

**PRODUCT APPENDIX 1**  
**SOFTWARE AND SUPPORT SUBSCRIPTIONS**



This Product Appendix (which includes Exhibits applicable to specific Red Hat Products) contains terms that describe the parameters and govern your use of Software Subscriptions and Support Subscriptions. This Product Appendix does not apply to Red Hat hosted or on-line subscription offerings. When we use a capitalized term in this Product Appendix without defining it in this Product Appendix, the term has the meaning defined in the Agreement to which this Product Appendix applies, either the Red Hat Enterprise Agreement set forth at <http://www.redhat.com/agreements> or, if applicable, a mutually signed agreement between Client and Red Hat. In the event of a conflict, inconsistency or difference between this Product Appendix and an Exhibit to this Product Appendix, the terms of the Exhibit control.

Red Hat may modify or update this Product Appendix either by posting a revised version of this Product Appendix at <http://www.redhat.com/agreements>, or by providing notice using other reasonable means. If you do not agree to the revised version then, (a) the existing Product Appendix will continue to apply to Red Hat Products you have purchased as of the date of the update for the remainder of the then-current Subscription term(s); and (b) the revised version will apply to any new purchases or renewals of Red Hat Products made after the effective date of the revised version.

This Product Appendix does not apply to generally available open source projects such as [www.wildfly.org](http://www.wildfly.org), [www.fedoraproject.org](http://www.fedoraproject.org), [www.openstack.redhat.com](http://www.openstack.redhat.com), [www.gluster.org](http://www.gluster.org), [www.centos.org](http://www.centos.org), okd.io [Ansible Project Software](https://www.ansible.com) or other community projects.

**1. Subscription Services**

**1.1 Unit Definitions.** Fees for Subscription Services are determined by counting the Units and metrics associated with the applicable Red Hat Product. Table 1.1 below defines the various Units that are used to measure your use of Software Subscriptions. The specific Units that apply to the various Software Subscriptions are contained in the Order Form(s) applicable to your purchases and in the Exhibit(s).

**Table 1.1**

Unit	Software Subscription Unit Definitions
Certificate	a file that identifies the holder and enables the secure exchange of information that is generated or managed by the Software.
Core	a physical processing core located in a CPU or a virtual processing core within a virtual machine or supporting a container, in each case, that contains or executes the Software.
Core Band	a group of processing Cores (e.g. 2, 4, 16 or 64).
CPU	a central processing unit in a computer system.
Customer User	your and your Affiliates' third party end users with access to the Software.
Deployment	means an installation of a single Quay Enterprise registry using a single shared data store.
Employee User	your and your Affiliates' employee users acting on your behalf (including your independent contractors and those of your Affiliates) who are able to access the Software.
Full Time Equivalent or FTE	the sum of (a) the total number of full time faculty plus one third of the part time faculty and (b) the total number of full time staff plus one half of the part time staff.
GB of RAM	a gigabyte of processing memory that contains or executes the Software.
Managed Node	each and every Node managed by the Software. "Node" means a Virtual Node, Physical Node, device or other instance of software.
Module	use of the Software to manage one System, Virtual Node or Physical Node.
Physical Node	a physical system which contains or executes all or a portion of the Software including, without limitation, a server, work station, laptop, blade or other physical system, as applicable.
Power IFL (Integrated Facility for Linux) including PowerVM	a processor core on an IBM Power system that is activated and contains or executes all or a portion of the Software.
Socket	a socket occupied by a CPU.
Socket-pair	up to two Sockets.
Storage Band	an amount of Storage (measured in terabytes "TB" and/or petabytes "PB"), where "Storage" is the total (absolute) capacity of storage available to each instance of the Software.
System	a system which contains or executes all or a portion of the Software including, without limitation, a server, work station, laptop, virtual machine, container, blade, node, partition, appliance or engine, as applicable.
System on a Chip or SOC(s)	a single integrated circuit that includes the major components of a computer and is generally recognized as a system on a chip.
System z IFL (Integrated Facility for Linux)	a mainframe CPU that is activated and contains or executes all or a portion of the Software.
vCPU	a physical CPU, in whole or in part, which is assigned to a virtual machine or container which contains or executes all or a portion of the Software.
Virtual Node or Virtual Guest	an instance of the Software executed, in whole or in part, on a virtual machine or in a container.

**1.2 Use of Subscription Services.**

- (a) **Basis of the Fees.** While you have Subscriptions entitling you to receive Subscription Services for a Red Hat Product, you are required to purchase the applicable Software Subscriptions and Support Subscriptions in a quantity equal to the total number and capacity of Units of that Red Hat Product from the commencement of your use or deployment of such Red Hat Product(s). For Add-On Subscriptions, you must purchase a quantity equal to the total number and capacity of Units that receive the associated Subscription Services. For purposes of counting Units, Units include (a) non-Red Hat Products if you are using Subscription Services to support or maintain such non-Red Hat Products and (b) versions or copies of the Software with the Red Hat trademark(s) and/or logo file(s) removed. The fees are for Subscription Services; there are no fees associated with the Red Hat Software licenses. An instance of a Red Hat Universal Base Image by itself (e.g., not combined or used with Red Hat Products) is not considered a Unit unless such instance receives or uses Subscription Services.
- (b) **Supported Use Cases.** Subscription Services are provided for Software only when the Software is used for Supported Use Cases as described in the table below and the Exhibits to this Product Appendix. The Supported Use Case(s) associated with a Red Hat Product also determine the type of Subscription that is required. If your use of any aspect of the Subscription Services is contrary to or conflicts with a Supported Use Case, you are responsible for purchasing the appropriate Subscription(s) to cover such usage. For example, if you are using a Red Hat Enterprise Linux Desktop Subscription on a System that is a server, you are obligated to purchase Red Hat Enterprise Linux Server Subscription Services.

**Table 1.2(b): Supported Use Cases**

Use Case Name	Supported Use Case	Hardware Capacity Limitations and Examples
Edge Server	Supported only for server class hardware used for distributed computing excluding deployments in a data center, purpose built hosting facility or public cloud.	Physical and virtual server class instances, typically connected to data sources from endpoints or gateways and optionally connected to cloud and data center resources. Server class hardware and systems with up to 1-2 physical sockets, more than 8 cores per socket, over 32G of memory.
Edge Gateway	Supported only for non-server class hardware used for distributed computing, typically connecting to endpoint systems and devices to aggregate them. Gateways provide a secure bi-directional interconnect between the IT enterprise datacenter and to the individual endpoint devices via one or multiple cloud- cellular- LAN or WiFi connections. Excludes deployments in a data center, purpose built hosting facility or public cloud.	Devices include non-server hardware such as the Intel NUC with mobile or desktop class processors, Intel Celeron & i3 - i7 CPUs.
Edge Endpoint	Supported for non-server class hardware at the endpoint with lightweight, low cost, single purpose devices such as systems on chip or module, connecting IoT and other sensor and data gathering systems. Excludes deployments in a data center, purpose built hosting facility or public cloud.	Devices include single purpose system on chip ("SoC"), system on module ("SoM") boards, Atom class processors directly receiving input from a data generating source(s) including human interfacing devices such as kiosks and retail POS devices.
Disaster Recovery	Supported only on Systems or Physical Nodes used intermittently for disaster recovery purposes such as systems receiving periodic backups of data from production servers, provided those disaster recovery systems have the same Service Levels (as set forth in the Subscription Appendix, Section 2.3(d)) and configurations (e.g. Socket-pairs, Virtual Guests, Cores). The Disaster Recovery Use Case does not include the execution of active workloads.	Not applicable.
Backup and Archival	Supported only for Software used for backup or archival purposes.	Off-line storage devices.
Developer Support for Teams	Solely to support the Software contained in the Red Hat Developer Support Subscriptions for Teams for Development Uses.	Not applicable.
AI/ML	Solely to support applications that (a) include or access a data warehouse and (b) use techniques which learn or create logic by analyzing large data sets.	Not applicable.
Migration	Supported for temporary scenarios where Client is (a) transitioning from an unsupported technology to a standard Red Hat Product, or (b) upgrading from one version of a Red Hat Product to a newer version of a Red Hat Product.	Not applicable.

- (c) **Development and Production Uses.** This Section 1.2(c) describes four types of Activities (Demonstration Activities; Individual Coding and Testing Activities; Multi-User Development, Test and Integration Activities; and Deployment Activities). As described in Table 1.2(c), each of the Activities is categorized as either a Development Use or a Production Use, based on the Red Hat Product to which the Activities are associated. For example, Multi-User Development, Test and Integration Activities is a Development Use for Red Hat Enterprise Linux but a Production Use for Red Hat Application Services. "Development Use" consists of the Activities set forth in Table 1.2(c) below based on the Red Hat Product lines; and also includes creating software that functions as an extension to or an integration with a Red Hat Product (e.g. OpenShift operator or Ansible integrations). "Production Use" consists of those Activities identified as Production set forth in the Table below and any use other than for Development Use. These defined terms are used in numerous Red Hat Product Use Cases in the attached Exhibits. Notwithstanding anything to the contrary, Development Use and Production Use both exclude Unauthorized Subscription Services Uses.

**Table 1.2(c): Development and Production Uses**

Red Hat Product line	Development Use vs Production Use			
	Demonstration Activities	Individual Coding and Testing Activities	Multi-User Development,-Test and Integration Activities	Deployment Activities
Red Hat Enterprise Linux and associated products (Exhibit 1.A)	Development Use	Development Use	Development Use	Production Use
All other Red Hat Products (Exhibits 1.B, 1.C, 1.D and 1.E)	Development Use	Development Use	Production Use	Production Use

- (d) **Support Levels.** You agree not to use Software Subscriptions with support service levels, such as Standard and/or Premium, (as described in Section 2.4(c) below) higher than the support levels (e.g. Self-support and/or Standard) you have purchased. For example, clusters of systems all require the highest level support for that given cluster.
- (e) **Transferring Subscriptions.** You may transfer, migrate or otherwise move Software Subscriptions provided you are accountable for the number and types of Units associated with the Software Subscriptions.
- (f) **Scope of Use of Subscription Services.** The Agreement (including pricing) is premised on the understanding that you will use Subscription Services only for your internal use (which may include Affiliates). Your internal use may include running a web site and/or offering your own software as a service, provided that such use (a) does not include a distribution, sale or resale of any of the Subscription Services and (b) provides as the primary component of the web site or service a material value added application other than the Subscription Services. However, providing the Subscription Services to, or using them for the benefit of, a third party (for example, using Subscription Services to provide hosting services, managed services, Internet service provider (ISP) services, or third party access to or use of the Subscription Services) is a material breach of the Agreement.
- (g) **Use by Contractors.** Subscription Services may be used by third parties acting on your behalf, such as contractors or outsourcing vendors provided: (i) you remain fully responsible for all of your obligations under the Agreement and this Product Appendix and for the activities and omissions of the third parties and (ii) in the case of a migration to a third party cloud or hosting provider, you are qualified for and comply with the terms of the Red Hat Cloud Access program as set forth in Section 3 below.
- (h) **Unauthorized Use of Subscription Services.** Any unauthorized use of the Subscription Services is a material breach of the Agreement. Unauthorized use of the Subscription Services includes: (a) only purchasing or renewing Subscription Services based on some, but not all, of the total number of Units, (b) splitting or applying one Software Subscription to two or more Units, (c) providing Subscription Services (in whole or in part) to third parties, (d) using Subscription Services in connection with any redistribution of Software or (e) using Subscription Services to support or maintain any non-Red Hat Software products without purchasing Subscription Services for each such instance (collectively, "**Unauthorized Subscription Services Uses**").

