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

Barry Pilling, Managing Partner, Cortex Consulting

CORTEX
#SAMSimplified

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

CORTEX
#SAMSimplified

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
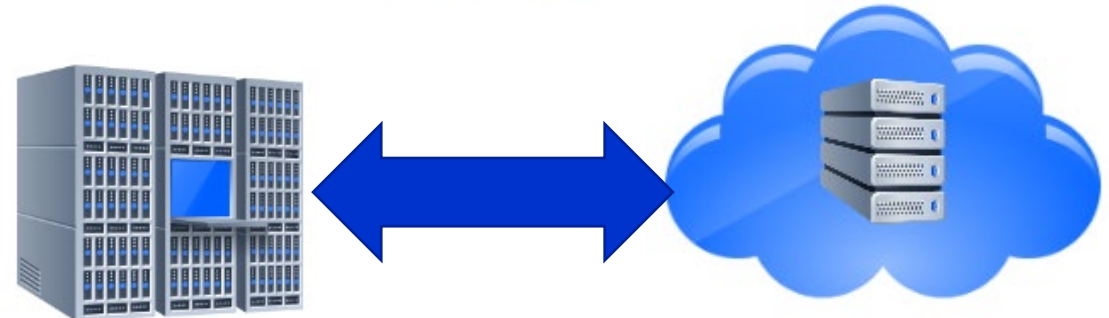
Microsoft Licence Mobility Rules

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

AWS

90 days

MS Azure

90 days
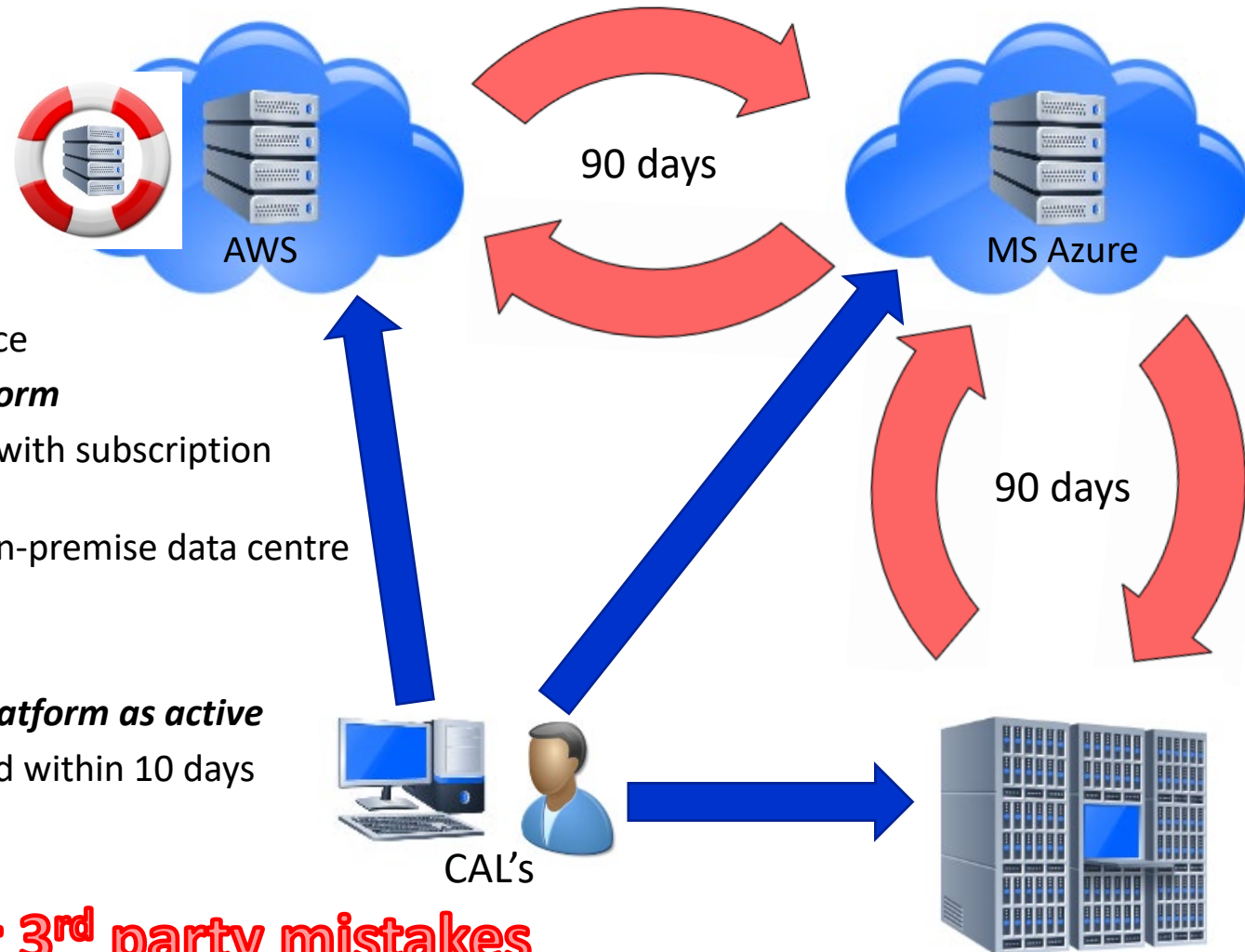
CAL's

You are responsible for 3rd party mistakes

CORTEX
#SAMSimplified

Modified Use Rights

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

A word about System Centre…
- Appendix B specifies versions 2012 R2 and 2016 (current April 2019)
- System Centre 2019 was released in March 2019

KNOW THE RULES !

