



NOTICE: This Service Description is no longer being updated. Content has been moved to the Cloud Services Guide, found at <https://www.vmware.com/agreements>

Uhana™ by VMware

Service Description

Dated as of 30 August 2022

© 2022 VMware, Inc. All rights reserved. This product is protected by U.S. and international copyright and intellectual property laws. This product is covered by one or more patents listed at <http://www.vmware.com/download/patents.html>.

VMware is a registered trademark or trademark of VMware, Inc. in the United States and/or other jurisdictions. All other marks and names mentioned in this Service Description may be trademarks of their respective companies.

As used in this Service Description, “VMware”, “we”, or “us” means VMware, Inc., a Delaware corporation, if the billing address for your order is in the United States, or VMware International Unlimited Company, a company organized and existing under the laws of Ireland, if the billing address for your order is outside the United States. Terms not defined in this Service Description are defined in the Terms of Service or elsewhere in the Agreement.

VMware, Inc.
3401 Hillview Ave.
Palo Alto, CA 94304
www.vmware.com

1. Introduction

1.1 Service Description

Uhana™ by VMware (“Uhana by VMware” or the “Service Offering”) uses artificial intelligence (“AI”) -based analytics to provide mobile network operators the ability to generate actionable insights from their 4G and 5G radio access networks to improve customer experience and reduce operational costs.

The Service Offering correlates and enriches high volumes of streaming data from mobile network elements to provide comprehensive insights at a subscriber level. Using AI, Uhana by VMware automatically performs anomaly detection, determines the root cause of network issues, and recommends remediations.

The Service Offering’s platform is suited to telco organizations with many operational engineers needing real-time access to the system with carrier grade scale, reliability, and performance.

The Service Offering includes:

- A data distribution engine (DIDE) capable of ingesting, decoding, and distributing inbound TCP and file-based telemetry data coming from network elements and applications. DIDE is running as a set of microservices on the container orchestration platform.
- A Real-time Stream Processing Engine (RSPE), that is processing raw telemetry data into real-time per-subscriber fine-grained KPIs that get stored into a highly scalable, high-performance, and highly available distributed database, all running as microservices on the container orchestration platform
- Data analysis of the telemetry data by domain experts that refine and retrain machine learning models according to the anomaly and misconfiguration patterns found in the customer specific environment
- Front-end API and UI visualization that enables queries, displays charts, and sets alarms to understand telemetry data
- The platform is run on the customer’s private cloud infrastructure (on-premises deployment). “Bare metal” or virtual machine (VM) capacity is jointly determined by the customer and VMware, based on the scale of the deployment. Alternatively, a customer-provided Kubernetes-based container orchestration platform can be used, assuming it is suitable to host the Uhana by VMware microservices.
- Installation, operations, regular upgrades, monitoring, and troubleshooting is performed by VMware. Customers are not required to train operations staff to run this platform.

Although the Service Offering is installed in the customer’s environment, it is managed by VMware. The customer has no right to take possession of the software elements of the Service Offering installed in its environment. The Service Offering can only be managed and operated by VMware; the customer cannot manage and operate the Service Offering, nor can the customer have any party other than VMware manage and operate the Service Offering.

1.2 Technical Documentation and Training

Documents and FAQs, including information on training, is found at <https://www.vmware.com/products/uhana.html>.

1.3 Legal Terms

Use of the Service Offering is subject to the Terms of Service, found through links on the VMware end user terms landing page, at: <https://www.vmware.com/download/eula.html>

or directly at:

<https://www.vmware.com/content/dam/digitalmarketing/vmware/en/pdf/downloads/eula/vmware-cloud-services-universal-tos.pdf>

2. Service Operations

The following outlines VMware's roles and responsibilities in providing the Service Offering. While specific roles and responsibilities have also been identified as being owned by you, any roles or responsibilities not contained in this Service Description are either not the duty of VMware or are assumed to be your responsibility.

2.1 Service Provisioning

VMware will provide the following provisioning services:

- VMware will deploy a container orchestration platform on hardware or VM-based compute capacity provided by you. Hardware and/or compute capacity requirements will be defined by VMware prior to installing the services. If you decide on providing a Kubernetes-based container orchestration platform instead of raw compute capacity, VMware will confirm that the Kubernetes environment is suitable to run the Service Offering.
- VMware will create a corresponding service account and send an email or other notification to the contact that you identified in your Order, inviting that contact to access the system. A URL to access the Service Offering will be provided within that notification.
- If requested, VMware will configure the system to authenticate the access to the user interface (UI) through a customer-provided SSO backend. The suitability of the backend SSO system to be used with the Uhana by VMware platform will be determined by VMware
- VMware will ensure that the identified contact can create additional user accounts for other users, as needed.

