



# **KALTURA PLATFORM: FLEXIBLE CONTENT DELIVERY OPTIONS FOR A CONVERGED VIDEO STRATEGY**

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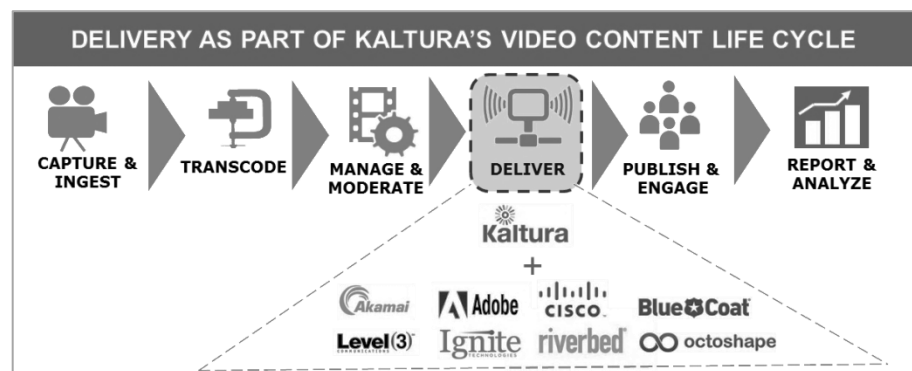
# Introduction

The vast majority of organizations today recognize video as a powerful and engaging tool for collaboration, training, knowledge sharing, communication and marketing. However, the complexities of deploying and managing a video solution, along with concerns regarding bandwidth constraints on the wide-area network (WAN) and reliable video delivery to geographically dispersed workforce, are some of the biggest impediments to setting up an enterprise-wide video publishing service.

Kaltura's video platform solves the challenges of centrally managing video in your organization, and handles the technical complexities of live and on-demand video delivery by offering integrations with best-of-breed content delivery technologies, some of which may already be in use by your organization, as well as implementing turn-key delivery solutions from the ground up. This document describes the flexible delivery options that Kaltura offers as part of our market leading video platform.

## Kaltura Enterprise Video Platform

Kaltura offers an end-to-end Enterprise Video Platform that provides a converged strategy to handle the entire lifecycle of live and on-demand video content, including: capturing, ingesting, transcoding, managing, delivering, engaging, and analyzing video. **The**



**Kaltura offering includes a variety of turn-key and integrated content delivery options that securely deliver optimized video to your audience anywhere, anytime, on any device and over any network connection, while minimizing the impact of video bandwidth consumption on your network.** The solution empowers employees with live and on-demand video creation and publishing tools, while it also provides full internal compliance and control that may be required by IT. Moreover, with Kaltura's multiple deployment options (Kaltura SaaS™, Kaltura On-Prem™, and hybrid variations), you can benefit from the flexibility of a solution perfectly tailored to your organization's unique business and infrastructure needs as well as to your video delivery preferences.

## Key Components

The Kaltura platform includes all components required to implement a successful video strategy for your organization that will boost employee productivity, reduce training costs, and simplify communication. These components include:

- **Kaltura Management Console™:** An administrative tool to centrally manage all video content along with associated searchable metadata, granular access control, moderation workflows, reports/analytics, and transcoding configurations



- **Applications for User Engagement and Collaboration:**

- **Kaltura MediaSpace™:** A YouTube-like internal video portal with channels, social tools, user management (with SSO/AD/LDAP integration), tools for live and on-demand video creation and authoring/editing
- **Out-of-the-box integrations with enterprise collaboration and training applications:** A core set of Kaltura's out-of-the-box integrations with platforms such as SharePoint, Jive, Yammer, Moodle, Blackboard, and others, seamlessly incorporating video into enterprise tools and workflows that employees are already accustomed to



- **Content Delivery:** Effectively deliver your live and on-demand content via external CDNs as well as via internal eCDNs and P2P technologies that optimize delivery across the WAN/LAN. This includes adaptive bitrate and auto-device detection for optimized video delivery regardless of location, bandwidth and device used.



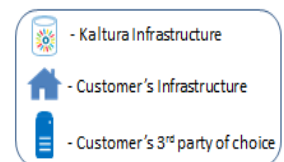
## Variety of Deployment Options

To tailor to your specific needs and requirements, the Kaltura video platform and all components can be deployed and hosted in a variety of options.