**1.3 Subscription Start Date.** Unless otherwise agreed in an Order Form, Subscription Services will begin on the earlier of the date you purchase or first use the Subscription Services.

**1.4 End User and Open Source License Agreements.** The Red Hat Software is governed by the EULAs set forth at [www.redhat.com/agreements](http://www.redhat.com/agreements). Software Subscriptions and Subscription Services are term-based and will expire if not renewed. This Agreement establishes the rights and obligations associated with Subscription Services and is not intended to limit your rights to software code under the terms of an open source license.

**1.5 Red Hat Software Subscription Bundles.** Red Hat offers combinations of Software Subscriptions with complementary feature sets and price discounts ("**Bundle(s)**"). The basis of the fees for these Bundles is the combined use of such Software Subscriptions on a single Unit. When any of the combined Software Subscriptions are used independently from the Bundle, the fees for such independent usage will be Red Hat's standard fees associated with the Unit for the particular Software Subscription.

**1.6 Usage Related Information.** As part of the Subscription Services, information related to use of the Software may be transmitted to Red Hat. That information may be used for purposes of providing support and upgrades, optimizing performance or configuration, minimizing service impacts, identifying and remediating threats, troubleshooting, improving the offerings and user experience, responding to issues and for billing purposes pursuant to the Agreement. Additional details related to the type of information collected and the methods by which you may opt out of the data collection are provided in the specific Red Hat Product documentation.

**2. Subscription Service Support Terms**

**2.1 Trials and Evaluations.** Red Hat may offer Trial and/or Evaluation Subscriptions for trial or evaluation purposes and not for Production Use. Trial or Evaluation Subscriptions may be provided with limited or no support and/or subject to other limitations. If you use the Trial or Evaluation Subscription(s) for any purpose other than trial or evaluation, you are in violation of this Agreement and are required to pay the applicable subscription fees for such use in accordance with Section 1 above, in addition to any and all other remedies available to Red Hat.

**2.2 Developer Subscriptions.** Red Hat may offer Developer Subscriptions for Development Use and not for Production Use. Developer Subscriptions may be provided with limited or no support and/or subject to other limitations. If you use the Developer Subscription(s) for any purpose other than Development Use, you are in violation of this Agreement and are required to pay the applicable subscription fees for such use in accordance with Section 1 above, in addition to any and all other remedies available to Red Hat..

**2.2.1 Red Hat Developer Subscription for Teams.** Red Hat Developer Subscription for Teams provides access to Software for numerous Red Hat Products (excluding Red Hat OpenShift Container Platform), on a self-supported basis only for Development Use on up to 25,000 Physical or Virtual Nodes. You may purchase Support Add-ons for certain Red Hat Products contained in the Red Hat Developer Subscription for Teams. If you provide Red Hat with personal information in the form of a list(s) to create accounts on a batch or bulk basis, you represent to Red Hat that you have the required consents of the individuals on such list to be added to the appropriate Red Hat systems.

- 2.3 Support from a Business Partner.** If you purchase Software Subscriptions that include support provided by an authorized Red Hat Business Partner (not by Red Hat) then Section 2.4 does not apply to you and you should work with your Business Partner to obtain support services. Section 2.4 only applies if you have purchased Software Subscriptions with Support provided by Red Hat.
- 2.4 Support from Red Hat.**
- (a) **Development Support.** Certain Software Subscriptions include Development Support. “**Development Support**” consists of assistance with architecture, design, development, prototyping, installation, usage, problem diagnosis and bug fixes, in each case, for the applicable Software when used for Development Use. Requests for deployment and maintenance assistance and/or assistance for Production Use are not included within the scope of Development Support, but may be available on a consulting basis under the terms of a separate agreement.
- (b) **Production Support.** Certain Software Subscriptions include Production Support. “**Production Support**” consists of assistance with installation, application testing, usage, problem diagnosis and bug fixes, in each case, for the applicable Software when used for Production Use. Production Support does not include assistance with (i) code development, system design, network design, architectural design, optimizations, tuning recommendations, development or implementation of security rules or policies, (ii) third party software made available with Red Hat Software, (iii) software on the supplementary, optional or Extra Packages for Enterprise Linux (“**EPEL**”) channels or (iv) preview technologies.
- (c) **Support Coverage.** Support is provided in the English language but may be available in other languages based on available resources. Red Hat does not provide support for (a) any underlying infrastructure or for any third party products; (b) Software that (i) you (or a third party) have modified or recompiled, (ii) is running on hardware or platforms that are not Supported Configurations or (iii) is not running in its Supported Use Case. You are responsible for testing the Software before deploying it in your environment, backing up your systems on a regular basis and having those backups available if needed for support purposes. Except as otherwise expressly stated, Support does not include data migration or data recovery support. Unless otherwise agreed in writing, Support does not include remote access by Red Hat personnel to your network and/or systems.
- (d) **Service Level Guidelines.** Red Hat will use commercially reasonable efforts to provide Support at one or more of the following support levels, depending on the Red Hat Product: Self-support, Standard or Premium, as set forth at <https://access.redhat.com/support/offerings/production/sla>. After the initial response to a support request, Red Hat will provide status updates on the issue consistent with the update guidelines applicable to the Severity Level (which may be downgraded to a lower Severity Level during the course of resolving the support request) until the issue is resolved or the parties agree on an alternative update schedule.
- (e) **Obtaining Support.** To receive Support, you must provide Red Hat with sufficient information to validate your entitlement to the relevant Support. Certain Support is provided only during Red Hat’s local standard business hours. You may contact Red Hat through your designated Support Contacts. You may designate up to the number of contacts described at <https://access.redhat.com/support/offerings/production/contacts> based on the number of Standard and Premium Software Subscriptions you have purchased (other than for Academic Edition Customers with Campus Wide Subscriptions which are based on the number of FTEs).
- 2.5 Software Subscription Lifecycle.** During the life cycle of Software, the scope of Software Maintenance and Support evolves and, after a number of years, we discontinue Software Maintenance and Support for older versions of Software. The life cycle for Software Maintenance and Production is described at [https://access.redhat.com/support/policy/update\\_policies.html](https://access.redhat.com/support/policy/update_policies.html) and, in certain instances, in the Exhibit(s). For certain versions of Software, you may purchase Extended Update Support (“**EUS**”) and/or Extended Life Cycle Support (“**ELS**”) Add-On Subscription(s) to extend your Subscription Services as further described at <https://access.redhat.com/support/policy/updates/errata/>, provided EUS Subscriptions are included in certain Software Subscriptions.
- 3. Cloud Access: Deploying Software Subscriptions in a Public Cloud**
- 3.1 Enabling Eligible Subscriptions for use in a Public Cloud.** You may deploy Red Hat Software Subscriptions in a Vendor’s Cloud under the Cloud Access program if you have a sufficient number of Software Subscriptions, provided such Software Subscriptions do not have Units that are solely based on physical attributes as further described at the Red Hat Subscription Management Customer Portal (<https://access.redhat.com/management/cloud>). The deployment of Software Subscription(s) for use in a Vendor’s Cloud does not change the start date or the duration of the original Software Subscription(s). This means that when your Software Subscription expires, your access to the Software Subscription deployed in the Vendor’s Cloud will cease, unless renewed.
- 3.2 Cloud Usage Reporting.** You consent to the Vendor reporting to Red Hat your usage of Red Hat Software Subscriptions in the Vendor’s Cloud.
- 3.3 Public Cloud Terms of Service.** Through the Cloud Access program, you may obtain access to Software images and/or updates to the Software, if and when available, either (a) via new images obtained from the Vendor’s Cloud or (b) from a Red Hat Portal. Certain information (such as Software related notices) may only be available to you via the Red Hat Portal. Payments to Red Hat for Software Subscriptions do not include any fees that may be due to the Vendor for the Vendor’s Cloud services. Red Hat is not a party to your agreement with the Vendor and is not responsible for providing access to the Vendor’s Cloud or performing any other obligations of the Vendor. The Vendor is solely responsible and liable for the Vendor’s Cloud. Red Hat may have a support relationship with the Vendor that enables Red Hat and the Vendor to collaborate and you consent to (i) Red Hat discussing your Software Subscriptions and related Support with the Vendor and (ii) Red Hat and the Vendor sharing information for the purpose of providing Services. Red Hat will provide Support to you for each Eligible Subscription pursuant to this Agreement. Certain software components or functionality of the Software contained in the original Software Subscription (or Add-on Subscription) may not be available or supported when used in the Vendor’s Cloud.
- 3.4 Vendor Specific Services.** Vendors may offer other services, offerings or commitments related to their Clouds, which may include the provision of services by US only personnel, compliance with various legal regimes or other Vendor Cloud specific obligations. Notwithstanding what may be offered by a Vendor, the Software Subscriptions are not provided subject to the terms of those Vendor offerings, and any Vendor offerings solely related to the Cloud itself and not to the Software Subscriptions operated on the Cloud. As between

Red Hat and you, you are solely responsible for complying with any applicable export laws or regulations related to your use of the Software Subscriptions and you agree not to transmit information, data or technology governed by the International Traffic in Arms Regulations to Red Hat in the course of your use of the Software Subscriptions.

- 3.5 Vendor Termination.** Red Hat may terminate the availability of a particular Vendor that offers Cloud Access with sixty (60) day notice, provided you may continue to use any Software Subscription for the remainder of the term of the Software Subscription on another Vendor's Cloud or on your premises under the terms of this Agreement.

#### 4. Definitions

**"Add-On Subscriptions"** are optional Software Subscriptions that may be purchased in addition to the base Software Subscription (e.g. a Red Hat Enterprise Linux Software Subscription).

**"Cloud"** means a Vendor's hosted computing infrastructure that provides systems, virtual machines or container hosts to end users.

**"Cloud Access"** is the Red Hat program that allows you to use Eligible Subscriptions in a Vendor's Cloud under the terms set forth in Section 3.

**"Demonstration Activities"** means deploying some or all of the Software with other software or hardware solely for the purpose of illustrating its capabilities excluding use in staging and acceptance testing environments and revenue generating deployments such as paid proof of concepts.

**"Deployment Activities"** means using the Software (a) in a production environment, (b) with live data and/or applications for any reason except Development Use and/or (c) for backup instances, whether cold or hot backup.

**"Development Uses"** is defined in Section 1.2(c) above.

**"Eligible Subscriptions"** means certain Software Subscriptions that meet the criteria for Cloud Access set forth at [www.redhat.com/solutions/cloud/access](http://www.redhat.com/solutions/cloud/access).

**"EULA"** means the end use license agreements for the Red Hat Products located at <https://www.redhat.com/en/about/red-hat-end-user-license-agreements>.

