

A Modern Virtual Desktop Experience



Product Overview

CubeVDI is a remote desktop and DaaS connection broker that pairs users with resources via a single management console. As a commercial product in the Bigstack Enterprise Expansion Suite, CubeVDI integrates deeply with the open-source CubeCOS platform and eliminates dependency on a single virtualization provider. This allows enterprises in demanding fields such as energy, media, financial services, and government to evolve their infrastructure without re-architecting the end-user computing layer.

Why Choose CubeVDI?

1. **Rapid Deployment of Remote Work Environments:** Set up a VDI architecture quickly to provide users with fast access to dedicated desktops and internal systems via a browser or native remote desktop connection.
2. **Highly Integrated, Efficient Management:** Deep integration with the CubeCOS cloud platform enables automated desktop template creation, centralized maintenance, and rapid deployment, thereby reducing the operational burden.
3. **Diverse application scenarios:** Supports medical card readers and virtual teaching applications in schools. Suitable for internal system access, development environments, and information security isolation.
4. **Secure work environments:** All operations are executed inside the data center under a zero-trust model, and remote connections and multi-factor authentication are used.



Part of the Bigstack Enterprise Expansion Suite, built on the open-source CubeCOS infrastructure platform.

Enterprise Expansion Suite

- Virtual Desktops
- Hybrid Cloud Management
- Data Protection

Use Cases

- VMware Alternatives
- Private Cloud
- Edge/Telecom Cloud
- Public Cloud

Deployment Models

- All-in-One (AIO) Deployment
- Hyper-Converged Infrastructure (HCI)
- Web Scale Architecture

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5. **Resource and Service Integration:** It provides centralized management of computing, storage, and network resources, as well as internal system service integration for rapid desktop delivery.
6. **Comprehensive Data Protection:** User data is never stored locally. It is combined with file transfer controls, internal/external network isolation, and screen recording for compliance.
7. **Enterprise-ready:** Our expert team and our partners' service teams will assist you with planning, deployment, and operations, enabling you to deploy CubeVDI with confidence to meet the demands of critical business scenarios.

Use Cases

1. **Government and Defense:** Zero-trust remote access, smart card authentication, audit trail, and VPN-free gateways suitable for secure/classified environments
2. **Energy and Science:** Complex simulations and HPC workloads; GPU-accelerated remote visualization via DCV
3. **Media and Entertainment:** Large-file video editing, 3D rendering, and live streaming/post-production workflows enabled by unified remote access
4. **Financial Services:** Low-latency real-time communication protocols, strict compliance, session recording, and comprehensive access audit logs
5. **Education:** Efficient management of virtual resource pools, streamlined deployment times and processes, and provision of high-performance virtual machine course resources
6. **Enterprise / SMB:** Comprehensive alternative for migrating virtual desktops built on Horizon/Citrix virtualization infrastructure
7. **Healthcare:** Secure access to clinical applications through multi-factor authentication (MFA) and a complete connection audit trail



Secure Work Environment

Supports remote connections and multi-factor authentication; all operations are executed within the data center, creating a zero-trust secure work model

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Authentication and Identity Management

1. Active Directory / LDAP Integration
2. SAML 2.0-based Identity Provider (IdP) Single Sign-On (SSO) via enterprise IdP
3. Multi-factor authentication (MFA) with native support for RADIUS or Duo Security integration
4. Smart Card / Certificate-Based Authentication
5. Microsoft Entra ID (Azure AD) Integration
6. Location-Based Access Control (Internal and External Network Policies)
7. Enforce Content Security Policy (CSP) to enhance authentication security

Security

1. **Zero-Trust Architecture:** Users can only access authorized resources; no lateral movement
2. **VPN-Free Connectivity Gateway:** The gateway replaces the corporate VPN, enabling users to access resources with the least privilege
3. **Data Protection:** All data remains within the corporate network
4. **Screen Recording:** Records and archives user activity
5. **Audit Trail:** Comprehensive records of user logins, resource access, and connection history

Resource and Connection Management

1. Offers both **persistent** and **non-persistent** desktop deployment models
2. Offers **Named-User** and **Concurrent-User** licensing models
3. Automatically assign users and resources (resource pools, plans, assigned desktops, etc.) via the policy engine
4. Dynamically provision and delete virtual machines on demand or according to a schedule



Comprehensive Data Protection

This solution comprehensively strengthens enterprise data protection and compliance management by never storing user data locally, combining file transfer controls and mechanisms to isolate internal and external networks, and providing screen recording capabilities.

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5. **Automated power management:** Start, stop, or suspend virtual machines based on rules or user requests
6. **Protocol Schemes:** Assign display protocols based on resource pools or user policies
7. **Power Control Policies:** Define virtual machine lifecycle rules based on resource pools
8. **Disconnection Policy:** Controls virtual desktop management behavior when a connection is lost or times out
9. **Screen Resolution Matching:** Automatically matches the virtual machine resolution to the client display

Monitoring, Reporting, and Management

1. A single web-based control panel covering virtualization and desktop environments
2. Real-time visibility into virtual machine power status and user remote connections
3. Resource usage reports, login history, assignment logs, and proxy server metrics
4. SMTP email alerts for environment events
5. External databases supporting large-scale deployments: PostgreSQL, Azure SQL, Microsoft SQL Server
6. REST API for automation and third-party integration
7. Customizable end-user login page (branding)

Ecosystem and integration partners

Display protocols and remote transmission

1. Microsoft RDP and RemoteFX
2. NICE Desktop Cloud Visualization (DCV)
3. rdesktop
4. Red Hat SPICE



Resource and Service Integration

Centrally manage computing, storage, and network resources. Integrate internal system services. Rapidly deliver corresponding desktop environments. Comprehensively improve IT management efficiency.

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5. VNC (RealVNC, TigerVNC, TightVNC, and UltraVNC)

Learn More

🖥️ Product overview: <https://www.bigstack.co/en/products/cubevdi/overview>

🌐 Product features: <https://www.bigstack.co/en/products/cubevdi/feature>

Assistance and Support

📞 Business Inquiries: <https://www.bigstack.co/contact-form/sales>

🌐 Social Media Channels: <https://www.bigstack.co/community>

💡 Discussion Forums: <https://github.com/bigstack-oss/cubecos/discussions>



About Bigstack — Simplifying AI Infrastructure

We specialize in providing enterprise-grade, open-source platforms that support AI infrastructure, software-defined data centers, edge clouds, and telecom clouds. We help businesses flourish in a data-driven, software-centric world.

With the CubeCOS infrastructure platform, Bigstack helps enterprises streamline their digital transformation, scale seamlessly, and confidently adopt open cloud infrastructure.

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