Cogito Group
DIGITAL IDENTITY AND SECURITY

cogitogroup.com.au

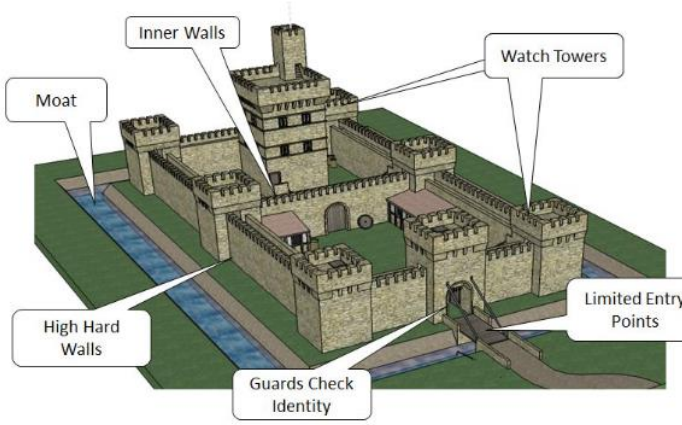
Protecting Data

Presented by Richard Brown

The Castle Defence

Traditional data protection

- Until now strong protection of the border involved:
  - Restricted entry based on entry points (ports)
- On compromise only options were:
  - to further restrict entry points
  - Still have a host of vulnerabilities.



Rapidly changing landscape

- Not all threats come in through the front door
  - The trusted insider threat
  - Bring Your Own Device
  - Our systems are no longer just on our physical premises but in the cloud and accessible via the internet.
  - Accessed by employees, contractors, customers and partners
  - Accessed any time from anywhere in the world
- Once your in most organisations have very few restrictions navigating the internal network.

Security landscape challenge

- Business now expects high levels of connectivity between applications, devices and individuals. Security must adapt to this.
- Security needs to:
  - See past one box or solution. A layered approach gives greater assurance
  - See authentication and encryption as essential components.
  - Adapt to internet scale rather than enterprise scale.
  - The boundary is still important though.

The New Look Castle

Next Generation Firewalls

- Boundary Protection will always play an important role but has new and improved guards at the entrance including:
  - Heuristic techniques to identify patterns and can now defend against zero-day vulnerabilities
  - Content identification: stop threats and prevent data leaks
  - Rules based on user identification: Social networking apps can be enabled
  - Decryption and inspection of secure packets
  - Filtering and checking based on daily updates (eg URL and AV)

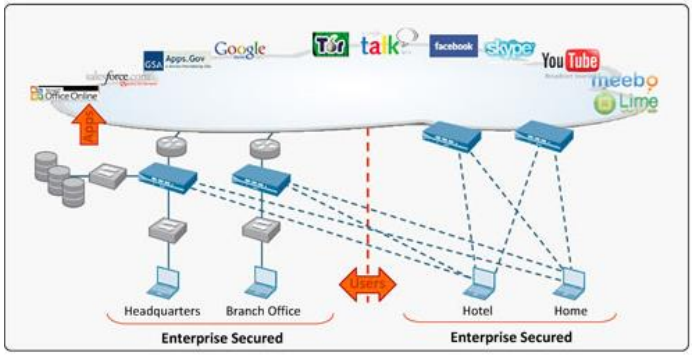
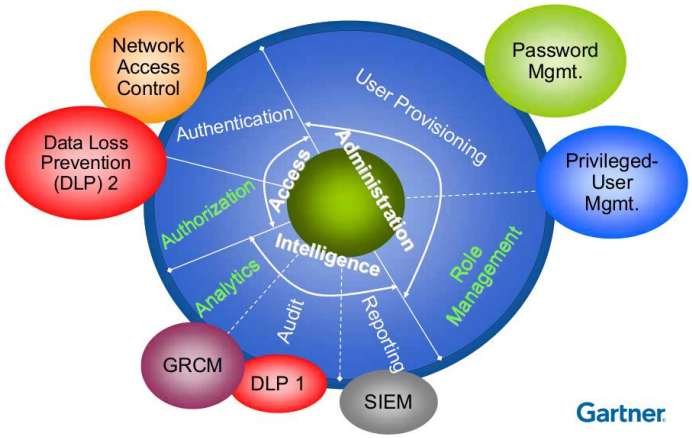


*Image courtesy of Palo Alto Networks

Identity is KEY

- You need to get it right from the start and to the end
- Provisioning, update and de-provisioning are key
- An ‘identity’ is the set of attributes that uniquely identify an entity.
- An ‘entity’ may be:
  - a person (an employee, a contractor)
  - a device
  - a third party (such as a partner, an agency or a service provider)
- Entities include users from outside the organisation and may represent a group or role.
- Organisations now need to gain an understanding of the relationships it has with identities.

Identity and Access Management: Outside the boundary participants



Authentication

- Know the other end, even internally
- Know that the communications is not only secure but that it has not been tampered with.
- For all devices eg
  - Between Network devices
  - Web services
  - Servers
  - PCs
  - BYODs

Multi Factor Authentication

- MFA remains one of the most effective measures to prevent a cyber-intruder
- MFA is the provision of multiple pieces of information in order to perform tasks such as system authentication.
    - Something you know (eg username and/or passwords)
    - Something you have (eg OTP or smartcard)
    - Something you are (eg biometrics)
- Edward Snowden proves why is can be so effective.

Encryption

- Assume a compromise of your boarder will occur at some point.
- Protect your data, not just the border using encryption
- Protecting the keys used for encryption from compromise and loss.
- Make sure you change keys regularly.

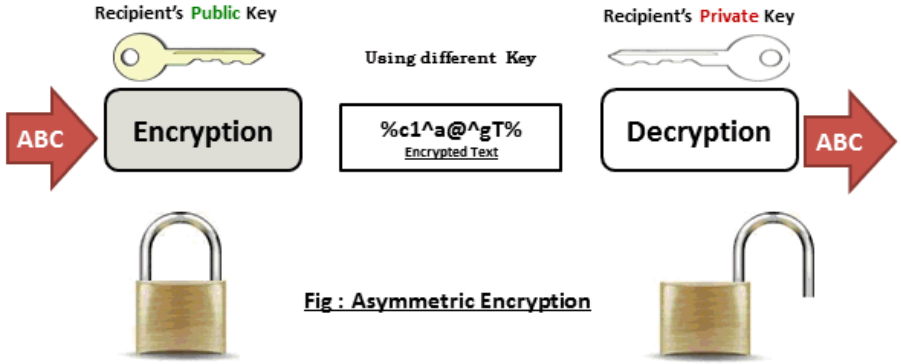


Fig : Asymmetric Encryption

Protection examples

- DB
- File
- Storage Unit
    - Don’t use storage managed encryption
- Applications
- Virtualised Platforms

Make sure the keys stay in the kingdom

- Keys to the kingdom must remain in control of the keepers of the castle.
- What environments can I do this with
  - On-premises
  - In the cloud
  - Hybrid on-premises/cloud environment
- Keeping the keys means:
  - On-premises administrators don't need to see the data to perform their roles
  - In the cloud even the trusted service providers can't get to your data.

Thank You

Thanks for listening.

Please direct any further questions to:

Richard Brown
CEO, Cogito Group
sales@cogitogroup.com.au

www.cogitogroup.com.au
facebook.com/cogitogroup
Cogito Group Pty Ltd