CORTEX
#SAMSimplified

What If You Don't Have SA?

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

CAL's

CORTEX
#SAMSimplified

Oracle Authorised Cloud Policy

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

MS Azure

AWS EC2

AWS RDS
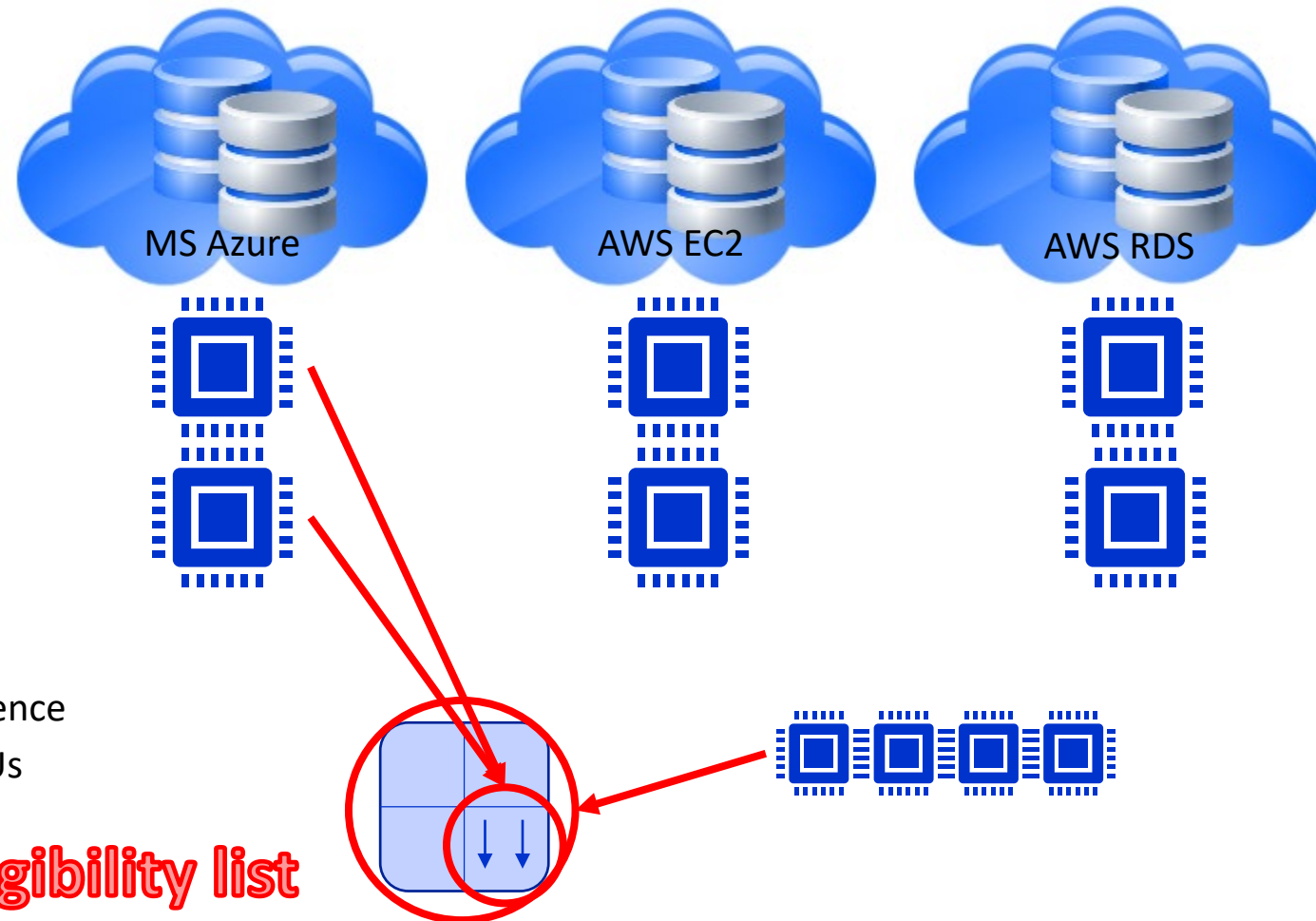
Check the program eligibility list

CORTEX
#SAMSimplified

Licensing by NUPs

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

Enterprise

Standard

CORTEX
#SAMSimplified

"this metric can be used in all environments"
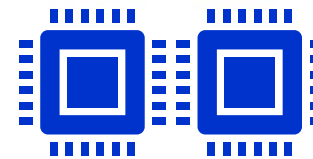
What About Other Clouds?

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..."

CORTEX
#SAMSimplified

IBM Eligible Public Cloud BYOSL Policy

"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
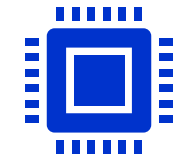 - IBM Cloud bare-metal servers
    - Refer to technology and PVU table

70 PVUs
per VCPU

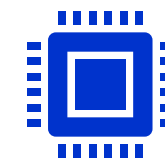IBM VMs

MS Azure

AWS

Google Compute

140 PVUs
per OCPU

Oracle Cloud

CORTEX
#SAMSimplified

Conclusions

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?

CORTEX
#SAMSimplified

Questions?

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