


BRIGHTCOVE

VIDEO CLOUD™

Security Whitepaper

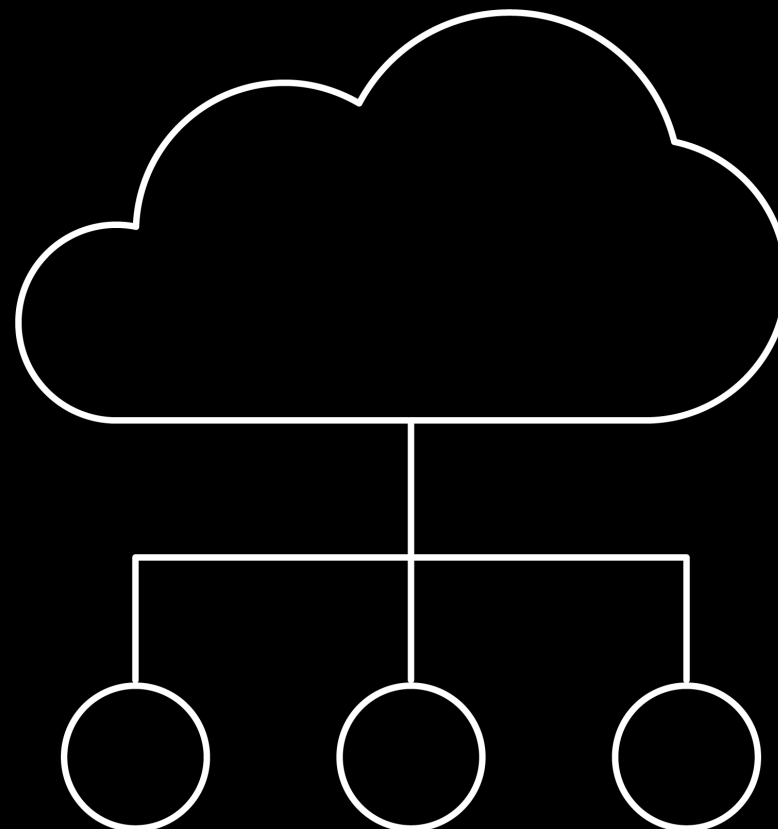
INTRODUCTION

In today's world, it's critical to have the ability to connect with everyone that's important to your business. Brightcove Video Cloud provides a powerful toolkit to engage, manage and lead teams using the persuasive power of live video and video-on-demand. Video Cloud helps maximize the power of video, from live events for customers to on-demand training for remote employees anywhere in the world with a comprehensive and secure suite of tools backed by market-leading uptime.

Brightcove's unmatched reliability enables secure video workflows that easily scale to fit organizational strategies, and is backed by an award-winning, around-the-clock support team. Brightcove Video Cloud brings together security options that serve your strategic needs. Unlike other solutions on the market, Video Cloud is highly scalable, quick to deploy, and supports secure access to video content.

Brightcove's cloud-first approach to online video, removes all of these barriers and increases the opportunities to communicate securely between employees, partners, suppliers, and franchisees.

This document examines how Brightcove secures its online video platform and protects your video content throughout its life cycle, from upload to delivery.



