

Blueprint for the Security of Court Information

Seventh edition, April 2024

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INTRODUCTION TO THE SEVENTH EDITION

We are pleased to introduce the seventh edition of the Canadian Judicial Council *Blueprint for* the Security of Court Information (Blueprint). This updated version reflects our ongoing commitment to maintaining the highest standards of information and cyber security in our court systems. The digital landscape is constantly evolving, and with it, the threats we face. As such, it is crucial that our security policies evolve in tandem to effectively mitigate these risks. This latest edition of the *Blueprint* incorporates the most recent advancements and best practices in information security, ensuring that our courts are well-equipped to handle the challenges of today's digital environment.

This revision addresses several new developments since the 2021 sixth edition. The top ten changes from that version include new and amended policies:

- 1. Court security programs must be updated regularly (Policy 4b).
- 2. The title and role of Judicial Information Technology Security Officer (JITSO) have been changed. The new role proposed is that of a Court Chief Information Officer (Policy 5).
- 3. Measures to ensure supply chain security have been introduced (Policy 8).
- 4. Guidelines re reporting of security incidents have been enhanced (Policy 10).
- 5. Protection of information that is exempt from legal access to information requests is required (Policy 13c).
- 6. Zero trust architecture for managing access to systems is now recommended (Policy 13d).
- 7. Council's *Model Policy on the Classification of Court Information* is now incorporated in Policy 16.
- 8. The judicial role in the procurement of cloud services has been enhanced (Policy 18a).
- 9. Protocols have been introduced to protect the contact information and status (availability) of judges in cloud environments (Policy 18c).
- 10. Guidelines have been added to secure artificial intelligence tools (Policy 24).

BACKGROUND

The Canadian Judicial Council acted on several recommendations made in November 2001¹, which are based on the following fundamental principles:

- Judges and court administrators must make information technology security ("ITS") a priority in their courts.
- ITS is not merely a technical concern but involves planning, management, operations, and end-user practices.
- All ITS measures taken by courts must safeguard judicial independence and other
 unique aspects of the relationship between Judicial Users and court IT administration,
 whether managed by government, a court services organization, or even the private
 sector.
- Responsibility for ITS policy with respect to the security of Judicial Information is a judicial function and, as such, rests with the judiciary.
- Management, operations and technical measures to safeguard Judicial Information in accordance with judicial policy are administrative functions, which in most courts are the responsibility of the provincial government.²

In 2013, the Council adopted sixteen foundational policies relating to Court Information governance, as set out in the *Policy Framework to Accommodate the Digital Environment* (Framework).³ The *Framework* also sets out policies for Access, Privacy, Security, Preservation, and Performance Management. The *Blueprint* was revised to conform to the applicable *Framework* policies.

The *Blueprint* is just one part of the Council's approach to the security of Judicial Information. For more information on the Council's related initiatives, please visit www.cjc-ccm.ca.

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¹ See Appendix 2. The full 2001 Report is confidential as it deals with potential vulnerabilities of court systems.

² This issue does not arise in federal courts such as the Supreme Court of Canada, however, the federal government considers the provision of internet services (through SCNet) to be a government function.

³ Policy Framework to Accommodate the Digital Environment (Discussion paper, 2013).

SCOPE AND DEFINITIONS

DEFINED TERMS

The *Blueprint* uses the following key terms as defined in the *Model Definition of Judicial Information*. Readers are encouraged to refer to that report for more context and specific examples. Abbreviated references to Canadian and international publications are listed in full in Appendix 1.

Term	Definition
Case File / Dossier judiciaire	A Case File contains the Information that relates directly to a single court proceeding or to a number of related court proceedings that have all been assigned the same case file number. It includes the Information that comprises the Court Record and any other Information that has been captured or placed in the Case File.
Court Information / Information judiciaire	Court Information is Information that is received, collected, stored, used or produced by a court in relation to its mission.
Court Operations Information / Information sur les opérations de la cour	Information related to the supervision, management and direction of matters necessary for the operation of the Court or other matters assigned to the Executive by law or agreement (such as a Memorandum of Understanding).
	In Quebec, Case Management Tools (<i>Outils de gestion des causes</i>) and Court Monitoring Tools (<i>Outils de suivi des affaires judiciaires</i>) are included as subsets of the broad category of Court Records (<i>Documents d'activité des tribunaux</i>) and are probably best included under Court Operations Information.
Court Record / Document judiciaire	Information and other tangible items filed in proceedings and the information about those proceedings stored by the court. Refers to the "Official" recorded Information of a proceeding. It is the portion of the Case File that is made accessible to the public, subject to privacy constraints regarding, for example, disclosure of personal Information.

Term	Definition
Information	Information includes recorded information in any medium or format, regardless of how it has been created. This includes information generated by human or other means.
Judicial Administration / Administration judiciaire	The supervision, management and direction of matters necessary for carrying out judicial functions, including: 1. the scheduling, preparation, assignment and adjudication of court events; 2. the education, performance, conduct and discipline of Judicial Users; 3. the governance of Court Information and technology, and 4. all other matters assigned to the judiciary by law or agreement (such as a Memorandum of Understanding).
Judicial Information / Renseignements de la magistrature ⁴	Irrespective of who created it or how it was created, Judicial Information includes: 1. Personal Information of Judicial Officers; 2. Information related to the exercise of a judicial function ("Adjudicative Information"), and 3. Information related to Judicial Administration ("Administrative Information").
Judicial Agent / Agente ou agent judiciaire	A Judicial Agent is a Judicial User who supports a Judicial Officer and may include court staff such as executive officers, lawyers, paralegals, law clerks, JITSOs, law students, articling students, judicial clerks, administrative assistants, as well as independent consultants working under retainer or contract.
Judicial Officer / Officière ou officier judiciaire	A Judicial Officer is a Judicial User acting in a judicial or quasi- judicial capacity, and includes judges, deputy judges, masters, justices of the peace, registrars, prothonotaries or anyone else authorized to act in an adjudicative role.
Judicial User / Utilisateur ou utilisatrice judiciaire	A Judicial User performs or supports judicial functions and may be authorized to access Judicial Information at various levels of permissions, depending on their role.

