

poly²

poly-computer * poly-network

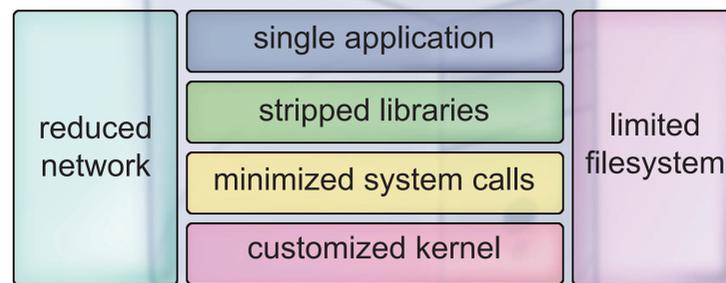
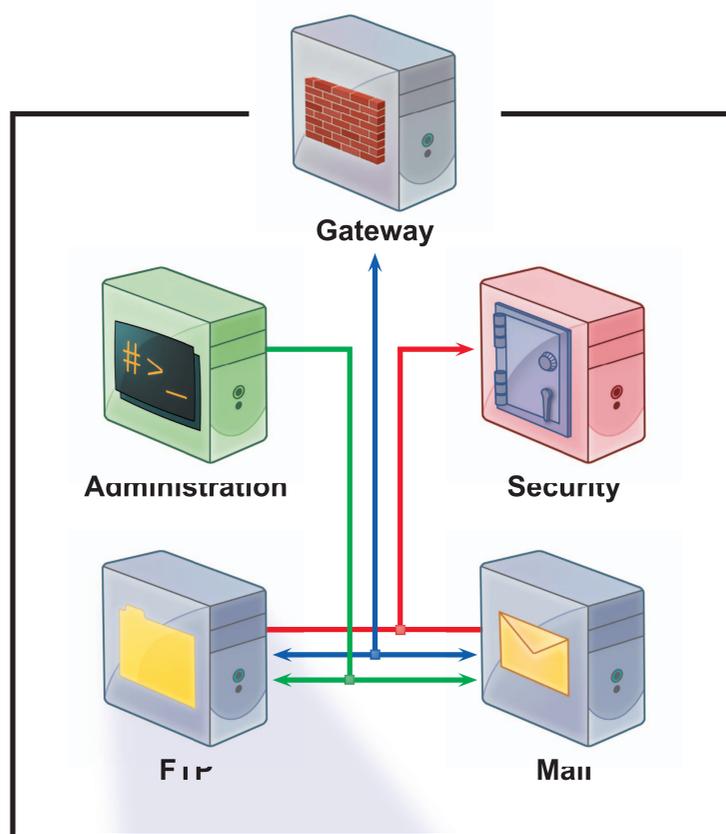
To create a secure and fault-tolerant server architecture using established security design principles.

Benefits

- Scalability
- Defense in Depth
- High Availability
- Improved Performance
- Attack Isolation
- Intrusion/Anomaly Detection
- Forensics

Implementation

- Commodity Hardware
- Application-Specific O/S
- Customized Kernel
- Separation of Internal Traffic
- Stripped Library Calls
- Minimal Software



Design Principles

- Economy of Mechanism
- Least Privilege
- Separation of Privilege
- Complete Mediation
- Fail-Safe Defaults
- Least Common Mechanism
- Open Design
- Psychological Acceptability

Project Tasks

- Server Image Creation
- Server Image Management (OSCAR)
- Trusted Boot (SALIVATE)
- Reduction Process and Tools
- Automated Provisioning
- Kernel-level Minimization of Resources
- Security Metrics
- Information Flow and Control

<http://projects.cerias.purdue.edu/poly2/>

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