SZS Consulting Ltd

System Z Software

Switching mainframe software to an OTC license model using VUE.

If IBM are knocking on your door and offering to save you mainframe cost by switching to a VUE model, you might benefit from reading this.

After many years of declining revenue, it seems IBM have finally found a solution to their woes. In the 1980's IBM sold off the lease/rental hardware business to address a revenue shortfall (with disastrous consequences once the base was sold). Since sometime in 2017 they have been running a similar program to sell off the rental software business in a controlled way. **THIS PAPER SETS OUT SOME OF THE FACTORS TO BE CONSIDERED BY CUSTOMERS IF A CHANGE IS TO BE MADE.**

As such, this is not an announced IBM program/offer, but it is being proposed in almost every ELA refresh that we see, and also to larger customers outside of the ELA renewal cycle.

The new program sets out to swap MLC licenses of CICS, MQ, DB2, IMS and Cobol to IPLA One-Time-Charge Perpetual Licenses. As we enter 2019, IBM are even starting to move the z/OS operating system to the perpetual model. IBM seek to offer a break-even of 54 months or more, but most situations seem to close on 48 months and we have helped a number of clients secure 36-month break-evens or less. IBM are managing the move, and there are criteria being used to assess which customers they migrate. To IBM, VUE is a way to book 2 years' MLC rental up front. We estimate the program is enabling them to accelerate up to $800m per annum of revenue and profit recognition on a rolling basis. It has temporarily at least halted the annual revenue decline and therefore is holding the stock price from crashing further before the current CEO departs.

Once you start to sell off a rental base, you have to backfill the loss of the future rental as time passes. IBM hoped that the strategic Imperatives revenue (AI, Blockchain etc.) would do this, but it hasn't. So they are filling the gap with more sell-offs as each quarter passes. It's hard to see where or how this will end but potentially they can accelerate $10bn over time from the whole program.

BACKGROUND TO THE OFFERING. Back in 2008, IBM announced a One-Time Charge (perpetual License) variant of the DB2 Database called Value Unit Edition (VUE). This was to try to compete with distributed systems where the license model was perpetual and IBM believed they were losing competitive situations (especially for SAP database servers) to Oracle particularly when business case compares considered 5 years' rental. The new license allowed IBM to discount DB2, and most importantly (for IBM) to book revenue up front. For a long time, factions in IBM have wanted to flip the Monthly License Charges to an OTC model – seeing this installed rental revenue base as a war-chest, thus pulling forward a lot of revenue and profit to 'get rich quick'. The list-price points of DB2 VUE never looked that attractive with a break-even at over 7 years. The factions in IBM who actually liked MLC and wanted to protect it insisted on a set of terms that meant it could only be sold for new applications that qualified for zNALC pricing, and for true incremental capacity (i.e. it could not be used to replace an MLC rental stream). As a consequence, perhaps only 100 customers took VUE licenses. Roll the clock forward to 2016, and the landscape was changing.

ELIGIBILITY FOR VUE In the period 2013 to 2014, IBM announced VUE editions of the rest of the middleware (CICS, MQ and IMS) to complement the already announced DB2 and QMF, and more recently Cobol has been announced. Whilst the announced terms appear to have the same restrictions, exceptions started to be

granted. Government institutions who had a budgetary issue with a rental model; users who had a verified intent to move away from the mainframe (where an OTC would act as a potential lock-in – or at least secure the revenue now); users who are growing legacy applications (but perhaps not zNALC eligible).

HOW DOES VUE LICENSING WORK? VUE pricing is different to MLC – it is priced similar to IPLA products such that a user buys Value Units, and depending upon the VU Exhibit there are a varying number of Value Units per MSU. CICS and MQ use Exhibit 7, whilst DB2 and IMS use Exhibit 1.

From	To	VU/MSU Exhibit 1	VU/MSU Exhibit 7
1	3	5.25	1
4	45	0.83	0.45
46	175	0.35	0.36
176	315	0.26	0.27
316	9999999	0.2	0.2

This table defines the relationship.