**FOR EACH OF THE FOLLOWING DEPLOYMENT OPTIONS YOU CAN CHOOSE BETWEEN LEVERAGING YOUR EXISTING CDN/ECDN DELIVERY INFRASTRUCTURE OR USING A TURN-KEY DELIVERY SOLUTION OFFERED BY KALTURA**

**(1) Kaltura SaaS™:** Kaltura's full-featured Software-as-a-Service video platform, catering all video workflow services from Kaltura's infrastructure. Our SaaS solution is the most cost effective and fastest way to get you started and to easily scale to your needs.



**(2) Kaltura Hybrid:** Many of our customers, initially looking for a fully self-hosted solution, often select one of our "hybrid variations" as a cost-effective alternative. These variations use the Kaltura SaaS management component to manage video assets and account settings, while storage, transcoding, and delivery components can be hosted by Kaltura or by the customer.

		Kaltura SaaS™	Hybrid Variations	Kaltura On-Prem™
Solution Components	Management			
	Transcoding		OR  OR	
	Storage		OR  OR	
	Delivery		OR  OR	

**(3) Kaltura On-Prem™:** This is a full featured video cluster, running on your own servers, behind your firewall, providing ultimate control. This option is suitable for organizations with unique needs that are not met by SaaS/Hybrid variations and that have the capacity, budget and dedicated IT staff to deploy, manage and maintain a self-hosted video platform.

For a full overview please see: <http://corp.kaltura.com/Products/Deployment-Options>

# Kaltura Content Delivery Offering

One of the main customer concerns in deploying a video solution is around reliable and cost-effective delivery of live and on-demand video content to geographically dispersed workforce. **Kaltura's strategy for optimizing delivery is to provide a turn-key video management and delivery solution with the highest level of flexibility and ease of integration, allowing customers to select their preferred delivery methods.** Kaltura's solution delivers high performance streaming media via a variety of internal and external content delivery technologies, without impacting the corporate LAN/WAN networks or business critical applications. There are two main options to consider, depending on your needs:

Internal Delivery across  
WAN/LAN



External Delivery  
via Internet facing CDNs



- 1) External delivery via Internet facing CDNs
- 2) Internal delivery across WAN/LAN

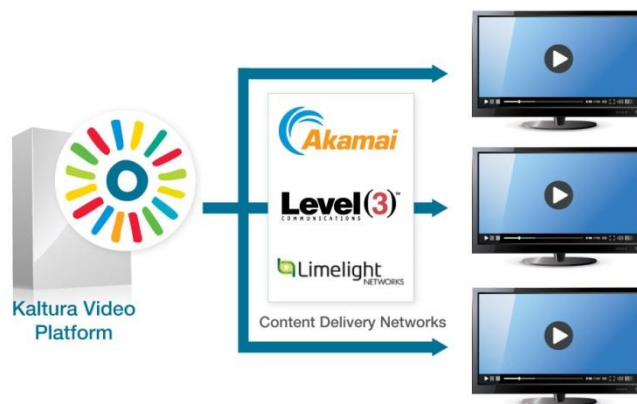
## External Delivery via Internet Facing CDNs



A Content Delivery Network (CDN) is a network of computers used to cache content close to the viewer, in order to overcome delays and latency in video delivery and to prevent degradation of video playback quality. An external CDN, or internet facing CDN, is this network of computers, hosted externally to the organization, on the global Internet.

Kaltura incorporates the delivery capabilities of external CDNs to stream high quality video to all relevant target viewers in the most efficient manner.

Kaltura partners, out of the box, with leading CDNs such as Akamai, whose network spans more than 120,000 edge servers, and can serve content with minimal delays globally thanks to reserved internal routing and global reach. Furthermore, Kaltura is CDN-agnostic and can also distribute content via any CDN such as Limelight Networks, Level3 and many others. While CDNs are an excellent way to deliver video to external users on the internet, and also, in some cases internal audiences, they don't necessarily address inbound bandwidth constraints at your remote offices, which often requires some form of WAN optimization solution on your local network.



# Internal Delivery across WAN/LAN

## Overview

The main reasons for organizations to implement an internal content delivery mechanism are:

- Leverage existing investments in network infrastructure
- Internal vs. external bandwidth considerations
- Unwillingness to rely on external transport solutions
- Compliance with regulations governing the location of media files



Kaltura provides an end-to-end solution to the above based on Kaltura OnPrem™ or Hybrid variations combined with additional SW/HW elements for origin, packaging, streaming and caching. Kaltura works with best-in-class, certified vendors for internal enterprise video delivery.