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⁴ While "Information Judiciaire" has been used for "Judicial Information" in the past, in French it means "Court Information." To avoid confusion, "Judicial Information" should be translated as « Renseignements de la magistrature. »

JUDICIARY

"The judiciary" is a term used throughout the *Blueprint*. For any particular policy, "the judiciary" may refer to the complement of judges on a particular court; the office of the Chief Justice of a court, a designated representative of the Chief Justice, or a committee of judges responsible for technology in a jurisdiction.

SCOPE

Though the statutory mandate of the Council is limited to federally-appointed judges, those judges often share technology platforms and resources with their provincially-appointed counterparts. For this reason, among others, collaboration on the development of security policies is encouraged. The *Blueprint* applies to any computer system that is used to access Court Information. This would include cloud services, home computers, removable media, data communication networks and mobile devices.

Information technology security is a complex field and the *Blueprint* is not intended to be comprehensive or technical in its scope. Furthermore, the Council's focus is on the role of the judiciary in developing policies and standards, and not on the specifics of managing a technology department. In that respect, the *Blueprint* does not cover every aspect of security administration. Nor does the *Blueprint* discuss security relating to information that is not in digital form, security of telephone and fax communications, or the physical security of a courthouse and its occupants.

The *Blueprint* is designed to tailor and enhance existing policies and programs within governments and court administrations. To that extent, the *Blueprint* is based on and intended to co-exist with worldwide reputable information security standards, guidelines, controls and best practices, some of which are listed in the Key References section below.

POLICIES

1. JUDICIAL INDEPENDENCE

Policy 1a: All information security measures taken by courts must safeguard judicial independence and other unique aspects of the relationship between Judicial Users and court administration, whether managed by government, a court services organization, or the private sector.

Policy 1b: Judicial Users must be provided with their own security domain, whether isolated by physical or logical separation, or a combination of both. Network architecture, configuration, access controls and operational support must at a minimum be compliant with the latest edition of the *Blueprint*.

Policy 1c: Regardless of who has custody or access, the judiciary always has ownership of Judicial Information.

Commentary:

Judicial independence is a fundamental constitutional principle. It applies, for the benefit of the public, to the judiciary in general as well as to individual judges. Independence includes freedom from any undue influence, but particularly independence from the executive branch of government, which is a frequent litigant before the courts. One of the key elements of judicial independence is administrative independence, to which the governance and application of information technology are tightly bound. Because an independent judiciary engenders public trust in the system of justice, the *appearance* of independence must also be carefully safeguarded.

Cross references: NIST SP-800-171r2.

Framework: All judiciary, court staff, and court communications will use a common Internet domain that is distinct from the government domain (Foundational Policy 8).

⁵ "Our Constitution requires that judges at all levels enjoy security of tenure, financial security, administrative independence, and adjudicative autonomy." Hon. Ian Binnie, "<u>Judicial Independence in Canada"</u>, page 34.

2. MONITORING

Policy 2a: Any monitoring of Judicial Users must be performed in accordance with the Canadian Judicial Council *Computer Monitoring Guidelines* (2002): "As an overriding principle, any computer monitoring of judges, and judicial staff who report directly to judges, must have a well-defined and justifiable purpose that does not encroach on deliberative secrecy, confidentiality, privacy rights or judicial independence."

Policy 2b: Analytical tools (including those incorporating artificial intelligence) may not be applied to Court Information, whether anonymized or not, without the advice and approval of the judiciary.

Commentary:

While content monitoring such as keystroke recording, review of web browsing history and automated keyword searching of emails would be a direct violation of judicial privacy including deliberative secrecy, any form of monitoring can potentially compromise judicial independence. For example, event logs can contain sensitive data and personally identifiable information. Judicial research may require access to websites that are routinely blocked for non-Judicial Users.

Cross references: NIST SP800-53r5, ISO 27001:2013 18.1.4. and ISO 29100.

Framework: Privacy Impact Assessments will be undertaken at the design stage of Court Information management systems that involve the potential collection, access, use, or dissemination of personal information (Privacy Policy 3).

3. POLICY

Policy 3a: Responsibility for Court Information policies, including information security, is a judicial function and, as such, rests with the judiciary. Management, operations and technical measures to safeguard Court Information in accordance with judicial policy are administrative functions, which in most courts are the responsibility of a government agency.

Policy 3b: Every court must plan and conduct an annual threat and risk assessment ("TRA") in collaboration with the judiciary. The level of detail required in a TRA, and its scope, may vary from one court to another depending on the circumstances.

Cross references: NIST SP800-53r5, 12-PL, 14-RA, ISO 27001:2013, A.5. See ISO/IEC 27005 for risk management guidance.

Framework: Information Management Policies will be published on the Court web site (Access Policy 7).

4. GOVERNANCE

Policy 4a: The security of Court Information must be managed within a formal, documented security program authorized and adequately funded by the government body responsible for court administration. Court administration must describe in a written plan how the security requirements of the judiciary are to be met.

Policy 4b [*new*]: The court security program should be a living document, regularly updated to reflect the latest versions of referenced standards and guidelines. It should also address emerging threats, such as more sophisticated ransomware, deepfakes, and state-sponsored attacks. Regular reviews and updates ensure that the court system stays ahead of the evolving threat landscape.

Commentary:

The security of Court Information cannot be left to *ad hoc*, informal and undocumented processes, nor can ultimate responsibility be delegated to junior level employees. Adequate budgets must be allocated to ensure the security and integrity of Court Information, in accordance with the threat and risk assessment.

Cross references: ISO 27001:2013, A.6.