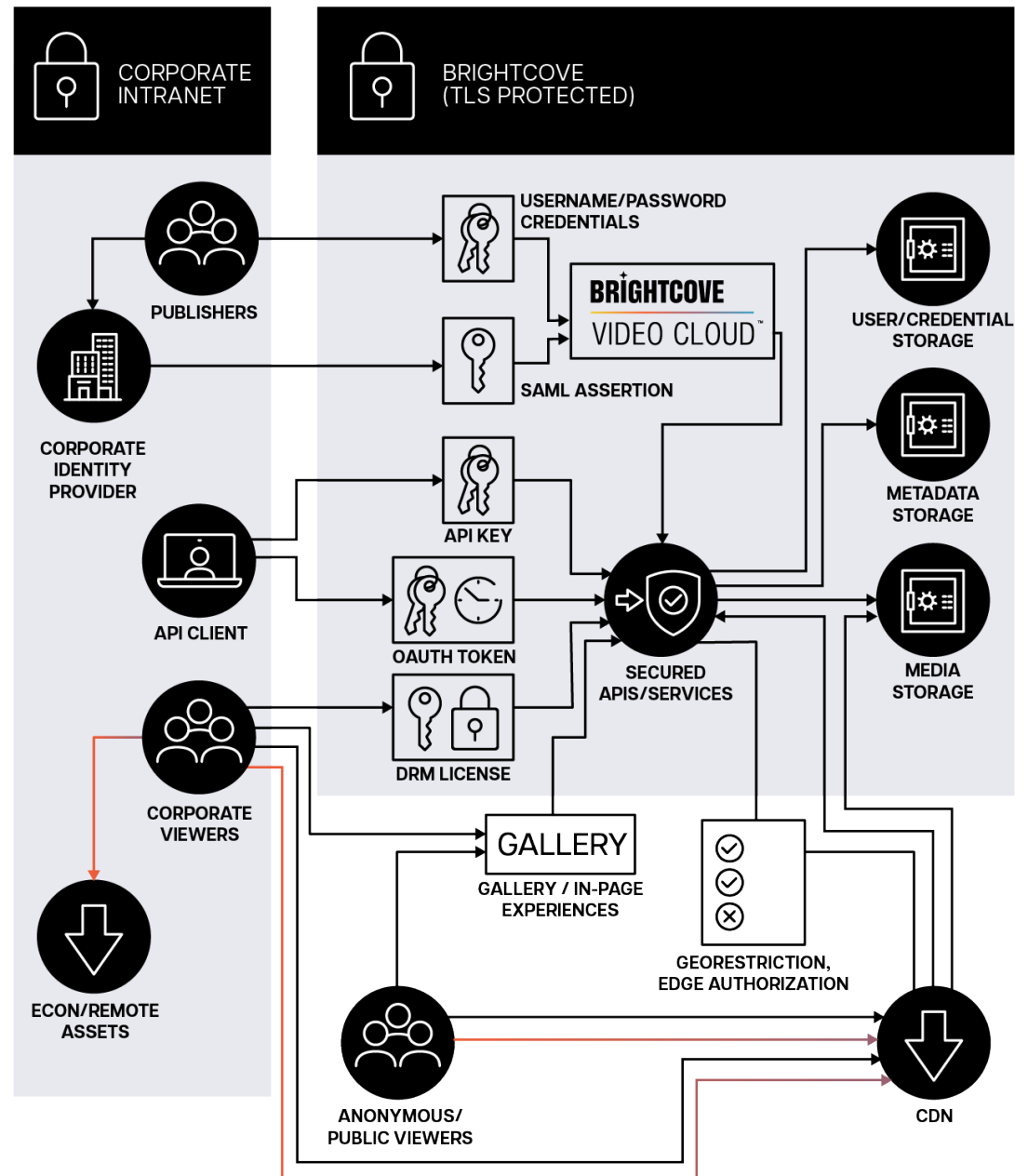
CLOUD COMPUTING

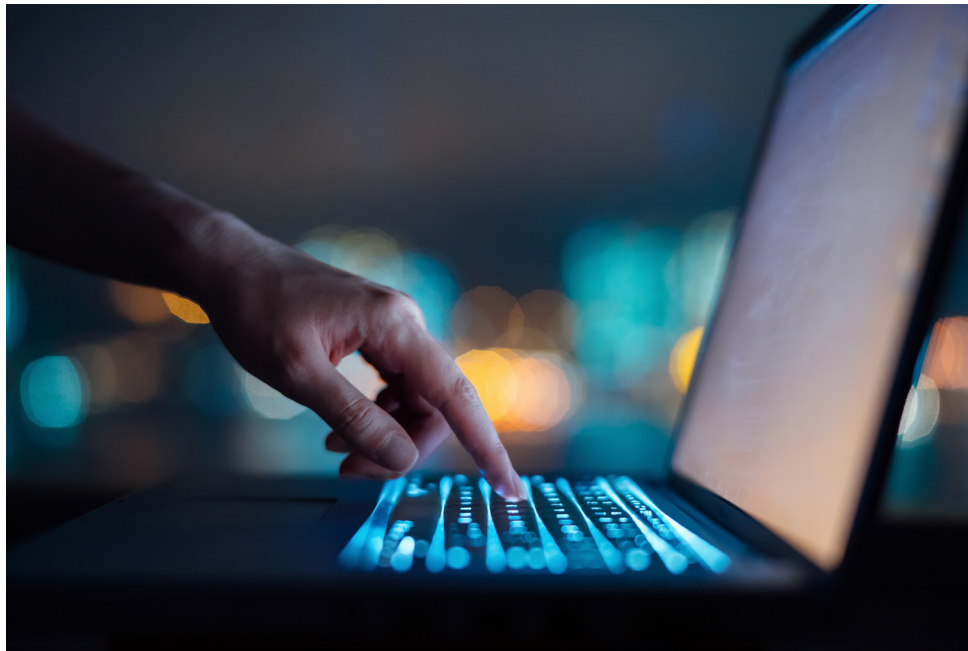
and The Shared Security Model

- ▶ The Brightcove online video platform (OVP) is a Software-as-a-Service (SaaS) platform.
- ▶ Data is hosted in a multi-tenant environment, but segregation is integrated into the application at the customer layer.
- ▶ Operate on Cloud Computing Services including: Amazon Web Services (AWS) and Google Cloud Platform.
- ▶ Leverage Content Delivery Networks (CDN) including: Akamai, Fastly and Cloudfront.
- ▶ The Brightcove software platform is built to provide both a secure and reliable foundation for a broad set of functionality that helps customers scale and manage their video content.
- ▶ Brightcove offers the option to only store the master videos in a region selected by the customer. For example: If the customer is tied to us-east-1 their masters won't leave us-east-1

LEGEND

- ▶ METADATA REQUEST
- ▶ MEDIA REQUEST (BASED ON METADATA)





ROLE-BASED ACCESS CONTROL

- ▶ Brightcove implements strong access control measures. Brightcove's studio supports delegated administration use cases through a role called "user administrator". The role comprises permissions that allow limited user related tasks, such as create users, deactivate users, etc.
- ▶ Administrators can configure the Video Cloud platform so that user access can be restricted to specific modules (Media, Publishing, Advertising, Analytics). This can be restricted based on the individual user's role, together with control of Brightcove API tokens, in order to enable you to limit who has access to change your players, media files, meta data, and policies.

SECURE PLATFORM DEVELOPMENT

Software development follows the Agile Scrum methodology. The teams are composed of developers, QA, design and systems engineers (as needed) that work on creating shippable code on every iteration/sprint.

- ▶ Encryption is enforced via TLS to all data in transit. Only secure (HTTPS) access to the SaaS application is allowed. Non-secure HTTP requests are first redirected for the HTTPS endpoint before they can be served.
