Service Description

VMware Horizon™ Air®

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## Contents

1. **INTRODUCTION** .................................................................................................................. 4
   1.1 SERVICE PORTALS ............................................................................................................. 5
   1.2 ADDITIONAL INFORMATION ......................................................................................... 6

2. **SERVICE OPERATIONS** .................................................................................................... 6
   2.1 SERVICE SUPPORT ........................................................................................................... 6
   2.2 SERVICE PROVISIONING ............................................................................................... 6
   2.3 DISASTER AVOIDANCE AND DISASTER RECOVERY ...................................................... 7
   2.4 MONITORING .................................................................................................................. 7
   2.5 INCIDENT AND PROBLEM MANAGEMENT ...................................................................... 7
   2.6 CHANGE MANAGEMENT ............................................................................................... 8
   2.7 SECURITY ...................................................................................................................... 8
   2.8 GOLD PATTERN TEMPLATES ......................................................................................... 9
   2.9 TEMPLATE UPLOAD ...................................................................................................... 10

3. **BUSINESS OPERATIONS** .................................................................................................. 11
   3.1 ORDERING AND INVOICING ......................................................................................... 11
   3.2 METERED USAGE .......................................................................................................... 12
   3.3 ADD ON CAPACITY ....................................................................................................... 12
   3.4 RENEWAL .................................................................................................................... 12
   3.5 SUSPENSION AND RE-ENABLEMENT .......................................................................... 13
   3.6 TERMINATION .............................................................................................................. 13
   3.7 EARLY TERMINATION .................................................................................................. 13

**APPENDIX A** – ORDERING AND METERED USAGE COMPONENTS ....................................... 15

**APPENDIX B** - HORIZON AIR SUMMARY OF ITEMS INCLUDED AND AVAILABLE FOR PURCHASE SEPARATELY 18

**APPENDIX C** - HORIZON AIR GUEST OS SUPPORT MATRIX .................................................. 19

**APPENDIX D** – MICROSOFT LICENSING REQUIREMENTS ...................................................... 19
1. Introduction

VMware Horizon™ Air® ("Horizon Air" or the “Service Offering”) is a family of cloud-services from VMware, that enables the delivery of virtual desktops, applications, and desktop disaster recovery capabilities to end-users on any device, anywhere. VMware Horizon Air provides three distinct services: Horizon Air Desktops, Horizon Air Apps, and Horizon Air Desktop DR.

Standard Service Model Options

Horizon Air Standard Service allows customers to purchase Horizon Air Desktop and Horizon Air Apps capacity on a 1, 12, 24, or 36 month subscription term. During the subscription term, customers can provision desktops and hosted apps VMs at any time up to the full capacity purchased through the subscription. For example, a customer who purchased 100 standard service desktop subscription on a 12 month term can provision between 1 and 100 standard desktop VMs anytime during that 12 month term.

Standard service Horizon Air Desktops and Horizon Air Apps are available in four main choice-of-service models:

- **Standard Desktop** provides 1 vCPU, 2GB vRAM, 30GB HD.
- **Advanced Desktop** provides 2vCPU, 4GB vRAM, 60GB HD and the benefits of Soft3D for the end user.
- **Enterprise Desktop** provides 4vCPU, 8GB vRAM, 120GB HD and the benefits of Soft3D for the end user.
- **Hosted Apps Server** provides 20vCPU, 30GB vRAM, 120GB HD and the benefits of Terminal Services and Published Applications for the end user.

For all virtual machine OS licensing and use (such as windows client or server OS), customers must use their own licenses purchased through their Microsoft licensing distributor. See Appendix C and D for details on supported Guest OS and Microsoft licensing guidance.

The use of the desktop and mobile clients to access the Service Offering is governed by separate license terms.

All Standard Service options include two Gold Pattern Templates for use as the basis of the virtual desktops and hosted applications.

In addition, customers may choose to buy additional hard disk storage in 1TB increments which can be distributed across the virtual desktop servers and Gold Pattern Template space as necessary.

All Standard Service options are deployed by default on dedicated computing servers with VMware HA and layer-2 network isolation for workload traffic isolation, dedicated storage volumes, and a dedicated desktop management instance. Each service instance is deployed with a public IP address for VPN-less remote access. Desktops and published applications can be accessed via VMware Horizon View clients directly or via the Horizon Air Desktop Portal via View Client, RDP or clientless HTML5 (Horizon View Blast Protocol).