**With our flexible options for internal delivery over LAN/WAN, organizations can choose between (1) leveraging their existing delivery infrastructure or (2) using a turn-key delivery solution offered by Kaltura.**

### **(1) Leveraging Existing Infrastructure:**

Many organizations have already implemented or are planning to implement their own internal infrastructure for application acceleration, file transfer or internal video delivery. These organizations can leverage their existing infrastructure investments in these technologies (such as Blue Coat, IP Multicast enabled routers, peer assisted delivery solution, etc.) through out-of-the-box integrations with the Kaltura On-Prem™ or Hybrid offering.

### **(2) Turn-key Solution:**

For organizations that do not currently own such infrastructure Kaltura provides a myriad of turn-key solutions for optimized delivery across the WAN/LAN. These hardware and software based delivery systems are often optimized to take advantage of internal network capabilities such as traffic prioritization, proxy and caching.

**Dual Delivery - best of both worlds:** To optimize delivery for internal and external users as well as to help you save on delivery costs, Kaltura can support dual delivery options. Users may watch videos both from inside the company WAN and outside the network, securely accessing the internal network via VPN. Administrators can set access rules and restrictions upon publishing the video assets, or rely on network configurations that determine access based on IP range, domain locations or customer-driven content governance policy.

## Internal Delivery Options

The following three options are available to customers interested in internal delivery (behind your firewall), based on their unique requirements and needs:

- **Kaltura OnPrem™ Standalone:**

**Who is this for?** This solution works best for smaller organizations with low traffic demand expectations.

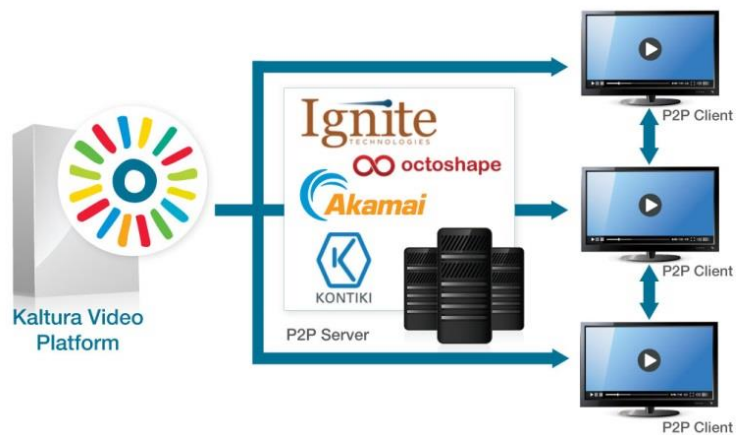
**How does it work?** Kaltura uses its own out-of-the-box capabilities and tools to package and stream content across the network

- **Kaltura OnPrem™ or Hybrid with Peer Assisted Delivery (P2P):**

**Who is this for?** Global organizations, with a large number of bandwidth constrained remote offices, that are interested in software-based solutions only and that are interested in a “data centric” approach.

**How does it work?** This approach requires a lightweight client running on your users’ end delivery device (such as PC), essentially enabling it to function as a miniature edge server that simplifies distribution to peer devices within the network. Devices with close network proximity will share cached video bits in order to minimize network transport and load. Since the cost of installing a standalone delivery service is prohibitive, this solution fits organizations with many distributed small offices.

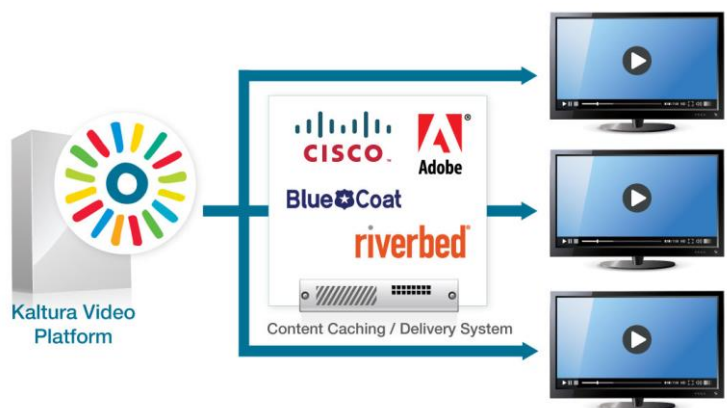
Kaltura is integrated with leading P2P providers such as Ignite Technologies, Octoshape, and others. See example #2 below.