5. CHIEF COURT INFORMATION OFFICER (CCIO)

Policy 5 [amended]: Every jurisdiction must ensure that a Chief Court Information Officer (CCIO) who is accountable to the judiciary be appointed to oversee the management of Court Information technology operations.

A Chief Court Information Officer (CCIO) should be responsible for overseeing a court's overall information governance, with a special focus on risk management, cybersecurity, privacy and records retention. The CCIO would be responsible for developing and implementing information management strategies and policies to ensure the secure and efficient handling of Court Information. The CCIO should also be responsible for collaborating with the Court's information technology providers, and ensuring compliance with all relevant laws, regulations, Canadian Judicial Council guidelines, and industry best practices.

A key element is that the role be functionally accountable only to the judiciary, to avoid any potential conflicts of interest. In some jurisdictions the CCIO may be part of an organization providing support to Judicial Users, and specific qualifications, roles and responsibilities of a CCIO team should be determined by the needs of each court.

6. AWARENESS AND TRAINING

Policy 6 [amended]: Adequate privacy and security awareness training must be provided on a regular basis to all system users including Judicial Users, while more advanced role-related training must be provided to any user with access to Court Information. Training should be updated regularly to address the evolving threat landscape.

Commentary:

End users without adequate training present a real threat to any organization. Security awareness, awareness training, and education are all necessary for the successful implementation of any information security program. The training program should cover topics such as recognizing phishing attempts, safe internet practices, and procedures to follow in the event of a security incident. It is also important to include material on the independence of the judiciary and the special constitutional position of Judicial Users.

Cross references: NIST SP800-53r5, 3-AT, ISO 27002:2013, 7.2.2.

7. PHYSICAL SECURITY

Policy 7: All processing facilities or equipment used for Court Information must be located in a physically secure environment, with access limited to authorized individuals. Physical security must be designed to protect Court Information assets from natural disasters or human threats, consistent with the threat and risk assessment.

Commentary:

Physical security refers to the protection of building sites and equipment (and information and software contained therein) from break-ins, theft, vandalism, natural or unnatural disasters, and accidental damage. Managers must be concerned with data centre construction, room assignments, emergency action procedures, regulations that govern equipment placement and use, energy and water supplies, product handling – and relationships with staff, outside contractors, other courts, government departments, agencies and tribunals. This applies whether equipment in on premises or not, and includes physical security of assets used to access Court Information remotely.

Cross references: NIST SP800-53r5, 11-PE, ISO 27001:2013, A.11.

8. INFORMATION SYSTEMS

Policy 8 [amended]: The processes for acquisition, development and maintenance of Court Information systems must be designed and applied so as to safeguard its quality, integrity and long-term availability. As courts rely more and more on commercial suppliers, a program of supply chain security must be adopted. Judicial Information requires additional protection over and above the security safeguards applied to Court Information more generally.

Commentary:

In addition to low-level hacking, random login attempts and social engineering, court administrators should be mindful of the risks associated with advanced persistent threats.

Cross references: ISO 27001:2013, A.14, NIST SP800-53r5, 15-CA, 18-SA.

Framework: Foundational Policy 10, Security Policy 5.

9. COMMUNICATIONS AND OPERATIONS

Policy 9a: Court security programs must include documented and approved operational controls, procedures, practices, and well-defined responsibilities. Additional formal policies, procedures, and controls must be used to protect the exchange and publication of Court Information through any type of communication medium or technology.

Policy 9b: Courts are responsible for implementing controls to protect against malicious code, denial of service attacks and similar external threats.

Commentary:

The key elements of operational security as defined in ISO 27001:2013 are:

- 1. Documented operating procedures
- 2. Change management
- 3. Capacity management
- 4. Separation of development, testing and operational environments
- 5. Protection from malware
- 6. Backup
- 7. Logging and monitoring
- 8. Clock synchronization
- 9. Control of operational software
- 10. Installation of software on operational systems
- 11. Technical vulnerability management
- 12. Restrictions on software installations
- 13. Information systems audit controls

Cross references: ISO 27001:2013, A.12, A.13, NIST SP800-53r5, 16-SC.

Framework: Courts must implement and maintain updated best practices for securing wireless local area networks (WLANs) and ensuring that Judicial Users are not compromising the security of Court Information when using WLANs. ("Where a public wireless Internet access point is installed within a court precinct it must not compromise Court Information" Security Policy 6.)

Court Information systems and technologies should be procured, designed and implemented in a manner that facilitates interoperability and data exchange between different systems, all without compromising systems independence, judicial independence and the Courts' role as custodian of Court Records (Foundational Policy 4).

10. INCIDENT MANAGEMENT AND REPORTING

Policy 10 [amended]: Every court must have in place a comprehensive protocol for reporting of security incidents relating to or involving Judicial Users and Judicial Information, including steps to identify, contain, eradicate, recover from, and learn from security incidents. Regular drills should be conducted to ensure all staff members are familiar with the plan. The principles of judicial independence must be respected throughout the entire process, by all parties involved. Information security incidents must be reported promptly and only through approved channels.

Commentary:

Anyone who has reason to believe that a security breach is threatened or has occurred must take steps to report the incident, report it promptly, and report it to the appropriate person or persons. An incident reporting process includes awareness and training for all staff with respect to security safeguards, the warning signs of a breach, and the appropriate mechanisms for reporting.

Among the various types of security breaches include public release of court records subject to publication ban, or prior to approved release by the court.

The *Computer Monitoring Guidelines* provides: "Any monitoring should be administered by personnel who report directly and are answerable only to the court's chief justice." This principle should apply equally to the reporting of incidents involving Judicial Users.

Cross references: NIST SP800-53r5, 7-IR. ISO 27001:2013, A.16.

11. BUSINESS CONTINUITY

Policy 11 [amended]: Courts must protect Court Information in the event of a catastrophe or other system failure, and provide a high level of assurance that any disruption in service as a result of such event will be as brief as possible. Judicial Users must have access to data storage that is securely backed up at least daily. Effective provision must be made to facilitate back up of Court Information created or received (if stored locally), for example on mobile devices.

