CİTRIX®

Citrix Application Delivery Management

Citrix Application Delivery Management (ADM) is an intuitive, comprehensive platform that enables automation, orchestration, management, and analytics for application delivery across hybrid multi-cloud environments. To help you deliver the best application experience and availability for both monolithic and microservices-based applications, Citrix ADM provides one holistic view with the ability to drill down on specific details for easier troubleshooting, faster resolution, and actionable insights.

Applications Drive Business

We effectively live in an application economy where applications are synonymous with business productivity, growth, and customer experience. To stay competitive, organizations must be able to innovate rapidly and scale to meet customer demand while also minimizing downtime to prevent productivity and revenue loss. Doing this effectively and efficiently requires a transformation in application design, application delivery, and the type of network services employed by applications.

Application Delivery Needs to Adapt

As hybrid multi-cloud becomes the standard for application deployment, application components become distributed across disparate environments, which leads to fragmentation. This fragmentation introduces a number of challenges for delivering applications and network services:

- Inconsistent configuration resulting from time-consuming and error-prone processes
- Lack of clear visibility and insight across all environments
- Fragmented troubleshooting

With its application-centric approach to managing application delivery, Citrix ADM automates configuration and monitoring, gathers telemetry to produce actionable insights, and improves troubleshooting capabilities for all of your applications and application-delivery infrastructure regardless of deployment location or form factor.

Citrix ADM: Application Delivery Management from a Single Pane of Glass

Only Citrix ADM gives you a single pane of glass to manage your application

delivery infrastructure across:

- Any application: 3-tier web and cloud native
- Any environment: on-premises, public, private, and hybrid
- Any ADC form factor: physical, virtual, cloud, and more

With Citrix ADM, you get infrastructure analytics and the comprehensive health score of each ADC and application in a single place. You can quickly isolate and focus on critical ADC errors and use built-in workflows to address common issues.

Platform and Location Independent

Because all Citrix ADCs use a single code base, Citrix ADM can connect to, manage, and collect telemetry data from all ADC form factors — physical (MPX, SDX), virtual (VPX), containerized (CPX), and bare metal (BLX) — wherever they are deployed to give you comprehensive insights across all your applications, ADCs, and environments.

Citrix ADCs are platform and location independent, so they support any type of deployment — whether it's a three-tier web application or a microservices-based application — in any location that best suits your needs including an on-premises virtualized environment or private cloud, public cloud, or hybrid multi-cloud. And Citrix ADM gives you a holistic view across all your environments for automating, managing, and orchestrating your ADCs.

Automated Configuration: Fast and Error-free

Citrix ADM automates ADC configuration to make it simpler, consistent, and error-free. Create and manage configuration jobs in a single place to easily schedule updates at your convenience. Leverage pre-defined templates to ensure configuration compliance and monitor drift. Know confidently that all your configurations are committed, saved, and backed up and accessible in one central location.

StyleBooks for application portability

Use StyleBooks as configuration blueprints to help accelerate your application deployment and enable portability into and among clouds. You have the option to configure individual features or group multiple StyleBooks to configure an entire application. StyleBooks also enable you to use parameters as variables to abstract the application configuration, making it much simpler and more efficient for teams to manage complex configurations across different types of infrastructure.
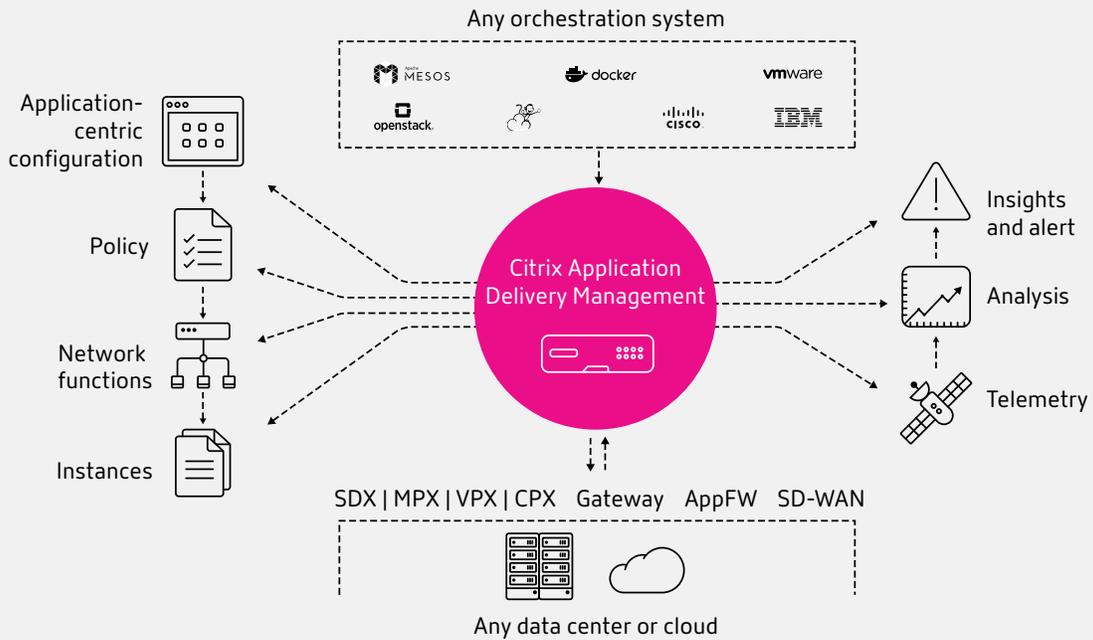
Automatic scaling of resources