Your responsibilities include:

- Providing compute capacity either in a bare metal or VM-based form factor. The compute capacity needs will be determined by VMware.
- Providing access to the necessary telemetry information from network elements: e.g., implement required firewall rules, enable access to file-based telemetry data, etc.
- Providing detailed static information about the network element emitting the telemetry data. For example, in case of LTE eNodeBs or 5G gNodeBs, you will need to provide exact GPS coordinates, azimuth of the sectors, antenna details, configuration details, and network details.
- Providing assistance on requests to clarify anomalies found in the data by VMware's domain experts. For example, in case of LTE eNodeBs or 5G gNodeBs, to clarify unclear interference patterns seen in the data, so that ML algorithms can be retrained and refined to take better decisions.

2.2 Support

For assistance in identifying and resolving errors, and to answer questions related to the operational use of the Service Offering, go to the VMware Support page, at <https://www.vmware.com/support/services.html>.

2.3 Disaster Avoidance and Disaster Recovery

The Service Offering should not be considered the database of record for your data, and you should not rely on or consider the Service Offering as the sole source of your data, nor a complete copy of your data.

2.4 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, software and services over which VMware has direct, administrative access and control, including software and services used to provide the Service Offering.

You are responsible for incident and problem management (e.g., detection, severity classification, recording, escalation, and return to service) pertaining to:

- Your account settings in the Service Offering administrative management console.
- Access to the telemetry data from network elements
- Availability, reliability and performance of the provided on-premise compute capacity
- Anything else not under VMware's direct control and administration.

2.5 Change Management

VMware will provide the following change management elements:

- Processes and procedures to release new code versions and bug fixes.

You are responsible for:

- Management of changes to the compute infrastructure (bare metal or VM-based)
- Management of changes that influence the access to the telemetry data emitted by network elements
- Notification to VMware about changes to the structure and configuration details of the network elements emitting telemetry data

2.6 Data Privacy

Deletion of Data

Following expiration or termination of the Agreement, all Content, and all personal data contained in Content, in VMware's possession will be deleted from VMware's primary database and (if applicable) back-up database, as described in the "Termination" section, below. The only exception would be if and to the extent that VMware is required by applicable law to retain any of the personal data (in which case VMware will implement reasonable measures to isolate the personal data from any further processing).

3. Business Operations

Purchasing; Billing

The Service Offering is sold per Radio Access Network (RAN) cell. For purposes of this Service Description, a macro site with three sectors and two bands each equals six (6) cells. Usage is based on that calculation; your Order will specify the number of entitlements that you have purchased. You will be billed for base charges, in advance, and for overage charges, in arrears. For the purposes of this Service Offering, “overage” is defined as RAN cells in excess of the amount included in your Order.

The Service Offering is purchased through committed term subscriptions of one year or three years. The Subscription Term starts on the earlier to occur of (i) provisioning of the Service Offering in the customer’s environment, or (ii) 60 days after VMware’s acceptance of your Order.

Committed charges for the entire term are payable up front. Overage charges are payable monthly. You can purchase subscriptions to the Service Offering directly from VMware, or from an authorized VMware reseller. Consult your VMware sales representative for guidance on how to purchase a subscription.

This service offering will *not* automatically renew at the end of the purchased Subscription Term. If you wish to continue using the Service Offering after expiration of the purchase Subscription Term, you must purchase a new subscription.

If you wish to purchase additional subscriptions, the Subscription Terms for those additional subscriptions may not be coterminous with subscriptions already purchased. Consult your VMware sales representative for details on purchasing additional subscriptions.

Cancellation

You cannot cancel or terminate your subscription prior to the expiration of the committed purchased Subscription Term. You are liable for all charges incurred for the Subscription Term, regardless of whether you actually use the Service Offering for the entire Subscription Term. There is no refund for any committed subscription term charges that you paid at the time you purchased your subscription.

Termination

Termination of your Service Offering instance will result in loss of access to the environments, discontinuation of services, and a deletion of the environments and configurations created via the Service Offering.