**"Evaluation Subscriptions"** and/or **"Trial Subscriptions"** means Red Hat Products offered without charge solely for evaluation and not for Production Use or Development Use, including offerings described as evaluation, trial, preview or beta.

**"Individual Coding and Testing Activities"** means an individual working independently (with their own installation of Red Hat Software) to develop other software and/or perform prototyping or quality assurance testing, excluding any form of automated testing, multi-user testing and/or multi-client testing.

**"Multi-User Development, Test and Integration Activities"** means deploying the user-space (non-kernel) Software components, container images or products packaged as container images, solely for the purposes of multi-user software development, build, continuous integration environment and testing, including automated testing, multi-user testing and/or multi-client testing of such Software.

**"Product Appendix(ces)"** means the specific terms applicable to the Red Hat Products posted at <http://www.redhat.com/agreements> or otherwise attached to or incorporated into an Order Form.

**"Production Use"** is defined in Section 1.2(c) above.

**"Red Hat Portal"** means a Red Hat hosted delivery portal, such as Red Hat Customer Portal, Red Hat Container Registry, cloud.redhat.com and/or Red Hat Update Infrastructure ("RHUI") that provides Software Access and/or Software Maintenance.

**"Red Hat Products"** means Software, Subscription Services, and other Red Hat branded offerings made available by Red Hat.

**"Red Hat Universal Base Image(s)"** means a certain subset of Red Hat Enterprise Linux user space (non-kernel) software components and supporting container software provided by Red Hat via Red Hat Universal Base Image repositories.

**"Software"** means Red Hat branded software that Red Hat provides as part of a Red Hat Product.

**"Software Access"** means access to various Software versions if and when available.

**"Software Maintenance"** means access to updates, upgrades, corrections, security advisories and bug fixes for Software, if and when available.

**"Software Subscription"** means a Subscription that contains Software Access, Software Maintenance and Support.

**"Stacking"** (or **"Stacked"** or **"Stackable"**) means the use of more than one Subscription to account for the capacity of a System or Physical Node.

**"Standard Business Hours"** are listed at <https://access.redhat.com/support/contact/technicalSupport.html>.

**"Subscription"** means a time bound Red Hat Product offering, other than professional services.

**"Subscription Services"** means Red Hat offerings consisting of Software Access, Software Maintenance, Support and/or any other services associated with and during the term of a Subscription.

**"Support"** means access to Red Hat support for issues relating to Software as described in Product Appendix 1.

**"Supported Configuration(s)"** means the supported Red Hat Product hardware and platform configurations that are listed at <https://access.redhat.com/supported-configurations>.

**"Support Contact(s)"** is a person authorized by you to open support requests and/or contact Red Hat support personnel.

**"Support Subscriptions"** means a Subscription that contains a specialized Support offering that is supplemental to Support provided in a Software Subscription.

**"Supported Use Case"** means the manner and/or environment in which a particular Subscription(s) is used and supported as further defined in an applicable Exhibit.

**"Vendor"** means the Red Hat authorized third party from whom you purchase Cloud services and who is authorized by Red Hat to participate in this Cloud Access program.

## EXHIBIT 1.A

### RED HAT ENTERPRISE LINUX AND RELATED SOFTWARE SUBSCRIPTIONS



This Exhibit 1.A. to Product Appendix 1 contains terms that describe the parameters and govern your use of the Software Subscriptions described below.

#### 1. Unit of Measure and Purchasing Requirements for Red Hat Enterprise Linux Server, Red Hat Virtualization and Red Hat OpenStack Platform

Table 1 sets forth the support level, Units of measure, capacity limitations, and stacking capabilities for various Red Hat Enterprise Linux Server, Red Hat Virtualization and Red Hat OpenStack Platform Software Subscriptions. You must purchase the appropriate number and type of these Software Subscriptions based on the Unit and other parameters described in Table 1 below.

**Table 1**

Software Subscription	Support Level	Unit of Measure	Capacity		Stackable
			Socket(s) or SOCs	Virtual Nodes	
Red Hat Enterprise Linux Server (Physical or Virtual Nodes) Red Hat Enterprise Linux for SAP Solutions Red Hat Enterprise Linux for Distributed Computing, Edge Server	Standard or Premium	Physical Node or Virtual Nodes	Socket-pair for each Physical Node or 2 Virtual Nodes		Physical Node: Yes
Red Hat Enterprise Linux for Distributed Computing, Endpoint Red Hat Enterprise Linux for Distributed Computing, Gateway	Standard or Premium	Physical Node or Virtual Nodes	Single Socket for each Physical Node or 2 Virtual Nodes		Physical Node: Yes
Red Hat Enterprise Linux for Virtual Datacenters Red Hat Enterprise Linux for Virtual Datacenters for SAP Solutions (see Notes 1 below)	Standard or Premium	Physical Node	Socket-pair	Unlimited Virtual Nodes running on a Socket-pair	Physical Node: Yes
Red Hat OpenStack Platform Red Hat OpenStack Platform for Atom Red Hat OpenStack Platform for Real Time	Standard or Premium	Physical Node	Socket-pair	Unlimited Virtual Nodes running on a Socket-pair	Physical Node: Yes
Red Hat OpenStack Platform for Bare Metal Managed Nodes	Standard or Premium	Physical Node	Socket-pair	None	Physical Node: Yes
Red Hat Enterprise Linux for Real Time Red Hat Virtualization Red Hat Enterprise Linux for ARM	Standard or Premium	Physical Node	Socket-pair	N/A	Physical Node: Yes
Red Hat Enterprise Linux for Power Red Hat Enterprise Linux for SAP Solutions for Power	Standard or Premium	Physical Node or Virtual Nodes	Up to 4 processor cores or Socket-pair	N/A	Virtual Node: Yes Physical Node: Yes
Red Hat Enterprise Linux for Power with Smart Virtualization Red Hat OpenStack Platform for Power	Standard or Premium	Physical Node	Socket-pair	N/A	Physical Node: Yes
Red Hat Enterprise Linux for System z	Standard or Premium	System z IFL	N/A	N/A	System z IFL: Yes
Red Hat Enterprise Linux for Hyperscale Red Hat OpenStack Platform for Hyperscale	Standard	Physical Node	Band of SOCs	None	Physical Node: No
Red Hat Enterprise Linux Server Entry Level	Self-support	Physical Node	Socket-pair	None	Physical Node: No
Red Hat OpenStack Platform Red Hat Enterprise Linux with Smart Virtualization	Standard or Premium	Physical Node	Socket-pair	Unlimited Virtual Nodes running on a Socket-pair	Physical Node: Yes

Red Hat Enterprise Linux with Smart Virtualization for SAP Applications Red Hat Virtualization Suite Red Hat Virtualization Suite for SAP Applications					
Red Hat Enterprise Linux for PRIMEQUEST	Premium	Physical Node	1-2 Sockets, 9 Logical Partitions 4 Sockets, 10 Logical Partitions 6 Sockets, 11 Logical Partitions or 8 Sockets, 12 Logical Partitions		Physical Node: No
Red Hat Enterprise Linux Desktop	Self-support, Standard or Premium	System	1 CPU Up to 8GB RAM	1 Virtual Guest	CPU: No
Red Hat Enterprise Linux Workstation	Self-support, Standard or Premium	System	2 CPU Unlimited RAM	1 Virtual Guest or 4 Virtual Guests	CPU: No
Red Hat Enterprise Linux Academic Site Subscription Red Hat Infrastructure for Academic Institutions - Site Subscription	Standard or Premium	Full Time Equivalent (FTE)	1-2 Sockets	1 Virtual Guest	N/A

**Note 1:** Please note that Red Hat Enterprise Linux for Virtual Datacenters Subscriptions do not include an entitlement for the host operating system.

## 2. Red Hat Enterprise Linux Server Add-Ons

Red Hat Enterprise Linux Server Subscriptions may be purchased with one or more optional Add-On Subscriptions. Add-On Subscriptions require a separate paid and active Software Subscription for each Unit that deploys, installs, uses or executes such Add-On. Each Unit of an Add-On Subscription (a) must match the Unit of Measure and capacity of the underlying Red Hat Enterprise Linux Unit and (b) inherits the Support Level of the underlying Red Hat Enterprise Linux Unit. Add-On Subscriptions are not supported on Red Hat Enterprise Linux Subscriptions with a Self-support service level.

## 3. Red Hat Enterprise Linux Server Supported Use Cases

**Table 3**

Software Subscription	Supported Use Case
Red Hat Enterprise Linux Server (see Note 1 below) Red Hat Enterprise Linux for ARM Red Hat Enterprise Linux for Power Red Hat Enterprise Linux Server for System z	Supported only for server computing on Supported Configurations, including delivery of services to other logical or physical client or server systems and the execution of multi-user applications.
Red Hat Enterprise Linux for Real Time Red Hat OpenStack Platform for Real Time	Supported only on systems running (a) operating environments identified at <a href="http://www.redhat.com/mrg/hardware">www.redhat.com/mrg/hardware</a> as Red Hat Enterprise Linux for Real Time compatible and (b) hardware systems identified as Red Hat Enterprise Linux for Real Time certified at <a href="https://hardware.redhat.com">https://hardware.redhat.com</a> will be supported.
Red Hat Enterprise Linux for PRIMEQUEST	Subscription Services are provided only on Fujitsu PRIMEQUEST systems.
Red Hat Enterprise Linux for SAP HANA Red Hat Enterprise Linux for SAP Solutions	Subscription Services are provided only on Supported Configurations certified by SAP solely to run SAP's HANA platform, S4 HANA and/or NetWeaver product.
Red Hat Enterprise Linux for Hyperscale	Subscription Services are provided only on Supported Configuration in the form of chassis that contain and use at least five (5) SOC's.
Red Hat Enterprise Linux for HPC Compute Nodes Red Hat Enterprise Linux for HPC Head Nodes Red Hat Enterprise Linux for ARM for HPC Compute Nodes Red Hat Enterprise Linux for ARM for HPC Head Nodes	Supported only for high performance computing ("HPC") that consists of a minimum set of four Systems that are networked and managed to perform compute-intensive workloads ("cluster") with all of the following characteristics: (a) the cluster is used for compute-intensive distributed tasks sent to individual compute nodes within the cluster, (b) the cluster works as a single entity or system on specific tasks by performing compute-intensive operations on sets of data (Systems running a database, web application, load balancing or file serving clusters are not considered HPC nodes), (c) the number of management or head nodes does not exceed one quarter of the total number of nodes in the cluster and (d) all compute nodes in the cluster have the same Red Hat Enterprise Linux configuration. When Red Hat Enterprise Linux for HPC Head Nodes (an optional Software Subscription for management of compute nodes) is combined with Red Hat Enterprise Linux for HPC Compute Nodes Software Subscriptions for the compute nodes in the same cluster, the compute node inherits the Service Level (as set forth in Section 2.3(d) of the Product Appendix) of the Head Node.