Horizon Air Desktop DR Reservation Capacity SLA Options

Horizon Air Desktop customers on a 12 month term or longer can take advantage of Horizon Air Desktop DR service and reserve access to VM capacity. This add-on option provides the ultimate flexibility with a guaranteed fulfillment window for capacity and a wide range of cost / SLA choices. Customers who need Desktop DR or general burst capability with limited or no lead should consider this option.

The reserved Capacity is purchased as an add-on and billed based on the plan chosen by the customer.
Customers can purchase DR capacity in any Horizon Air datacenter where they have Standard Service. Once purchased, at any time during the term, customers can request their reserve capacity or a portion thereof and pay a metered daily usage rate for the capacity used. For each usage request, customers will have a minimum of 7 days of usage and can deactivate the capacity any time thereafter. Customers must inform VMware when to activate the capacity by submitting a Severity 1 technical support request. Customer must inform VMware when to deactivate capacity by submitting a standard non urgent support request.

Horizon Air Desktop DR offers three SLA tiers with varying fulfillment times:

- **Gold** (8 hr)
- **Silver** (24 hr)
- **Bronze** (72 hr)

Customers can mix and match desktops models and SLA tiers as to best address their end user priorities. VMware will always activate Reservation Capacity for a particular VM model starting from the highest tier (Gold) to the lowest tier (Bronze). Fulfillment times for each plan are counted from when a capacity activation request is made to VMware.

**Service Objects**

All Service Offerings include the capability to access these objects:

- **Domain Binding** may be managed through the Horizon Air Enterprise Center Console to set up active directory, administrator roles and permissions, and end user groups.
- **Gold Pattern Template** may also be managed through the Horizon Air Enterprise Center Console and are used as the base image from which VMs are cloned.
- **Desktop Pools** are the grouping object for VMs, Remote Desktop Session Host (RDSH) published desktops, and RDS published applications. Pools specify which Desktop Model, gold pattern, desktop type, and other policies to apply when creating VMs. Desktop VMs can only be created as part of a pool.
- **Virtual Machines (VMs)** are the desktop that is accessed by the end user.
- **RDSH Published Desktops (Sessions)** are the published desktops running on hosted RDSH Servers that are accessed by the end user.
- **RDSH Published Apps (Apps)** are the published applications running on hosted RDSH Servers that are accessed by the end user.
- **Reservation Capacity (SLA)** is an option to order additional VMs under an agreed upon fulfillment time frame based on the plan selected.

### 1.1 Service Portals

**Self-Service Portals**

The Service includes access to three self-service consoles:

- **My VMware Account Management Console** ("My VMware") provides access to subscription status, integrating navigation, viewing and management of all VMware product licenses and support under a single account.
- **VMware Horizon Air Enterprise Center Console** ("Console") is the primary interface for consumption and management of Horizon Air purchased from VMware, including domain binding, gold pattern management, desktop provisioning, end user entitlement, and multi-factor authentication under the same sign on.
VMware Horizon Air Desktop Portal is the primary web interface for accessing the desktop and published apps by end users. This interface can provide access via RDP, can launch pre-installed VMware Horizon View clients, or provide browser based access via HTML5. Users are not required to use the portal to access their desktop or app – they can do so with the VMware Horizon View Clients supported on Windows, MAC, Linux, iOS, Android, and through various zero clients.

VMware will also provide organization administrator access to the Horizon Air Application Programming Interface (API) for programmatic resource management.

1.2 Additional Information

Technical Documentation and Training

Online help outlining Key Concepts with usage examples, a “Getting Started” guide, and “How To” guides for key objects are available through the Console.

Legal Terms

Use of Horizon Air is subject to the Terms of Service located at www.vmware.com/download/eula/horizon-air-terms-of-service.html.

2. Service Operations

The following outlines VMware’s roles and responsibilities in the delivery of Horizon Air. While specific roles and responsibilities have also been identified as being owned by you, any roles or responsibilities not contained in this document are either not provided with the service or assumed to be your responsibility.

2.1 Service Support

VMware Horizon Air includes support for problems that you report as related to account and desktop/application availability, and selected additional services to assist with adoption and related to Horizon Air. Support may be provided by both U.S. and non-U.S. persons, as appropriate to meet VMware’s support obligations.