Use Citrix ADM to initiate automatic scaling of your ADC resources to meet fluctuating demand to ensure application availability and better manage costs.

Save time with easy inventory management

Comprehensive dashboards enable you to view and monitor all of your ADCs across your entire hybrid multi-cloud environment from a single place.

Figure 1: Citrix Application Delivery Management

Any orchestration system

MESOS   docker   vmware
openstack   cisco   IBM

Application-centric configuration

Policy

Network functions

Instances

Citrix Application Delivery Management

Insights and alert

Analysis

Telemetry

SDX | MPX | VPX | CPX   Gateway   AppFW   SD-WAN

Any data center or cloud

Centralized licensing control

Managing your Citrix ADC licensing from a single location is an efficient way to see the licenses and editions you have available and when they expire, enabling you to flexibly allocate ADC capacity when and where you need it.

Define, track, and enforce SSL compliance enterprise-wide

Citrix ADM monitors all SSL transactions and logs and flags deviations in the SSL dashboard. You can conveniently manage all your certificates across your infrastructure in one place: Drill down to troubleshoot SSL issues, track your SSL certificates and see when they expire, and install or revoke SSL certificates.

Analytics for Actionable Insight

Citrix ADM not only collates an unparalleled amount of data on your applications, infrastructure, and network, but also uses machine learning to define normal network patterns and spot anomalies. By presenting you with actionable insights via an intuitive dashboard, Citrix ADM can help you make data-driven decisions on how best to optimize and secure your application delivery environments. This helps you identify, isolate, and respond to issues faster, minimizing downtime.

Infrastructure analytics

With Citrix ADM, you can organize your ADC deployments according to your preferred criteria such as geography, type, version, and more. Intuitive health scores and color coding make it easy to visualize anomalies and performance issues. Drill down into individual ADC deployments for more detailed metrics.

Figure 2: Visualize your ADC infrastructure in groups customized to your needs
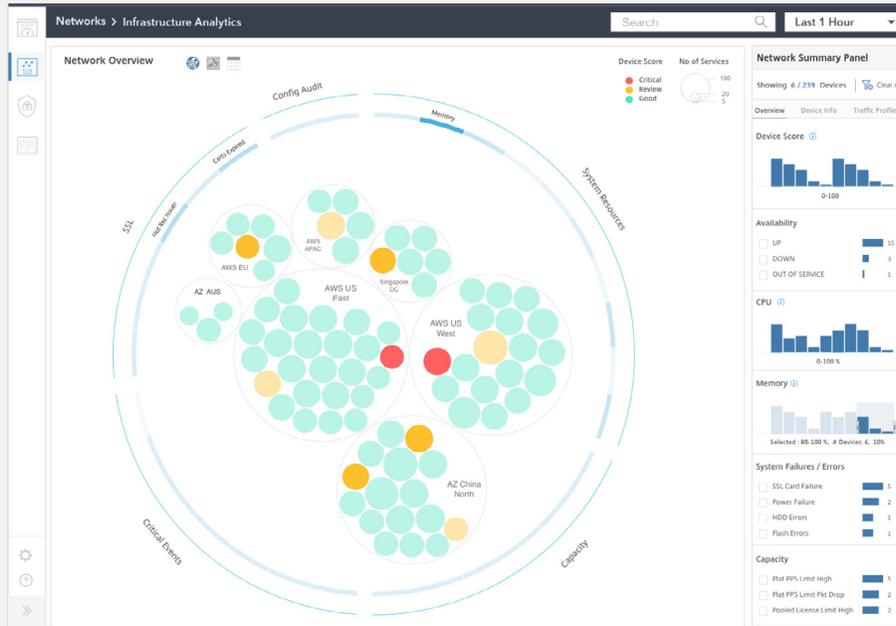
Application Dashboard

Monitor the status of all your applications at a glance regardless of their type or where they are deployed. Citrix ADM will automatically discover applications based on vServers, and you can group vServers to define custom applications that extend across environments.

