Software and the Cloud: Bring Your Own Licence or Bring Your Own Problem?

Barry Pilling, Managing Partner, Cortex Consulting
Barry Who?

• Independent SAM and licensing consultant with 10 years experience, specialising in data centre and tier 1 vendors, and the processes around them

• Purpose of the session – Examine the cloud policies and rules of three major vendors
  • Microsoft – Licence Mobility through Software Assurance...or not
  • Oracle – Licensing Oracle Software in the Cloud Computing Environment Policy
  • IBM – Eligible Public Cloud Bring Your Own Software Licence Policy
Types of Cloud Infrastructure

• Private Cloud
  • Dedicated platform hosting just your servers
  • Could be provided by managed service
  • No licence rule changes typically

• Public Cloud
  • Shared server platform
  • Typically billed per minute
  • Licence rule changes, depending on vendor and platform
  • Examples – AWS, Azure, Google Cloud

• Hybrid Cloud
  • Mix of on-premise, public cloud and / or private cloud
  • On-premise component licensing per norms
  • Shared server licence rule changes
Appendix B – Software Assurance

• Licence Mobility Across Server Farms
• Licence Mobility Through Software Assurance
  • Can deploy licensed software to shared servers if SA in place
    • Only to Azure or Authorised Mobility Partner’s platform
  • Access the software with access licences covered by SA or with subscription licences that permit access to the applicable product
  • Can move licences between shared server platforms and on-premise data centre
    • Not more than once every 90 days
  • Fail over rights still apply for in-scope products
    • Passive nodes must be on the same shared server platform as active
  • Licence verification form must be completed and submitted within 10 days

Microsoft Licence Mobility Rules

You are responsible for 3rd party mistakes
## Modified Use Rights

<table>
<thead>
<tr>
<th>Licence Model</th>
<th>Product / Type</th>
<th>Licence</th>
<th>Permitted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per Core / CAL</td>
<td>External connectors</td>
<td>External connector licence with SA</td>
<td>1 OSE per licence</td>
</tr>
<tr>
<td>Server / CAL</td>
<td>SQL Server</td>
<td>Each server licence with SA</td>
<td>1 OSE per licence</td>
</tr>
<tr>
<td>Per Core</td>
<td>All products</td>
<td>Each core licence with SA</td>
<td>1 virtual core (subject to 4 min)</td>
</tr>
<tr>
<td>Management Servers</td>
<td>System Centre Standard</td>
<td>Every 16 management licences with SA</td>
<td>2 OSEs per managed server</td>
</tr>
<tr>
<td>Management Servers</td>
<td>System Centre Datacentre</td>
<td>Every 16 management licences with SA</td>
<td>10 OSEs per managed server</td>
</tr>
</tbody>
</table>

A word about System Centre...
- Appendix B specifies versions 2012 R2 and 2016 (current April 2019)
- System Centre 2019 was released in March 2019
There are solutions available...

• AWS Dedicated Hosts / IBM Bare Metal Servers
  • Physical servers dedicated to your use
  • Lots of options available around core / memory / storage
  • **NOT** public cloud or shared servers
  • Licence Mobility Through SA rules do not apply

• **Pros**
  • Still in the cloud so no hardware maintenance costs
  • No requirement for SA or to follow licence mobility rules
  • Useful for sweating legacy licences

• **Cons**
  • Billed per hour or month for dedicated host instead of per minute
  • Be aware of licence rights without SA coverage
A Tale of Three Clouds...

• Authorised Cloud Environments
  • Microsoft Azure
  • Amazon EC2 / RDS platforms

• What the policy says about Processor licences
  • 1 VCPU = 1 processor licence if HT not enabled
  • 2 VCPUs = 1 processor licence if HT enabled
  • The Oracle Core Factor Table does not apply
  • ULAs – cloud does not count against certification

• What about Socket licences?
  • 4 or fewer VCPUs = 1 socket licence
  • Every block of 4 (rounded up) = additional socket licence
  • Standard edition <= 16 VCPUs / SE1 & SE2 <= 8 VCPUs

Check the program eligibility list
Can You Licence by NUPs?

- Authorised Cloud Policy
  - Does not mention licensing by NUPs but...
  - You do have all the information you need to do it

- Database Licensing Policy
  - Enterprise = min 25 NUPs per processor licence
  - Standard = min 10 NUPs per server

- So the calculations are?
  - Enterprise – if HT not enabled, 25 NUPs per VCPU or
  - If HT enabled, 25 NUPs per 2 VCPUs
  - Standard / SE1 / SE2 – 10 NUPs per virtual server

“this metric can be used in all environments”
Lots of Available IaaS Suppliers...

- If they’re not mentioned in the policy
  - Approach with caution – you’re taking a risk
  - Treat as on-premise licensing
  - Oracle Cloud BYOL is the exception (PaaS)

- Which means...
  - You need to understand the underlying technology
  - You need to be very well acquainted with Oracle’s partitioning policy
  - You need to ensure your IaaS contract includes reporting on data you will need for licensing

- True story...

“...you’ll have to tell Oracle they can’t just rock up with their usual multi-core type metrics...”
“Eligible”

• A key word in IBM licensing
  • Eligible virtualisation, eligible programs, eligible processor technology
  • 3 of the 4 terms which apply to sub-capacity licensing

• What is eligible software?
  • Any IBM software licensed to you directly or through an IBM reseller under IBM terms
  • Subject to use authorisations and restrictions stated in the applicable governing licence agreements

“...IBM authorises you to deploy your eligible IBM software on an eligible public cloud Infrastructure as a Service provided by IBM or a 3rd party...”
IBM BYOSL – Eligible IaaS Providers

Where Can We Deploy?

- Eligible IaaS providers
  - IBM Cloud – virtual / bare metal servers and containers
  - AWS – EC2 and dedicated instances
  - Google Compute Engine
  - Azure – virtual machines
  - Oracle – cloud compute instances

- PVU-licensed software
  - All of the above follow a standard pattern
  - Oracle Cloud compute instances
    - 1 x Oracle Compute Unit (OCPU) = 2 x VCPUs
  - IBM Cloud bare-metal servers
    - Refer to technology and PVU table

IBM VMs
MS Azure
IBM Cloud bare-metal servers
Oracle Cloud
AWS
Google Compute

70 PVUs per VCPU
140 PVUs per OCPU
Things to Think About

• IaaS platform
  • What does the platform look like?
  • What reports are available?
  • What terms can I negotiate into the contract?
  • What software do I want to deploy there?

• Software vendor
  • Is the platform provider an “approved” cloud solution?
  • What if they are not?
  • What impact is there on my licensing to using it?
  • What reporting obligations do I have?
Thank You for Coming

barry.pilling@cortexconsulting.co.uk
@Baron_ITAM
www.linkedin.com/in/barrypilling
www.cortexconsulting.co.uk
@cortexllp
www.linkedin.com/company/cortex-consulting-llp-uk