

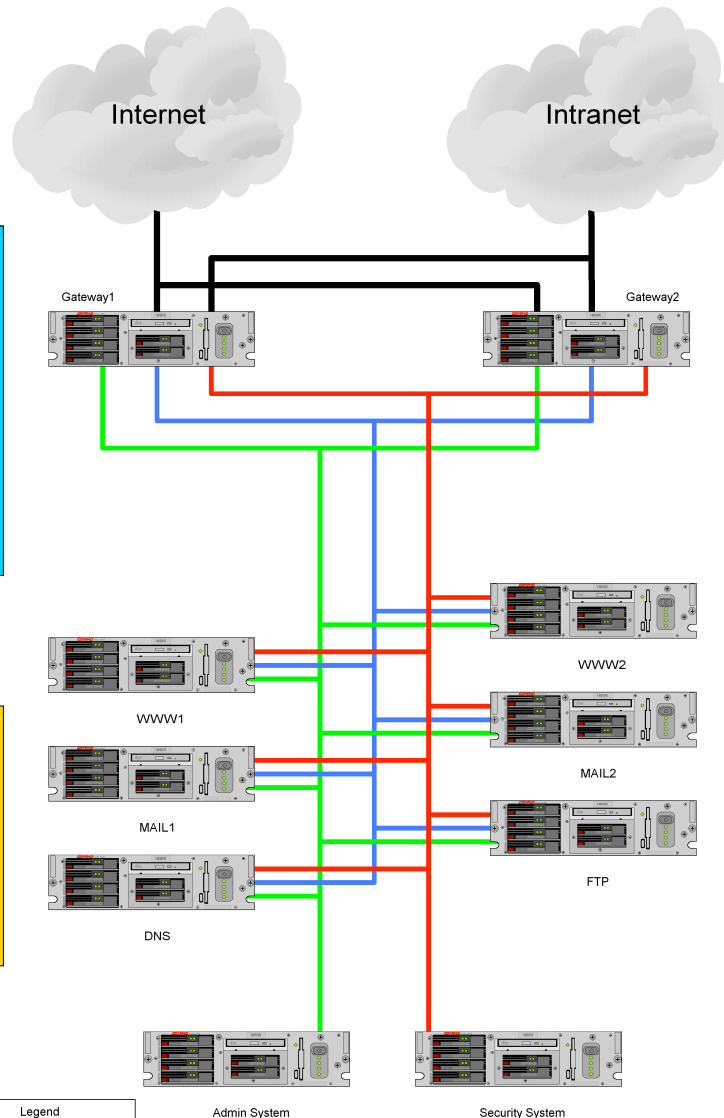
The Poly² Project (Poly-Computer * Poly-Network)

Design Goals

- Modularity
- Fault Tolerance
- Scalability
- Service Isolation
- Least Privilege
- Economy of Mechanism
- Least Common Mechanism
- Defense in Depth

Phases

- 1) Default O/S
- 2) System Profiling
- 3) Multi-system
- 4) Reduced Libraries
- 5) Reduced Kernel
- 6) Burn to CD



Implementation

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

Impact

- Improved Performance
- Data Diode
- Attack Isolation
- Intrusion/Anomaly Detection
- Forensics
- High Availability

Evaluation

- Metrics-based assessment of assurance in comparison with:
 - Virtualized server architecture (SODA)
 - Traditional server architecture

<http://www.cerias.purdue.edu/homes/poly2/>