Comprehensive application analytics enable you to easily monitor and troubleshoot your applications. Use a single intuitive dashboard to discover:

• Usage data for all your applications

• Application health score to quickly spot anomalies

• Trends for deeper and actionable insights

• One-click provisioning and monitoring

Key application performance metrics

Get a detailed view of application performance metrics such as request rate, errors, application and server response times, throughput, and total connections. Visually segregate views for the client, ADC, and application at the individual transaction level. The ability to monitor changes over time helps you troubleshoot and allocate resources.

Identify application security vulnerabilities

Citrix ADM monitors all of your applications and separates critical security issues from a tsunami of data so that you can easily identify threats and take action to improve your security posture. Discover:

• Which applications are under attack

Application Score

The application score is calculated based on the following information:

• Performance score: Apdex conforming score derived from the response-time variation of the application

• Application server resources: Inactive services and surge queue requests

• ADC instance health: System resources, critical SNMP events, and configuration issues

- How frequently they are being attacked
- Where the attacks are coming from
- If there is a trend to the attacks
- Type of attack like DDoS, bot, and SQL injection

Figure 3: Application insights from Citrix ADM
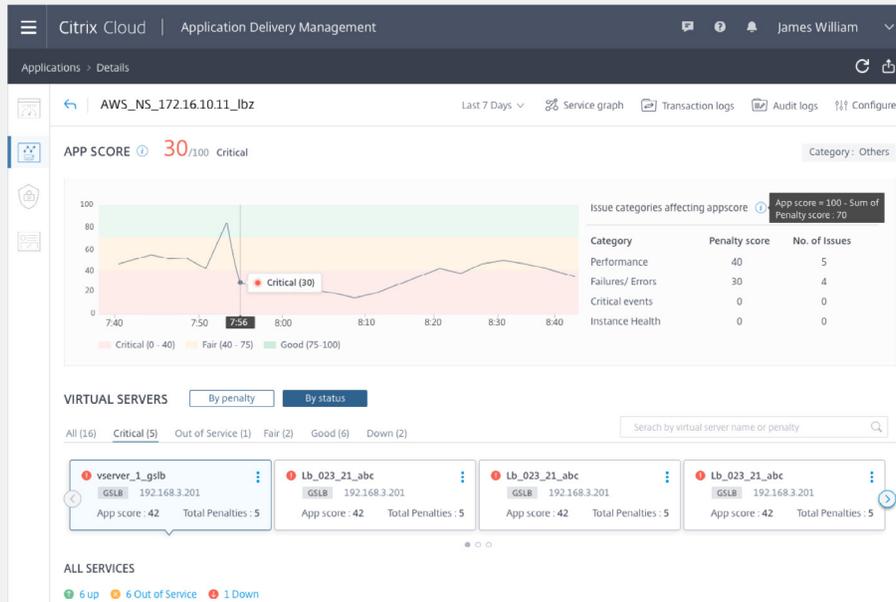
Comprehensive picture of application usage and user experience

With the Web Insight dashboard, you can visualize your application usage: See the top URLs accessed, top applications accessed, which applications have high response times, and which clients have high client network latency. Examine the loads on the web servers and their activity — requests, processing time, connections, and more. Track user experience with views of top clients and their locations, number of requests, network latency, and other useful experience monitors like load time and render time.

Faster Troubleshooting

One of the biggest issues facing IT teams today is troubleshooting. Modern applications are distributed and leverage more tools, making them — and troubleshooting — inherently more complex. Citrix ADM brings consistency across your entire application-delivery environment whether your applications are deployed on-premises, in the cloud, or both. It harnesses data across application, security, network, and infrastructure layers to help you proactively identify issues and troubleshoot them faster, before they impact application availability or performance.

Understanding Apdex

Citrix ADM uses the Apdex open standard for measuring application performance. Apdex defines a standardized method to report, benchmark, and track application performance by collecting multiple response-time measurements and calculating an overall score that represents user satisfaction.