2.2 Service Provisioning

VMware will provide the following provisioning services:

- Implementation of service components (physical servers, physical storage, and physical network devices) needed to support contracted resource pools.
- Providing initial network resources including default Public IP addresses.
- Providing initial or Reservation Capacity resources for Desktop Models (memory, processing, primary storage, and networking) and Hosted Apps Servers.
- Enabling a secure point to point network interconnect (a.k.a. backhaul) via VPN or MPLS from the Horizon Air network (to your corporate network). Note MPLS is purchased separately from your ISP. MPLS Direct Connect will have an additional monthly charge.
- Providing two standard VMware approved gold patterns from the current gold pattern catalog.
- Providing access to self-service training videos.
- Providing two hours of Enterprise Center portal walkthrough.
You will be responsible for the following provisioning services:

- Providing corporate resource assistance for establishing site to site connectivity.
- Completing Active Directory domain binding.
- Customizing your Gold Pattern Templates.
- Creating desktop, session, and application pools and assigning to users.
- Windows Client OS licensing (if applicable, and if so, compliance with applicable license agreements).
- Installing and configuring custom or third party applications and operating systems on Gold Pattern Templates or deployed Virtual Machines.

### 2.3 Disaster Avoidance and Disaster Recovery

VMware will provide the following services with respect to Disaster Avoidance and Disaster Recovery:

- Data protection, such as routine backups, for the Horizon Air infrastructure, including management and user-management interfaces owned and operated by VMware.
- Data and infrastructure restoration for the Horizon Air infrastructure, including management and user-management interfaces owned and operated by VMware.

You are responsible for the following services with respect to Disaster Avoidance and Disaster Recovery:

- Data protection, such as routine backups, for the data and content accessed or stored on Horizon Air VMs or storage devices, configuration settings, etc.
- Data, content, VM and configuration restorations for assets accessed or stored on your Horizon Air account.

### 2.4 Monitoring

VMware will provide the following services with respect to Monitoring:

- Monitoring the Horizon Air infrastructure, infrastructure networks, top-layer management and user-management interfaces, and compute, storage, and network hardware for availability, capacity, and performance. VMware will also provide customers with a service summary level view of Desktop Model quota utilization and desktop state.

You are responsible for the following services with respect to Monitoring:

- Monitoring the assets deployed or managed within your Horizon Air accounts, including, but not limited to virtual machines, operating systems, applications, operating system or application vulnerabilities, etc.

### 2.5 Incident and Problem Management

VMware will provide incident and problem management services (e.g., detection, severity classification, recording, escalation, and return to service) pertaining to:

- Infrastructure over which VMware has direct, administrative, and/or physical access and control, such as Horizon Air servers, storage, VPN integration, and network devices.
- Service software over which VMware has customer provided administrative access and control, such as the Horizon Air Console.
• VMware-provided operating system templates to the extent that:
  o Published templates cannot be accessed
  o Published templates cannot be used for provisioning without modification
  o Published templates cause errors at first run time
  o There are substantial hangs or excessive delays in the retrieval of a template
  o The configuration of a published template affects the virtual machine's interaction with
    the hypervisor
  o Time synchronization issues (NTP) exist

You are responsible for incident and problem management (e.g., detection, severity classification,
recording, escalation, and return to service) pertaining to:
• Your account settings under our administrative management (domain, 2 factor authentication).
• User-deployed and configured assets such as VMs, custom developed or third party applications,
custom or user-deployed operating systems, network configuration settings, and user accounts.
• Operating system administration including the operating system itself or any features or
  components contained within it.
• VPN integration.
• Performance of user-deployed VMs, custom or third party applications, your databases,
  operating systems imported or customized by you, or other assets deployed and administered by
  you that are unrelated to the Horizon Air Console, Horizon Air Desktop Portal, or Horizon Air
  service.
• Anything else not under the direct control and administration of VMware operations.

2.6 Change Management

VMware will provide the following change management elements:
• Processes and procedures to maintain the health and availability of the Horizon Air Enterprise
  Center Console or Horizon Air service components. Please see the VMware Horizon Air Service
  Level Agreement for maintenance details.
• Processes and procedures to release new code versions, hot fixes, and service packs related to
  the Horizon Air Enterprise Center Console, or Horizon Air service components.

You are responsible for:
• Management of changes to your VMs, operating systems, custom or third party applications, and
  administration of general network changes within your control.
• Administration of self-service features provided through the VMware and Horizon Air user
  consoles, up to the highest permission levels granted to you. Including but not limited to VM and
  domain functions, backup administration, and general account management, etc.
• Cooperating when planned and emergency maintenance is required.

2.7 Security

The end-to-end security of Horizon Air is shared between VMware and you. VMware will provide security
for the aspects of the Service over which it has sole physical, logical, and administrative level control.
You are responsible for the aspects of the Service over which you have administrative level access or
control. The primary areas of responsibility between VMware and you are outlined below.