Commentary:

A business continuity plan must be prepared based on the TRA and should include a process for updating. The security of the supply chain is critical today, as vulnerabilities in entities supporting mission-critical court technology platforms can lead to significant security incidents. This includes implementing controls on third-party vendors, conducting regular audits to ensure they are following security practices, and having contingency plans in case a vendor is compromised.

All business continuity plans must be consistent with the *Blueprint* and include at a minimum the following elements:⁶

- 1. Governance
- 2. Business Impact Analysis
- 3. Plans, measures, and arrangements for business continuity
- 4. Readiness procedures, testing and training
- 5. Quality assurance techniques (exercises, regular maintenance and auditing)

Cross references: NIST SP800-53r5, 5-CP; ISO 27001:2013, A.17.

⁶ For more information, see <u>Government of Canada, Business Continuity Planning</u>.

12. PERSONNEL SECURITY

Policy 12a: All courts must ensure that there are documented procedures for orientation and departure, as well as ongoing training for employees and contractors who have access to Court Information. There must be processes in place to ensure that employees and contractors have the appropriate level of security. The procedures should provide for discipline in the event of a breach of the policies regarding the security of Court Information. Procedures must exist to ensure the removal of access when an employee or contractor departs or transitions to a new role.

Policy 12b: Users with access to Court Information should be granted only the minimum permissions required to perform their duties, in accordance with the principle of "least privilege."

Policy 12c: Access to Court Information may not be granted to an individual unless they meet the requirements of this Policy and have been granted government security clearance at a level corresponding with their role.

Commentary:

Before access to Court Information is granted, a user must have at a minimum:

- 1. a need to know
- 2. passed a police background security check
- 3. passed other applicable security screening procedures
- 4. been made aware of the special nature of Court Information ("Staff Training Strategies should be embraced to improve awareness of the sensitivity of Judicial Information" Framework Security Policy 4.)
- 5. trained in all applicable security policies, procedures and practices
- 6. signed an agreement that documents their obligations respecting the security of Court Information

Cross references: NIST SP800-53r5, 10-PS, ISO 27001:2013, A.7

Framework: Oaths of confidentiality will be contained in engagement contracts for employees, consultants and contractors to prevent inappropriate disclosure of sensitive Court Information (Security Policy 2).

13. ACCESS CONTROL

Policy 13a: With respect to Court Information, all access control decisions are the responsibility of the judiciary. Users should be provided with the minimum level of access required for their role and consistent with their security clearance level. Administrator access should be on an extremely limited basis to non-Judicial users for administrative support only. This non-Judicial access should be granted only on request and then removed when its immediate purpose is accomplished.

Policy 13b: Court Information systems containing Judicial Information must be held in an appropriately protected environment, with enhanced monitoring, stringent access controls and encryption where possible. Courts must establish sufficient logging on all servers and network devices to screen for unauthorized access attempts and aberrant usage patterns. Any such activity on the part of Judicial Users is always subject to the *Computer Monitoring Guidelines* and must be brought to the attention of the judiciary.

Policy 13c [*new*]: Court information systems, including email and messaging systems, must be organized in such a way as to ensure that Judicial Information (or any other Court Information that is exempt from a legal access to information request) is excluded from searches, reports and responses.

Policy 13d [*new*]: Courts should consider implementing zero trust architecture, where all users, devices, and network traffic must be verified before accessing Court Information.

Commentary:

This policy does not assume that the judiciary has exclusive authority to determine roles and security clearance; court administration must also have authority to determine appropriate user levels of access, because court staff have may dual reporting responsibilities. Based on the

general principles outlined in the *Framework*, however, court administration cannot provide a user with greater access than that agreed to by the judiciary.

Cross references: NIST SP800-53r5, 1-AC, ISO 27001:2013, A.9.

Framework: Bulk Access to a portion of or the entire Court Record shall be governed by written agreement with the court addressing key issues and risks (Access Policy 5).

Judicial Information must be protected from unauthorised access in accordance with the CJC's *Blueprint* for the Security of Court Information (Security Policy 1).

Audit logs must be closely monitored to clearly identify which users have access to Court Information at any point in time (Security Policy 3).

14. REMOTE WORK AND EXTERNAL SYSTEM ACCESS

Policy 14a: Courts must establish and document baselines for usage restrictions, system configurations, connection requirements, and implementation guidance for each type of remote access permitted.

Policy 14b: In consultation with the judiciary, Courts must establish specific terms and conditions for the use of external systems consistent with the Court's security policies and procedures and specify the highest security category of information that can be processed, stored or transmitted on external systems.

Commentary:

The rise of remote work has introduced new security challenges. These include securing home networks, which may not have the same level of security as corporate networks and ensuring the secure use of collaboration tools. The use of secure VPNs can help protect data in transit, and guidelines should be established to help employees set up a secure remote work environment.

Safe remote access is not just a matter for IT – but also important for individual working from home or elsewhere, especially on a regular basis. In addition, users – whether in the courthouse or elsewhere – are using external platforms and systems more often (in other words, software

services that are not managed by court administration). Best practices should be developed and form part of a mandatory training program, including physical security.

Guidelines should be established for securing remote work environments, including the use of secure VPNs, multi-factor authentication, ensuring the security of home networks, and using secure collaboration tools.

Regular audits should be conducted to ensure compliance with these guidelines.

Cross references: Remote Access: NIST AC-17, Use of External Systems: NIST AC-20, Security Tips for Organizations with Remote Workers (ITSAP.10.016),⁷ National Security Agency, Selecting and Safely Using Collaboration Services for Telework – UPDATE.⁸

15. MOBILE DEVICE MANAGEMENT

Policy 15: Courts must implement a *Blueprint*-compliant policy for mobile devices and implement security tools and protocols that allow for the wiping of data from lost or stolen devices.