- ▶ Data stored is encrypted at rest using industry standard AES-256 encryption algorithm, as are automated backups, read replicas, and snapshots.
- ▶ Each user is identified with a unique session, stored in a secure, encrypted session cookie. API authentication is handled by cryptographic token-based authentication. Systems are in place to manage API authorization.

SINGLE SIGN-ON

SAML-based single sign-on support is available for Video Cloud Studio, which gives publishers access to the Studio via SSO through an Identity Provider (IdP) of the customer's choice. Our single sign-on offering includes the following capabilities:

- ▶ **Identity mapping:** We base identities on the username (full email address) rather than just a single email domain. This provides more flexibility for publishers who want some users enabled for SSO and others to go through the regular Video Cloud Studio login.
- ▶ **Streamline User Provisioning:** Once an account and its existing users are configured for SSO, new users who are added to the account through the Video Cloud Studio UI will inherit the SSO setup of the user that added them
- ▶ **Security & Password Requirements:** Enterprises have varying user password requirements, i.e. length, duration and complexity. Using SSO allows Brightcove to use the enterprise password requirements instead of the ones implemented by our product.
- ▶ Video Cloud supports Service Provider initiated login for SSO. We do not support direct IdP initiated at this time but can provide a URL to bypass the Video Cloudlogin screen that can be linked to from your Identity Provider portal.

DATA SECURITY

HLS Encryption: HTTP Live Streaming Encryption (HLSe) lets you send encrypted video over HTTP for playback on desktop and mobile devices.

Geo-Filtering: Geo-filtering can be used for content protection by applying geographic restrictions using IP location

URL Tokenization: Video URLs can be tokenized based on the viewer's access level. End users can stream videos using unique IDs for your videos instead of using various personal identifiers.

