PKI Smart Card Deployment and Registration Management – A Case Study

Gary Miller, Vice President, Marketing, Strategy and Business Development

October, 7, 2002
• Profile of the Client
• Client Objectives
• Obstacles faced by the Client
• The Critical Success Factors
• Challenges presented to Qunara
• Our Approach – Phases of a Deployment
• The Successful Solution
• Value Delivered to DND
Profile of the Client

Canadian Department of National Defence (DND)

- Secure Defence Message Handling System – an environment for accessing and communicating sensitive yet unclassified data over department wide and public networks
- 250+ locations, 80,000 plus employees, international coverage
- The solution includes PKI certificates on Smart Cards for higher integrity and a Registration Management System for effective distributed certificate management. Alignment with existing directory and strong security policy.
Objectives of the Client

Canadian Department of National Defence (DND)

• The need to enable a secure and trusted environment for sensitive internal communication – fully aligned with strong policy guidance.
• A distributed message handling system with two-factor authentication capabilities
• End-to-end network security for complex, distributed environment of over 80,000 employees in Canada
• A system capable of handling the high mobility of DND users
• The need for quick smart card and PKI deployment without major disruptions
Profile of the Success

- 6 months from procurement to contract completion. 80,000 + cards, 56,000 + readers branded, initialized, deployed, installed.

- Registration Management solution procured, customized and deployed allowing for distributed registration without compromise to integrity and security policy.

- Users trained and local registration authority structure established for effective recovery, revocation and issuance.
Business Obstacles

- Highly distributed control/command structure.
- Rigid RFP procurement procedures even after internal product reviews and compliance testing.
- Scale of project unprecedented. 90,000 Smart Cards and 56,000 readers, PKI certificate enabled.
- Strong security policy in place to be adhered to.
- Dependence upon alignment of disparate projects – mail, directory and PKI.
- Multiple levels of training to be aligned – users, LRA’s, support team……
Technical Obstacles

- Users tend to have very high mobility
- Directory structure was already in place using a flat tree and adhering to Government of Canada schema
- Very distributed environment (approx. 250 locations)
- Very diverse user base regarding experience and knowledge of IT and security in general
- Mix of serial, USB and PCMCIA readers on a variety of Windows operating systems and connector types
Critical Success Factors

**Business need must be real and well communicated** - business drivers must be compelling in order to create the required energy and commitment to remove barriers – perceived or real.

**Relationships are key** – there will be issues and challenges that require full alignment and commitment of all parties.

**Broad stakeholder buy in and commitment essential** - while it appears that card deployment is a point solution it has dependencies on many aspects of the business and draws upon extensive technology and business skills across an organization.
Challenges presented to Qunara

**Business**
- Central control versus regional authority
- Alignment of all parties – DND, Qunara, Datakey
- General acceptance by the user community
- Cost containment and procurement process
- Speed of deployment – logistics and JIT
- Net new registration management process

**Technical**
- Highly distributed environment
- Multi-level approval model for on-going management required
- Rapid adaptation of registration solution
- Alignment with existing services such as e-mail and directory
- Strong adherence to IT Security policy
Our Approach - Phases of a Smart Card Deployment

• Needs Analysis and Environmental Review
  • Application and security requirements, product evaluation testing and selection (cards, readers), training, integration, branding

• Deployment Strategy
  • Acquisition plan, distribution plan, vendor management, governance, application integration, registration (card) management system

• Development and Implementation
  • Project management office, order management, sequence consolidation for customs, application development, installation and configuration, training and support

• Management and On-Going Support
  • Replacing lost/defective cards and readers, deploying upgrades, help desk operation
The Successful Solution

- Industry leading Smart Card Solution from Datakey (SignaSURE)
  - Highly reliable and adherence to industry standards
  - Pioneers in PKI smart token technology since 1992

- PKI deployment expertise from Qunara
  - Leaders in solving PKI deployment challenges since 1996
  - Entrust VAR and SI partners since 1996
  - Datakey VAR partner since 1998
  - Alacris VAR partner since 1998

- Industry leading PKI Registration Management Solution
  - Providing certificate lifecycle management solutions where trust begins and ends…at the user
  - Innovative solutions for distributed PKI deployments since 1998
The Value Delivered to DND

- **Achieved their vision and reached their desired end state of strong two factor authentication** –
  - DND remained committed to vision and drove through barriers and challenges associated with highly distributed environment and certificate issuance

- **Achieved the Entrust deployment and ROI** –
  - Significant investment in technology that is now delivering true value through an integrated solution.

- **Have created a Foundation of Trust** –
  - Overcame challenges and now have a secure foundation upon which they can layer new electronic services easily and rapidly.

- **Tapped into proven expertise and realized unequaled value** –
  - DND realized value of integrator relationship that brought the experiences of hundreds of related projects and thus ensured success and speed of deployment with limited pain.
Thank you.