# Welcome

Apiculus is an end-to-end cloud-as-a-service solution that addresses the technology, business enablement and customer experience needs of regional, domestic and edge cloud service providers. Apiculus presents itself as an all-in-one technology platform that combines cloud service monetisation, infrastructure management and customer life cycle management, and offers an integrated solution for cloud providers in edge markets.
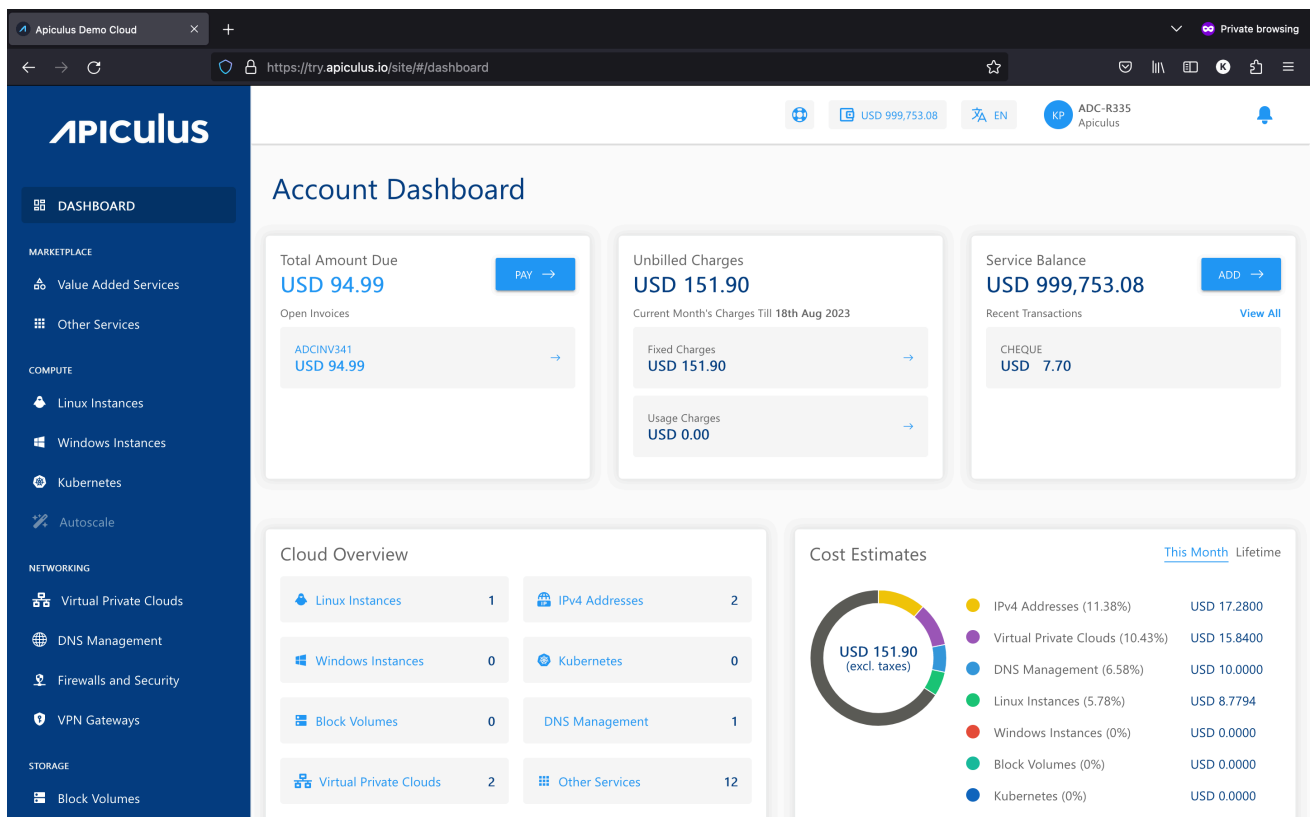
Apiculus enables:

- New service providers to launch and operate independent, greenfield with 100% data localisation.
- Established IaaS providers to transform and scale their VPS services into a full-fledged multi-service public cloud offering.
- Service providers to offer a standardised service delivery and user experience.

