

CERIAS

the center for education and research in information assurance and security

The Poly² Project

poly-computer * poly-network

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

The Poly² Architecture

This project advances the understanding in building secure and reliable system architectures for critical services in hostile network environments. A secure and reliable system architecture must only provide the required services to authorized users in time to be effective. The proposed architecture is based on widely acknowledged security design principles. The Poly² application nodes host the external network services.

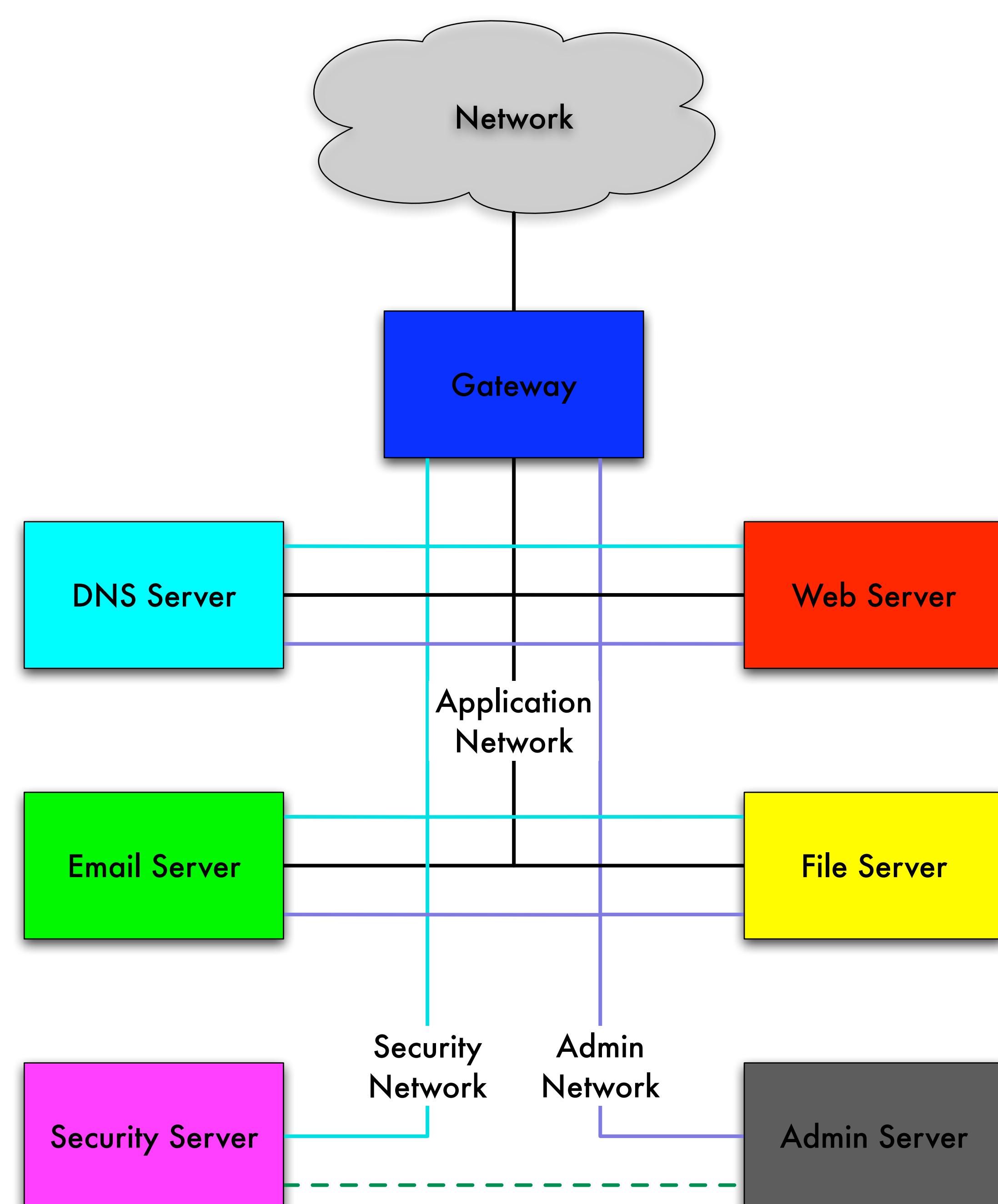
Benefits

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

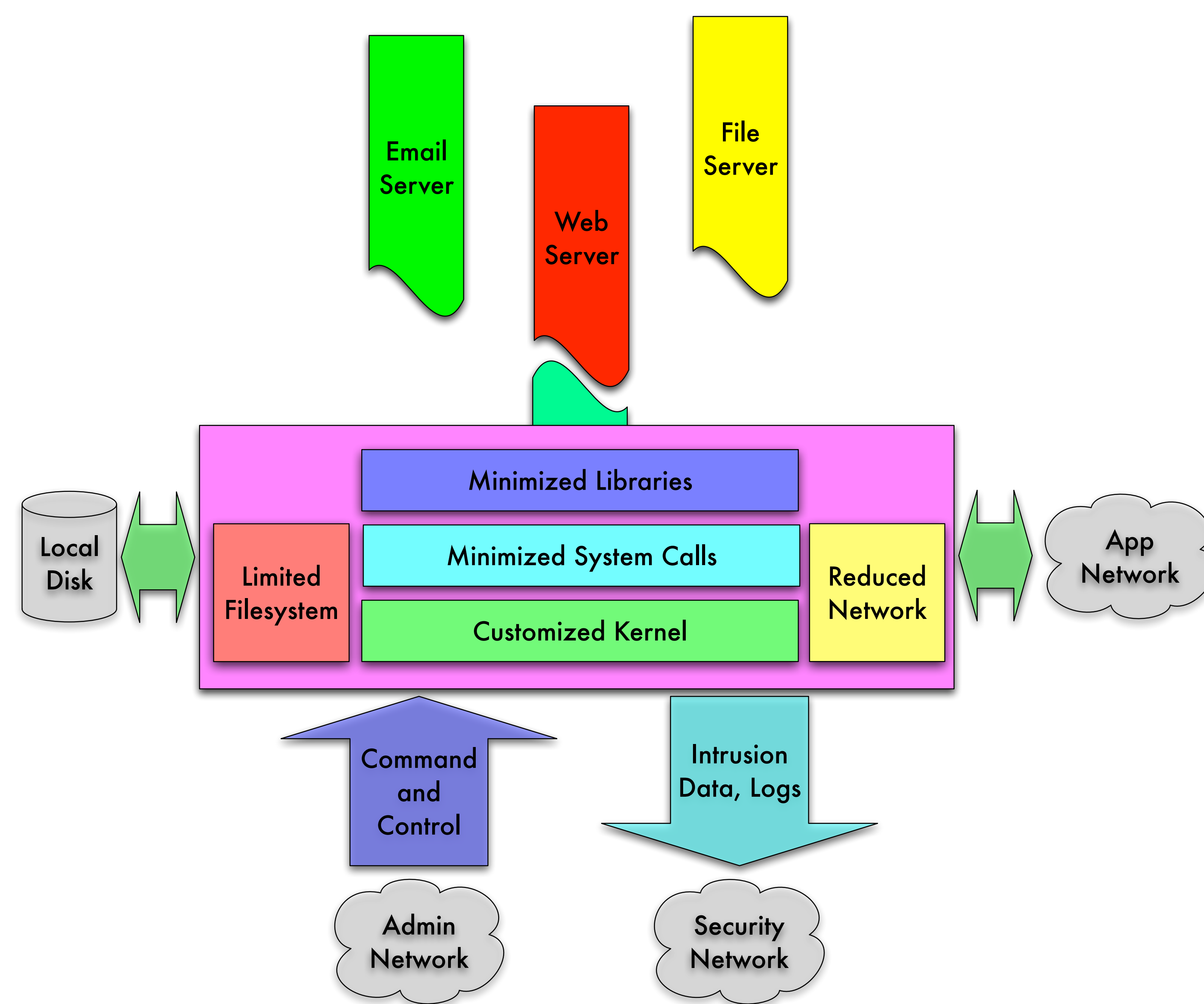
Design Principles

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

The Poly² Architecture



The Poly² Application Node



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