For the first 3 MSUs, you need 5.25 Value Units per MSU (15.75) for DB2, and 1 Value Unit per MSU (3) for CICS. The base VUE cost for CICS is therefore less than for DB2/IMS.

The current US prices per Value Unit are as follows:

	License $$
DB2 Base	11,572
DB2 QMF classic	3688
QMF Enterprise	5245
CICS	11897
MQ	5453
IMS DB	11325
IMS TM	13625

You have to buy the base License VUs, and then S&S is 25% of the base license per year (S&S on VUE is a %age higher than on other IPLA products). The base license (like all other IPLA products, and unlike PA products, does NOT include the first year's S&S. Therefore, for a 4-year deal, you would have to pay the base license plus 4 x 25% of the base licenses – which works out at twice the base license fee.

Note that for mixed environments (MLC and VUE of the same product), you pay MLC for the base and then you buy Value Units for any additional load. Note that this introduces a situation whereby if you reduce the MLC capacity then you might actually have to buy more Value Units. For example, suppose you have 175 MSUs of DB2 MLC, and 100 MSUs of DB2 VUE. You would have to buy 100x0.26 (26) Value Units . If you sunset a MLC application which consumed 40 MSUs then the MLC base would fall to 135 MSUs and you would now require [40*0.35 + 60*0.26] (29.6 – another 4 Value Units - $38,520)).

At the right price, VUE can be attractive, but it needs to be heavily discounted.

The Breakeven between VUE and MLC depends upon the size of installation and discount but undiscounted is typically 7 to 9 years. It also varies depending upon whether you are using VUE for all your capacity, or as a 'top-up' for a particular application on top of your legacy MLC. In models to simulate a number of factors, I estimate an average user (875 MSUs) with a software ELA wanting an additional 100 MSU of growth will need a discount of 65% to breakeven in 35 months. If you are 'flipping' all you MLC to a VUE model, then you would need a higher discount.

OTHER THINGS YOU SHOULD KNOW.

1. Since the introduction of z12, technology discounts apply to most MLC prices such that when you upgrade to a new technology your AWLC MLC cost will go down, by between 4% and 7% per machine generation, whereas the VUE price (and requirement) stays the same. Over time therefore (and most customers take a 5-year view) – you will need an increasing VUE discount to maintain par with the MLC

charges. Additionally, if you are going to upgrade your hardware in the next 12 months, now is not a good time to calculate the MLC baseline (because it will be up to 14% less when you upgrade.)

2. IBM will benchmark the MLC and the required IPLA based on a month or range of months. Note that the number of VUs required should be the maximum reported in any of the preceding benchmark months [usually 12], not the average. The MLC cost should be the average. If your workload is seasonal/cyclical, make sure the baseline is 12 months.
3. MLC software has annual price increases which IBM will factor into a break-even calculation, and although the IPLA price is fixed for the purchased quantity, it will increase for future purchases (significantly, because it will attract 4 years in one hit)
4. MLC is variable so some months it will be down, and some months up. IPLA is high-water-mark so you will need more capacity of IPLA software than MLC software. Typically, about 10% more.
5. You have to buy IPLA software up front – on a 4-year deal you will have to buy enough to allow for growth over that period, whereas the MLC growth will be gradual. Make sure you factor gradual growth into the MLC cost, and the end capacity into the VUE quantity.
6. Sometimes IBM will include VUE in an ELA but the workload does not qualify for zNALC. The underlying VUE terms specify that a workload has to qualify for zNALC, so you need to get a specific 'forever' exception to this requirement otherwise you have a potential future audit exposure. The terms from the announcement letter for DB2 VUE are as follows: -

   "..The workload must be a net new z/OS workload deployed in a zNALC LPAR at the time of licensing [product]VUE, and not an existing z/OS workload that a) is transferred or migrated to the zNALC LPARs from z/OS elsewhere in the enterprise or b) is already deployed in a zNALC LPAR within the enterprise. For example, an existing z/OS workload that would be or has been shifted across a border from one country to another, or from one data centre to another, or that has been renamed or rewritten does not qualify as an Eligible Workload.."

