Cloud Storage services can be used to secure unstructured content that proliferates users' laptops and PCs, and that can contain sensitive 'Pii' data.
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**EXECUTIVE OVERVIEW –**

This solution is developed through our 'Canada Cloud' initiative, a research innovation network to help stimulate and grow the Canadian Cloud Computing industry. See more at [http://CanadaCloud.biz](http://CanadaCloud.biz)

**UNIFIED CLOUD COLLABORATION**

A key facet of this program is building product innovation around the internal requirements of the Canadian government themselves.

These requirements are laid out in a road map plan from the Canadian Government. Their [Road map presentation](http://RoadmapPresentation.com) provides a “target architecture” for Business Transformation planning, providing a complete taxonomy for Enterprise Cloud design, offering a repeatable blueprint for others to do the same.

One key section in this road map is a need for 'Unified Cloud Collaboration', referring to a combination of technologies and business models to enable more “Web 2.0” type interaction both internally and with the public externally.

Microsoft is one vendor that offers a potential solution, their Unified Communications suite can be used for this purpose.

The UC suite includes tools for desktop VoIP and video collaboration, blogs, wikis and many other of these methods known as 'Enterprise 2.0' ways of working. They can boost staff productivity and automate workflows, like transforming paper-based processes to ones where electronic documents are received into staff email in-boxes.

This solution set is described in more detail one our knowledge base portal, at [http://enterprise2.us](http://enterprise2.us)

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The role of 'Sharepoint Cloud Storage' is to store these electronic documents, in Cloud-based storage facilities that offer the required levels of security to achieve compliance with Canadian government regulations.
**Securing Unstructured Content**

As this best practice report (33-page PDF) from Forrester highlights this explosion of using tools like Sharepoint has brought an equally explosive problem of sensitive data being widely distributed in a manner that creates security risks.

Unstructured content refers to all the Word documents, Excel spreadsheets, multi-media and all the other files that are proliferated across users laptops, and form the currency of most if not all corporate workers lives.

This refers to all the information outside of databases, like Word documents, Excel spreadsheets and multimedia files.

Ultimately enterprise systems like HP-Trim are used for archiving these records to achieve compliance, but prior to this step there is considerable workflow and collaboration using tools like Sharepoint. If this ‘work in progress’ data is stored on user laptops and on single Sharepoint servers, without adequate security measures, then it’s at risk of being lost or stolen, impacting both Business Continuity and Security and affecting IM compliance accordingly.

With an EMC report predicting a x44 factors explosion in this type of data the problem is only going to grow much bigger and more severe.

**Unstructured PII Content**

The key issue is that while these files are called unstructured data, there can still be ‘structured data’ within them, like customer information, and so they must be e-archived the same way as the main corporate databases.

This is known as 'PII' - 'personnally identifiable information', data like your social insurance number or biometric records, ie. information which can be used to trace you through various other systems, and therefore of critical importance to data security.

This means that these documents, the Word and Excel files, should be treated as official records and archived the same way. All government agencies are regulated to retain their records in line with certain legislations, the MIA in Newfoundland for example, which means that all of their customer forms received this way must be kept according to these standards.

**Cloud Archiving Services**

The role of Sharepoint Cloud Storage is that it can facilitate 'Cloud Archiving Services' to cater for this need, referring to connecting the Microsoft applications to remote Cloud storage facilities – A solution ideal for protecting 'unstructured PII content' by employing technologies like encryption to ensure this information is appropriately secured.
There are documented best practices available from government authorities for how information protection policies should be applied for government information stored in Cloud environments.

For example on the 19th August 2010 in the USA, the CIO.gov Web 2.0/Cloud Computing Subcommittee published the guide for ‘Privacy Recommendations for the Use of Cloud Computing by Federal Departments and Agencies’ (11-page PDF).

Their recommendations to government are to follow Cloud Security Alliance type guidelines and then not only is Cloud safe for this type of outsourcing, but that actually it’s more secure, and that: “Private Cloud vendors should be aware of these publicly published controls and should offer them as enhancements.”

These enhancements can be codified as Cloud services specifications, including::

- automatically time-stamp and archive the fax as its coming through, then it can tick the Compliance box too.
- More Features
- More Features

**ENTERPRISE CLOUD SOLUTION SPECIFICATION**

**Cloud Architecture**
Cloud service providers can deploy Cloud storage technologies as a platform for Cloud Archiving Services via the SNIA's 'Hybrid Cloud Storage' architecture model.

See: [http://HybridCloudStorage.info](http://HybridCloudStorage.info)

**Maturity Model**
This solution would achieve the following CSA maturity capabilities:

- DG-04 : Compliance with regulatory requirements.
- DG-07 : Protect against data leakage.

**Professional Services**
Cloud Privacy by Design is the methodology from the Canadian Privacy Commissioner for designing privacy controls for Cloud-based systems.

Esotera is a Canadian start-up that has developed a unique technology for enabling highly secured Cloud storage services.

Cloud Archiving Services  [http://SharepointCloudStorage.com](http://SharepointCloudStorage.com)