VMware will use commercially-reasonable efforts to provide:

- **Physical Security:** VMware will protect the data centers housing Horizon Air from physical security breaches.
- **Information Security:** VMware will protect the information systems used to deliver Horizon Air for which it has sole administrative level control.
- **Network Security:** VMware will protect the networks containing its information systems up to the point where you have some control, permission, or access to modify your networks.
- **Security Monitoring:** VMware will monitor for security events involving the underlying infrastructure servers, storage, networks, and information systems used in the delivery of Horizon Air for which it has sole administrative level control over. This responsibility stops at any point where you have some control, permission, or access to modify an aspect of the Service Offering.
- **Patching & Vulnerability Management:** VMware will maintain the systems it uses to deliver the Service offering, including the application of patches it deems critical for the target systems. VMware will perform routine vulnerability scans to surface critical risk areas for the systems it uses to deliver the Service Offering. Critical vulnerabilities will be addressed in a timely manner.

You should address:

- **Information Security:** You are responsible for ensuring adequate protection of the information systems, data, content or applications that you deploy and/or access on Horizon Air. This includes, but is not limited to, any level of patching, security fixes, data encryption, access controls, roles and permissions granted to your internal, external, or third party users, etc.
- **Network Security:** You are responsible for the security of the networks over which you have administrative level control. This includes, but is not limited to, maintaining effective firewall rules, exposing communication ports that are only necessary to conduct business, locking down promiscuous access, etc.
- **Security Monitoring:** You are responsible for the detection, classification, and remediation of all security events that are isolated with your Horizon Air account, associated with VMs, operating systems, applications, data, or content, surfaced through vulnerability scanning tools, or required for a compliance or certification program in which you are required to participate and which are not serviced under another VMware security program.
- **Compromised Desktops:** You are responsible for any compromised desktops and resolving related issues. VMware reserves the right to suspend desktops or whole customer accounts if compromised desktops are detected in order to protect VMware’s infrastructure and business operations.

### 2.8 Gold Pattern Templates

VMware will provide a catalog of supported virtual desktop Gold Pattern Templates that you may deploy into your Horizon Air environments. The deployment and use of such templates will be subject to the Third Party Terms located at [www.vmware.com/files/pdf/support/horizon-air-third-party-terms.pdf](http://www.vmware.com/files/pdf/support/horizon-air-third-party-terms.pdf) and may be subject to additional Subscription Software fees as further described in Appendix A of this Service Description. VMware will provide these templates, test them for quality, check for viruses, and install security patches before making them available in the Enterprise Center Console. VMware will also maintain and update these templates from time to time. You are responsible for deploying and configuring the virtual desktop Gold Pattern Templates that you choose to use, activating related licenses, and maintaining compliance with such license terms.

In order to comply with VMware’s legal obligations to our third party licensors, you will not be permitted to
export, download, or remove certain templates or any installed forms of certain templates for installation or use outside of the Service Offering. For more details regarding the licensing of Desktop Gold Pattern Templates, please see the Third Party Terms located at www.vmware.com/files/pdf/support/horizon-air-third-party-terms.pdf.

You may implement or import your own Gold Pattern Templates so long as you have the legal right to deploy and use the software contained in such templates.

Templates that are provided by VMware and infrequently used, out-of-date, or no longer supported may be removed at any time.

2.9 Template Upload

Horizon Air will support template uploads. All templates must use Open Virtual Machine Format (OVF). Once transfer is completed, VMware will mount the received template into the customer account, and thereafter it will be usable as a Gold Pattern Template.
3. Business Operations

This section summarizes processes for ordering, scaling, renewing, suspending, and terminating VMware Horizon Air.

3.1 Ordering and Invoicing

Subscription Ordering

- Initial orders include core Desktop and Hosted Apps Capacity, Reservation Capacity, Support, IP Address, and Internet Bandwidth components for a single Service instance (“Service Identifier”, or SID) and are described in further detail in Appendix A. The initial purchase establishes the default billing relationship that applies to all transactions for that SID for the duration of the contract; for example, if the initial order is placed through a VMware Authorized Reseller, then, by default, any subsequent payments related to that Service Identifier will be made through that Reseller. This billing relationship may be modified at time of renewal.

- When ordering the Service Offering, you will be required to fill out a detailed provisioning questionnaire provided to you by Horizon Air operations. This information is required to fulfill the order and must be returned to Horizon Air operations within 10 days of submitting the order. Failure to respond within the specified time may result in fulfillment delays of 6-8 weeks. Failure to respond within 45 days may result in cancellation of the order by VMware.

- Additional capacity may be purchased at the time of initial order or any time after the initial order.

