Asia Pacific Public Electronic Procurement Network

3rd e-Government Procurement Conference

Tbilisi, Georgia

Authentication Framework in e-GP: Issues in Security and Interoperability

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Issues in Security

As e-GP moves to support end-to-end procurement, security becomes more than just a technical challenge.

Security threats

Open e-GP Web based applications are highly vulnerable to attacks and provide entry points through which account details, personal information, and other sensitive data can be accessed and stolen.

Security solutions–including network firewalls, intrusion detection systems, encryption, and manual measures such as quality assurance and audit procedures – are incapable of preventing attacks and in some cases incapable also of stopping them.

It’s not if a security breach will never occur , it’s how a breach is managed once detected.

Security requirements for e-GP

confidentiality	• information is not disclosed in any unauthorised manner, which also includes ensuring that the content of request for participation and tenders is not examined before the deadline.
integrity	• information is not altered or modified in an unauthorised way or that modifications are at least detectable.
authentication	• guarantee the source of the tender and the identity of the bidder when participating in a tender.

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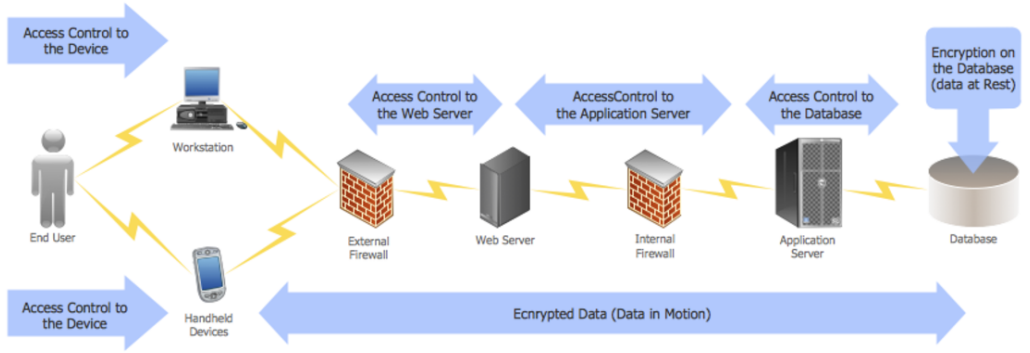
News · Canada

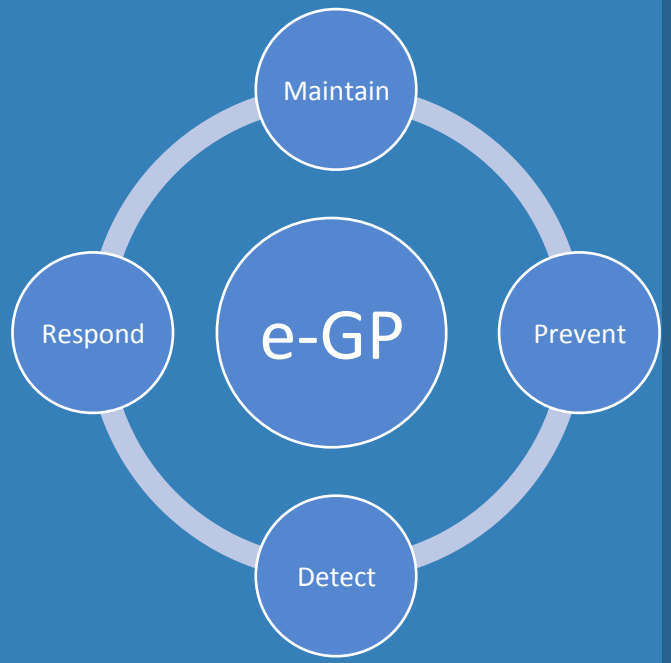
Alberta's MacEwan University loses $11.8M after being fooled by email phishing scam

The university says workers were fooled by fake emails asking them to change electronic banking information for one of the school's major vendors.



Security is not just a firewall

Managing Security



Technical Security

- Firewalls
- Network
- Application and Database design
- Workflow, permissions
- Encryption
- Password management
- Monitoring
- Authentication

Security Policy and Management

- Roles and Responsibilities
- Segregation of duties
- Application management
- Database management
- Testing (application, infrastructure)
- Monitoring
- Authentication and validation

