BCNET

Privacy Impact Assessment
Kaltura (Video Platform)

Part 1 – General

Name of Department/Branch:	BCNET		
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1. Description of the Initiative

BCNET is taking the lead on the development of this Privacy Impact Assessment (PIA) on the Kaltura open source video platform service (Kaltura), on behalf of its members and affiliations.

BCNET is a federally incorporated not-for profit, services information technology organization that represents the interests of its members (including 25 publicly funded post secondary institutions) made up of universities, colleges, institutes, and research institutes across British Columbia. It represents all public, post-secondary education institutions in the province and provides shared services to its members in the areas of networks, procurements, licensing and IT services.

This unique, collaborative shared services model provides a multitude of benefits to its members from reducing and containing costs and increasing spending power, to decreasing duplication and improving service quality and productivity. The model cultivates a strong community, where members actively engage with peers to share, explore and develop innovative ideas and solutions as they tackle a broad spectrum of common and unique research and education technology challenges and topics. BCNET strives to add value to its membership by leveraging an advanced network that provides economies of scale to maximize efficiencies and drive down collective costs, while at the same time, continuing to facilitate collaborative innovative solutions that meet the needs of their stakeholders in support of world-class research and education.

A key component of facilitating innovative information technology (IT) solutions through this advanced network is ensuring they are hosted, accessed, managed and protected within a secure environment in accordance with Provincial (*Freedom of Information and Protection of Privacy Act*, FOIPPA) privacy laws, regulations and controls.

The Kaltura video platform service is a digital asset management system used by BCNET members who are increasingly relying on video for teaching and learning over the traditional text method. It is used by many educational institutions, media companies and enterprises for collaborating through video. Online material does not replace face-to-face teaching but rather is used as an additional support that makes educational learning more interactive, engaging, and accessible. Kaltura is cost effective and a proven well-rounded solution that is stable, highly available and provides flexibility that meet the demands of BCNET members.

The platform also includes Kaltura MediaSpace services. Kaltura MediaSpace offers services that can customize the video needs of departments within each institution. They can use MediaSpace to, launch a CampusTube, capture and publish lectures, broadcast live events, organize library content, provide galleries for student groups and/or reach out to alumni and prospective students.

Kaltura offers a broad video (Video Platform as a Service - VPaaS), as well as turnkey video based SaaS on-premise solutions. With the single video portal, members have the capability to centralize all video content in a single, easy-to-manage repository. In addition, its video management and creation tools are designed to seamlessly integrate with all major Learning Management Systems (LMS), Video Learning Environments (VLE) and leading Content Management Systems (CMS).

The shared Kaltura service offered by BCNET is a video platform that integrates with an institutions' LMS and is hosted in the UBC EduCloud instance on premises at their UBC data centres. This ensures that it is secure, easily accessible and *FIPPA* compliant. While the BCNET service owner manages the services as required, UBC and BCcampus provide staff to support, operate and maintain the service.

Features & Benefits

- The centralized video platform can be used for importing, encoding/transcoding, organizing, securing, streaming, and disseminating video content to a host of devices used on campus.
- Analytics can be used for assessment and improvement of video use.
- The system is fully integrated with all existing Learning Management Systems (LMS) and allows users to record, upload, and store videos in their LMS. These videos will be transcoded for easier viewing on multiple devices, stored in a central platform, and be available for searching and viewing.

Faculty, staff, researchers, students and central groups can easily create, upload, edit, manage, publish, discover and deliver high quality video to any device, live or on demand. Educators can create classroom lectures and capture in webcast recordings. Users can make their own videos, upload as single files or in batches. Video messages can be added to emails to cut through inbox clutter. All content can be kept in one place, making it easier to share across departments while still controlling access.

2. Scope of this PIA

This PIA covers the use of the Kaltura video platform hosted in EduCloud and has been developed with a focus on the privacy protection and security measures deployed by UBC in the Canadian cloud environment.

3. **Related Privacy Impact Assessments**

No other PIA's have been completed on this initiative however, a comprehensive PIA has been completed by BCNET on EduCloud server. This PIA covers the use of EduCloud server, and the operational controls and measures deployed by UBC in the Canadian Cloud environment to identify and assess potential vulnerabilities to BCNET members.