- Activating some or all of your Reservation Capacity can be done by contacting VMware support with a Severity 1 priority and requesting “activation of Reservation Capacity”. Billing for in use Reservation Capacity will start on the first full day after fulfillment is complete. Minimum billing period for in-use Reservation Capacity is 7 days from billing start.

- Deactivating some or all of your in use Reservation Capacity can be done by contacting VMware support. Billing for deactivated Reservation Capacity will stop on the first full day after the request is received.

- Reservation Capacity may only be activated once a fulfillment complete notification has been communicated for the order.

- Additional services, such as additional Hard Disk Storage, may be purchased with the initial order or through the My VMware portal at any time during the subscription term. Additional terms and fees may apply to such additional services.

- Account changes to capacity can be made by ordering additional capacity or services any time before the end of the contracted term.

- Changes to the VMware Authorized Reseller associated with a SID may be made at the time of renewal by contacting VMware as noted below.

- Service reductions may be coordinated with VMware at the time of renewal and will require a new order for the reduced Service Offering capacity. However, in the event the capacity associated with your reduced Service Offering order is less than the capacity required to sustain your then current workloads, VMware will bill you for the excess capacity at the then current rates until such time as you’ve released the excess capacity and VMware has reclaimed it. Reduction orders must be submitted to VMware a minimum of 30 days from the date of renewal. Reduction orders on contract terms less than 12 months or on the On Demand service must be submitted to VMware a minimum of 5 days from the date of renewal.

Invoicing

- When you purchase the Service Offering directly from VMware, VMware will invoice you for all
ordered services within thirty (30) business days after the beginning of each Billing Period. When you purchase the Service Offering through a VMware Authorized Reseller, the Reseller will invoice you as mutually agreed between you and such Reseller.

- **Plan Charges**, as defined in Appendix A, will be invoiced by VMware for the then-current Billing Period unless you choose a prepaid Service Offering SKU, in which case you will be billed for the ordered subscription term. Should the Service Offering not be provided for the entire Billing Period, then the fees for such period will be prorated (a) from the day the Service Offering was first provided through the end of the Billing Period, or (b) from the beginning of the Billing Period through the last day in the Billing Period the Service Offering was provided, as appropriate.

- **Usage Charges**, as defined in Appendix A, will be invoiced by VMware on the next billing date following the Billing Period in which they were used. If your SID is provisioned within 5 business days of the billing date, you may not receive the first invoice for Usage Charges until the second billing date following the SID provisioning.

### 3.2 Metered Usage

- **Metered Usage** components such as Reservation Capacity in use are available for consumption at any time under the Terms of Service. You are obligated to pay for such Metered Usage components at the lessor of the contracted rate or then-current rates published by VMware if you purchased the Service Offering directly from VMware, or from the rates agreed with the VMware Authorized Reseller if you purchased the Service Offering via a Reseller. Such charges will be billed by VMware as Usage Charges. A list of Metered Usage components is provided in Appendix A.

### 3.3 Add On Capacity

- Add-on capacity (such as additional desktops, hosted app servers, and storage) and services as described above may be purchased at any time to meet new or expanded requirements.
  - Additional desktops, storage and Reservation Capacity may be added via the My VMware portal or through purchase order.
  - The Term for add-on capacity or services will be set to terminate at the same time as the core subscription term for the SID.
  - If add-on desktop capacity causes you to achieve a higher volume tier, any per-unit price reductions will apply to the remaining term of the SID if billed monthly. Prepaid subscriptions will not receive a refund for the per-unit price reduction due to achieving a higher volume tier. Per-unit price reductions will apply to the add-on desktop capacity for both monthly and prepaid subscriptions added after the higher volume tier is achieved.

### 3.4 Renewal

VMware reserves the right to not renew an SID at the end of its subscription term. In the event of a non-renewal by VMware, we will notify you 30 days prior to the end of the subscription term. Renewal options for each SID may be selected using the My VMware administrative portal. Renewal options include:

**Auto-Renewal (the default setting)**
Except as set forth in this Section 3.3, each SID will automatically renew using the current configuration and the existing order term length. The then-current SKU’s and pricing, based on the applicable price list, will be applied to such renewal term. You may opt-out of auto-renewal by changing your renewal
option setting for the SID within the My VMware Portal available at [http://my.vmware.com](http://my.vmware.com). The deadline to change the renewal option is 30 days prior to the last day of the current SID subscription term.

