailored to the user. Where IBM wants an early z9 order the z9 replacement is "definitely not this year". However when a user already has a full complement of z9 processors and no short-term requirement to increase capacity the z9 replacement is "definitely this year".

Which story do I believe? Well, if the replacement does not come this year there will have been a 30-month 'gap' between new processors – by far the biggest gap for some years. In addition a number of large users already need larger systems – so my money is firmly on a 2007 announcement and delivery of the z9's replacement.

PROCESSOR PRICING

System z pricing – confusion reigns

System z hardware pricing is still incredibly variable from deal to deal. The lowest prices are well under $1,000 per MIPS (€750, £550) and the highest prices closer to $3,000 – and even higher in the case of some very small upgrades.

This huge range confuses even IBM itself with few people able to understand or explain the variations. Just how confused the company is can be seen from the fact that in two different versions of the same worldwide presentation IBM quoted the price of a single z9 processor as $800,000 and $1,450,000 respectively. That is a price variation of over 80% in PUBLISHED IBM material. Meanwhile, in my work I continue to see variations of up to 200% from deal to deal and all sorts of confusion about 'clothed' and 'raw' MIPS.

In this situation all users need independent advice to set realistic expectations for their circumstances – although from my experience ALL users can get close to the sub-$1,000 pricing with the right negotiation tactics.

SOFTWARE PRICING

Software pricing: he who dares, saves

For nearly 40 years IBM has introduced improved mainframe software pricing on an almost annual basis – at an average rate of around 15% per year. This has been achieved through a combination of new pricing methodologies, lower prices for higher capacities, and aggregation of systems.

These improvements automatically benefited the users, with no special actions required.

However, recently IBM has chosen to provide this pricing improvement through negotiation rather than automatically to all users. Thus users who do not negotiate (or at least do not negotiate well) pay far more for their software than their peers.

The level of 'negotiable' discount that a user should expect increases year by year to compensate for the 15% per annum improvement not being automatically provided.

Consequently discounts of as much as 80% for additional monthly licence charge software and 90 to 95% for OTC software are possible in well negotiated contracts. In the former case it is just a question of 'phasing' the monthly licence charge stream to maximize the benefits. In the latter case you need to use the right negotiating tactics.

The Arcati seminar on 18th June in London (further details shortly) will provide all of the information users need to maximize their discounts and re-gain the initiative, ensuring that they get the full price improvements otherwise taken away.

PRICING SCHEMES

IBM re-thinks NALC pricing

The System z New Application Licence Charge (zNALC) offering from IBM is – using its own words – designed to offer "many benefits over previous 'new workload' pricing offerings". Of course, like most marketing statements from IBM there is an element of truth in this claim but also a large element of 'omission'. What do I mean by this? Well there are many users today who receive generous NALC pricing terms for what can only loosely be described as 'new applications'. With the new offering not only will many of these applications no longer qualify but in addition IBM will effectively 'audit' any zNALC situations every year.

The prerequisites for zNALC themselves are not particularly onerous, but the naming convention for zNALC LPARs may cause problems for some users. However, the definition of a 'qualifying' application may be more restrictive.

The definition is as below:

zNALC is available only on LPARs where a Qualified Application is present, among other requirements. In general, Qualified Applications are those that IBM considers 'new workload,' such as Java language business applications

running under WebSphere Application Server, Domino, SAP, PeopleSoft, or Siebel.

IBM has established the following criteria to determine which applications are Qualified Applications:

1. *An "Application" is a computer program that is used to accomplish specific business tasks (such as, Customer Relationship Management (CRM), Enterprise Resource Planning (ERP), Supply Chain Management (SCM), business information warehouse, accounting, and inventory control programs), including the database server used for that task. In this definition, an Application is not a stand-alone database management system or systems management tool (ie related to the management or operation of the computer itself or of other computer programs). Examples of software that are not considered applications are operating system software, database products (except those qualifying as described in section (b) below), transaction managers, tools, utilities, and games.*
2. *An application may be considered a Qualified Application if:*
   a. *It is currently generally commercially available, supported by its manufacturer, and enabled to run under z/OS, and that same Application (with substantially the same functionality) is simultaneously generally commercially available, supported by its manufacturer on, and enabled to run under a UNIX operating system (for example, AIX, HP-UX, Linux, or Solaris), or Microsoft Windows (collectively "Distributed Platforms"); or*
   b. *It is a database server running under z/OS and it is operating solely in support of a software program that is currently generally commercially available, supported by its manufacturer, and running in a client/server environment where the business logic (eg application server) is running on a Distributed Platform. or*
   c. *It is a Java language business application running under WebSphere Application Server (or equivalent). These do not include systems management tools.*
3. *z/OS is eligible for zNALC pricing when running in an LPAR where the Qualified Application is executing. The only other products that may execute in this LPAR are those products that support the Qualified Application. The LPAR must be used exclusively for the Qualified Application and for programs that support the Qualified Application and for no other purpose.*
4. *IBM will determine whether a particular program is a qualified application.*

In the event you want to check if another application can qualify, contact your IBM sales representative or IBM business partner.