Commentary:

Whether issued by court administration, used as part of an official "bring your own device" policy, or used outside of the court's security program entirely, mobile devices are challenging traditional approaches to information security.

Mobile devices, whether provided by the court -- or, as is the dominant trend -- purchased by users themselves, invite many security risks.

Mobile devices can be configured to conveniently access networked information
resources from anywhere. But unlike desktops or laptops, which are procured, issued,
configured and maintained by court administration, mobile devices are typically not
designed, nor built or configured with the same security capabilities in mind.

⁷ Canadian Centre for Cyber Security

⁸ National Security Agency – Selecting and Safely Using Collaboration Services for Telework

- 2. Mobile devices are computers that can generate, manipulate and store data. However, depending on configuration, password protection on these devices can be weak, encryption options may be limited or non-existent, and the devices can be easily misplaced or stolen, giving rise to serious security and privacy breaches.
- 3. The popularity of free and inexpensive apps has been largely responsible for the rise in popularity of mobile devices. Taking advantage of these apps is hugely convenient, but fraught with risk, as data created by the user and data about the user are transmitted often surreptitiously to the third parties who make the software.
- 4. Mobile devices are always connected to the Internet, and with built-in GPS capabilities, track the location and activities of users in real time. If compromised, the built-in cameras and microphones can also be used to record and transmit events and conversations without the knowledge of the user.

16. CLASSIFICATION OF COURT INFORMATION

Policy 16a [amended]: Courts must adopt a classification scheme so that sensitive Court and Judicial Information may be designated for special protection. Classification schemes as adopted should be consistent with the Council's Model Policy for the Classification of Court Information to ensure a common understanding of asset sensitivity and protection requirements.

Policy 16b: Classified information may be made available to a person only when the originator establishes that the person has a valid "need to know," appropriate personnel security controls are in place, and the access is necessary to the accomplishment of official court duties.

Commentary:

The author of a document should be responsible for assigning the appropriate classification to information that he or she has created. Everyone who works with the Court has a duty to respect the confidentiality and integrity of any court information and data that they access, and is personally accountable for safeguarding assets in accordance with this policy.

The three-level classification scheme adopted in the *Model Policy for the Classification of Court Information* mirrors the "Protected" levels of the Federal government (Protected A, B and C). Though the terminology is different, the definitions and thresholds for each proposed classification are the same:

- Public
- Court-Confidential (Protected A)
- Court-Restricted (Protected B)
- Court-Secret (Protected C)

Cross references: Model Policy for the Classification of Court Information (September 2022).

17. ENCRYPTION AND SIGNATURES

Policy 17a: The judiciary must be involved in the development of encryption policy and implementation, as they relate to confidentiality, integrity, non-repudiation and authentication of Court Information. Encryption policy and procedures should be consistent with the classification scheme for Court Information. Key management, including policies and procedures, must be in the hands of the judiciary.

Policy 17b: To ensure complete independence, it is recommended that the certificate authority for Judicial Users be a trusted third party independent of government.

Policy 17c: The decision to encrypt data should be based on documented court security risk management decisions and the application of the Court Information classification scheme.

Policy 17d: Courts should provision authorized Judicial Users with secure digital or electronic signatures to facilitate secure workflows in a virtual court setting.

Commentary:

The objective of this policy is to make encryption tools readily available to Judicial Users, manage the encryption process securely, ensure that judicial independence is preserved, and protect sensitive information from unauthorized access. The application of a digital signature is

⁹ See <u>Levels of security – Security screening for government contracts – Security requirements for contracting with the Government of Canada – Canada.ca (tpsgc-pwgsc.gc.ca)</u>

an important tool for protecting the integrity and reliability of those court records that require a signature where courts are operating in a paperless environment.

Cross references: ISO 27001:2013A.10. ISO 27017:2015, s. 10, ISO 27002, 10.1, Secure Electronic Signature Regulations, SOR/2005-30, made under the Canada Evidence Act and PIPEDA.

18. CLOUD MIGRATION

Policy 18a [amended]: Court Information may not be migrated to the cloud without the consent of the judiciary and compliance with the mandatory prerequisites outlined in the *Guidelines for Migration of Judicial Information to a Cloud Service Provider* (Cloud Guidelines). As such, the judiciary must be included in negotiations for proposed cloud services including procurement, governance, operations, access controls, encryption, data location, and other security considerations.

Policy 18b: The security, privacy and integrity of Court Information must be expressly addressed in any service provider agreement. Third party compliance with the *Blueprint* must be monitored and audited on a regular basis, as part of a program of supply chain security.

Policy 18c: [new] Courts migrating to the cloud must establish and enforce rules to ensure the privacy and security of judicial users within shared environments such as Microsoft Teams.

Commentary:

Cloud computing allows users in different organizations to share hardware, network services and software from the same provider, but with each organization independently managing its own user access and information independently. This contrasts with traditional architectures in which each organization builds its own data centre and provisions its own networking equipment, hardware and software. The advantage of cloud computing is that by consolidating investment in physical space, management, hardware, software, communications, electrical power, backups and security, cloud service users only access and pay for the computing resources that they need, leaving the administration of the technology to their provider.

Consolidation from the government's perspective leads to greater control over technology spending and technology management. From the perspective of the judiciary, however,

consolidation of network, computing and support services means a diminishment of control and greater uncertainty as to the safeguarding of Court Information. For this reason, the judiciary in each affected jurisdiction has canvassed for greater transparency and a stronger voice in the planning and implementation processes.

In general, if the executive branch is going to be provisioning information services for the judiciary, either directly or in partnership with commercial third parties, the judiciary must play an active role in specifying how it wants Court Information to be managed.