**Modify Subscription Service at End of Term**

When this option is selected, you may be contacted prior to the end of the SID term to discuss your renewal options. You may modify your Service Offering configuration and make changes to your reseller relationship, if applicable, by both changing your setting for the SID within the My VMware Portal available at [http://my.vmware.com](http://my.vmware.com) and issuing a new purchase order. If you do not make any changes to your current SID by the deadline below and/or you do not issue a new purchase order for the new Service Offering to VMware or your VMware Authorized Reseller, if applicable, your existing SID, as currently configured, will automatically renew with VMware or your existing reseller. When you purchase the Service Offering through a VMware Authorized Reseller, a manual renewal is the only time a customer may elect a change in reseller relationship for that specific SID. The deadline to change the renewal option is 30 days prior to the last day of the current SID subscription term.

**Terminate at End of Term**

You may terminate your existing SID renewal by changing your setting for the SID within the My VMware Portal available at [http://my.vmware.com](http://my.vmware.com). When this option is set, then your access to the Service Offering will expire at the end of the SID term. The deadline to select the termination option is 30 days prior to the last day of the current SID subscription term.

### 3.5 Suspension and Re-Enablement

- While a SID is suspended by VMware for delinquent payment or any other reason as detailed in the Terms of Service, VMware will restrict access to all SIDs and block all traffic across their Public IP addresses. VMware will retain SIDs with configurations and data intact until the issue is resolved or the service expires or is terminated.

- SID re-enablement will be initiated immediately upon resolution of the account issues that led to suspension; access to the Service Offering and traffic across IP Addresses will be restored.

### 3.6 Termination

- Full termination of an SID due to contract expiration, termination, cancellation, or any other cause will result in permanent loss of access to the environments, discontinuation of account services, and a deletion of such environments, configurations and data according to VMware’s internal data retention policy.

- Data from a terminated SID will not be retained by VMware beyond termination of such SID.

### 3.7 Early Termination

- Horizon Air monthly-paid subscriptions with an initial term of 12 months or more are eligible for early termination. Horizon Air annually-paid subscriptions with an initial term of 24 months or more are eligible for early termination. Pre-paid subscriptions are not eligible. Add-ons are eligible only to the extent that the underlying monthly-paid core subscription is also terminated. The termination can be effective only after the first 3 months of that term, and upon advance notice to VMware. You also must pay a fee equal to one month of contracted subscription fees (including add-on fees) for every 12 month period (or portion thereof) remaining on your Subscription Term as of the effective termination date.

For example:

<table>
<thead>
<tr>
<th>Months Remaining on Subscription Term at Effective Termination Date</th>
<th>Early Termination Fee Amount</th>
<th>Eligible Plans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 12 months</td>
<td>Equal to 1 month of contracted subscription fees</td>
<td>Monthly</td>
</tr>
</tbody>
</table>
### Service Description

VMware® Horizon Air™

<table>
<thead>
<tr>
<th>Duration</th>
<th>Fee Description</th>
<th>Billing Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>At least 12 months, but less than 24 months</td>
<td>Equal to 2 months of contracted subscription fees (including add-on fees)</td>
<td>Monthly Annually</td>
</tr>
<tr>
<td>At least 24 months, but less than 36 months</td>
<td>Equal to 3 months of contracted subscription fees (including add-on fees)</td>
<td>Monthly Annually</td>
</tr>
</tbody>
</table>

- To give the required notice for the SID you want to terminate, please contact the VMware Global Support and Services team by filing a Support Request in the My VMware Portal, at [http://my.vmware.com](http://my.vmware.com).
- You must provide 30 to 60 days advance notice. The termination (the last active day for your SID) will be effective on the last day of your next subscription Billing Period.
  - For example, if your subscription Billing Period ends on the 15th of each month (please note that this may be different from your billing date), you must notify us by April 15th to terminate your SID effective May 15th; if notice is provided on April 16th, the SID will be terminated effective June 15th.
Appendix A – Ordering and Metered Usage Components

This Appendix A to the Service Description outlines the components that may be purchased by the Customer during the initial or subsequent orders and the components that will be billed based on actual usage.

Definitions:

“Bandwidth” is the network connectivity from your Horizon Air to the public Internet using VMware’s Internet service providers. Bandwidth is consumed when data is either transferred or received by your purchased class of service.

“Billing Date” is the date when VMware will periodically bill for the Service Offering. Billing Dates will occur monthly unless otherwise indicated.

“Billing Period” is the period for which the Service Offering is being billed. Billing Periods are monthly and are related to the provisioning of your SID, unless otherwise indicated.

“Desktop Model” is a bundle of compute, memory, storage and bandwidth capacity that can be instantiated as a desktop. A core order consists of a quantity of a specific Desktop Model as defined below.

“Core Components” are Desktop Models that include a public IP Address and Support, and storage for two Gold Pattern Templates.