Red Hat Enterprise Linux for Grid Nodes	Supported only in a compute Grid where a "Grid" means a minimum of fifty (50) Socket-pairs that are networked and managed to solve workloads with the following characteristics: (a) all the nodes in the group of systems have the same Red Hat Enterprise Linux configuration, (b) the group of systems is running a single application or is controlled by a single job scheduler, (c) the workloads are sent to the group of systems by a job scheduler, (d) the workloads are maintained in a single distributed application across the nodes in the group of systems, (e) the workloads are non-interactive, and (f) the production outage of the complete group of systems is defined as 30% of the nodes in the group of systems being unable to run the workload. This Supported Use Case does not include nodes running databases, web applications, load balancing, or file services.
Red Hat Enterprise Linux with Smart Virtualization Red Hat Enterprise Linux for Power with Smart Virtualization	Supported on physical hardware solely to support virtual guests. Red Hat Enterprise Linux with Smart Virtualization is designed to run and manage virtual instances. The included Red Hat Enterprise Linux Software Subscription is supported solely when used as the host operating system with the Red Hat Virtualization Hypervisor or when used as the guest operating system with virtual machines.
Add-Ons: High Availability, Load Balancer, Resilient Storage, Scalable File System, Extended Update Support, Extended Life Cycle Support, and Red Hat Insights	Supported only on active Standard and Premium level Red Hat Enterprise Linux Server Software Subscriptions.
Red Hat Enterprise Linux Server used as a Virtual Guest	Virtual Guests may be pooled or shared on any other System that has a Software Subscription with the same (a) Support Level (Standard or Premium) and (b) number of Virtual Guests (1, 4 or unlimited Virtual Guests), provided that you do not exceed the total number of Virtual Guests associated with the underlying Software Subscriptions.
Red Hat Virtualization	Supported on physical hardware solely to support virtual guests. Red Hat Virtualization is designed to run and manage virtual instances and does not support user-space applications. Red Hat Virtualization may be used as a virtual desktop infrastructure solution, however, the Subscription does not come with software or support for the desktop operating system. You must purchase the operating system for each instance of a desktop or server separately. Red Hat Virtualization Manager, a component of Red Hat Virtualization, includes a subscription for Red Hat Enterprise Linux for the purposes of running Red Hat Virtualization Manager. Red Hat Virtualization includes Red Hat JBoss Enterprise Application Platform solely supported to run certain utilities in Red Hat Virtualization.
Red Hat Virtualization Suite Red Hat Virtualization Suite for SAP Applications	Supported only when used on a Physical Node that is a server. Red Hat Enterprise Linux is supported solely when used as the guest operating system with virtual machines created and managed with Red Hat Virtualization. Red Hat CloudForms is included and only supported when used to manage virtual machines created with Red Hat Virtualization Suite. Red Hat Virtualization includes Red Hat JBoss Enterprise Application Platform solely supported to run certain utilities in Red Hat Virtualization.
Red Hat Enterprise Linux Desktop	Supported only on personal computing systems with a primary purpose of executing applications and/or services for a single user who is typically working from a directly connected keyboard and display. Red Hat Enterprise Linux Desktop does not include support for open source server applications (e.g., Apache, Samba, or NFS), testing and development purposes or to share data with peers. Each Red Hat Enterprise Linux Desktop Software Subscription includes one Smart Management Module, each to be used solely with a single Red Hat Enterprise Linux Desktop System.
Red Hat Enterprise Linux Workstation	Supported only on personal computing systems with a primary purpose of executing applications and/or services for a single user who is typically working from a directly connected keyboard and display. Each Red Hat Enterprise Linux Workstation Software Subscription includes one Smart Management Module to be used solely with a single Red Hat Enterprise Linux Workstation System.
Red Hat OpenStack Platform (Physical Node) Red Hat OpenStack Platform for Power	Supported only when used on a Physical Node that is a server. Red Hat Enterprise Linux is supported solely when used as the host operating system for running Red Hat OpenStack Platform or when used as the guest operating system with virtual machines created and managed with Red Hat OpenStack Platform. Red Hat Enterprise Linux is currently the only supported operating system for Red Hat OpenStack Platform. Red Hat CloudForms, Red Hat AMQ and Red Hat OpenShift Container Platform are included and only supported when used to monitor and manage virtual machines created with Red Hat OpenStack Platform.
Red Hat OpenStack Platform (without guest OS) Red Hat OpenStack Platform for Power (without guest OS)	Supported only when used on a Physical Node that is a server. Red Hat Enterprise Linux is supported solely when used as the host operating system for running Red Hat OpenStack Platform. Red Hat Enterprise Linux is currently the only supported operating system for Red Hat OpenStack Platform. Red Hat CloudForms, Red Hat AMQ and Red Hat OpenShift Container Platform are included and only supported when used to monitor and manage virtual machines created with Red Hat OpenStack Platform.
Red Hat OpenStack Platform for Atom	Supported only when used on a Physical Node that is a server running an Intel Atom processor. Red Hat Enterprise Linux is supported solely when used as the host operating system for running Red Hat OpenStack Platform. Red Hat Enterprise Linux is currently the only supported operating system for Red Hat OpenStack Platform. Red Hat CloudForms is included and only supported when used to manage virtual machines created with Red Hat OpenStack Platform.
Red Hat OpenStack for Bare Metal Managed Node	Supported for each Physical Node managed by Red Hat OpenStack Platform. Red Hat Enterprise Linux is supported solely when used as the host operating system for Red Hat OpenStack Platform.



Red Hat Enterprise Linux – Academic Server	Supported only for use by qualified academic institutions for teaching and learning purposes that consist of (a) faculty, staff, or student laptops or desktops for personal and academic use, (b) computer labs available to faculty, staff, and students for general education use, (c) classroom desktops, (d) laboratories for technical and research use and/or (e) laboratories for software development use. Red Hat Enterprise Linux – Academic Edition is not supported when used for any purpose other than as described in (a) – (e) above. Qualified academic institutions must be accredited by a national accreditation agency (e.g. the United States accreditation is located at <a href="http://ope.ed.gov/accreditation/Search.aspx">http://ope.ed.gov/accreditation/Search.aspx</a> ). <b>Note:</b> When you use Red Hat Enterprise Linux – Academic Edition for non-qualified academic purposes as described above, standard Red Hat Enterprise Linux subscription rates apply.
Red Hat Enterprise Linux Academic Desktop	
Red Hat Enterprise Linux Academic Workstation	
Red Hat Enterprise Linux Academic Site Subscription	Supported only for use by qualified academic institutions. Qualified academic institutions must (a) be accredited by a national accreditation agency (e.g. the United States accreditation is located at <a href="http://ope.ed.gov/accreditation/Search.aspx">http://ope.ed.gov/accreditation/Search.aspx</a> ) and (b) have at least one thousand (1,000) FTEs.
Red Hat Infrastructure for Academic Institutions - Site Subscription	Supported only for use by qualified academic institutions. Qualified academic institutions must (a) be accredited by a national accreditation agency (e.g. the United States accreditation is located at <a href="http://ope.ed.gov/accreditation/Search.aspx">http://ope.ed.gov/accreditation/Search.aspx</a> ) and (b) have at least one thousand (1,000) FTEs.
Red Hat Enterprise Linux Developer Suite	Supported only for Red Hat Enterprise Linux Developer Suite for Development Use.

Note 1: The Red Hat Enterprise Linux Server Use Case applies to the Red Hat Enterprise Linux Server variants in this Table 3.

- 3.1 Red Hat Enterprise Linux Server – Atomic Host.** Red Hat Enterprise Linux Server may be deployed using RPM package manager or in Atomic Host mode. Atomic Host mode is an optional image based delivery, deployment and updating mechanism designed to support container based environments. Each deployment of Red Hat Enterprise Linux, regardless of the method (including containers), constitutes a Unit.
- 3.2 Red Hat Enterprise Linux Desktop and Workstation Software Subscriptions**  
Production Support for Red Hat Enterprise Linux Desktop subscriptions is limited to Support Contacts that are helpdesk support personnel and not end users.
- 3.3 Red Hat Enterprise Linux and Red Hat OpenStack Platform Extended Life Cycle Support Software Subscriptions**
- (a) **Limited Maintenance and Production Support.** Red Hat Enterprise Linux and/or Red Hat OpenStack Platform ELS Add-on Subscriptions entitle you to receive Software Maintenance and Production Support for Severity 1 and 2 problems on x86 architectures and z systems, but only for a limited set of software components listed at <https://access.redhat.com/articles/2901071>. Red Hat Enterprise Linux and/or Red Hat OpenStack Platform ELS Software Maintenance is limited to those Software updates that Red Hat considers, in the exercise of its sole judgment, to be (a) critical impact security fixes independent of customer support requests and (b) selected urgent priority defect fixes that are available and qualified for a subset of the packages in specific major releases of Red Hat Enterprise Linux and/or Red Hat OpenStack Platform beyond the end of its regular production cycles. The ELS streams will be maintained for an additional period of time immediately after the end-date of the regular production cycles of the relevant release as set forth at <https://access.redhat.com/support/policy/updates/errata/>. Red Hat will only provide one code base for both Red Hat Enterprise Linux ELS and Red Hat OpenStack Platform ELS and will not make functional enhancements to versions of either Red Hat Enterprise Linux or Red Hat OpenStack Platform during the ELS cycle.
- (b) **Red Hat Enterprise Linux ELS Unsupported Components.** Red Hat Enterprise Linux ELS covers components supported prior to the end of the life cycle but does not cover the following (in addition to those noted in Section 3.3(a) above): (a) desktop applications, (b) Red Hat Cluster Suite, (c) content from the Extras channel (“Extras” is a set of content with a shorter life cycle) and (d) Independent layered or Add-on products such as Directory Server, Red Hat Satellite, or Scalable File System. Red Hat reserves the right to exclude additional packages.
- (c) **Red Hat Enterprise Linux ELS Content Delivery.** Red Hat Enterprise Linux ELS Software Maintenance is delivered through separate Red Hat Portal base channels for the specific release and corresponding child channels if applicable. You must install a modified redhat-release package downloaded from Red Hat Portal to subscribe a Unit to a Red Hat Enterprise Linux ELS channel.
- 4. Red Hat Enterprise Linux Developer Suite**  
Red Hat Enterprise Linux Developer Suite provides an open source development environment that consists of Red Hat Enterprise Linux with built-in development tools, certain Red Hat Enterprise Linux Add-Ons, Red Hat Enterprise Linux for Real Time, Smart Management and access to Software Maintenance, but no Support. If you use any of the Subscription Services or Software associated with Red Hat Enterprise Linux Developer Suite for Production Use, you agree to purchase the applicable number of Units of the applicable Software Subscription.
- 5. Red Hat Enterprise Linux Developer Workstation and Red Hat Enterprise Linux Developer Support Subscriptions**  
For each paid, active Red Hat Enterprise Developer Workstation and/or Red Hat Enterprise Linux Developer Support Subscription, Red Hat will provide you with (a) access to the supported versions of Red Hat Enterprise Linux and updates through a Red Hat Portal; and (b) assistance for: (i) installation, usage and configuration support, diagnosis of issues, and bug fixes for Red Hat Enterprise Linux, but only for issues related to your use of Red Hat Enterprise Linux for Development Use and (ii) advice concerning application architecture, application design, industry practices, tuning and application porting (collectively, “**Developer Support**”).
- The Red Hat Enterprise Linux Developer Workstation and Red Hat Enterprise Linux Developer Support Subscriptions do not include support for (a) modified software packages, (b) wholesale application debugging or (c) software included in the Red Hat Extras repository, supplementary channels, preview technologies or software obtained from community sites.
- 5.1 Red Hat Enterprise Linux Developer Support Subscription Levels.** You may purchase Professional (two (2) business day response time) or Enterprise (four (4) Standard Business Hours response time) with web and phone support for an unlimited number of requests for

Red Hat Enterprise Developer Workstation (one (1) System) and/or Red Hat Enterprise Developer Support Subscriptions (twenty-five (25) Systems).

