

## **SCHEDULE A: SERVICE DEFINITION FOR VIRTUAL DATA CENTRE (VDC) SERVICES**

### **1. VDC Service Description**

Exponential-e's VDC Service provides virtualised hardware resources to the Customer allowing the Customer to create and configure their own Virtual Machines (VMs) via a portal. Exponential-e uses multiple Tier 3 data centres to house the underlying hardware resources which deliver virtual resources to multiple customers ("VDC Sites"). Exponential-e shall manage all hardware and underlying virtualisation technology required to provide the VDC Service and the portal to enable the Customer to manage and view the virtual resources. The Customer shall be responsible for the VMs and all software and applications that may be used in connection with the Service(s).

#### Standard VDC Service

The Service is made up of 3 components as follows:

- **Processor** - These are standard contended resources (measured in terms of the number of Virtual CPU (vCPU) allocated to the Customer and being used by the Customer).
- **Memory** - Virtual Random Access Memory (vRAM) allocated by the Customer when creating the VM and being used by the Customer plus hypervisor overhead measured in Gigabytes (GB) (1,073,741,824 bytes). These are standard contended resources.
- **Storage** - The amount of space allocated by the Customer when creating the VM that includes VMs, defined image templates and disk images (ISO) measured in GB (1,000,000,000 bytes) of disk space. These are standard contended resources.

#### Reserved Instance VDC Service

The Service is made up of 3 components as follows:

- **Processor** - These are reserved (uncontended) resources (measured as the amount of CPU MHz allocated to the Customer).
- **Memory** - Virtual Random Access Memory (vRAM) allocated by the Customer when creating the VM and being used by the Customer plus hypervisor overhead measured in Gigabytes (GB) (1,073,741,824 bytes). These are reserved (uncontended) resources.
- **Storage** - The amount of space allocated by the Customer when creating the VM that includes VMs, defined image templates and disk images (ISO) measured in GB (1,000,000,000 bytes) of disk space. These are reserved (uncontended) resources.

#### Cloud Design

The cloud design statistics for the VDC Service are located in the following location: <https://www.exponential-e.com/exponential-e-cloud-design-statistics>. This content is updated by Exponential-e following changes made to the cloud design. Detail for the Exponential-e VDC Services are located in this location under all sections of the table marked with a cloud type of Shared Cloud. Private Cloud entries do not relate to VDC Services.

#### Management

The VDC Service will be subject to management by Exponential-e in accordance with Appendix A to this Service Definition.

### **2. Operating Systems (OS) and Licences**

The supported OS list is available at:

[http://partnerweb.vmware.com/comp\\_guide2/pdf/VMware\\_GOS\\_Compatibility\\_Guide.pdf](http://partnerweb.vmware.com/comp_guide2/pdf/VMware_GOS_Compatibility_Guide.pdf).

Inclusion of an OS on this list does not provide or imply the grant of any licence for use with the VDC; the Customer must ensure that their licence permits use of the OS on the Exponential-e owned, multi-tenant VDC platform. Exponential-e will provide OS licences for the currently-supported versions of Microsoft Windows server edition when the Customer uses an Exponential-e provided template. Standard templates for a selection of operating systems are provided by Exponential-e. Unless agreed otherwise in the Contract, the Customer shall be responsible for the installation and maintenance of the OS. Under Microsoft licensing rules, Windows Desktop is not permitted to be installed.

### **3. VDC Service Demarcation Point (SDP)**

The VDC SDP is the point up to which Exponential-e's VDC Service obligations apply and the VDC Service Level Agreement



applies. The VDC SDP is the network-facing ports on the Exponential-e core switches at the VDC Site(s).