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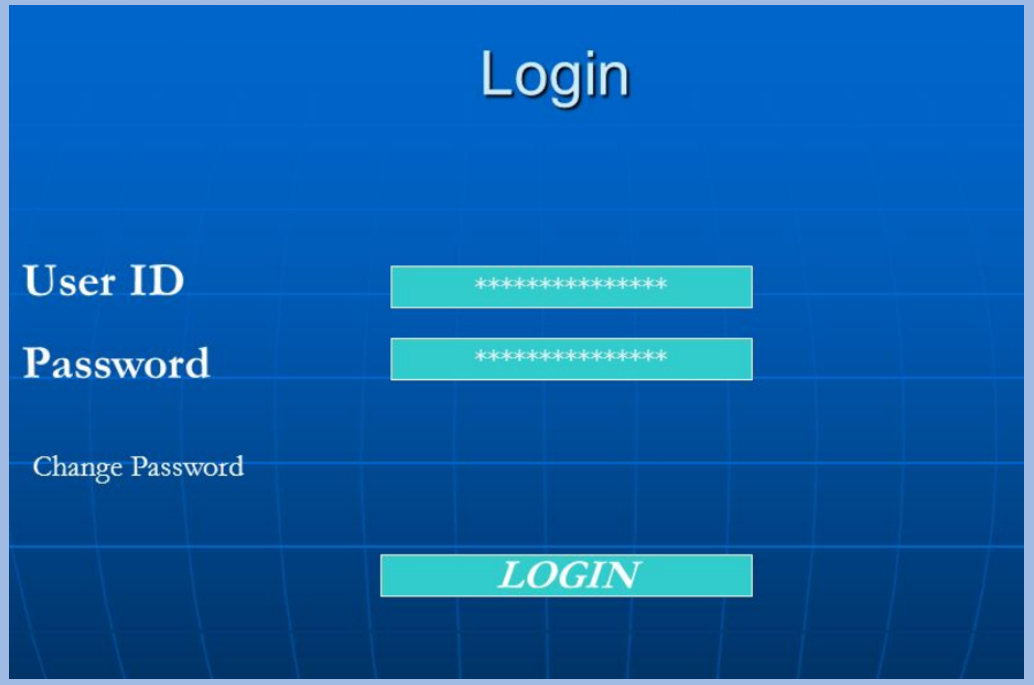
Establishing a level of trust

Digital Signatures

User Id and Password



System and user authentication
(SSL and PKI)

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Establishing a level of trust

User Authentication and Validation

- Digital Signatures (PKI) will not on their own make a system or process more secure. It is a component of the security process.
- Some system use the Digital Signature to authenticate a user and apply a key to sign a document with encryption applied in the database and with the users key.
- Digital Signatures are not a standard and there could be compatibility issues between systems and providers of digital signatures.

Establishing a level of trust

User Authentication and Validation

- What makes the a Digital Signature viable is the process for authenticating and validating the individual / firm assigned the key not the technology itself.
- Similar authentication processes could be applied to the issuance of a User Id and Password to authenticate and validate a user and a system could apply an internal key to sign and encrypt data and documents.
- The main objective of the system is to ensure the authentication of the user to support the integrity of the process and minimize fraud and corruption.

Digital Signature, Recent experience

Acquisition of DSC from a Certified CA in India as a foreign firm

- Able to apply for and receive a Class III certificate for signing and encryption without having to travel to India
- Required application form and supporting documents with current photos and copy of passport to be notarized, stamped by Government of Canada and stamped by High Commission of India (lots of running around).
- Uploaded electronic copies, make e-payment with PayPal and shipped originals.
- Had online voice and video calls to serve as face to face visit and validate application.
- DSC shipped to Canadian office, arrived within 10 days
- Challenges installing key (browser and java), great support from CA
- More challenges linking key to e-tender portal (browser and java versions). 10 hours with tech support to solve.

Costs: DSC $200, India Stamp $84, Shipping $40; Time: 6 days

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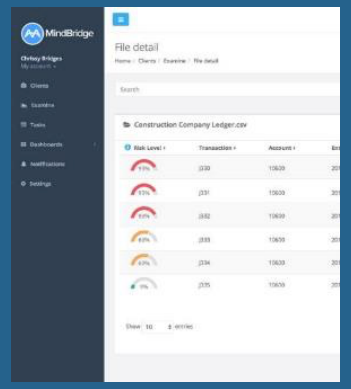
Common Security Threats

- Malware
- Mobile
- e-Payments
- Attacks on SMB's
- Uneducated Users
- User Errors

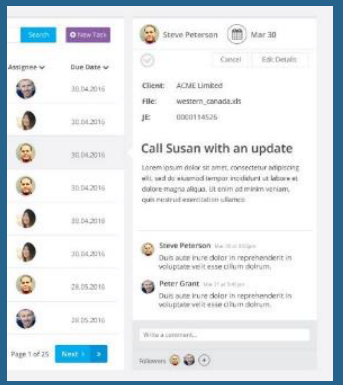
Security Considerations

- Audit and Monitoring
  - Analytics
  - Real-Time Monitoring
- On-Going Assessments
  - Assess regularly
  - Adjust and update policies
- Dedicated Resources
  - Personnel
  - Tools



Identify

Assess



Investigate

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Thank You

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