## 6. Red Hat Directory Server Software Subscriptions

Table 6 sets forth the Unit of measure and Supported Use Cases for Red Hat Directory Server. You must purchase the appropriate number and type of these Subscriptions based on the Unit and other parameters described in Table 6 below. The Service Level(s) for Directory Server is determined by the Service Level of the underlying Red Hat Enterprise Linux Subscription for the Physical Node or Virtual Node running Directory Server (for example, if the Service Level for the underlying Red Hat Enterprise Linux Software Subscription is Premium, then Directory Server would receive Premium level support).

**Table 6**

Software Subscription	Unit	Supported Use Case
Red Hat Directory Server	Physical Node or Virtual Node	Red Hat Directory Server is only supported on a physical server with a standard Red Hat Enterprise Linux Software Subscription (not a Red Hat Enterprise Linux Desktop, Red Hat Enterprise Linux for HPC or Red Hat Enterprise Linux Workstation Software Subscription). A Replica Red Hat Directory Server is only supported with an active Software Subscription for a Primary Red Hat Directory Server. <b>“Replica”</b> means a second instance of a Directory Server configured as a subordinate to the first instance of Directory Server. Red Hat Enterprise Linux Server is supported solely for the purpose of running Red Hat Directory Server Software. <b>“Primary”</b> means the authoritative Red Hat Directory Server from which Replica Red Hat Directory Servers derive Red Hat Directory Server information.

## 7. Red Hat Certificate System Software Subscriptions

Table 7 sets forth the Unit of measure and Supported Use Cases for Red Hat Certificate System. You must purchase the appropriate number and type of these Subscriptions based on the Unit and other parameters described in Table 7 below. The Service Level(s) for Certificate System is determined by the Service Level of the underlying Red Hat Enterprise Linux Subscription for the Physical Node running Certificate System (for example, if the Service Level for the underlying Red Hat Enterprise Linux Software Subscription is Premium, then Certificate System would receive Premium level support).

**Table 7**

Software Subscription	Unit	Supported Use Case
Red Hat Certificate System	Certificate	Red Hat Certificate System is only supported on a standard Red Hat Enterprise Linux Software Subscription (not a Red Hat Enterprise Linux Desktop, Red Hat Enterprise Linux for HPC or Red Hat Enterprise Linux Workstation Software Subscription). Certificate System includes Directory Server only to run and support Certificate System.

**EXHIBIT 1.B**

**RED HAT JBOSS APPLICATION SERVICES, OPENSIFT AND RED HAT QUAY SOFTWARE SUBSCRIPTIONS**



This Exhibit 1.B. to Product Appendix 1 contains terms that describe the parameters and govern your use of the Red Hat JBoss Application Services (formerly known as Red Hat JBoss Middleware), Red Hat OpenShift Container Platform, and Red Hat Quay product lines.

- 1. **Unit of Measure and Purchasing Requirements for Red Hat JBoss Application Services Software Subscriptions.** Table 1 sets forth the Units of measure, stacking capabilities and Supported Use Cases for various Red Hat JBoss Application Services Subscriptions. You must purchase the appropriate number and type of Software Subscription(s) for each Unit, based on the Unit and other parameters described in Table 1.
  - 1.1 **Supported JBoss Application Services Software.** Using Red Hat JBoss Application Services Software Subscriptions, (or any portion thereof) to support software obtained from community sites without purchasing a corresponding Software Subscription for such community software, is a material breach of the Agreement.
  - 1.2 **Red Hat JBoss Core Services Collection.** “Red Hat JBoss Core Services Collection” is a collection of components that provide common functionality (such as monitoring and management, load balancing, process control and single sign-on) across a majority of the JBoss Application Services portfolio and is subject to the following terms:
    - (a) You will receive entitlements for Red Hat JBoss Core Services Collection in a quantity equal to the number of Cores of Red Hat JBoss Application Services Software Subscriptions you purchased (for Software Subscriptions where the Unit is a Core).
    - (b) You will receive entitlements to Red Hat JBoss Core Services Collection equal to sixteen (16) Cores for each Red Hat JBoss Application Services Software Subscription you purchase on a per socket-pair basis.
    - (c) Red Hat JBoss Web Server (which only include the management components of the Core Services Collection) do not include Red Hat JBoss Core Services Collection.
  - 1.3 **JBoss Application Services for Hybrid Deployments.** Red Hat JBoss Application Services Software Subscriptions in Table 1 include access to the Red Hat JBoss Application Services Software enabled for and supported on Red Hat OpenShift Container Platform regardless of the deployment platform (private cloud or public cloud). The JBoss OpenShift Enabled Software Subscriptions may be deployed with monolithic applications or on Red Hat OpenShift Container Platform, and in each case such deployments are interchangeable with respect to the number of Cores, provided for Red Hat OpenShift Dedicated and Azure Red Hat OpenShift instances, Cores are consumed based on the size (vCPUs and RAM) of the deployment node.
  - 1.4 Red Hat’s Open Source Assurance Program applies only to the JBoss Application Services Software Subscription that you purchased and does not apply to JBoss OpenShift Enabled Software that may be provided (for no additional fee) with the Red Hat JBoss Application Services Subscription that you purchased.

**Table 1**

Software Subscription (Note 1 below)	Unit of Measure	Stackable	Supported Use Case
Red Hat JBoss Enterprise Application Platform	Core Band	Yes	These Red Hat Products are only supported on Supported Configurations.
Red Hat JBoss Web Server			
Red Hat Runtimes			
Red Hat Data Grid			
Red Hat Fuse			
Red Hat AMQ			
Red Hat Data Virtualization			
Red Hat Process Automation Manager (formerly Red Hat JBoss BPM Suite)			
Red Hat Decision Manager (formerly Red Hat JBoss BRMS)			
Red Hat JBoss Application Services Extended Life Cycle Support Add On			
Red Hat Integration (Note 2)			
Red Hat Runtimes (Note 2)			
Red Hat Process Automation (Note 2)			
Red Hat Application Services Portfolio (Note 2)			
Red Hat build of OpenJDK for Workstations (Note 3)	Physical Node	Yes	This product is supported for use on supported Windows Desktop versions as set forth in the

			Supported Configurations. This product is explicitly not supported for the deployment of Java based servers or use on Windows Server distributions.
Red Hat build of OpenJDK for Servers (Note 3)	Core Band	Yes	This product is supported for use on supported Windows Server versions as set forth in the Supported Configurations.

Note 1: Unless otherwise stated in an Order Form, one (1) Core is equivalent to two (2) vCPUs with hyper-threading active for the Red Hat Products in this Exhibit 1.B.

Note 2: You may use up to the number of Cores in the Core Bands that you purchase for any combination of Red Hat Products included in these Bundles.

Note 3: Client may use up to twenty (20) Support Contacts for Red Hat build of OpenJDK Subscriptions.

## 2. Unit of Measure and Purchasing Requirements for Red Hat OpenShift Container Platform

Table 2 sets forth the Units of measure, capacity limitations, stacking capabilities and Supported Use Cases for various Red Hat OpenShift Container Platform Subscriptions. You must purchase the appropriate number and type of Software Subscription(s) for each Unit, based on the Unit and other parameters described in Table 2. The Red Hat OpenShift Container Platform Use Case (OCP Use Case as defined below) applies to all Red Hat OpenShift Container Platform offerings and additional Use Cases apply to the Red Hat OpenShift Container Platform offerings as noted below. Red Hat OpenShift Container Platform for RHEL and Container Platform for RHEL are layered products and require a separate paid and active Software Subscription to Red Hat Enterprise Linux for Virtual Datacenters with matching Support Levels for each Unit that deploys, installs, uses or executes such layered products.

- 2.1 **Red Hat Enterprise Linux Server – CoreOS.** Red Hat Enterprise Linux Server as included in Red Hat OpenShift Container Platform may be deployed using RPM package manager or in a host mode intended to run containers (aka “Red Hat Enterprise Linux CoreOS”). Red Hat Enterprise Linux CoreOS mode is an optional image based delivery, deployment and updating mechanism designed to support container based environments. Each deployment of Red Hat Enterprise Linux, regardless of the method (including containers), constitutes a Unit.

Table 2

Software Subscription (Note 1 below)	Unit of Measure	Capacity for Socket-based SKUs		Stackable	Supported Use Case
		Sockets	Virtual Nodes		
Red Hat OpenShift Container Platform	Physical Node	Socket-pair	Unlimited Virtual Guests	Physical Node: Yes Virtual Guest: N/A	Red Hat OpenShift Container Platform will only be supported (this Use Case is collectively the “OCP Use Case”) when used as a platform as a service on Supported Configurations. Running other applications and/or programs of any type on the operating environment can have a negative impact on the function and/or performance. Third party operators are not supported. The Multi-Cloud Gateway included in Red Hat OpenShift Container Storage may be used for Migration purposes with the Migration Toolkit included with Red Hat OpenShift Container Platform without the need for an active paid subscription for Red Hat OpenShift Container Storage for such use. Red Hat JBoss Web Server is only supported to run Red Hat OpenShift Container Platform components.
Red Hat OpenShift Container Platform for RHEL	Physical Node	Socket-pair	Unlimited Virtual Guests	Physical Node: Yes Virtual Guest: N/A	Red Hat OpenShift Container Platform will only be supported (this Use Case is collectively the “OCP Use Case”) when used as a platform as a service on Supported Configurations. Running other applications and/or programs of any type on the operating environment can have a negative impact on the function and/or performance. Third party operators are not supported. The Multi-Cloud Gateway included in Red Hat OpenShift Container Storage may be used for Migration purposes with the Migration Toolkit included with Red Hat OpenShift Container Platform without the need for an active paid subscription for Red Hat OpenShift Container Storage for such use. Red Hat JBoss Web Server is only supported to run Red Hat OpenShift Container Platform components.
Red Hat OpenShift Container Platform (Bare Metal Node) Red Hat OpenShift Platform Plus (Bare Metal Node)	Physical Node	Socket-pair with up to 64 Cores	None	Physical Node: Yes Virtual Guest: N/A	This Red Hat Product will only be supported when installed and running on physical hardware and not when running as a virtual image or on a public cloud.
Red Hat OpenShift for NFV Applications	Physical Node	Socket-pair	Unlimited Virtual Guests	Socket-pair: Yes Virtual Guest: N/A	This Red Hat Product is only supported for the deployment of virtualized and containerized Telco communication services or network functions that deliver consumer services, business services, mobile services, video/content services, telecommunication workloads and IOT services. Examples of use cases that are not supported are nodes running general purpose IT or Enterprise applications in central or