- **Kaltura OnPrem™ or Hybrid with Content Delivery Systems (dedicated delivery/caching servers):**

**Who is this for?** Global organizations with multiple large regional offices, that have implemented or are planning to implement their own internal delivery infrastructure for application acceleration, file transfer, internal video delivery etc.

**How does it work?** This solution relies on servers deployed across an enterprise network. These systems often



do much more than just video delivery. The CDS solution can be:

- **Hardware based** (e.g. enabling Blue Coat Systems, Cisco, and Riverbed Technology)
- **Software based** (e.g. using Adobe Media Server, Wowza)

In both cases content delivery systems can cache video content locally within the network using a caching component like Varnish (software-based) or Blue-Coat and Riverbed (hardware-based).

The advantage of this solution is not relying on or supporting end-user software, but instead having guaranteed concentrators for video, strategically deployed. See example #1 below.

## Example #1 (Dedicated Server System): Kaltura + Adobe AMS

Kaltura is fully integrated with Adobe Media Server, providing an end-to-end live and on-demand video content management and delivery solution. The turn-key solution components include:

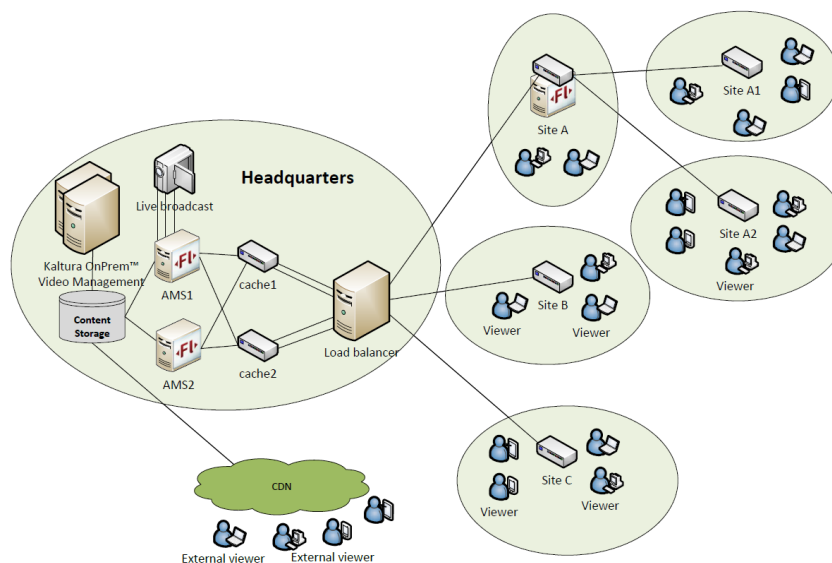
- Kaltura OnPrem™ or Hybrid - for content management,
- Adobe Media Server software (formerly Adobe Flash® Media Server) - for segmentation, packaging and streaming live and VOD content across your enterprise network
- Caching elements for scalability- numerous caching elements can be included such as Varnish (software-based) or Blue-Coat (hardware-based)



The Kaltura- AMS offering is software driven, and leverages your existing hardware infrastructure since it can be deployed on any standard servers (no proprietary hardware components or requirements). The solution can also leverage your existing IP-Multicast infrastructure for live delivery.

### Unique Benefits:

- No hardware required for delivery
- Can be integrated with Adobe's security features such as DRM packaging
- A widely used, mature, and well-known media server solution
- Fully scalable
- Can deliver a multitude of protocols, including: HLS, HDS, RTMP, RTMFP





## Example #2 (Peer Assisted Delivery): Kaltura + Ignite Technologies

Kaltura and Ignite provide a joint video content management and delivery solution that leverages your existing network and does not require hardware infrastructure and edge servers for delivery purposes. With peer-assisted delivery, the closest peer device will share cached video bits in order to minimize network load. The Kaltura-Ignite Peer-Assisted Delivery solution provides for all your content delivery needs - **Live, On Demand** and content **Push** - and it's inherently scalable, so deployment is quick and easily expands without any of the growing pains.



### Unique Benefits

- No impact on existing network traffic
- Scales as your video use increases: peer-assisted technology actually increases in capacity and speed as more desktops are added
- Easily expandable for changes in the organizational structure (e.g. M&A) as opposed to traditional hardware solutions
- Leverages existing servers and desktops and does not require additional caching, routing or other equipment
- Fast time to market: **With no complex infrastructure build-out, you can deploy a Peer-Assisted delivery faster than a server-based delivery solution.**

