

Cyber Security Management in Rwanda: A National Priority in a Global Context

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HEAD- Strategy and Policy
RDB/IT

Have you heard



Outline

- Top concerns in 2010
- Cyber security challenges
- Common considerations
- Government IT Security strategy
- National IGF: Some issues for consideration

Top concerns in 2010

- Threats and criminals are faster, smarter and more covert
- Criminal activity has increased during economic downturn
- Criminals are exploiting vulnerabilities
- Companies are operating globally, beyond borders of the network
- Motivations: Cyber war, Espionage, Religious, Activists, Political, Financial, and much more.



Source: Cisco

Source: Cisco.com

Cont'd

- Virtually every action we take leaves traces more extensive and permanent in nature than occurs in 'real' life
- Compare buying a train ticket on line with purchasing one at the station.
- We perhaps have more privacy but much less possibility of anonymity

Con t'd

- Recent cases of data losses by Government departments evidence one aspect of the issue.
 - Data relating to 30 million people involved in receipt of child benefits fitted onto 2 CDs.
 - Significant data about 100,000 prisoners was held on a memory stick
- Effectively (not entirely) , space constraints no longer feature in data storage.
- It is easier to retain than to delete and easier to send everything rather than edit

Cyber Security Challenges

Accountability
for Empowered
Employees



Shifting Boundaries
for a Global and
Mobile Workforce



New and
Changing
Threats



Compliance



Contractors,
Partners, Guests



Source: Cisco

Source: Cisco.com

CYBER Security challenges (Cont'd)

- ✘ **Expanding information:**

- + Internal employees, Network, Applications, Databases, File servers, Content management Systems, Storage

- ✘ **Expanding identities:**

- + Remote employees, external partners, Customers, Contractors, Internal employees, Privileged users, etc.

- ✘ **Expanding Infrastructure:**

- + Mobility, Virtualization, Cloud computing

- ✘ **Expanding threats:**

- + Stolen IPs, Applications/Databases/Encryption Hack, Fraud, Stolen credentials, Data Leak, Public Infrastructure Access hack, Online banking attacks, Session Hijacking, Application vulnerabilities; Phishing, Malicious codes, DNS spoofing, DNS poisoning, SQL injections, etc

Cyber security: Common considerations

- Defend against existing threats and new threats, Protect Business and assets and achieve Regulatory Compliance by preserving/ensuring:
 - Confidentiality
 - Integrity
 - Availability
 - Authorization
 - Non-repudiation
 - Accountability

Government IT Security Strategy

- Government of Rwanda established a Cyber Security division under RDB with special focus on developing the necessary cyber security policy & implementation strategy.
- The Cyber security division has an immediate focus to:
 - Develop the Government IT security master plan
 - Design the Government Enterprise Information Security Architecture
 - Design and implement the National Public Key Infrastructure System (NPKI)
 - Development of Information Security Management Systems (ISMS) – ISO27001

Government IT Security Strategy

- Focus continued....:
 - Establishment of the Rwanda Computer Emergency Response Team/Coordination Center (rwCERT/CC)
 - Development of Security Web Portal
 - Human Resource development - Cyber Security Trainings and Public Awareness events (Capacity strengthening)

Government IT Security Strategy

- Focus continued...:
 - Linkage with regional/international IT security organizations
 - Partnership with existing CERT (SA CERT, TuniCERT, JpCERT, etc)
 - Joining the International CERT Collaboration: FIRST
 - Support to information security regulatory and legal framework development (Relevant security laws such as Critical Information Infrastructure Protection Act, Information and Communications Network Protection Act, Security breach notification laws, etc)

National IGF: issues for considerations

- Citizen Data Security, openness and privacy
- Privacy:
 - Privacy in the light of the new social network phenomenon
 - Consumer protection in the Internet environments
- Right balance between access to knowledge, freedom of expression, and intellectual property rights.
- Partnership between government, private sector, NGOs, education, academia, R&D in cyber security.
- Regional/Global partnership for Cyber security (EAC CERT)
- Support to Regulatory framework development support (data protection, data privacy, laws on pornography, etc)
- Accession and harmonization to international conventions and instruments



Thank you for your attention