					regional data center deployments, nodes running developer features/services or application development workloads, and nodes running databases, web applications, or file services. Third party operators are not supported.
Red Hat OpenShift Container Platform (Bastion Node)	Physical Node	Socket-pair	N/A	Socket-pair: Yes Virtual Guest: N/A	Red Hat OpenShift Container Platform "Bastion Nodes" are supported when Red Hat Enterprise Linux is used to host the scripts, files, and other tools to provision the bootstrap, control-plane, and compute nodes for Red Hat OpenShift Container Platform. Containerized workloads are not supported on Bastion Nodes.
Software Subscription (Note 1 below)	Unit of Measure	Capacity for Core-based SKUs		Stackable	Supported Use Case
		Cores	Virtual Nodes		
Red Hat OpenShift Container Platform Red Hat OpenShift Platform Plus	Virtual Guest	2 Cores or 4 vCPUs	One Virtual Guest	Cores: Yes Virtual Guest: Yes	OCP Use Case
Red Hat OpenShift Container Platform	Virtual Guest or Physical Node	Core Band	Unlimited Virtual Guests	Physical Node: Yes Virtual Guest: N/A	
Red Hat OpenShift Container Platform for Power Red Hat OpenShift Kubernetes Engine for Power	Virtual Guest	2 Cores or 4 vCPUs	One Virtual Guest	Cores: Yes Virtual Guest: Yes	OCP Use Case
Red Hat OpenShift Container Platform for IBM Z and IBM LinuxOne Red Hat OpenShift Kubernetes Engine for IBM Z and IBM LinuxOne	Virtual Node	1 Core	One Virtual Node	Physical Node: N/A Virtual Node: Yes	These Red Hat Products will only be supported when deployed on Red Hat supported KVM hypervisor running in an IBM Z L-PAR.
Red Hat OpenShift Kubernetes Engine (formerly known as Red Hat OpenShift Container Engine)	Virtual Guest	2 Cores or 4 vCPUs	One Virtual Guest	Cores: Yes Virtual Guest: Yes	This Red Hat Product is only supported as described in the OCP Use Case with respect to the components that are set forth at <a href="https://access.redhat.com/support/offersings/openshift-engine/sla/">https://access.redhat.com/support/offersings/openshift-engine/sla/</a> . Third party operators are not supported.
Red Hat OpenShift Container Platform with Application Runtimes (Note 2)	Physical Node	Core Band	Unlimited Virtual Guests	Cores: Yes Virtual Guest: N/A	These Red Hat Products will only be supported when used as a platform as a service on Supported Configurations. Running other applications and/or programs of any type on the operating environment can have a negative impact on the function and/or performance. Third party operators are not supported.
Red Hat OpenShift Container Platform with Integration (Note 2)	Physical Node	Core Band	Unlimited Virtual Guests	Cores: Yes Virtual Guest: N/A	
Red Hat OpenShift Container Platform with Process Automation (Note 2)	Physical Node	Core Band	Unlimited Virtual Guests	Cores: Yes Virtual Guest: N/A	
Red Hat OpenShift Container Platform with Application Services Portfolio (Note 2)	Physical Node	Core Band	Unlimited Virtual Guests	Cores: Yes Virtual Guest: N/A	

Red Hat OpenShift Platform (Bastion Node)	Physical Node	Core Band	N/A	Cores: Yes Virtual Guest: N/A	Red Hat OpenShift Container Platform Bastion nodes are supported when Red Hat Enterprise Linux is used to host the scripts, files, and other tools to provision the bootstrap, control-plane, and compute nodes for Red Hat OpenShift Container Platform. Containerized workloads are not supported on Bastion Nodes.
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**Note 1:** Unless otherwise stated in an Order Form, one (1) Core is equivalent to two (2) vCPUs with hyper-threading active for the Red Hat Products in this Exhibit 1.B.

**Note 2:** There are two pools of Cores included in these Bundled Red Hat Products, one pool of Cores for any combination of JBoss Application Services products and one pool of Cores for OpenShift Container Platform. You may use up to the number of Cores that you purchase in the Core Band(s) (a) for JBoss Application Services products included in these Bundles and (b) for OpenShift Container Platform deployments (in a minimum of 2 Core allocations per Unit).

**Note 3:** Red Hat OpenShift includes Red Hat OpenShift Virtualization which is designed to run and manage virtual instances. Red Hat OpenShift Virtualization is supported only when Red Hat OpenShift is installed on the bare metal server and is not installed within a virtual machine. The included Red Hat Enterprise Linux software is supported solely when used as the guest operating system within virtual machines hosted on Red Hat OpenShift Virtualization. Red Hat OpenShift Virtualization includes Red Hat JBoss Enterprise Application Platform solely supported to run certain utilities in Red Hat OpenShift Virtualization.

### 3. Unit of Measure and Purchasing Requirements for Red Hat 3Scale API Management Software Subscriptions

Tables 3.1 sets forth the Units of measure, capacity limitations, and Supported Use Cases for Red Hat 3Scale API Management Subscriptions. You must purchase the appropriate number and type of Software Subscription(s) for each Unit, based on the Unit and other parameters described in Table 3 below.

**Table 3**

Software Subscription	Unit of Measure	Capacity	Supported Use Case
Red Hat 3Scale API Management Platform	Cores	4, 16 or 64 Cores	The Subscription is supported (a) when used on a server, (b) on Supported Configurations, and (c) when used for the purpose of API Management.

### 4. Unit of Measure and Purchasing Requirements for Red Hat Quay.

Table 4 sets forth the Units of measure and Supported Use Cases for the Red Hat Quay Subscriptions. You must purchase the appropriate number and type of Software Subscription(s) for each Unit, based on the Unit and other parameters described in Table 4. Red Hat Quay is an Add-On Subscription and requires a separate paid and active Software Subscription to Red Hat Enterprise Linux with a matching Support Level for each Unit that deploys, installs, uses or executes such Add-On Subscriptions.

**Table 4**

Software Subscription	Unit of Measure	Supported Use Case
Red Hat Quay	Deployment	These Red Hat Products will only be supported when used on a Supported Configurations. Running other applications and/or programs of any type on the operating environment can have a negative impact on the function and/or performance.

## EXHIBIT 1.C

### RED HAT DATA SERVICES AND STORAGE SUBSCRIPTIONS



This Exhibit 1.C. contains terms that describe the parameters and govern your use of the Red Hat products as described below. References to “Red Hat Data Services and Storage Subscriptions” refer to both product lines.

#### 1. Unit of Measure and Purchasing Requirements.

Table 1 sets forth the support level, Unit of measure, stacking capabilities and Supported Use Case for various Red Hat Data Services and Storage Subscriptions. You must purchase the appropriate number and type of these Software Subscriptions based on the Unit and other parameters described in Table 1 below. In addition, the following terms apply:

- (a) Red Hat Gluster Storage includes management tools to manage one or more instances of Red Hat Gluster Storage.
- (b) Red Hat Ceph Storage Software Subscriptions are priced based on the total amount of storage capacity. Each Red Hat Ceph Storage Software Subscription supports up to a certain number of Physical Nodes or Virtual Nodes. Should the number of Physical or Virtual Nodes be consumed before the Storage Band capacity is reached, you may upgrade to the next Storage Band to receive additional Physical or Virtual Nodes.

Table 1

Software Subscription	Support Level	Unit of Measure	Stackable	Supported Use Case
Red Hat Gluster Storage	Standard or Premium	Physical Node or Storage Band	Yes	Red Hat Storage is intended to be used as a storage system and will be supported only when used as a storage node. These Subscriptions are not supported on non-server hardware such as desktops or workstations and are intended for use on a dedicated Physical Node; running other applications and/or programs of any type on the Physical Node can have a negative impact on the function and/or performance of the Subscription. Each Subscription includes one Software Subscription to Red Hat Enterprise Linux Server and the Scalable File System Add-on, which are supported solely in connection with the use of the respective Red Hat Storage Subscription. Red Hat Gluster Storage Module does not include a Red Hat Enterprise Linux Software Subscription which must be purchased separately.
Red Hat Gluster Storage Module	Standard or Premium		Yes	
Red Hat Ceph Storage	Standard or Premium		Yes	
Red Hat Gluster Storage Pre-Production	Standard		No	
Red Hat Ceph Storage Pre-Production	Standard		No	
Red Hat Gluster Storage for Public Cloud	Standard or Premium	Virtual Node	Yes	Red Hat Gluster Storage for Public Cloud is intended to be used as a storage system and will be supported only when used as a storage node. When running in Amazon Web Services, an EC2 M1 Large dedicated instance is required in order to be supported. Running other applications and/or programs of any type on the same instance can have a negative impact on the function and/or performance of the Red Hat Gluster Storage for Public Cloud and is not a Supported Use Case.
Red Hat Hyperconverged Infrastructure for Virtualization	Standard or Premium	Physical Node	No	Red Hat Hyperconverged Infrastructure is only supported when used as an integrated compute plus storage infrastructure. These Software Subscriptions are supported on server hardware but not on desktops or workstations. Support is provided for a minimal deployment of three (3) Nodes.
Red Hat OpenShift Container Storage	Standard or Premium	Physical Node or Cores	No	This Subscription is only supported when used as a (a) storage system with Red Hat OpenShift Container Platform or Red Hat OpenShift Data Foundation, (b) container inside OpenShift Container Platform or (c) storage node outside OpenShift Container Platform. The Subscription is supported on server hardware but not on desktops or workstations and is intended for use on a dedicated Physical Node or as containers inside OpenShift Container Platform clusters.
Red Hat OpenShift Data Foundation Essentials Red Hat OpenShift Data Foundation Advanced	Standard or Premium	Cores		
Red Hat Gluster Storage – Academic Edition Red Hat Ceph Storage – Academic Edition	Standard or Premium	FTE	n/a	Red Hat Storage – Academic Edition Subscriptions are supported for use by qualified academic institutions for teaching and learning purposes that consist of (a) faculty, staff, or student laptops or desktops for personal and academic use, (b)

			<p>computer labs available to faculty, staff, and students for general education use, (c) classroom desktops, (d) laboratories for technical and research use and/or (e) laboratories for software development use. Red Hat Storage – Academic Edition is not supported when used for any purpose other than as described in (a) – (e) above. Qualified academic institutions must be accredited by a national accreditation agency (e.g. the United States accreditation is located at <a href="http://ope.ed.gov/accreditation/Search.aspx">http://ope.ed.gov/accreditation/Search.aspx</a>).</p> <p><b>Note:</b> When you use Red Hat Enterprise Linux – Academic Edition for non-qualified academic purposes as described above, standard Red Hat Enterprise Linux subscription rates apply.</p>
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\***Pre-Production Purposes**\* consists of assistance with issues relating to the installation, configuration, administrative tasks and basic trouble-shooting of the Red Hat Ceph Storage or Red Hat Gluster Storage Software components prior to deployment in a production environment, but it does not include architectural design reviews or advice, advanced configuration topics, performance analysis or reviews.