The following prerequisites for moving Judicial Information to the Cloud were considered mandatory by the Canadian Judicial Council in the *Cloud Guidelines*:

- 1. Threat and Risk Assessment
- 2. Privacy Impact Assessment
- 3. Definition of Judicial Information (now Court Information)
- 4. Definition of Judicial Users
- 5. Classification of Judicial Information (now Court Information)
- 6. Data residency in Canada "Data residency (including OneDrive and SharePoint) must remain in Canada (at rest, and including backups). While in transit, data should reside in Canada, where feasible."
- 7. Records Management
- 8. Training

Other requirements are set out in that document and should be consulted prior to and after migration.

Multi-tenant public cloud environments operate very differently from server-based systems when it comes to "sharing" and collaboration tools. For example, the popular Microsoft 365 platform may result in Judicial Users by default being incorporated into groups or having their availability (or contact information) broadcast inappropriately. The following protocols should be considered and implemented as part of the migration plan:

- 1. **Restricted Visibility**: Judicial users' profiles, including contact details and online statuses, must be configured to be invisible or restricted to unauthorized users within the shared cloud environment.
- 2. **Private Communication Channels**: Dedicated and secure communication channels must be established for Judicial Users. These channels will be inaccessible and invisible to others.
- 3. **Data Encryption**: All data, including messages, shared documents, and collaboration notes, pertaining to judicial matters, must be encrypted end-to-end.
- 4. **Access Control**: Strict access controls must be implemented to ensure that only authorized personnel can view or interact with Judicial Users or their content.
- 5. **Audit and Compliance Reporting**: Regular audits must be conducted to ensure compliance with Policy 19c, and detailed reports should be maintained for accountability.
- 6. **Training and Awareness**: Judicial Users and relevant staff must receive training on best practices for maintaining privacy and security in a shared cloud environment.

Cross references: NIST SP800-53r5, 18-SA, ISO 27001:2013, A.15, <u>Cloud Security Alliance Security</u> Guidance Version 4.

CJC: Guidelines for Migration of Judicial Information to a Cloud Service Provider (2019).

19. DATA LOCATION

Policy 19 [amended]: Court Information must be stored in a computing facility located within the geographic boundaries of Canada. Court Information may not be put at risk of access by any foreign law enforcement authorities without a threat and risk assessment, privacy impact assessment, and prior approval by the judiciary.¹⁰

¹⁰ As a prime example, the Clarifying Lawful Overseas Use of Data Act or CLOUD Act (H.R. 4943) is a United States federal law enacted in 2018 by the passing of the Consolidated Appropriations Act, 2018, PL 115-141, section 105 Executive agreements on access to data by foreign governments. Primarily the CLOUD Act amends the Stored Communications Act (SCA) of 1986 to allow federal law enforcement to compel U.S.-based technology companies via warrant or subpoena to provide requested data stored on servers regardless of whether the data are stored in the U.S. or on foreign soil. Wikipedia at https://en.wikipedia.org/wiki/CLOUD Act.

Commentary:

Classified Court Information should at all times reside in Canada. Judicial Users must be notified and give prior consent if any Judicial Data is proposed to be stored, processed or transmitted outside Canadian jurisdictions or by hosts in Canada that are subject to intrusive foreign law.

Cross references: <u>Treasury Board, Data Sovereignty and Public Cloud</u>. Security Assessment and Authorization. NIST SP800-53r5, 15-CA (data location).

20. VIRTUAL PROCEEDINGS - VIDEOCONFERENCING AND STREAMING

Policy 20a: Videoconferencing platforms selected for court proceedings must be secure enough to comply with the *Blueprint*. Any videoconferencing platform used for court proceedings must be carefully configured and tested in advance to ensure that proceedings are not disrupted. End users (including members of the public) should be advised as to the applicable protocol for video hearings as established by the presiding judge.

Policy 20b: Internet bandwidth provided to Judicial Users in a courthouse must be provisioned sufficiently for robust video and audio performance.

Policy 20c: To the extent that videoconferencing multimedia proceedings, including associated text-based content, may need to be recorded, sufficient secure data storage must be provisioned, subject to the *Blueprint* and in accordance the classification of the information.

Policy 20d: Video proceedings that have been declassified by the presiding judge or judges may be posted on public video-sharing platforms such as YouTube or Vimeo, as long as appropriate settings, watermarks and notations are posted to reflect the court's public access and usage policies.

Commentary:

The COVID-19 pandemic has accelerated the progress of courts from in-person to virtual proceedings, and from paper exhibits to electronic. Courts have been quick to adopt videoconferencing, either by extending their existing internal systems (such as Microsoft Teams, or Webex) to external users, or by licensing purpose-built commercial platforms such as Zoom.

Judicial Users operating within courts and remotely should be provisioned as much as possible with sufficient continuous bandwidth so as to support interruption- and interference-free video and audio connections.

Videoconferencing providers have published various guidelines and security best practices for their respective platforms to ensure against so-called "Zoom-bombing" and other disturbances. These should be followed carefully.

Cross-references: NSA, Selecting and Safely Using Collaboration Services for Telework – UPDATE (Nov 2020), Zoom recommendations, Microsoft Teams security documentation, Cisco Webex Meetings Security.

21. VIRTUAL PROCEEDINGS – COLLABORATION (FILE SHARING)

Policy 21a: When procuring, configuring, and implementing collaboration tools such as file and exhibit sharing for virtual proceedings, courts must ensure that sufficient storage space is provisioned, and that appropriate security controls are in place for data uploads, data sharing and data storage. These may include encryption for classified information as well as an audit trail of uploads, file access, modification and deletion.

Policy 21b: Courts must ensure that end users are effectively authenticated to avoid unauthorized access.

Commentary:

Despite the attractive convenience, low (or no) cost of public file-sharing platforms such as Dropbox, Box.com and many others, Courts intending to share classified information for virtual proceedings should avoid consumer-oriented platforms unless their security is thoroughly vetted.

22. SOCIAL MEDIA

Policy 22: The judiciary is responsible for establishing security policies, codes of conduct and training programs for the use of social media by Judicial Users.