“Gold Pattern Templates” are master images that can be modified in the Enterprise Center Console and are used to create virtual desktops.

“IP Addresses” are used to provide connectivity from the public Internet.

“Metered Usage Components” are those Service Offering elements that are billed based upon actual usage. Metered Usage Components are: Reserved In Use Desktops.

“Plan Charges” are those Service Offering components that are not billed based upon usage (i.e., those components that you have committed to purchase and are recurring during the subscription term without regard to use). These charges will be invoiced for the then-current Billing Period as described in Section 3.1 of this Service Description.

“Reservation Capacity” is an SLA guarantee for specific desktop model capacity to be delivered within a specific time frame as set by the specific purchased plan.

“Reserved Desktop In Use” is a fulfilled desktop model capacity that has been activated by the customer during the term. In use desktops must be active for a minimum of 7 days.

“Storage” contains block level VM capacity surfaced to you through your purchased class of service. Storage is ordered in the increments defined below. Storage usage is intended for core operating system and applications only.

“Subscription Software” is any software provided to you and for which you are billed for its use.

“Support” is the service to be delivered by VMware as described in Sections 2.2 to 2.7 of this Service Description.

“Third-Party Licenses” are those licenses for third-party software that are made available to you as optional services (either through the Service Catalog or otherwise).

“Usage Charges” are those Service Offering components that are billed based upon usage. These
charges will be invoiced in arrears as described in Section 3.1 of this Service Description.

Ordering Core Components

Core components are ordered for specific subscription terms. Each component will be invoiced and payable on a monthly basis or invoiced and payable as a lump sum if a pre-paid Service Offering is ordered. At least 1 starter pack must be ordered per data center location. See Appendix C for Guest VM compatibility details.

Each core offering comes with the following standard options:

- IP Addresses: 1 Public IP Address for access to the Enterprise Center Console and Desktop Portal/Broker
- Bandwidth: Each account is provided an aggregate bandwidth amount equal to the sum of desktop peak bandwidths as totaled from the desktop models ordered\(^1\). Average expected bandwidth is also listed for each model for client side planning purpose.
- Support: 24x7 Production Support

Standard Desktop Core

50 Desktops that can run a Windows Client or Windows Server OS with the following specifications:

- vCPU: 1 vCPU
- vRAM: 2 GB
- vHD: 30 GB
- IOPS: 20
- Average Bandwidth: 100 Kbps
- Peak Bandwidth: 500 Kbps
- Soft3D Enabled: No
- Workload Type: VDI

Advanced Desktop Core

50 Desktops that can run a Windows Client or Windows Server OS with the following specifications:

- vCPU: 2 vCPU
- vRAM: 4 GB
- vHD: 60 GB
- IOPS: 40
- Average Bandwidth: 500 Kbps
- Peak Bandwidth: 2000 Kbps
- Soft3D Enabled: Yes
- Workload Type: VDI

Enterprise Desktop Core

50 Desktops that can run a Windows Client or Windows Server OS with the following specifications:

- vCPU: 4 vCPU
- vRAM: 8 GB

\(^1\) Example: An account with 50 Standard desktops and 50 Advanced desktops will have 125Mbps of total aggregate bandwidth available for all the accounts desktops
vHD: 120 GB
IOPS: 80
Average Bandwidth: 500 Kbps
Peak Bandwidth: 2000 Kbps
Soft3D Enabled: Yes
Workload Type: VDI

Hosted Apps Server Core

5 servers that can run a Windows Server OS with RDSH with the following specifications:

- vCPU: 20 vCPU
- vRAM: 30 GB
- vHD: 120 GB
- IOPS: 400
- Average Bandwidth: 2500 Kbps
- Peak Bandwidth: 20000 Kbps
- Soft3D Enabled: Yes
- Workload Type: Terminal Services Published Desktops & Apps

Due to service improvements and performance tuning, VMware reserves the right to modify the Hosted Apps Server specifications and quantities so long as the total capacity of Hosted Apps Servers purchased is of equal to or greater than the specification in this document.

Fees and Charges

When you order directly from VMware, VMware will invoice you based upon the fees listed in VMware’s then current applicable price list, or as otherwise agreed with VMware in the order. When you order from a VMware Authorized Reseller, that reseller will invoice you based upon their price list or as otherwise agreed with you.

Orders that add services or capacity to an existing SID will be ordered from VMware or a Reseller based upon the manner in which the SID was booked and will be co-termed to the end of the SID subscription period. Specifically, if a reseller is already billing you for the SID, then the order for such additional services or capacity will also be placed through that reseller, and the price that you agree to pay and other applicable terms will be based upon your agreement with that reseller.