Stack Components

Items in **blue** are Apiculus software capabilities; items in **black** are services and extensions that can be monetised; items in **green** are service provider's assets.

Features and Specifications

This section covers the following:

- Self-service and Administration
- Integrated Billing and XaaS Monetisation
- End-to-end Business Enablement

Self-service and Administration

Apiculus brings a powerful layer of self-service along with a multitude of configurable options for managing customer journeys, admin operations and cloud commerce.

FEATURES	DESCRIPTION
SELF SERVICE	
Onboarding, Provisioning, and Cloud Management	Offer a complete self-service experience to your customers for onboarding, provisioning and cloud resource management.
Admin Operations and CMP Administration	Manage your cloud operations, customer accounts, service requests, and marketplace mechanics - all from a single Admin Console.
Marketplace Management	Offer a wide range of compute, networking, cloud-native and value-added services with single-click provisioning and seamless ease of management and operations.
ADMINISTRATION	
Complete Customer Profile and Records	Manage and get a 360-degree view on your customers' profiles and activities.
Customer Identity Verification Workflows	Define workflows for mandatory or regulatory KYC (Know Your Customer) identity verification of your customers.
Self-service Platform Configurations	Configure the end-user experience, right from branding to policy documentation, custom links and platform default behaviours.
Role-based Admin Access	Onboard various functional personnel with our customisable role-based access system.

Integrated Billing and XaaS Monetisation

With Apiculus, service providers can set up a marketplace of IaaS, PaaS, multi-cloud and other value-added service offerings. Apiculus offers not only the listing of services, but also a complete automated and integrated provisioning, operating, and billing paradigm.

FEATURES	DESCRIPTION
INTEGRATED BILLING	
Built-for-cloud Billing Models	Configure billing models such as monthly subscriptions, fixed recurring pricing or pay-as-you-go, and integrate with any payment gateway of your preference.
Transactions and Billing Records	Manage invoices, credit notes, tax input records and offline transactions with ease and loads of customisation options.
Dunning and Automation Policies	Automate customer lifecycle on the basis of billing events, payment delays, KYC identity verifications and many more.
XAAS MARKETPLACE AND MONETISATION	
IaaS, PaaS, Multi-cloud and SaaS-ready Marketplace	Offer a wide variety of traditional IaaS, cloud-native and marketplace services to capture a larger share of your customer's wallet.
Custom Catalogues and Quick Plans	Define and create custom catalogues with integrated or billing-only services, with multiple targeting options for customer accounts.
Multi-currency and Multi-Region	Offer billing in global currencies in addition to local ones to serve your local and global demand.
Discounts, Coupons & Trials	Streamline your customer acquisition by creating on-site discounting, cash vouchers and structured trial benefits.

End-to-End Business Enablement

Apiculus ships with SLA-backed integrated support and all the tools needed to enable stellar service delivery on the cloud. As an extension of business enablement, Apiculus also offers comprehensive localisation across branding, regulatory, compliance and other localisation domains.

FEATURES	DESCRIPTION
SUPPORT AND LIFE CYCLE MANAGEMENT	
Integrated Ticketing System	Offer an engagement touchpoint to your customers via the integrated ITIL-compliant ticketing system, or offer real-time support using our marketing extensions.
Customer Life Cycle Dashboards	Get complete visibility of your customer's journeys, cloud spending, technical health and more.
24/7 SLA-Driven L2-L4 Support	Enjoy SLA-based L2 to L4 support from our team of technology and business experts and eliminating vendor management hassles.
LOCALISATION AND PERSONALISATION	
On-premise and Locally Hosted	Offer a 100% localised offering, from your data centres, in your region.
Design, Localisation and Regulatory White Labelling	Put your brand in front of the customers with our all-round white label philosophy.
Personalised Touchpoints for Customer Communication	Personalise your customer outreach using highly customisable messaging templates.
Integrable with External Billing and ITSM Systems	Get our team of solution experts to onboard you and accelerate your GTM with our Cloud Accelerator program.