**EXHIBIT 1.D**

**RED HAT INTEGRATED SOLUTIONS**



This Exhibit 1.D. to Product Appendix 1 contains terms that describe the parameters and govern your use of the Red Hat Integrated Solutions product lines.

- 1. Unit of Measure and Purchasing Requirements.** Table 1 sets forth the Unit of measure and Supported Use Cases for Red Hat Cloud Infrastructure Subscriptions. You must purchase the appropriate number and type of these Software Subscriptions based on the Unit and Supported Use Cases described in Table 1 below. A Red Hat Cloud Infrastructure Software Subscription comes with a Red Hat CloudForms Software Subscription but if you are managing any virtual machines with the Red Hat Cloud Infrastructure Subscription that are not running on the same Physical Node as the active Red Hat CloudForms Software Subscription, you must purchase additional Red Hat CloudForms Subscriptions for such use.

**Table 1**

Software Subscription	Unit of Measure	Capacity		Supported Use Cases
		Sockets and/or Cores	Virtual Nodes	
Red Hat Cloud Infrastructure	Physical Node	Socket-Pair	Unlimited Virtual Nodes on a Socket Pair	Red Hat only provides Subscription Services for the Software when used on a Physical Node that is a server. Red Hat Enterprise Linux is supported solely when used as the host operating system for Red Hat OpenStack Platform or when used as the guest operating system on virtual machines created and managed with this Subscription. Red Hat Virtualization is supported solely when used to run and manage virtual guests for this Subscription. Red Hat Enterprise Linux is the only supported operating system for Red Hat OpenStack Platform. Red Hat CloudForms is included and only supported when used to manage virtual machines created with Red Hat OpenStack Platform or Red Hat Virtualization. If the Red Hat Cloud Infrastructure product contains an entitlement for Red Hat Satellite, Red Hat Satellite is only supported for managing Physical Nodes within the Red Hat Cloud Infrastructure private cloud.
Red Hat Cloud Infrastructure (without guest OS)	Physical Node	Socket-Pair	none	Red Hat only provides Subscription Services for the Software when used on a Physical Node that is a server. Red Hat Enterprise Linux is supported solely when used as the host operating system for Red Hat OpenStack Platform. Red Hat Virtualization is supported solely when used to run and manage virtual guests for this Subscription. Red Hat Enterprise Linux is the only supported operating system for Red Hat OpenStack Platform. Red Hat CloudForms is included and only supported when used to manage virtual machines created with Red Hat OpenStack Platform or Red Hat Virtualization. If the Red Hat Cloud Infrastructure product contains an entitlement for Red Hat Satellite, Red Hat Satellite is only supported for managing Physical Nodes within the Red Hat Cloud Infrastructure private cloud.
Red Hat Cloud Suite	Physical Node	Physical Node: Socket-Pair with up to 32 Cores	Unlimited Virtual Nodes on a Socket Pair	Red Hat only provides Subscription Services for the Software when used on a Physical Node that is a server on Supported Configurations. Red Hat Enterprise Linux is supported solely when used as the host operating system for Red Hat OpenStack Platform or when used as a guest operating system on virtual machines created and managed on this Subscription. Red Hat Virtualization is supported solely when used to run and manage virtual guests for this Subscription. Red Hat CloudForms is included and only supported when used to manage virtual machines created with Red Hat OpenStack Platform or Red Hat Virtualization. If the Red Hat Cloud Infrastructure product contains an entitlement for Red Hat Satellite, Red Hat Satellite is only supported for managing Physical Nodes within the Red Hat Cloud Infrastructure private cloud. Running other applications and/or programs of any type on the operating environment can have a negative impact on the function and/or performance.

## EXHIBIT 1.E MANAGEMENT SUBSCRIPTIONS



This Exhibit 1.E. to Product Appendix 1 contains terms that describe the parameters and govern your use of the Red Hat Smart Management, Red Hat CloudForms, Red Hat Ansible product lines and related offerings.

### 1. Red Hat Smart Management, Red Hat Satellite and Red Hat Capsule

- 1.1 Red Hat Smart Management.** Red Hat Smart Management is an infrastructure management offering for Red Hat Enterprise Linux and other Red Hat infrastructure environments consisting of fifty (50) entitlements of Red Hat Satellite, or, Red Hat Satellite Capsule and access to a Red Hat Portal(s).
- 1.2 Units of Measure and Purchasing Requirements.** You must purchase the appropriate number and type of Red Hat Smart Management Subscriptions based on the Unit and Supported Use Cases described in Table 1 below.

Table 1

Software Subscription	Unit	Supported Use Case
Red Hat Satellite, Red Hat Satellite Capsule and Red Hat Satellite Proxy (included in Red Hat Smart Management Subscriptions)	System	Red Hat only provides Subscription Services for Red Hat Satellite, Red Hat Satellite Capsule or Red Hat Satellite Proxy when used on a System or Physical Node that is a server. Red Hat only provides Subscription Services for Red Hat Satellite Capsule and Red Hat Satellite Proxy when deployed with Red Hat Satellite. Red Hat Satellite includes a subscription for Red Hat Enterprise Linux for the purposes of running Red Hat Satellite.
Red Hat Smart Management	Managed Node	Red Hat Smart Management entitlements are required for each Unit of Red Hat Enterprise Linux that is managed by Red Hat Satellite Capsule, Red Hat Satellite Proxy and/or Red Hat Satellite. Red Hat Smart Management entitlements may be used with Red Hat Portal directly.
Red Hat Smart Management for non-RHEL	Managed Node	Red Hat Smart Management for non-RHEL entitlements are required for each Unit of non-RHEL that is managed by Red Hat Satellite Capsule, Red Hat Satellite Proxy and/or Red Hat Satellite. Red Hat only provides support for the Red Hat Smart Management functionality and does not support the installation, configuration, connectivity or other general use of the non-RHEL Managed Node. Red Hat Smart Management entitlements may be used with Red Hat Portal directly.

### 2. Red Hat CloudForms

- 2.1 Units of Measure and Purchasing Requirements.** Table 2 sets forth the Unit of measure, stacking capabilities and Supported Use Cases for various Red Hat Management Subscriptions. You must purchase the appropriate number and type of these Subscriptions based on the Unit and other parameters described in Table 2. For Virtual Nodes managed by CloudForms in a CloudForms enabled public cloud, you need to purchase Units equal to either (at your option), (a) the actual number of Units or (b) the average daily maximum Virtual Nodes managed by CloudForms in the previous 365 days. If 365 days of usage history is not available, you may use the average usage history period that is available. If managing Virtual Nodes on a public cloud, you must confirm that a specific public cloud is Red Hat CloudForms enabled.

Table 2

Software Subscription	Unit of Measure	Capacity		Stackable	Use Case
		Socket(s)	Managed Nodes		
Red Hat CloudForms	Managed Node: (Physical Node or Virtual Node)	Socket-pair for each Physical Node or Sixteen (16) Virtual Nodes		Physical Node: Yes Virtual Node: Yes	Red Hat only provides Subscription Services for Red Hat CloudForms Software when deployed on (a) a System or Physical Node that is a server and (b) Virtual Nodes if they are running on-premise or on a Red Hat CloudForms enabled public cloud. Red Hat Enterprise Linux is the only supported operating system for Red Hat CloudForms Subscriptions.

### 3. Red Hat Ansible Automation Subscriptions

Red Hat Ansible Automation Subscriptions provide access to additional software components (Certified Components and Community Components) with varying levels or no support as set forth at <https://access.redhat.com/articles/3166901> (“**Ansible Support Matrix**”). “**Certified Components**” means third party components listed on the Ansible Support Matrix and maintained by such third party. “**Community Components**” means components (e.g., modules and plugins) that are created and submitted by community members. Red Hat will provide limited assistance for Certified Components solely to the extent required to run Red Hat Ansible Automation but otherwise does not provide Support or Software Maintenance for Certified Components or Community Components. “**Ansible Project Software**” means the upstream open source community version of the Ansible deployment and configuration management engine. Ansible Automation does not include or support Ansible Project Software.

- 3.1 Units of Measure and Purchasing Requirements.** Table 3 sets forth the Unit of measure and Supported Use Cases for Red Hat Ansible Automation Subscriptions. You must purchase the appropriate number and type of these Subscriptions based on the Unit and other parameters described in Table 3 below.

**Table 3**

Software Subscription	Unit	Supported Use Case
Red Hat Ansible Automation and Red Hat Ansible Automation Academic Site Subscription	Managed Node (see Note 1) or FTEs (see Note 2)	<p>Red Hat only provides Subscription Services for Red Hat Ansible Automation Software (a) when used on a system that is a server and (b) on platforms that are Supported Configurations. Support of Red Hat Ansible Automation Software does not include Subscription Services for Ansible Project Software. At its sole discretion, Red Hat may provide assistance with Ansible Project Software, solely to the extent required to run Red Hat Ansible Automation Software. Red Hat Ansible Automation includes a subscription for Red Hat Enterprise Linux or Red Hat OpenShift Container Platform for the purposes of running Red Hat Ansible Automation.</p> <p>Red Hat provides Subscription Services for Ansible Automation Software (a) on systems that are supported platforms set forth at <a href="https://access.redhat.com/articles/3168091">https://access.redhat.com/articles/3168091</a> and (b) modules identified via Section 4 above. The Support of Ansible Automation does not include the creation, maintenance, support or services related to customer playbooks and/or roles, or Ansible Project Software.</p> <p>In addition to the Supported Use Cases, Red Hat Ansible Automation Academic Site Subscriptions are supported only for use by qualified academic institutions. Qualified academic institutions must (a) be accredited by a national accreditation agency (e.g. the United States accreditation is located at <a href="http://ope.ed.gov/accreditation/Search.aspx">http://ope.ed.gov/accreditation/Search.aspx</a>) and (b) have at least one thousand (1,000) FTEs.</p>

**Note 1:** Managed Node includes each Node managed by Ansible Automation during the term of the Software Subscription.

**Note 2:** FTEs only apply to Red Hat Ansible Automation Academic Subscriptions.

**3.2 Data Analytics.** Red Hat Ansible Automation Software may collect and transmit usability data (including information identifying the source of that data) to Red Hat. Red Hat intends to use the data to enhance future releases of the Red Hat Ansible Automation and help streamline customer experience and success. Usability data includes information such as dashboard items clicked in the Red Hat Ansible Automation Software, amount of time spent on individual pages and paths taken throughout the Red Hat Ansible Automation Software. Usability data is collected and transmitted to Red Hat via a javascript file that is downloaded to a customer’s web-browser. The collection and transmission of such usability data is optional and you may (a) completely opt-out by editing the Red Hat Ansible Automation Software configuration and restarting the Red Hat Ansible Automation Software, or (b) choose between two opt-in scenarios: (i) “anonymous mode” that will provide usability data to Red Hat without any information identifying the source of that data, or (ii) “detail mode” that will provide usability data with the customer name to Red Hat. For Red Hat Ansible Automation Software you may opt-out from usability data collection and transmission by following the directions found at: [http://docs.ansible.com/ansible-tower/latest/html/administration/usability\\_data\\_collection.html](http://docs.ansible.com/ansible-tower/latest/html/administration/usability_data_collection.html).