Understanding Threat Index

Citrix ADM uses a digital rating system on a scale of 1 to 7 to indicate the criticality of attacks on an application. The Threat Index for a given application is calculated based on attack-related information such as:

- Violation type
- Attack category
- Attack location
- Client details
- Volume of attacks

Correlated data

The Citrix ADM analytics engine collates, analyzes, and correlates application and ADC health and performance scores with specific server, network, and security issues for easy alerting and faster analysis.

Interactive Dashboards

Citrix ADM dashboards are interactive and intuitive, and give you the ability to both see critical issues at a glance and drill down for more detail. The dashboards display a holistic view of applications, networks, and delivery infrastructure across all your environments and put actionable insights at your fingertips to help you quickly find the root cause of issues.

Role-based dashboards

Empower the right people with the right insights for the issues they care about most. Create custom dashboards for:

- IT Ops: Holistic view of applications and ADCs
- Security Ops: Comprehensive view of all security details
- Application Owners: Focused view of specific applications

Web transactions analytics

The ability to look at every historical web transaction is invaluable for pinpointing application performance problems. Citrix ADM maintains a record of all web sessions so that you can solve issues faster with:

- Detailed logs of every web transaction
- Search capability to find relevant logs
- Ability to isolate an ADC-to-end user vs. ADC-to-server problem

Service Graphs

Service Graphs provide an end-to-end view of your microservices-based applications and their environments. Application scores summarize the performance of each application and are color coded to help identify anomalies. Health scores for your application components and intuitive color coding for identifying networking services make it easy to spot anomalies and issues in a complex cloud native deployment. You can click the items for more granular details about application usage and performance and threats to your applications.

Other Capabilities

Support for containerized microservices-based applications

Citrix ADM provides the same management capabilities across both traditional and containerized applications. ADM supports all Citrix ADC form factors including CPX, which runs as a Linux container and is fully integrated with the leading Kubernetes platforms Amazon (EKS), Azure (AKS), Google (GKE), and Red Hat OpenShift as well as leading open source tools including Istio, Prometheus, Grafana, and Spinnaker.

Citrix ADM automatically detects microservices-based application deployments and starts the service creation process to apply application delivery functions for the applications. As a result, your application delivery infrastructure dynamically reacts to any changes in the requirements of the applications.

Figure 4: Drill into application metrics for faster troubleshooting
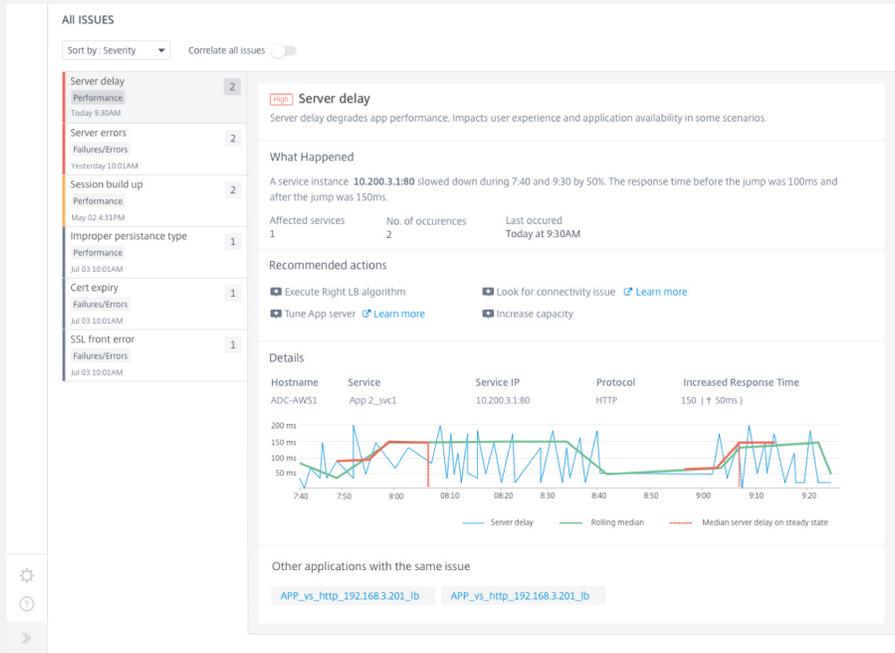
Manage HAProxy with Citrix ADM

Open source load balancers often lack proper management and configuration, which can be problematic. Integrate the management of these devices into Citrix ADM for a single point of control for all your ADC deployments across your entire hybrid multi-cloud environment. The HAProxy Dashboard provides a comprehensive view of the transactions, throughput, and session information collated from all your HAProxy load balancers.

How to Get Citrix ADM

Citrix ADM is available as a virtual machine for deployment on-premises or as a cloud service from Citrix.