Services Catalogue

The Apiculus cloud catalogue is offered for all production Availability Zones, as shown below.

#	Service	Type	ISV
1	Linux Instances	Core	Apache CloudStack
2	Windows Instance	Core	Apache CloudStack
3	Block Volumes	Core	Apache CloudStack
4	VPC Networking	Core	Apache CloudStack
5	Apiculus Autoscale (deprecated March 2024)	Core	Apiculus Converge
6	DNS Management	Extended	PowerDNS
7	Multi-cloud AWS	Extended	AWS
8	Metal Instances	Extended	Canonical MAAS
9	Virtual Firewall Instances	Extended	pfSense/FortiGate VM
10	Load Balancer Instances	Extended	Citrix Netscaler VPX
11	Kubernetes Clusters	Core	Apache CloudStack
12	Autoscale Groups	Core	Apache CloudStack
13	Instance & Volume Backups (GA May 2024)	Core	StorPool VolumeCare
14	File-level Backups (GA May 2024)	Extended	Acronis Cyber Protection
15	Databases	Extended	TBD
16	Virtual Firewall Instances	Extended	Fortinet Virtual Firewall
17	S2S and RA VPN	Core	Apache CloudStack

#	Service	Type	ISV
18	Images & Snapshots	Core	Apache CloudStack
19	Account-level Storage	Core	Apache CloudStack
20	Account-level Data Transfer	Core	Apache CloudStack
21	Managed Services	Core	Service Provider
22	Professional Services	Core	Service Provider
23	QuickPlans	Core	Service Provider
24	Object Storage/S3	Extended	Cloudian HyperStore

Logging In

Any user with a valid username/email and password can log in to Apiculus and will automatically be directed to their respective control panel based on their user type. Upon successful login, the navigation is as below:

- Subscriber users (admin and children) - to Apiculus Cloud Console
- Reseller users - to Apiculus Admin Console in the reseller view
- Admin users - to Apiculus Admin Console

Apiculus stores certain essential and non-third party cookies that are needed for account identification. These are:

- Access token to authenticate session
- User information like ID, email, type, state, and first/last name
- Other metadata such as the user's billing currency and payment currency

Additionally, if Google Tag Manager is being used, the connected apps may inject their own cookies into the session. These will be treated as third party cookies and may be blocked by privacy-focused browsers, ad blockers etc.

> ⓘ **NOTE**
>
> Login attempts and passwords can be managed by setting up strong password policies through platform configurations.

Resetting Password

Forgotten passwords can be reset by clicking on **I have forgotten my password** on Access Central. If the email entered is valid and exists on the system, instructions to set a new password will be sent by email.

Passwords must adhere to the password policies defined in the platform configurations.

Introduction

Apiculus is designed to make your experience easier, from managing infrastructure to handling payments and communication. Here's a look at the main features that help simplify the process.

📄 Building Blocks

Apiculus Cloud Console is the topmost layer on a technology stack that is fine-tuned and ...

📄 Billing Concepts

Billing on Apiculus Cloud works on a subscription model. In line with modern-day apps an...

📄 Supported Payment Gateways

The following payment gateways are supported on Apiculus to receive payments:

📄 Supported SMS Gateways

Apiculus supports SMS gateways that can be used for sending SMS notifications, sending ...

📄 Apiculus Access Central

Apiculus offers a single login page for subscribers and admins alike, and redirects based …

Building Blocks

Apiculus Cloud Console is the topmost layer on a technology stack that is fine-tuned and optimised for performance, features and experience. The Apiculus solution uses Enterprise-grade components to handle various facets of infrastructure management and service delivery.