**3.3 Red Hat Ansible Automation Software Life Cycle.** The supported life cycle for Red Hat Ansible Automation Software is set forth at: [https://access.redhat.com/support/policy/update\\_policies](https://access.redhat.com/support/policy/update_policies).

**4. Red Hat Advanced Cluster Management for Kubernetes Software Subscriptions**

Table 4 sets forth the Unit of measure, Capacity and Supported Use Cases for Red Hat Advanced Cluster Management for Kubernetes. You must purchase the appropriate number and type of these Subscriptions based on the Unit and other parameters described in Table 4 below.

**Table 4**

Software Subscription	Unit	Capacity	Supported Use Case
Red Hat Advanced Cluster Management	Core Band	Two (2) Core Or Four (4) vCPUs	This product is supported when used in connection with Red Hat OpenShift platforms.

**5. Unit of Measure and Purchasing Requirements for Red Hat Advanced Cluster Security for Kubernetes.**

Table 5 sets forth the Units of Measure, Capacity limitations and Supported Use Cases for Red Hat Advanced Cluster Security for Kubernetes. You must purchase the appropriate number and type of Software Subscription(s) for each Unit, based on the Unit and other parameters described in Table 5.

**Table 5**

Software Subscription	Unit of Measure	Capacity	Supported Use Case
Red Hat Advanced Cluster Security for Kubernetes	Core Band	Two (2) Core	Red Hat Advanced Cluster Security for Kubernetes is supported when analyzing workloads running on current versions of Red Hat OpenShift Container Platform, Red Hat OpenShift for Kubernetes Engine and certain other Kubernetes implementations on Supported Configurations as set forth below. The Central (defined below) management platform is supported as set forth in Table 2.1 below.
Red Hat Advanced Cluster Security for Kubernetes (Bare Metal)	Physical Node	Socket-pair with up to 64 Cores	

**5.1 Supported Configurations for Red Hat Advanced Cluster Security for Kubernetes.** The following describes the platforms on which Red Hat Advanced Cluster Security for Kubernetes is supported.

**5.1.1 Red Hat Advanced Cluster Security for Kubernetes Architecture**

Red Hat Advanced Cluster Security has two main architectural components with sub components as defined below and their supported platforms as set forth in Table 5.1.1 below:

- A server component called “**Central**” executes the scanner, persistent storage, API server, and user interface; and
- A distributed framework for the Kubernetes clusters managed by Central, that includes three components “**Collector**” that runs on each node inside the clusters, a single “**Sensor**” that runs on each managed cluster, and a single “**Admission Controller**” that runs on each managed cluster.

**Table 5.1.1**

Platform	Support for Central	Support for Collector, Sensor and Admission Controller
Red Hat OpenShift Container Platform (OCP) 3.11.z	No	Yes (see Note 1)
Red Hat OpenShift Container Platform (OCP) 4.x 9 (see Note 2)	Yes	Yes
Red Hat OpenShift Kubernetes Engine (OKE) 4.x (see Note 2)	No	Yes
IBM Red Hat OpenShift Kubernetes Services 4.x (ROKS)	No	Yes
Amazon Elastic Kubernetes Service (Amazon EKS) (Kubernetes 1.15 and later)	No	Yes
Google Kubernetes Engine (Google GKE) (Kubernetes 1.15 and later)	No	Yes
IBM Cloud Kubernetes Service (Kubernetes 1.15 and later)	No	Yes
Microsoft Azure Kubernetes Service (Microsoft AKS) (Kubernetes 1.15 and later)	No	Yes

**Note 1:** The Red Hat Advanced Cluster Security for Kubernetes (ACS) Admission Controller is not supported on Red Hat OpenShift Container Platform 3.11.z. This only limits some of the feature capabilities related to event monitoring based on port forwards and system execs.

**Note 2:** Red Hat OpenShift Container Platform 4.x and Red Hat OpenShift Kubernetes Engine 4.x have a rolling support window wherein 3 versions are supported at any given time plus an OpenShift Container Platform Extended Update Support release.

**5.1.2 Supported Browsers**

Table 5.1.2 outlines the supported browsers for viewing the Red Hat Advanced Cluster Security web user interface and their associated support tier:

- **Tier 1** means the browser and operating system combination is tested and fully supported. Red Hat will work to resolve issues with Tier 1 browsers.
- **Tier 2** means the browser and operating system combinations are partially tested, and are likely to work. Limited support is provided for Tier 2 browsers.
- **Tier 3** means the browser and operating system combinations are not tested, but may work. Minimal support is provided for Tier 3 browsers.

**Table 5.1.2**

Support Tier	Supported Browsers
Tier 1	Google Chrome for Business; Mozilla Firefox version 82.0.2 (64-bit)
Tier 2	Microsoft Internet Explorer Edge version 44 and later for Windows and version 81 (Official build) (64-bit) for MacOS
Tier 3	Safari on MacOS (Mojave) version 14.0

**5.2 Red Hat Advanced Cluster Security for Kubernetes Life Cycle**

Support and updates (if and when available) are provided for Red Hat Advanced Cluster Security for Kubernetes versions up to six (6) months after their initial general availability, which typically corresponds to the previous nine (9) released versions (Y.X.Z.Q).

**EXHIBIT 1.F**  
**SUPPORT SUBSCRIPTIONS**



This Exhibit 1.F. to Product Appendix 1 contains terms that describe the parameters and govern your use of TAM Services, Confirmed Stateside Support Subscriptions and Developer Support Subscriptions.

**1. Technical Account Management (“TAM”) Service**

The TAM Service is a Support Subscription that you may purchase in addition to your underlying Standard or Premium Software Subscription in order to receive enhanced Support. The TAM Service does not include support for (1) Self-support Software Subscriptions, (2) any Unit of Software (such as a System, Physical Node, Core, etc.) for which you do not have an active paid Software Subscription or (3) any Software Subscription for which support is provided by a Business Partner. When you purchase a TAM Service, you receive access to a Red Hat support engineer to provide you with (a) access to Red Hat’s technology and development plans, including beta testing and bug/feature escalation, (b) weekly review calls, (c) up to two (2) on-site technical review visits per year for each full one year TAM subscription term, (d) up to four Support Contacts, (e) quarterly service performance metrics via the TAM electronic dashboard, and (f) a subscription to Red Hat’s TAM monthly newsletter.

Support Subscription	Unit Description
TAM Service Dedicated TAM Service TAM Extension	<b>Point of Contact:</b> a Red Hat associate whom you are authorized to contact to request support for a particular team, geography or Red Hat product line.

**1.1 TAM Service Coverage.** Each TAM Service Subscription will be limited to certain parameters (that is, a region, a customer team and/or a product line) and will be listed in the Order Form and, if not listed, the TAM parameters will be established upon the initiation of the TAM Service.

- (a) **Regions:** North America, Latin America, EMEA, Asia-Pacific (excluding Japan, China and India), China, India or Japan.
- (b) **Customer Team:** The customer team supported by the TAM, such as your development team, your system administration team, your support team, etc.
- (c) **Red Hat Product Line:** The supported Red Hat product line, such as the Red Hat Enterprise Linux, Red Hat JBoss Application Services, Red Hat OpenShift Container Platform, Red Hat Storage, Red Hat Ansible or Red Hat Cloud product lines.

**1.2 TAM Service Level.** The TAM Service is offered during local Red Hat Support Standard Business Hours as set forth at <https://access.redhat.com/support/contact/technicalSupport.html> (based on the physical location of the TAM representative). If you have purchased Premium Red Hat Software Subscriptions, you will receive 24x7 Support for Severity 1 and 2 issues through Red Hat’s 24x7 Production Support teams and not necessarily from your assigned TAM representative. Red Hat’s 24x7 Production Support team will be responsible for addressing issues, but will consult with your TAM representative, as your TAM representative is available, for advice and to gain a better understanding of your infrastructure, environment and specific needs. If you have purchased multiple TAM Service Subscriptions in each of Red Hat’s primary Support Regions, you will receive the benefit of extended TAM Service coverage hours, but you should follow the same process and contact the Red Hat 24x7 support numbers at <https://access.redhat.com/support/contact/technicalSupport.html>.

**1.3 Dedicated TAM Service.** The Dedicated TAM Service is the assignment of a Red Hat resource dedicated to you for TAM Services.

**1.4 TAM Extension Service.** The TAM Extension Service is an extension of a Red Hat Enterprise Linux TAM Service to provide additional technical knowledge such as SAP implementations on Red Hat Enterprise Linux. The TAM Extension Service requires a separate active and paid standard TAM Service Subscription.

**1.5 Confirmed Stateside Support Subscriptions**

Red Hat Software Subscriptions that are identified as Confirmed Stateside Support (“CSS”) Service are Software Subscriptions that provide the applicable level of Support (Standard or Premium) in English via restricted, support resources in the United States for a specific Client account on Red Hat Customer Portal (“CSS Client Account”). Each CSS Subscription will be limited to a specific CSS Client Account. All support requests for CSS Covered Subscriptions must be submitted to the Red Hat designated CSS support contacts. Client agrees to only submit CSS Support requests for Red Hat Software Subscriptions identified as CSS Subscriptions. The CSS Service does not include support for (i) Self-support Software Subscriptions, (ii) any instance of Software for which you do not have an active paid Software Subscription; or (iii) any Software Subscription for which support is provided by a Business Partner. When you purchase the CSS Subscription, you receive access to a Red Hat support group to provide you with:

- (a) Support accessed from the US and provided by US citizens;
- (b) Logical and physical Client data separation from Red Hat’s standard support systems for each CSS Client Account;
- (c) Separate secured physical workspace for the CSS support personnel; and
- (d) Triage based support to resolve known issues and create a sanitized support request ticket if escalation to standard non-CSS resources is required.

**1.6 Developer Support Subscriptions**

**1.6.1 Scope of Coverage.** For certain Red Hat Products, Red Hat offers Developer Support Subscriptions. For each paid, active Developer Support Subscription, Red Hat will provide you with (a) access to the supported versions of the respective products through a Red Hat Portal; and (b) assistance for: (i) installation, usage and configuration support, diagnosis of issues, and bug fixes, but only for issues related to your use of such products for Development Use and (ii) advice concerning application architecture, application design, industry practices, tuning and application porting (collectively, “Developer Support”). Developer Support Subscriptions do not include support for (a) modified software packages, (b) wholesale application debugging or (c) software included in the Red Hat Extras repository, supplementary channels, preview technologies or software obtained from community sites. For Red Hat JBoss Application Services and/or Red Hat OpenShift

Developer Support Subscription Developer Support is provided for up to one hundred (100) developers provided all support requests will be made by up to two (2) named Client contacts.

**1.6.2 Red Hat Developer Support Subscription Levels.** You may purchase Professional (two (2) business day response time) or Enterprise (four (4) Standard Business Hours response time) with web and phone support for an unlimited number of requests for Red Hat Storage Developer Support Subscriptions.