Usage Restrictions

Horizon Air VMs are intended for use with desktop and terminal services applications. Special exemption is provided for customers who wish to use a VM instance as a utility server (s.a. domain controller, active directory server, DHCP relay or file server). 1 VM in the tenant may be used as a utility server without drawing from the desktop quota purchased. Any additional utility servers will count towards the desktop quota purchased by subtracting the total CPU and Memory resources consumed for utility service as expressed in terms of whole number of desktops from the total VMs purchased.

Any use of server based applications or transactional applications is not supported and may interfere with performance and user experience. Encrypted hard disks are not allowed within the Horizon Air VM environment. Customers who need secure disk services should consider redirecting user data to their data center or can purchase vCloud Air virtual private cloud instance and deploy an encrypted file server for user data.
Appendix B - Horizon Air Summary of items included and available for purchase separately

Included in Horizon Air:

- Infrastructure for desktops, hosted apps servers and images (based on SKUs ordered)
- Two standard VMware image templates per account
- One time walkthrough of administration console (2 hrs) at account setup

Optional:

- SKUs:
  - Additional storage in 1TB increment for use with desktops or images
  - Direct Connect for MPLS bridging

- Services Included:
  - One VM to serve as a utility server (s.a. domain controller, dhcp relay, or file server)
    - Additional utility servers can be created but will consume desktop quota equal to the total amount of vCPU/Memory used by the utility servers.
  - One time VPN and network configuration per Horizon Air datacenter location setup

Available for purchase separately via VMware Professional Services and not included in the Horizon Air Core and Addon SKUs:

- Advanced Onboarding Assistance (SKU: CON-HZAIR-ADVON)
  - Recommended for successful proof of concept and production deployments
- Project Management
- Use Case Assessment & Definition
- Desktop Engineering and Image Management
- Misc. professional services requests

Available for purchase from 3rd parties that may be required to complete the service setup:

- MPLS service from customer to VMware datacenter
- Direct Connect setup inside the datacenter to Horizon Air
Appendix C - Horizon Air Guest OS Compatibility Table

Horizon Air supports the use of the following Windows operating systems on virtual machines hosted within Horizon Air.

<table>
<thead>
<tr>
<th>Operating System</th>
<th>Patch / SP</th>
<th>32 / 64 bit</th>
<th>Additional Variants / Specs</th>
<th>VDI / RDSH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Win7</td>
<td>Base / SP1</td>
<td>Both</td>
<td>Professional / Enterprise</td>
<td>VDI</td>
</tr>
<tr>
<td>Win 8.0</td>
<td></td>
<td>Both</td>
<td>Enterprise</td>
<td>VDI</td>
</tr>
<tr>
<td>Win 8.1</td>
<td></td>
<td>Both</td>
<td>Professional / Enterprise</td>
<td>VDI</td>
</tr>
<tr>
<td>Win Server 2008 R2</td>
<td>SP1</td>
<td>64 Only</td>
<td>Datacenter Edition</td>
<td>Both</td>
</tr>
<tr>
<td>Win Server 2012</td>
<td></td>
<td>64 Only</td>
<td>Standard, Datacenter</td>
<td>Both</td>
</tr>
<tr>
<td>Win Servers 2012 R2</td>
<td></td>
<td>64 Only</td>
<td>Standard, Datacenter</td>
<td>Both</td>
</tr>
</tbody>
</table>

Appendix D – Microsoft Licensing Recommendations

The following are recommendations only. Please verify licensing requirements and restrictions with your Microsoft Licensing distributor.

Horizon Air does not provide any guest OS licensing required for the full use of the Horizon Air solution. All necessary Microsoft licenses for operating Horizon Air Desktops and Hosted Apps Servers are available from your preferred Microsoft Licensing distributor.

Microsoft windows 7 and 8.x OS licensed guest VMs require Microsoft Virtual Desktop Access (VDA) subscription license or Microsoft Software Assurance for Windows.

Windows Server VMs must use Windows Server OS licenses. Customers are advised to bring 1 Windows Server Datacenter Edition for 2 Processors for every 120 standard desktops, or 60 advanced desktops, or 30 enterprise desktops, or 5 Hosted Apps Servers. In addition, customers are required to bring 1 Remote Desktop Service (RDS) Customer Access License (CAL) for each user who will access a Windows Server VDI VM or Hosted Apps Server.

Please note as Horizon Air supporting hardware and Microsoft Licensing policy may change over time, please check with Horizon Air customer services for the latest recommendations.