On-premises deployment

You can download the Citrix ADM virtual machine from the Citrix downloads page and deploy it on all popular hypervisors. Use Citrix ADM as a license server, configuration manager, and an orchestration engine for your ADC deployments with no license requirements. The analytics capabilities of Citrix ADM require a license, and pricing is based on the number of vServers where analytics are used.

Citrix ADM Service

Save the time and expense of deploying and managing hardware by taking advantage of the Citrix ADM Service. Get up and running quickly with the free Citrix ADM Express version or take full advantage of comprehensive analytics capabilities by opting for the paid version.

Figure 5: Identify anomalies at a glance with Service Graphs
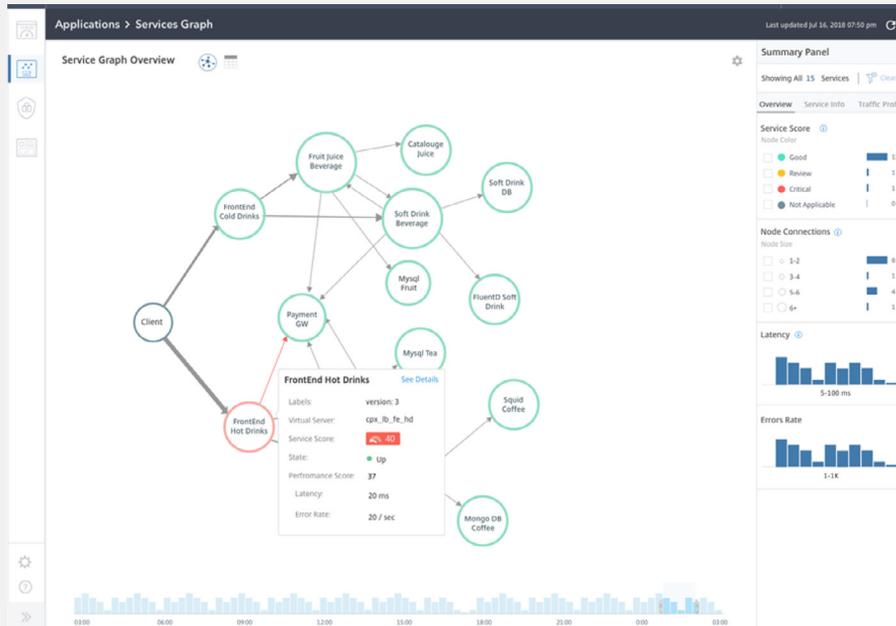
Licenses

Citrix ADM licenses are:

• An annual subscription (single or multi-year)

• Priced per each vServer (minimum order quantity of 10)

• Deployed on-premises or in the cloud via Citrix ADM Service

Feature	Citrix ADM On-Premises*	Citrix ADM Service Express (Not Licensed)	Citrix ADM Service (Licensed)
Analytics			
App Performance Analytics (App Dashboard)	•	Restricted to 2 vservers	•
Web Transaction Analytics	•	Restricted to 2 vservers	•
App Security Dashboard	•	Restricted to 2 vservers	•
Web Insight	•	Restricted to 2 vservers	•
SSL Insight	•	Restricted to 2 vservers	•
Security Insight	•	Restricted to 2 vservers	•
HDX Insight	•	Restricted to 2 vservers	•
Gateway Insight	•	Restricted to 2 vservers	•
TCP Insight	•	Restricted to 2 vservers	•
Video Insight	•	Restricted to 2 vservers	•
WAN Insight	•	Restricted to 2 vservers	•
Application Management			
StyleBooks	•	Restricted to 2 config packs	•
Management & Monitoring			
Auto-Scale	•	•	•
License Pool	•	•	•
Infrastructure Analysis	•	•	•
Inventory Management	•	•	•
Event Management & Syslog	•	•	•
Configuration Management	•	Restricted to 2 config jobs	•
Network Reporting (Instance Level)	•	•	•
Network Reporting (Virtual Server Level)	•	Restricted to 2 vservers	•
Network Functions	•	Restricted to 2 vservers	•
SSL Certificate Management	•	•	•
RBAC & External Authentication	•	•	•
Orchestration			
OpenStack Integration	•		
VMware vSphere/vCenter Integration	•		
Cisco APIC Integration	•		
Container Integration	•		
Third-Party Load Balancers			
HAProxy Management, Monitoring & App Analytics	•	•	•
Citrix ADM Storage			
	Not licensed. Customer can allocate as needed.	Restricted to 500 MB.	•

*: Requires license for more than 30 vservers   • License Required   • Included