Lotus Domino	Baan ERP
Net.Commerce	Oracle Applications for OS/390
Payment Server	DB2 OLAP Server for OS/390
Payment Gateway	WebSphere App Server for OS/390 or z/OS
WebSphere Payment Manager	Siebel
Intelligent Miner for OS/390	WebSphere Commerce
SAP	Lawson ERP Applications
PeopleSoft	Walker e-business Applications
	Intelligent Miner for Data for OS/390

Figure 1: The original list of NALC-qualified applications

The following list is provided with the zNALC announcement:

* SAP
* PeopleSoft
* Seibel
* Domino
* Java Language Business Applications running under WebSphere Application Server

This compares with Figure 1, the list for the original NALC, which was always 'flexible' anyway. Of course, 2a above is the most interesting criterion as it shows that with zNALC IBM is aiming squarely at distributed platforms. This paragraph in effect says that if the application is NOT available on the other platforms there will be no price reduction.

However, like it or not, zNALC is the IBM strategy, replacing the z/OS.e operating system and the NALC pricing metric for the future. Users should ensure that this change does not impact them negatively.

PRICING SCHEMES

zNALC costs compared with 'normal' IBM software pricing

Based on the UK pricing from IBM, the costs of zNALC compared with VWLC for the z/OS Base at different MSU levels are as shown in Figure 2.

The savings indicated are actually on the low side as certain other z/OS elements also qualify for reduced pricing. These are RMF, SDSF, DFSORT, C++ w/ Debug Feature, Security Server Feature, DFSMS dss hsm Feature and DFSMS rmm Feature.

With this new pricing metric, you can see that IBM has continued with its theme of hitting the large user, as the savings drop from 93% at the low end to just 56% for the larger users (Figure 3).

In fact this does not truly illustrate the issue as the relative cost of VWLC compared with zNALC is 14 times higher at the low end but just double for the larger users (Figure 4).

Despite this, in general terms the zNALC pricing is good for users and for the platform as it improves the mainframe pricing relative to other platforms. It is also better than the old NALC pricing for any user with more than 100 MSUs of qualifying capacity. The figures for the UK (again just base z/OS) are as shown in Figure 5.

The only other significant point is that, where zNALC LPARs run on a system with other normal LPARs, the reported capacity of the normal LPARS is used for the cost calculation with only the remaining capacity

	zNALC	VWLC	Annual saving from zNALC	
50	£1,150	£15,431	£171,372	93%
100	£2,250	£26,581	£291,972	92%
200	£4,400	£47,306	£514,872	91%
400	£8,315	£72,931	£775,392	89%
800	£15,690	£102,431	£1,040,892	85%
1,600	£28,795	£137,236	£1,301,292	79%
3,200	£52,795	£183,061	£1,563,192	71%
6,400	£100,795	£269,461	£2,023,992	63%
12,800	£196,795	£442,261	£2,945,592	56%

Figure 2: zNALC versus VWLC at different capacity levels

charged at the zNALC rate. So in a 2,000 MSU system with a zNALC peak of say 1,000 but a 'normal' workload peak of 1,500, only 500 MSUs would be charged at the zNALC rate.