4. **Elements of Information or Data**

The data elements required to access the Kaltura video platform flow from each individual institutions LMS. The LMS credentials are established at the institution level and they authenticate the user. Student/Faculty user credentials are passed from the institution LMS into Kaltura. Although there may be some slight differences from institution to institution, credentials are typically the User I.D, course, name and email. Once a video is recorded and complete it is uploaded to "My Media" in the "Media Gallery". Access to the "Media Gallery" is restricted to instructors and students enrolled in the course. All video content can be reviewed and approved by authorized instructors prior to the public publishing of a video. Permissions are strictly governed by each institution.

The MediaSpace service of Kaltura does not integrate with the member institution's LMS, however it does allow for a number of authentication methods (i.e. LDAP, SAML, SSO Gateway) that are based on the collection of the same elements of personal information noted above. For MediaSpace, the information is passed from the institutions system of record in a similar method to how data is passed from the LMS.

It should be noted that additional PI may be included in the videos themselves such as video footage of individuals, names or inadvertently sensitive information. The inadvertent collection of any personal information from the individuals is managed through the BCNET member. BCNET members may provide guidelines on the use of the video platform that can reinforce that all video content is not intended to be shared or distributed outside of the BCNET member environment.

Part 2 – Protection of Personal Information

5. **Storage or Access outside Canada**

EduCloud:
EduCloud Server is currently hosted on secure servers in 2 geographic locations (Vancouver and Kamloops) within BC. Kaltura data is primarily stored in Vancouver with a Disaster Recovery copy stored in Kamloops. The platform is restricted to authorized users and not by geographic location. All personal information stored by members will reside in Canada and will not be stored outside of Canada.

BCNET members can work with designated staff from BCcampus, a not-for-profit organization, that provides various forms of educational support to BC post-secondary institutions, and designated UBC support contacts to assist in managing and resolving incidents and issues that are raised and reported. BCNET and their members have access to support staff during regular business hours, all of whom are located in BC. BCNET members have sole control and responsibility of what information they share with technical staff when they contact them at the time as permitted under Section 33.1 of the Act.

Kaltura:

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Kaltura is a US based company headquartered out of New York however, the video platform is hosted on the EduCloud servers therefore all personal information resides within Canada and is not stored outside of Canada.

6.   Data-linking Initiative*

In FOIPPA, "data linking" and "data-linking initiative" are strictly defined. Answer the following questions to determine whether your initiative qualifies as a "data-linking initiative" under the Act. If you answer "yes" to all 3 questions, your initiative may be a data linking initiative and you must comply with specific requirements under the Act related to data-linking initiatives.	
1. Personal information from one database is linked or combined with personal information from another database;	No
2. The purpose for the linkage is different from those for which the personal information in each database was originally obtained or compiled;	N/A
3. The data linking is occurring between either (1) two or more public bodies or (2) one or more public bodies and one or more agencies.	N/A
If you have answered "yes" to all three questions, please contact your privacy office(r) to discuss the requirements of a data-linking initiative.	

7. Common or Integrated Program or Activity*

In FOIPPA, "common or integrated program or activity" is strictly defined. Answer the following questions to determine whether your initiative qualifies as "a common or integrated program or activity" under the Act. If you answer "yes" to all 3 of these questions, you must comply with requirements under the Act for common or integrated programs and activities.	
1. This initiative involves a program or activity that provides a service (or services);	Yes
2. Those services are provided through: (a) a public body and at least one other public body or agency working collaboratively to provide that service; or (b) one public body working on behalf of one or more other public bodies or agencies;	No
3. The common or integrated program/activity is confirmed by written documentation that meets the requirements set out in the FOIPP regulation.	N/A
Please check this box if this program involves a common or integrated program or activity based on your answers to the three questions above.	

