

## **Cloud Management Solution (CMS)**

for Azure Stack Hub

# Features and Benefits

### Introduction

The CMS is a subscription management and billing system that enhances existing investments into Microsoft Azure Stack Hub deployments.

The CMS focuses on providing integration and management solutions for functionality gaps within Azure Stack Hub.

These solutions are aimed at infrastructure providers and organisations alike.







# Solutions

### The platform works to solve the following challenges.



#### **Multi-Region Management**

Azure Stack Hub does not provide a single interface for tenant management.

The CMS provides a single interface across multiple regions.



### **Subscription Management**

Azure Stack Hub subscription provisioning is a complex subject needing knowledge across the Azure Stack and Entra ID and there is no mechanism for standardisation or self-service.

The CMS solves these issues by providing delegated subscription management in a standardised approach.



### **SKU Based Pricing**

Natively Azure Stack provides base meters for Windows and Linux, but users generally consume Virtual Machines based on SKUs.

The CMS provides SKU based pricing templates which align with ensures that the billing items match what they are provisioning.



### **Tiered Management and Self-Service**

Azure Stack Hub doesn't natively cater for distributors, partners and tenants.

The CMS provides a three-tier model allowing distributors and partners to manage their Azure Stack Hub subscriptions and billing.



### **Billing and Commissions**

Natively the Azure Stack Hub handles resource metering but does not offer any mechanism for cloud billing or invoicing.

The CMS provides a comprehensive multi-currency billing system that also provides commission-based incentives to distributors and partners and provides credits, discounts and custom pricing for tenants.



#### **Invoicing and API Integration**

Azure Stack Hub does not provide any invoicing or computed billing records.

The CMS provides an invoicing service which delivers branded consumption invoices direct to the end users while at the same time providing easy, seamless integration with your existing billing systems through easy API calls.

# Your platform, your rules

### **Branding and Architecture**

#### **Feature**

### **Description**



## Offline Operations

We understand that one strength of Azure Stack Hub is to bring Azure native services to edge and disconnected scenarios. If that is your requirement, the CMS is designed to work completely disconnected from the internet.

The CMS is completely containerized and can run on any container runtime at any scale.



## Scalable, Modular Containerization

The CMS service is a three-tier application providing a portal, API and database tier which can be independently, horizontally, scaled to meet your unique growth and availability requirements.

Containerization brings enhanced security, portability and free's up the organisation from the responsibilities of having to run dedicated virtual machines.

All deployments leverage NGINX reverse proxy and make use of MySQL which provides exceptional multi-geo replication as well as read and write segmentation.



## Platform Running Costs

The CMS is built from the ground up to provide a scalable, robust single pane of glass that sits in front of all Azure Stack stamps without requiring expensive Virtual Machines running within your Azure Regions and adds no additional software costs outside CMS licensing.



Custom Branding and White Labelling Our goal is to put your brand first and foremost, there is not a single part of the CMS that cannot be customized to match your brand, and our engagements always include a branding component up front.

# **Secure Tiered Management**

### **Delegation and Access Control**

#### **Feature**

#### Description



#### **Three Tier Model**

At the heart of the CMS is the three-tier model. This model provides an ownership hierarchy between Distributors, their Partners and the Tenants managed by either.

This is perfect for infrastructure providers who already have or want to build strong partner networks across multiple geographies.



### User Management

The first challenge the CMS overcomes is that of user management. The system provides delegated user management and read-only roles which allow for secure, authorised management and control at all tiers.

For those who wish to use the inbuilt forms authentication. The CMS provides native password recovery and MFA functionality.



### Identity Federation

Although Azure Stack Hub needs all administrators creating and managing resources to bind subscriptions to an Entra ID tenant, the CMS itself is fully integrated into multiple cloud native identity providers such as Entra ID, Google and GitHub.



Secrets Management Delegation of any kind requires careful planning, for integration with your regions the CMS uses Entra ID applications and only supports certificate-based authentication with certificates securely stored as secrets within Azure Key vault.