#### 4. Target Service Commencement Dates

VDC Service 5 Working Days\*

*\*From order acceptance. Leadtime is subject to confirmation if changes are made by the Customer and/or further information comes to light which would have affected the initial design. Exponential-e shall use reasonable endeavours to ensure that the Customer may connect to the portal over the public internet within this Target Service Commencement Date. However, where the VDC Service is also part of a solution involving Connectivity Services, access to the VMs shall also be dependent upon the lead times for the Connectivity Services.*

#### 5. VDC Service Level Agreement

##### VM Availability

A VM is considered available if the VM is in “powered on” state with all required resources (vCPU, RAM & Storage) available to that VM.

	Target Availability
Each VM	99.9%

##### Service Credits

	Measure	Service Credit*
Availability	Below Target	5%
	>0.1 Below Target	10%
	>0.2 Below Target	20%

*\*The Service Credit is applied as a percentage of the Monthly Charge for the VMs that are Unavailable (calculated on a pro-rata basis). Monthly Charge is the Annual Charge divided by 12 and/or any Usage Charges for the month concerned (where applicable).*

#### 6. Rate Card

The VDC Rate Card is available upon request from [sales@exponential-e.com](mailto:sales@exponential-e.com).

## APPENDIX A: VDC MANAGEMENT

Exponential-e will provide operational management for the elements forming the VDC Service. Exponential-e's responsibilities with respect to management of the VDC Service are as follows. The Customer is responsible for all management aspects other than those for which Exponential-e is responsible.

Aspect	Exponential-e Responsibilities
<b>Capacity Planning</b>	<ul style="list-style-type: none"> <li>• VDC performance capacity monitoring and analysis.</li> <li>• Collect and aggregate VM performance data from automated monitors as it relates to the VDC Service.</li> <li>• Provide reports on this collected data on a monthly basis.</li> <li>• Ongoing planning for future growth of the VDC Service involving trending of CPU/RAM/storage/network performance and utilisation patterns.</li> <li>• Recommend and dialog with the Customer to enact environment changes, including the addition of additional VDC hardware.</li> <li>• Discuss possible remediation options with the Customer to address capacity bottlenecks.</li> </ul>
<b>Documentation</b>	<ul style="list-style-type: none"> <li>• Maintain solution design documentation for the VDC Service.</li> <li>• Maintain Customer usage documentation for the VDC Service.</li> <li>• Implement and maintain version control for all documentation.</li> </ul>
<b>Hardware</b>	<ul style="list-style-type: none"> <li>• Keep the hardware warranty active so that it is subject to hardware remediation by the vendor.</li> </ul>
<b>Licensing</b>	<ul style="list-style-type: none"> <li>• Exponential-e is responsible for licensing and licensing maintenance under this Contract to cover the standard VDC Service, including. <ul style="list-style-type: none"> <li>• In scope VMware vSphere licenses</li> <li>• In scope VMware vCloud Director licenses</li> </ul> </li> </ul>
<b>Monitoring</b>	<ul style="list-style-type: none"> <li>• Monitor and alert on the availability and performance of the VDC infrastructure.</li> <li>• Provide proactive remediation of issues generated through the monitoring and alerting toolsets.</li> </ul>
<b>Patch &amp; Firmware Management</b>	<ul style="list-style-type: none"> <li>• Patch updating the Exponential-e VDC Service platform, at Exponential-e's discretion.</li> <li>• Software updating the Exponential-e VDC Service platform, at Exponential-e's discretion.</li> <li>• Patch updating the Exponential-e VDC Service management platform, at Exponential-e's discretion.</li> <li>• Software updating the Exponential-e VDC Service management platform, at Exponential-e's discretion.</li> <li>• Notify the Customer of proposed updates to the VDC Service.</li> <li>• Review and test critical hardware and software updates.</li> </ul>
<b>Proactive Remediation</b>	<ul style="list-style-type: none"> <li>• Investigate the cause of issues generated through the monitoring and alerting toolsets, or reported by the Customer.</li> <li>• Communicate recommended remediation activities to the Customer and request approval from the Customer for carrying out remediation activities.</li> <li>• Provide proactive remediation of issues as agreed with the Customer</li> </ul>