8. Personal Information Flow Diagram and/or personal Information Flow Table

1	Personal information is collected directly from BCNET member students and faculty by their institution at time of the establishment of appropriate access credentials (through an LMS or other specific institution program/system of record).	Collection	*26(c)*
2.	BCNET member students and faculty using Kaltura securely log into Kaltura using the above noted established authorized credentials (passed securely from their LMS or system of record into Kaltura).	Use	*32(a)*
3.	The personal information contained in the credentials authenticate the user and enable the individual to use Kaltura to record, complete and upload a video to "My Media" in the "Media Gallery".	Use	*32(a)*
4.	Authorized students can access the "Media Gallery" to view videos.	Use	*32(a)*
5.	Authorized instructors can access the "Media Gallery" to review, assess, and evaluate videos as well as approve videos prior to public publishing.	Use	*32(a)*

9. Risk Mitigation Table

NOTE:

It should be noted that primary responsibility for the management and administration of any physical and/or technical security risks is born by any BCNET member choosing to use Kaltura hosted in EduCloud. These privacy risks are managed through a combination of technical, administrative, and physical controls that are designed and in place to mitigate each associated risk.

Risk Mitigation Table				
	Risk	**Mitigation Strategy**	**Likelihood**	**Impact**
1.	Unauthorized individuals could access the personal information in Kaltura platform and use or disclose it for personal purposes (within BCNET institutions and/or UBC).	Employee Code of conduct and Non-disclosure agreements; Use of Information & Technology Policies, password protected access, user access to system, based on need to know basis, permission restrictions, controls, and monitoring.	Low	Medium
2.	Authorized individuals could access the personal information in the Kaltura platform and use or disclose it for personal purposes (within Kaltura).	Confidentiality Agreement between Kaltura and UBC, Employee Code of conduct and Non-disclosure agreements; Use of Information & Technology Policies, password protected access, user access to system, based on need to know basis, permission restrictions, controls, and monitoring.	Low	Medium
3.	BCNET member personal information data is compromised during transmission from the member to EduCloud.	Transmission is encrypted with 256-bit AES encryption and over a secure line. Encryption keys managed by BCNET members.	Low	Medium
4.	EduCloud Security Breach.	EduCloud breach protocols are in place to reduce risks to member data in the event of a security breach	Low	Medium

10. Collection Notice

The BCNET member is responsible for ensuring the appropriate collection notification is in place prior to accessing/using the institutions LMS and subsequently the Kaltura video platform.

Part 3 – Security of Personal Information

11. Please describe the physical security measures related to the initiative (if applicable).

BCNET members:
Members and their service providers are responsible at all times for ensuring the physical security of all data while in their custody and/or control (including all data at rest or in transit) and must meet all applicable physical security standards required by their organization.

UBC/EduCloud:
The EduCloud service is hosted in two secure data centers protected by access controls. Access is continuously monitored both electronically and by cameras. Only authorized personnel have access to the secure data centers.
Kaltura:
The Kaltura video platform virtual machines all reside in EduCloud on servers within BC. (see above)
A limited number of pre-approved Kaltura engineers and UBC technical administrators currently have access to the Kaltura Administrative Console (KAC), and each BCNET institutions authorized administrators have access to their own Kaltura Management Console (KMC). Both are not behind a virtual private network, however, both site locations have a security certificate.

12. Please describe the technical security measures related to the initiative (if applicable).

BCNET:
BCNET members and their service providers are responsible at all times for ensuring the technical security of all data while in their custody and/or control (including all data at rest or in transit) and must meet all applicable technical security standards required by their organization.

UBC/EduCloud:
As EduCloud is built on VMware technology UBC follows VMware best practices for securing the platform.

VMware vCloud Networking and Security vCloud Networking and Security provides networking and security capabilities for virtualized compute environments that are built with vCloud Suite technologies. It provides a broad range of services delivered through virtual appliances (see Figure 1), such as a virtual firewall, virtual private network (VPN), load balancing, network address translation (NAT), DHCP and VXLAN-extended networks, while also providing a comprehensive framework to integrate third-party solutions. These foundational networking and security capabilities of the vCloud Suite enhance operational efficiency, improve agility with control and enable extensibility to partner solutions. Management integration with VMware vCenter Server™ and VMware vCloud Director® reduces the cost and complexity of data center operations.

