Trusted Enterprise Solutions
Products

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Overview

Products
Trusted Gateway
Trusted Web Server
Integrated Examples
Conclusions
Product List

- Trusted Gateway
- Trusted Web Server
- Other Products Under Development
- Security Architecture, Design and Development (Consulting)
- Integration into Your Environment
- High Assurance Applications Development

Trusted Gateway Features

- Integrates networks at single sensitivity level (NT or Solaris) with networks at multiple sensitivity levels (Trusted Solaris)
- Label-based routing provides secure data flow
- Trusted Virtual Private Networks
Trusted Gateway Example

Gateway-level encryption more efficient than application-level approach

- Performed at IP layer
  - More secure
  - Reduces complexity of key management
  - Improves performance
  - Transparent to application

- Encryption algorithms include:
  - 56-bit DES CBC
  - 3-key Triple-DES
  - 128-bit SAFER CBC

- Future enhancement will be hardware encryption
**Trusted Web Server Features**

- Strong separation of data sensitivity levels
  - Data labelling identifies sensitivity levels of files
  - Mandatory access controls enforced by Trusted Solaris
  - Eliminates need to replicate data on multiple servers
- Read-only pages protected from hacking
- System configuration files protected from unauthorized modification

**Trusted Web Server Example**

Diagram showing network topology with Trusted Web Server, Labeled Network, Public Internet, and other network components.
Protecting Web Pages

Example Multi-Level Web Page

http://xyz/index.html
**Trusted Web Server Features**

- Supports Java Servlets and CGI scripts with enforced access controls
- Provides standard SSL support
- Utility allows Web Master to change Web page security level
- Access via standard Web browsers

**More Complex Example**

Diagram showing network infrastructure with trusted web servers, public/confidential/proprietary networks, and secure communications.
Supporting Multiple Companies

Conclusions

Strong Access Control Enforced Primarily by the Operating Systems and Labeled Networking
First Set of Basic Architectural Components using Trusted Operating Systems
Emphasis on Developing Products for the Commercial Markets