Commentary:

Social networks and media raise many questions for courts and judiciary, not least are those related to security and privacy. Among these are "insufficient authentication controls, cross site scripting, cross site request forgery, phishing, information leakage, injection flaws, information integrity and insufficient anti-automation." Policies and training should address all known risks.

23. COMPLIANCE

Policy 23a: All Court Information policies, procedures and practices must comply with applicable laws, regulations and valid contractual requirements. Access to and use of compliance audit tools must be limited to a small number of authorized individuals only. Where audits are performed on Court Information and Judicial Users, these must be done in compliance with the *Computer Monitoring Guidelines*.

Policy 23b: In circumstances where Court Information may need to be searched or otherwise accessed in response to a legal request, prior approval from the judiciary is required. The judiciary shall determine who is granted access, and what Court Information may be exempt from the search, review and disclosure processes.

Commentary:

Whether Court Information in any particular circumstance is exempt from litigation disclosure and information access (or freedom of information) requests or not, the process of searching, reviewing and ultimately producing Court Information must only be performed by or with the consent and under the direct oversight of the judiciary.

¹¹ Cited by Wu He, (2012), "<u>A review of social media security risks and mitigation techniques</u>", Journal of Systems and Information Technology, Vol. 14 Issue 2, pp. 171-180.

Cross references: NIST SP800-53r5, 2-AU, 16-AU, ISO 27001:2013, A.18.

Framework: Privacy Impact Assessments will be undertaken at the design stage of Court Information management systems that involve the potential collection, access, use, or dissemination of personal information (Privacy Policy 3).

Access to and use of compliance audit tools must be limited to a small number of authorized individuals only. Audit logs will be closely monitored to clearly identify which users have access to Court Information at any point in time (Security Policy 3).

24. ARTIFICIAL INTELLIGENCE

Policy 24 [*new*]: Any use of artificial intelligence and machine learning within the court system must be accompanied by appropriate security measures to protect against potential vulnerabilities and misuse.

Commentary:

As generative artificial intelligence tools are increasingly used in courts, it is important to consider their security implications. This includes, for example, protecting the data used to train these systems; ensuring the integrity of the algorithms, and guarding against adversarial attacks that aim to manipulate the system's output. Regular audits should be conducted to ensure these systems are operating as intended and not introducing new vulnerabilities.

APPENDIX 1: KEY REFERENCES

The *Framework* provides a principled structure for determining a wide range of Court Information policies, of which information security is just one. Part of the mandate for updating the *Blueprint*, then, includes ensuring its consistency with the values, principles, policies and definitions enunciated in the *Framework*, to which the reader of the *Blueprint* should refer.

Cross references referred to in each Policy section are to the following documents unless otherwise indicated:

SELECT CANADIAN JUDICIAL COUNCIL PUBLICATIONS

- Computer Monitoring Guidelines (2002)
- <u>Court Information Management: Policy Framework to Accommodate the Digital</u> <u>Environment. Jo Sherman (2013)</u> ("Framework")
- Guidelines for Migration of Judicial Information to a Cloud Service Provider, Martin Felsky (2019) ("Cloud Guidelines")
- Model Definition of Judicial Information, Martin Felsky (2020)
- Model Policy for the Classification of Court Information (2022)
- Model Policy for the Retention of Court Information (2023)

SELECT INTERNATIONAL STANDARDS AND BEST PRACTICES

- Please note that access to some of these resources may require purchase or subscription.
- ISO/IEC 27001:2022 Information security, cybersecurity and privacy protection –
 Information security management systems Requirements
- ISO/IEC 27002:2022 Information security, cybersecurity and privacy protection –
 Information security controls
- Security and Privacy Controls for Information Systems and Organizations, NIST Special Publications SP800-53r5
- Protecting Controlled Unclassified Information in Nonfederal Systems and Organizations
 NIST Special Publications SP800-171 Rev 2

•	Cloud Security Alliance (2020). Security Guidance for Critical Areas of Focus in Cloud
	Computing

APPENDIX 2: RECOMMENDATIONS OF THE JUDGES TECHNOLOGY ADVISORY COMMITTEE AS APPROVED BY COUNCIL – NOVEMBER 30, 2001

- 1. That the Canadian Judicial Council consider conducting a seminar at its next mid-year meeting to review urgent security issues identified in [the report on court computer security of the Judges Technology Advisory Committee].
- 2. That the Chair of the Canadian Judicial Council circulate the report to the Canadian Council of Chief Judges and Chief Justices.
- 3. That the Chair of the Canadian Judicial Council circulate the report to all Deputy Attorneys General with a request for their co-operation in implementing the recommendations.
- 4. That the Canadian Judicial Council request that the National Judicial Institute and the Office of the Commissioner for Federal Judicial Affairs coordinate the delivery of training [about computer security issues, including concerns about judicial independence and the integrity of Judicial Information] for federal and provincial judges, together with information technology staff.
- 5. That the Canadian Judicial Council ask all provincially and federally appointed chief justices/judges to:
 - (a) Establish security of the court's information system as a priority;
 - (b) Ensure that policy development takes place at an early stage before the conversion to an electronic environment;
 - (c) Identify and secure the necessary financial, staff and other resources that are critical to implementation of appropriate security measures;
 - (d) Ensure that a technology staff member who is accountable to the chief justice/chief judge be appointed to manage the court's security operations.
- 6. To achieve uniformity, that the Canadian Judicial Council take a leadership role by authorizing the Judges Technology Advisory Committee to develop a blueprint that

addresses recommended security procedures for all Canadian courts, and ensure that resources are made available to the Committee for that purpose.