VCloud Networking & Networking Security Features

FEATURES	VCLOUD SUITE ENTERPISE
Firewall	*
VPN	*
VXLAN	*
vCloud Ecosystem Framework	*
NAT	*
CHCP	*
High availability (HA)	*
Load balancing	*
Data Security	*
Endpoint	*

More detailed information on VMware vCloud security can be found at:

https://www.vmware.com/content/dam/digitalmarketing/vmware/en/pdf/whitepaper/products/vcns/vmware-vcloud-networking-and-security-overview-whitepaper.pdf and/or

https://www.vmware.com/content/dam/digitalmarketing/vmware/en/pdf/techpaper/vmw-10q3-white-paper-cloud-director-security.pdf

Kaltura:
Kaltura engineers access the VMs via the consultant's pool on UBC's virtual private network. This access also utilizes multi-factor authentication for additional security. By contract, access to the VMs within the EduCloud environment is only permitted in response to a request or support ticket.

Access logs are maintained and reviewed periodically by UBC. Kaltura engineers, when accessing the VMs or application, are requested to update the associated support ticket at that time. The Kaltura database (both Master and Slave) are currently 'locked' and are only accessible by UBC Database administrators. Kaltura must request for it to be 'unlocked' which is typically only required for upgrading the application after which the database is returned to a 'locked' state.

The following text exists in the 2016 agreement between Kaltura and BCNET:
'Kaltura shall only access Customer servers hosting the Kaltura application at the specific request of Customer and at a time and date agreed to by both Kaltura and Customer. Kaltura shall provide details of its activity so that UBC personnel can monitor the remote access.'

13. Does your branch/department rely on any security policies?

BCNET:
BCNET members and their service providers are responsible for the deployment, dissemination and administration of all of their individual organizational security policies etc. as it relates to the handling and management of personal information in their custody and/or control.

UBC/EduCloud:
Using the VMWare NSX solution, member can configure security rules for their individual VDC. With NSX, members have the ability to lock down application, create a logical DMZ in software, and reduce the attack of a virtual desktop environment, NSX Data Center enables micro-segmentation to define and enforce network security policies consistently on any workload hosted anywhere. All features are configured and administered by the member with support provided by the EduCloud operators as required.

UBC Policy #104
https://www.universitycounsel.ubc.ca/files/2013/06/policy104.pdf

Information Security policy, standards and resources
https://cio.ubc.ca/information-security/information-security-policy-standards-and-resources

There is an existing Security and Confidentiality Agreement between UBC and Kaltura - signed by Kaltura in 2013. In addition, please see Kaltura's privacy policy.
https://corp.kaltura.com/privacy-policy/

14. Please describe any access controls and/or ways in which you will limit or restrict unauthorized changes (such as additions or deletions) to personal information.

BCNET:
BCNET members and their service providers are responsible for the strict management and administration of user access based on a "need to know" basis only including maintenance and enforcement.

UBC/EduCloud:
UBC support staff do not access or alter personal information in any way. BCNET members can work with UBC support staff to manage and resolve all incidents and issues raised and reported. Members have access to technical support staff during regular business hours all of whom are located in BC. BCNET members have sole control and responsibility of what information they share with technical staff when they contact them at the time as permitted under Section 33.1 of the Act.

Kaltura:
As the Kaltura platform is hosted in an "on premises" environment, access to the UBC servers by Kaltura engineers for the purposes of upgrades and troubleshooting, must be preapproved, authorized and monitored by UBC. Kaltura engineers can only access the Kaltura application and environment in response to a support request or during a scheduled maintenance window. Kaltura engineers must update support tickets with relevant findings from these investigations. Kaltura engineers and UBC technical administrators must use a VPN and multi-factor authentication to access the Kaltura VMs on EduCloud.

15. Please describe how you track who has access to the personal information.

BCNET:

BCNET members and their service providers are responsible for ensuring that access to all personal information in their custody and/or control is controlled, monitored, and reviewed/audited on a regular basis.