7. VUE purchases for the purpose of moving from MLC do not currently drive an MLC benefit in an ELA – even for other products.
8. If you get (say) a 70% discretionary discount in the ELA, consider what happens to the S&S at the end of the ELA. It is possible for the S&S list price (per MSU) to be more than the MLC.
9. IBM looks to grow revenue with each renewal of an ELA. If you exceptionally buy a lot of VUE now, in 3 years' time IBM will look for you to spend the same again – or to start to reduce the discount offered as a consequence of reduced content.
10. Consider also that even though interest rates are low, someone is financing the up-front payment. If IBM are financing, get them to pay the financing charges.
11. If you use less capacity with MLC, you pay less. If you use less capacity with IPLA products you will pay the same (you have to pay S&S on **all** the entitled capacity)– for as long as you use the product. Therefore, if you see an opportunity to reduce usage of a product in the 3-year horizon, now is probably not a good time to switch unless you can negotiate some special terms that allow for the reduction in the break-even calculations.
12. IPLA products have a price curve which stops at 315 MSUs – after which the price is linear. MLC on the other hand has price reductions all the way up to 20,000 MSUs. If you are growing, the discount required to maintain a 48-month break-even will increase (for future purchases). For large customers, the discount required on the initial flip is about 45%, and on growth is about 60%. Break-even periods of less than 48 months obviously require a higher discount.

13. Standard terms state that you cannot 'true-up' retrospectively and get a discount. Retrospective true-ups are at list. Therefore, you have to buy in advance for unexpected peaks. Increasing caps for operational reasons might have a significant CAPEX impact.
14. In special circumstances, IBM can be persuaded to a offer lower break-even period.
15. The list price S&S on VUE products is high when compared to MLC – in some cases it can be almost the same as the incremental MLC per MSU/year. Therefore, what happens at the end of the agreement is important and Not-To-Exceed price points or discounts need to be secured for a further period of at least 3 – 4 years after the initial period for both growth and ongoing S&S.
16. OTC spend from MLC flips does not earn a discount on the remaining MLC in an ELA and for this reason will not usually be included in a catalog. The MLC reduction will however reduce the amount of OTC required to earn a MLC benefit.
17. If you have a running ELA with MLC caps and CBA, consider funding this new VUE spend out of the CBA (otherwise you will significantly under-run the CBA)

SUMMARY

The terms, pricing and approach to VUE are complex. IBM never makes customers aware of the pitfalls, and as a result most conversions are eventually regretted. Stated ROI of 4 years usually turns out to be 5 or 6 years. There are many license actions customers can take such as managing the monthly peak which return a much higher, much quicker, and entitled financial return which is not dependent on a discretional discount. If IBM addresses all the above issues, and if you are confident that your systems are optimised, then it might make sense, but if they do not then we do not recommend customers to switch.

GLOSSARY.

MLC - Monthly License Charge. As the name implies, customers pay for this software on a monthly basis. The charge is based on a published price list and the highest number of Measured Service Units (MSUs) consumed in the month.

OTC – One Time Charge. Refers to an alternate license metric to MLC whereby the license comprises a base charge for a Vale Unit the entitles perpetual (forever) usage of a product and an (optional) ongoing Subscription model (paid annually in advance)

VU – Value Unit. The metric used to measure resources consumed by OTC (IPLA) products. It is similar in principle to MSUs (used for MLC) but there are approximately 5 MSUs to 1 VU.

AWLC – Advanced WorkLoad Charge. The specifies the price tariff to use for MLC calculations

ELA – Enterprise License Agreement. An overall SW agreement covering several years and all software used in an Enterprise. Sometimes called an ESSO, Sapphire, Topaz, OIO agreement.

IPLA – International Program License Agreement – the license terms which apply to mainframe perpetual licensed (OTC) software

zNALC – Z New Application License Charge – a special discounted version of the z/OS operating system that was discounted provided certain conditions were met (new workload where there is an equivalent package offering on another platform, or Websphere/Java.)

DAVID WILSON, DIRECTOR, SZS CONSULTING LTD.