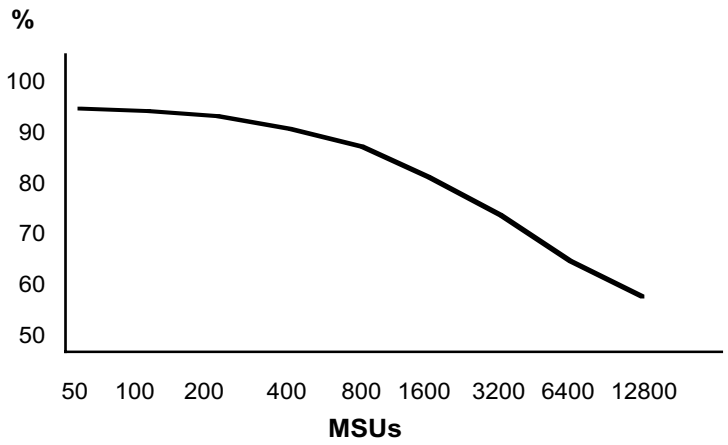

Figure 3: Annual saving from zNALC

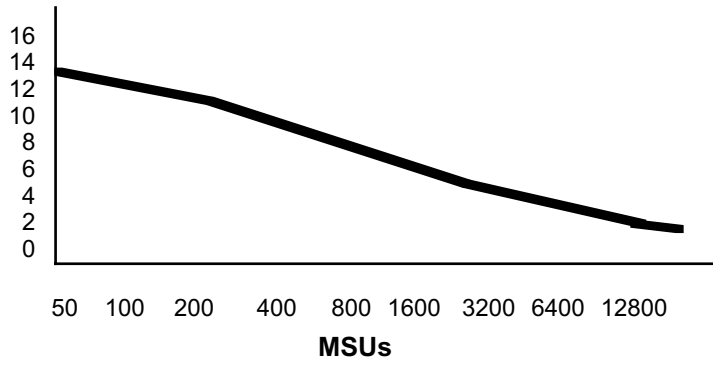

Figure 4: Relative cost of VWLC versus zNALC

MSUs	zNALC	NALC	Annual saving from zNALC versus NALC	
50	£1,150	£1,150	£0	0%
100	£2,250	£2,300	£600	2%
200	£4,400	£4,600	£2,400	4%
400	£8,315	£9,200	£10,620	10%
800	£15,690	£18,400	£32,520	15%
1,600	£28,795	£36,800	£96,060	22%
3,200	£52,795	£73,600	£249,660	28%
6,400	£100,795	£147,200	£556,860	32%
12,800	£196,795	£294,400	£1,171,260	33%

Figure 5: zNALC savings over NALC

VSE ANNOUNCEMENTS

MWLC introduced for VSE users

For the VSE users there were also some new pricing metrics announced – although in this case it was for z9 users only, forcing users of older hardware into a new processor purchase and further damaging the second-user processor market.

The most significant new pricing metric is Midrange Workload Licence Charges (MWLC), which allows for sub-capacity pricing.

The example given by IBM shows that with MWLC the software cost for a 32 MSU user will have declined from $240k per year to $71k per year over the past 6 or 7 years – equivalent to the 15 to 17% per annum improvement seen in the z/OS area.

This level of annual savings would allow a user to spend up to $800,000 on a new processor and still break even over four years. However, perhaps a more realistic level of savings for a 32 MSU user, from the IBM presentation, would be closer to $25k per year (comparing a z890 with TWLC against a z9 with MWLC). This of course would fund only a $100k processor purchase over four years – unfortunately nothing like the $400,000 that IBM would probably quote for a 32 MSU z9.

The savings from consolidating z/OS and VSE workloads are, however, likely to make this option attractive for some users.

SAMPLE MARKET PRICES

Target prices for systems and upgrades

The tables overleaf show target prices for given configurations of the z9 (EC and BC) in a z/OS environment, based on recent deals in the marketplace.

Target prices for the monthly maintenance charge, based on the net after ESA discount payments, are also included (though these vary enormously from deal to deal). The figures for processors all include one year's warranty/ maintenance.

Current target prices for the IBM ESS DASD devices and controllers are also shown. Note that all DASD prices include standard software and three years' warranty.

The final section of the table can be used to establish a target in $US for the current cost of upgrading an existing system. Note that the price of upgrades is largely determined by the extra processor speed being added.

z9 model	Priced configuration (GB/channel)	Target price ($000s)	(£000s)	(Eur000s)	Target MMC as % of price with ESA
2094-710	64/256	4,761	2,645	3,835	0.80
2094-724	128/512	9,607	5,337	7,739	0.78
Extra feature					
Per CBU		20	12.1	17.6	
Per IFL processor		100	60.6	87.9	
Per ICF processor		100	60.6	87.9	
Per zAAP processor		90	54.5	79.1	
Additional 8GB main storage		60	36.4	52.7	
Additional ESCON channels (4)		5	3	4.4	
OSA adapter		10	6.1	8.8	
FICON channels (2 ports)		10	6.1	8.8	
Sysplex timer		12	7.3	10.5	
Crypto card		10	6.1	8.8	

Sub-capacity z9 model	CPs	Target price ($000s)	(£000s)	(Eur000s)	Target MMC as % of price with ESA
BC S07-N04	4	750	417	604	0.80
EC 503	3	1,103	613	888	0.80

DASD TARGET PRICES

Capacity	Target price per MB ($000s)	(£000s)	(Eur000s)	MMC ($)
Over 1 terabyte (per TB)	31.0	17.7	25.7	135.4
Over 10 terabytes (per TB)	27.9	15.9	23.1	135.4
Over 50 terabytes (per TB)	22.5	12.9	18.6	135.4

UPGRADES

From	To	Price per MSU ($000s)	(£000s)	(Eur000s)	Notes
z2064/2084	z2094	10.0	5.71	8.3	40-80% cap increase
z2064/2084	z2094	7.0	4.0	5.8	Over 80% cap inc

Mainframe Market Bulletin is written by Barry Graham, an internationally recognized authority on the mainframe marketplace from both a financial and technical standpoint. He has worked for many years in senior management positions with IBM and Hitachi Data Systems. At IBM he was UK Large Systems Marketing Manager for MVS Systems and 30*xx* hardware. He left IBM to become Director of Strategic Account Marketing for HDS Europe. He has also held senior management positions in the software and leasing sectors. Now an independent consultant, Barry has played a significant role in the establishment and on-going operation of the Mainframe Market Bulletin and associated services (first with Xephon and now with Arcati), managing long-term contracts with users worldwide to help them negotiate directly with IBM and the ISVs. To date every one of these has resulted in substantial savings for the user. He can be contacted at barry@arcati.com.

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