Exodus Communications, Inc.
User Authentication Requirements

Dave Bailey

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What Is Exodus?

- Web hosting and co-location
- Internet backbone provider
What is Exodus?

- **Dynamic environment**
  - Everything and everyone is in motion
  - rapid growth
  - rapid change
- **Buy rather than build**

Data Classification

- 3 levels (Public, Internal Use, Confidential)
- Several compartments (Engineering, HR, Strategic Planning, Financial, Security, …)
Basic Facts - 1

The notion of “security perimeter” is rapidly eroding

- Core business functions are being outsourced
- Contractors are being brought in to provide support “within the building”

Basic Facts - 2

Every data item owned by Exodus is needed by someone outside the “security perimeter”

- remote employees
- travelling executives
- customers
- partners
- contractors
Authorization Problem Factors

- User Identity
- Data Identity
- Type of Connection
  - Link Protection
  - Platform Protection

Authentication Requirements - 1

Low Deployment Cost:

- $o(10000)$ users today (located everywhere)
- rapid user turnover
Authentication Requirements - 2

Low Management Cost

- Comparable to cost of managing passwords
- Implies extra hardware very inexpensive
  (i.e. < $10)

Authentication Requirements - 3

Easily Portable

- Mobile users are the norm
- Some users use a variety of machines
Authentication Requirements - 4

Easy Revocation

- 10000 issued to customers
- rapid turnover
- customer turnover may be discovered after the fact

Authentication Requirements - 5

Exportable from the US

- Will surely use encryption
- Will be used by non-employees
Authentication Requirements - 6

Importable Where we do Business

– May even have to be used within company facilities (e.g. in PRC)

Authentication Requirements - 7

• Scalable - to $o(100000)$ users