UBC/EduCloud:

UBC support staff do not have access to BCNET member personal data unless required under section 33.1 of the Act.

Kaltura:

Access to the UBC on-premise environment is managed by the UBC super administrator access interface.

Access logs for the Kaltura engineers are maintained and reviewed periodically. Authorized Kaltura engineers and UBC technical administrators currently have access to the Kaltura Administrative Console (KAC) and KMS Admin interface which are not behind a virtual private network. Both site locations have a security certificate. Access to the KAC allows admins to configure and access the Kaltura Management Console (KMC) of each institution. The KMC is the admin console for accessing all media from an institution, as well as other configuration items.

The KMS Admin interface, provides access to the configuration of the Kaltura Application Framework (KAF) and Kaltura MediaSpace as well as accessing the admin interface of both.

Part 4 – Accuracy/Correction/Retention of Personal Information

16. **How is an individual's information updated or corrected? If information is not updated or corrected (for physical, procedural or other reasons) please explain how it will be annotated? If personal information will be disclosed to others, how will the public body notify them of the update, correction or annotation?**

BCNET:

Personal information revisions and updates are done at the institution LMS level by authorized individuals at each institution. Each time a user goes into the Kaltura platform, the system authenticates them with the most current information in the LMS. In the case of MediaSpace, the current data used to authenticate a user is passed from the institution's system or record being used.

UBC/EduCloud:

From a technical perspective, a UBC super administrator (SA) could access Kaltura and modify a user ID or add a user. This would only occur in exceptional circumstances where Kaltura is not using an LMS to authenticate the user (using MediaSpace), is highly unlikely, and to date there have been no circumstances under which a UBC SA has been required to do so.

Kaltura:

From a technical perspective, a Kaltura engineer at the request of a super administrator can access Kaltura (MediaSpace services) and could modify data. This would only be under exceptional circumstances, is highly unlikely and to date has not occurred.

17. **Does your initiative use personal information to make decisions that directly affect an**

individual(s)? If yes, please explain.

Yes.
- Videos can be used to assess and assign academic grades to students;
- Videos can be used to assess and evaluate a teacher's effectiveness/performance;
- Livestream public presentations (through Kaltura) and can be used as part of the recruitment and selection process by a hiring committee to evaluate prospective candidates for positions.
- Faculty can use media in their ePortfolios as supporting evidence when applying for grants/funding.

18. If you answered "yes" to question 18, please explain the efforts that will be made to ensure that the personal information is accurate and complete.

Responsibility for ensuring all personal information is up to date and accurate lies with BCNET and its member institutions.

19. If you answered "yes" to question 17, do you have records retention and/or disposition schedule that will ensure that personal information is kept for at least one year after it is used in making a decision directly affecting an individual?

Responsibility for records retention and/or disposition schedules lies with BCNET and its members.

Part 5 – Further Information

20. Does the initiative involve systematic disclosures of personal information? If yes, please explain.

No

21. Does the program involve access to personally identifiable information for research or statistical purposes? If yes, please explain.

No

22. Will a personal information bank (PIB) result from this initiative? If yes, list the legislatively required descriptors listed in section 69 (6) of FOIPPA. Under this same section, this information is required to be published in a public directory.

Yes.
  a. Kaltura video platform system.
  b. Access to the Kaltura platform includes the use of a Users ID, name, course and email address.
  c. Section 26(c) & (d).
  d. Obtained, compiled and used for use of the Kaltura video platform.
  e. Used by teachers, students, and authorized BCNET members in support of the Kaltura platform.

Part 6 – Sign Off

BCNET Program Manager

Dean Crawford
_____
Dean Crawford
Director, Shared Systems &
    Technology
BCNET

2019-07-25
_____
Date

Head of BCNET

Digitally signed by Bala Kathiresan
DN: cn=Bala Kathiresan, o=BCNET,
ou=President/CEO,
email=bala.kathiresan@bc.net, c=CA
Date: 2019.07.25 07:53:51 -08'00'

_____
Bala Kathiresan
President & Chief Executive Officer
BCNET

July 25, 2019
_____
Date

A final copy of this PIA (with all signatures) must be kept on record.