TTL (Token Authentication): Video Cloud adds a TTL token to URLs for renditions to prevent your content being viewed after a set expiry date. By default, these tokens have a very short life.

Domain Restriction: Domain restrictions can be set on players to limit the domains where players can be used. If the player publishing code is copied and used on another site, domain restrictions would prevent the player from loading any videos.

IP Restriction: With IP restrictions, you can configure players to allow whitelisted IP addresses outside the U.S. to access your Video Cloud content.

DRM: Digital Rights Management (DRM) prevents your videos from being played back except in clients that are granted permission to do so. Implementations of DRM vary, but the typical use is to encrypt the video and decrypt it only if the client has a key to authorize playback. DRM is not included by default and can be purchased as an add-on.





NETWORK SECURITY



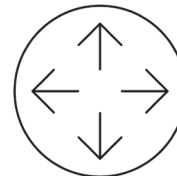
MONITORING

Brightcove monitors production systems to retain and analyze a comprehensive view of the security state of its production infrastructure.



LOGGING

The logs from the monitoring tools are collected and stored for analysis. Analysis of logs is automated to detect potential issues and alert responsible personnel.



DETECTION AND RESPONSE

Brightcove is utilizing an IDS agent in AWS which shows processes, lateral movement, escalations and communication to know bad hosts.

BUSINESS CONTINUITY

and Disaster Recovery

BRIGHTCOVE PLATFORM: HIGH AVAILABILITY

We have adopted a High Availability (HA) and resiliency-focused approach. Global networks allow for near real-time replication of data to various sites. The ability to scale in all directions allows for additional compute power to be available in minutes. Employing infrastructure as code allows for us to quickly create entirely new environments to respond to customer demand.

SERVICE RESILIENCY AND AVAILABILITY

The Business Continuity Plan (BCP) serves as the centralized repository for the information, tasks, and procedures necessary to facilitate management's decision-making processes and timely responses to any disruptive or extended interruption of normal business operations and services. This is vital if the cause of the interruption requires a prompt resumption of operations which cannot be accomplished by employing normal daily operating procedures.

AUDIT

SECURITY PACKAGE

To assist the client's due diligence in vendor risk assessment efforts, Brightcove has assembled a security package that includes a Standardized Information Gathering (SIG) questionnaire, policy and process documents, and a summary of results from recent third-party security assessments. The security package is built to serve as a comprehensive guide providing Brightcove's overall security posture. This package is available upon request to our prospects and customers as a free resource upon execution of an MNDAs.

THIRD PARTY SECURITY ASSESSMENT

As part of its security strategy, Brightcove engages third-party security research firms to perform annual vulnerability scan and penetration testing.

SARBANES-OXLEY (SOX) COMPLIANCE

Brightcove is proactive about obtaining 3rd party audits to review controls, policies, and procedures. A review of a company's internal controls is often the largest component of a SOX compliance audit. Internal controls include all IT assets, including any computers, network hardware, and other electronic equipment that financial data passes through.



CERTIFICATIONS



DIGITAL PRODUCTION PARTNERSHIP (DPP)

The DPP Committed to Security Programme enables Broadcast & Production suppliers to demonstrate their commitment to achieving security best practices.



CSA STAR (Security, Trust, Assurance, and Risk)

Brightcove is on the CSA STAR registry as a Level 1. STAR focuses on transparency, rigorous auditing, and harmonization of standards outlined in the Cloud Controls Matrix (CCM). Level 1 indicates we have participated in the self-assessment to demonstrate how we comply with CSA-published best practices.

CONCLUSION

Brightcove Video Cloud enables any organization to manage and deliver secured content to audiences residing inside or outside of a company's firewall with confidence, through secure platform development, single sign-on, secure customer data and network security.

ABOUT BRIGHTCOVE:

Brightcove creates the world's most reliable, scalable, and secure streaming technology solutions to build a greater connection between companies and their audiences, no matter where they are or on which devices they consume content. In more than 60 countries, Brightcove's intelligent video platform enables businesses to sell to customers more effectively, media leaders to stream and monetize content more reliably, and every organization to communicate with team members more powerfully. With two Technology and Engineering Emmy® Awards for innovation, uptime that consistently leads the industry, and unmatched scalability, we continuously push the boundaries of what video can do.

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