

## ADVANTAL SECURE INFRASTRUCTURE ACCESS MANAGEMENT PLATFORM

### OVERVIEW

Advantal Secure Infrastructure Access Management is a self-hosted, browser-based platform designed for enterprises managing access to critical IT and OT environments. It acts as a centralized jump server, enabling secure, audited, role-based access with built-in Multi-Factor Authentication (MFA) to:

SSH Servers

RDP Desktops

Multiple Databases

**No VPN client | No RDP software | No DB tools required**

### KEY HIGHLIGHTS

#### Unified Secure Access

- Single HTTPS portal (Port 443 only)
- All protocols proxied internally
- Zero direct exposure of servers

#### Enterprise Security

- Mandatory TOTP-based MFA
- Role-Based Access Control (RBAC)
- Command-level restrictions

#### Built-in Intelligence

- Query logging with undo capability
- Session recording & replay
- Smart SQL editor with templates

#### Easy Deployment

- Self-hosted (On-Premise)
- Lightweight architecture
- Works on Ubuntu & Windows Server

## ARCHITECTURE OVERVIEW

The platform follows a **Jump Server Architecture**:

- External users connect via HTTPS (443)
- All access is routed via centralized gateway
- Requests pass through dual firewall layers
- Internal systems are never directly exposed

**Result:** Maximum security + controlled access

## SECURITY & ACCESS CONTROL

### Authentication

- TOTP-based MFA (Google Authenticator, Authy)
- Password policy enforcement
- Account lockout protection

### Session Control

- Live session monitoring
- Force logout capability
- JWT-based secure sessions

### Role-Based Access Control

- 4-tier hierarchy: Admin → Manager → Analyst → Viewer
- 17+ granular permission flags
- Per-user & per-resource assignment

### Lateral Movement Prevention

- No direct SSH/RDP access
- Resource-level visibility control
- Command blocking with logging

## DATABASE MANAGEMENT (BUILT-IN)


Eliminates need for external tools like SSMS or Dbeaver.


### Supported Databases


- SQL Server
- MySQL


### Powerful Features

- Smart SQL Editor with syntax hints
- Query history & saved queries

 Oracle


 IBM Db2

 MongoDB

 Query Undo (unique feature)

 CSV import/export


 Explain execution plan


 SQL beautifier

**Highlight:** Full query audit logging with rollback capability

## SSH & RDP ACCESS

### SSH Features

 Browser-based terminal (xterm.js)


 Full session recording


 Command-level logging

 SFTP file transfer support

### RDP Features

 No RDP client required


 Browser-based desktop access

 Clipboard support

### Advanced Controls

 Command blocking (e.g., `rm -rf`, shutdown)


 Pattern-based restrictions


 Real-time monitoring


## AUDIT & COMPLIANCE

### Complete Audit Trail

 User activity logs

 SSH command logs

 DB query logs

 Session recordings




### Monitoring Capabilities

 Real-time alerts

 Behavioral analytics

 Anomaly detection

## Compliance Ready

-  Long-term log retention
-  Secure audit storage
-  Policy-driven access control

## ADVANCED SECURITY FEATURES

-  Data Loss Prevention (DLP)
-  Malware detection (roadmap)
-  Secure file transfer controls
-  Sensitive data pattern detection
-  Approval-based access workflows

## TECHNICAL SPECIFICATIONS

Component	Details
Server OS	Ubuntu 22.04+ / Windows Server 2019+
Backend	Node.js 18+
Frontend	React 18
Database	SQL Server (metadata)
Ports	443 (HTTPS), 5000 (API)

## DASHBOARD & ANALYTICS


-  Live session tracking
-  System health monitoring
-  Login analytics (7-day trends)
-  Top active users insights
-  Auto-refresh dashboard (30 sec)


## WHY ADVANTAL?

Feature	Advantal Secure Infrastructure Access Platform	Traditional Tools
DB Management	Built-in	External tools required
RDP Access	Browser-based	Client required
MFA	Included	Extra cost
Query Undo	Yes	Not available
Deployment	Simple	Complex


## SUMMARY

Advantal Secure Infrastructure Access Management provides a **complete, secure, and centralized access solution** with built-in Multi-Factor Authentication (MFA) for modern enterprises.

 Reduce risk

 Simplify access management

 Improve visibility

 Enhance security compliance

## CONTACT FOR SUPPORT

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