This not only ensures secure integration with each Azure Stack Stamp (Region) but also simplifies secret rotation, management and access control.

# **Consistent Deployments**

### **Subscription Management**

### Feature / Requirement

#### **Description**



## Subscription Self Service

Key to the CMS is subscription management across multiple Azure Stack Stamps (Regions) from a single interface.

Distributors, partners and tenants can be allowed to selfprovision within the guard rails you define without needing to involve an Azure Stack administrator at all.



## **Deployment Consistency**

The unique subscription deployment method used by the CMS means that the backend Azure Stack service is not littered with orphan resources such as plans, quotas and offers while automatically enforcing a consistent naming standard.



### **Entra ID Registration**

One frustration often raised by operators and users is the need to on board the Entra ID tenant used to provide role-based access control (RBAC) within the Azure Stack subscription.

The CMS mitigates this by guiding the end tenants through the registration process and letting them know should they need to refresh the federation based on backend health checks between the CMS and Azure Stack.



### Lifecycle Management

Through the CMS subscriptions can be safely disabled, enabled and repaired without needing manual intervention. Ownership can be modified by tenants themselves.

Subscriptions can be safely removed from the Azure Stack Hub environment with all historic billing stored securely in the CMS database

# **Complete Pricing Control**

### **Metering and Pricing**

### Feature / Requirement

### **Description**



#### **Meter Conversion**

The CMS performs all the heavy lifting when it comes to understanding, extracting and transforming the usage data coming from the Azure Stack commerce API. This includes custom meters not natively exposed through the commerce API.



### **SKU Metering**

The CMS automatically scans and imports all Virtual Machine Sizes / SKUs into the pricing sub-system. This includes flags for marketplace images which can have custom pricing assigned.



#### **Dynamic Pricelists**

The CMS allows pricing at the region and tenant levels and an easy-to-use price cloning utility to rapidly roll out new pricing.



# Discounts, Credits and tier-based pricing

Whether using metering or SKU based pricing, the system allows for credits, tier-based pricing and discounts. All clearly shown on tenant billing reports and invoices.



#### **Estimate Tool**

The CMS provides a built-in estimator which has various uses including planning price rises and providing preadoption usage estimates.



## Distributor and Partner Commissions

The CMS incentivizes distributors and partners by providing a transparent tier-based commission structure that helps the platform operator keep track of commission payments.

# **Intelligent Cloud Billing**

### **Billing and Invoicing**

### Feature / Requirement

### **Description**



### **Multi-currency Support**

The solution provides multi-currency support for all major currencies, including API integration with current international exchange rates. Allow custom and automated rate adjustments as needed.



### **Billing API**

It is common requirement for operators to implement Azure Stack subscription invoicing into their existing tools and workflows. The CMS API allows for seamless and secure integration by any type of dependent invoicing system.



### **Detailed Invoicing**

The CMS provides a single detailed invoice showing consumption, pricing, tax, savings and totals across all regions.

Tenants can track invoice status across both current and past invoices and there is delinquent payment management baked into the CMS.



#### **Budgets**

Tenants can set budgets on their consumption and receive custom alerts.



### **Onboarding Experience**

We don't just sell software; we sell a commitment to work shoulder to shoulder with our partners to get the most out of their investment in Microsoft Azure Stack Hub. During onboarding we:

- 1. Deploy and brand the CMS for you.
- 2. Complete integration with your current stamps.
- 3. Upload pricing for an Azure region of your choice.
- 4. Training your team and collaborating with them to get the platform online.

### **Conclusion**

Regardless of your Azure Stack deployment pattern, whether online or offline, the CMS removes the pain associated with running a profitable multi-tenant Azure Stack Hub environment while providing you with a complete turn-key reseller solution to amplify your business and drive adoption.

Your branding, your platform, your terms.

### Join us at onboard@cloudaxis.cloud