APPENDIX 3:	GLOSSARY OF TECHNICAL TERMS AND ACRONYMS
Term	Meaning
APT – Advanced Persistent Threats	High-level unauthorized network intrusions that persist undetected for long periods of time.
Analytics	The application of advanced software tools used to discover and extract meaningful information from volumes of data.
Anonymization	The process of removing personal identifiers from collections of data.
Apps	Software applications that are downloaded for use on mobile devices.
Artificial intelligence (AI)	Computer systems able to perform tasks normally requiring human intelligence
BYOD	Stands for "Bring your own device" a policy that allows users to access business networks using mobile devices belonging to them personally.
Cloud	The term used to refer to data centres managed by third parties (a Cloud Service Provider) to host an organization's data offsite.
CSP	Cloud service provider. The two largest CSPs with data centres located in Canada are Microsoft Azure and Amazon Web Services.
Digital signature	A digital signature is an encoded message that uniquely identifies the sender of the message and proves the message hasn't changed since transmission. Cf e-signature.
Encryption	A process that translates human-readable text into unreadable code for the purpose of securing information from unauthorized access.
Electronic signature (e-signature). Cf. Digital signature.	An e-signature is a form of signature applied to an electronic document, sometimes distinguished from a digital signature, which is an encoded form of authentication.
Firewall	A hardware or software product programmed to filter unwanted intrusions from one computer or network into another.
Generative AI	A form of AI which generates original output, such as text, images, video, audio, or computer code.
IDS	Intrusion Detection System – a system that monitors attempts to gain access to a network. Intrusion is defined as an attempt to compromise the security of a computer or network. Intrusion detection is the process of monitoring events

Term	Meaning
	occurring in a computer system or network and analyzing them for signs of intrusions.
Integrity	Integrity is the need to ensure that information has not been changed accidentally or deliberately, and that it is accurate and complete.
ISP	Information Service Provider – organization that provides access to the Internet.
LAN	Local Area Network – a system connecting users to shared computing resources within a building.
Least privilege	Least Privilege is the principle of allowing users or applications the least number of permissions necessary to perform their intended function.
Malicious code	Harmful programs and snippets of applications that are designed to delete data, prevent access, or otherwise interfere with the proper functioning of a computer system – the generic term for computer viruses, worms, spyware, Trojan horse, malware, denial of service attacks etc.
Malware	A generic term for a number of different types of malicious code. Cf Malicious code.
Multi-Factor Authentication (MFA)	Provides an additional layer of security by requiring users to provide at least two forms of identification before accessing Court Information systems.
Phishing	The use of e-mails that appear to originate from a trusted source to trick a user into entering valid credentials at a fake website. Typically, the e-mail and the web site look like they are part of a bank with which the user is doing business.
Physical security	Physical security refers to the protection of building sites and equipment (and information and software contained therein) from break-ins, theft, vandalism, natural or unnatural disasters, and accidental damage.
Public Key Infrastructure (PKI)	A PKI (public key infrastructure) enables users of a basically unsecured public network such as the Internet to securely and privately exchange data and money through the use of a public and a private cryptographic key pair that is obtained and shared through a trusted authority. The public key infrastructure provides for a digital certificate that can identify an individual or an organization and directory services that can store and, when necessary, revoke the certificates.

Term	Meaning
Ransomware	A type of malware that is a form of extortion. It works by encrypting a victim's hard drive denying them access to key files. The victim must then pay a ransom to decrypt the files and gain access to them again.
	Role based access control assigns users to roles based on their organizational functions and determines authorization based on those roles.
Shared services	Shared services is a model of provisioning computing and networking services to an enterprise (such as a government) through a single centralized resource as opposed to having separate IT infrastructures in each component of the enterprise.
	An SLA records a common understanding about services, priorities, responsibilities, guarantees, and warranties, usually defining a minimum "level of service" for availability, serviceability, performance, operation, or other attributes of the service.
Social engineering	Non-technical or low-technology means – such as lies, impersonation, tricks, bribes, blackmail, and threats – used to attack information systems.
Spoof	Attempt by an unauthorized entity to gain access to a system by posing as an authorized user.
Threat and Risk Assessment (TRA)	Threat and Risk Assessment - the process by which risks are identified and the impact of those risks determined. A threat is a potential violation of security, which exists when there is a circumstance, capability, action, or event that could breach security and cause harm
	A computer program that appears to have a useful function, but also has a hidden and potentially malicious function that evades security mechanisms, sometimes by exploiting legitimate authorizations of a system entity that invokes the program.
Virtualization	The configuration of a single central processing unit (CPU) to run more than one operating system at the same time, allowing an enterprise to better manage updates and rapid changes to the operating system and applications.
Virus	A hidden, self-replicating section of computer software, usually malicious logic, that propagates by infecting - i.e., inserting a copy of itself into and becoming part of - another program. A virus cannot run by itself; it requires that its host program be run to make the virus active.
	A restricted-use, logical (i.e., artificial or simulated) computer network that is constructed from the system resources of a relatively public, physical (i.e., real) network (such as the Internet), often by using encryption (located at

Term	Meaning
	hosts or gateways), and often by tunneling links of the virtual network across the real network. For example, if a corporation has LANs at several different sites, each connected to the Internet by a firewall, the corporation could create a VPN by (a) using encrypted tunnels to connect from firewall to firewall across the Internet and (b) not allowing any other traffic through the firewalls. A VPN is generally less expensive to build and operate than a dedicated real network, because the virtual network shares the cost of system resources with other users of the real network
Wired Equivalent Privacy (WEP)	A security protocol for wireless local area networks defined in the standard IEEE 802.11b.
Wireless LAN (also Wi Fi)	A local area network using radio frequency rather than wires to connect.
Worm	A computer program that can run independently, can propagate a complete working version of itself onto other hosts on a network, and may consume computer resources destructively.
Zero Trust Architecture	This approach to system design requires verification of all users and devices before granting access to systems. no user or device is inherently trusted, whether they are inside or outside the network perimeter. This approach requires verification of all users and devices before granting access to systems, thereby reducing the risk of breaches from compromised internal devices or credentials.