In short, the building blocks of Apiculus are:

- Apiculus Cloud Console and Admin Console - service provider administration, subscriber CMP, billing, service catalogues, platform administration
- Apache CloudStack - orchestrator to facilitate virtual infrastructure and asset provisioning
- Zabbix - monitoring of guest and management clusters, physical asset monitoring
- OTRS - support and ticket operations with ITIL v5 compliance
- Metabase - business intelligence and reporting dashboards
- StorPool - software-defined storage solution for reliability and underlying performance
- Cloudian HyperStore - S3-compatible object storage
- Hypervisors - KVM virtualisation with support for ESXi and Xenserver
- Networking - firewalls, switches and routers from industry-leading providers
- High-performance Servers - HPE preference hardware, with support for other leading (Dell, Huawei etc.) or commodity providers

Billing Concepts

Billing on Apiculus Cloud works on a subscription model. In line with modern-day apps and services, subscription billing models are an efficient way to deliver service value as a pay-as-you-go license. This not only eliminates heavy upfront costs for any service purchase, but also gives you the flexibility to cancel at any time and pay for only the amount or duration of use.

Billing on Apiculus Cloud

To understand the various billing and financial aspects of Apiculus Cloud, it is essential to be aware of certain billing concepts:

- **Billing Cycle:** By default, Apiculus Cloud follows a monthly billing cycle from the 1st to the 31st (or 30th or 28th) of each month. Any resource or service purchased during the billing cycle will be invoiced in the next month.
- **Billing Frequency:** Services can have their own billing or renewal frequencies. This is essentially the time period for which the resource or service is rated and billed for. These can be:
    - Hourly (mainly for virtual machines and disks)
    - Monthly (for most of the available services)
    - Weekly
    - Quarterly
    - Half-yearly
    - Yearly
    - One-time
- **Billing Model:** Apiculus Cloud follows a billing model determined by a credit limit that your account has been offered. This credit limit is a value that you can purchase services and resources up to without running the risk of account restriction, disablement, or termination. Credit limits can be enhanced by Apiculus based on your usage and payment track records.
- **Service Balance:** In simple terms, the service balance is your current purchase capacity on Apiculus Cloud. The service balance includes your credit limit, payments that you have made and all charges that you have incurred on your subscriptions and is denoted using a 'wallet' metaphor.

All billing records related to your account on Apiculus Cloud can be accessed from the respective sections under **Billing and Financial** in the main navigation panel.

Supported Payment Gateways

The following payment gateways are supported on Apiculus to receive payments:

- Razorpay (India)
- Stripe (global)
- Paypal (global)
- iVeri (Zimbabwe)
- Bank of Georgia (Georgia)
- DPO Group (Rwanda)
- DPO Paygate (South Africa)
- Ecocash (Zimbabwe)
- Esewa (Nepal)
- Fortis (USA)
- PayTM (India)
- PayTabs (Global)
- Hyperpay (MENA)
- HDFC
- DataWorld (Nepal) - In-house Gateway for DataWorld. Not available globally.

> ⓘ **NOTE**
>
> Apiculus supports the listed payment gateways in a **redirect** mode. Auto-debits and recurring payments are not currently supported.

Supported SMS Gateways

Apiculus supports SMS gateways that can be used for sending SMS notifications, sending one-time passwords (OTP) and verifying mobile number ownership. The following SMS gateways are supported:

- Kapsystem (India)
- Textlocal (India)
- Twilio (global)
- Oneway (ANZ, Asia, Europe)
- TelOne SendSMS (Zimbabwe)
- Bizbond
- Mobishastra (India)
- Unifonic (Middle East)
- JorMall (Jordan)

> ⓘ **NOTE**
>
> SMS charges and the ability to send domestic and international messages depend on the SMS provider and the service plan.

Apiculus Access Central

Apiculus offers a single login page for subscribers and admins alike, and redirects based on the type of user who is logging in (subscriber, reseller, admin).

Access Central can be accessed via the cloud URL configured for the service provider's cloud deployment.