

---

# Securing Web Access with DCE

**Brian C. Schimpf**  
**Gradient Technologies Inc.**

# Client/Server Applications - Can They Meet the Demand

- **Long Development Cycles**
  - Application development typically > 1 year
  - Development for multiple Client Platforms
  - Limited distributed computing developers
- **Administration Nightmare**
  - Installation and administration of many and complex desktop client applications

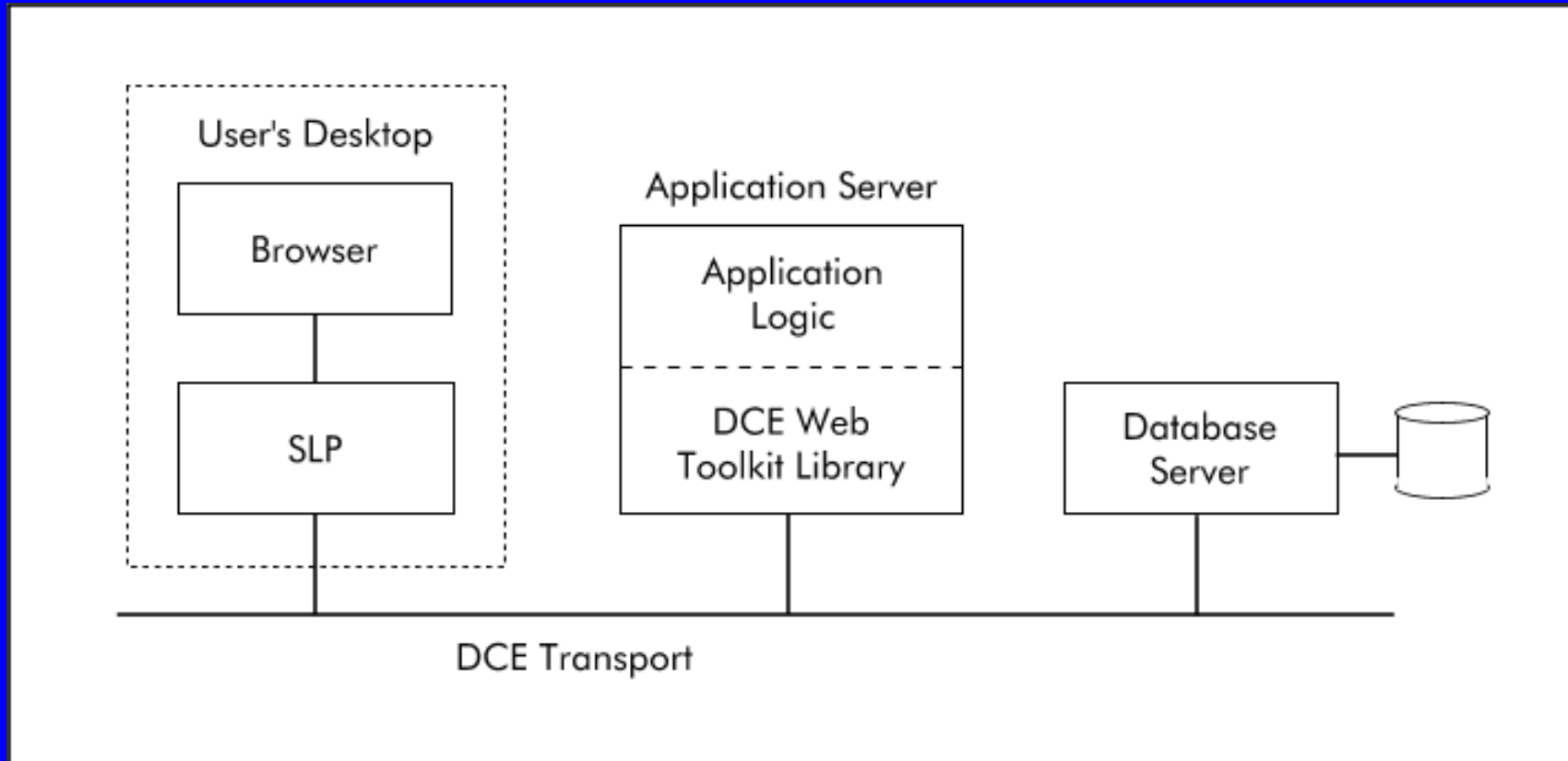
# *Internet/Web - Why Such Rapid Acceptance?*

- **Standards based networking**
  - “Standard” Web Browsers and Servers
  - TCP / IP everywhere
- **Cheap and easy access**
- **Quick Application and Information Deployment**
  - Tools easy to learn
  - Browsers easy to use
  - Applications easy to deploy

# Distributed Infrastructure

- **Apply heterogeneous distributed computing infrastructure to Web accesses**
- **Location independence of servers via directory service**
- **Security infrastructure that provides:**
  - strong user authentication (Kerberos)
  - data protection (integrity and privacy)
  - flexible and convenient authorization model

# Three-Tier Architecture with DCE Web



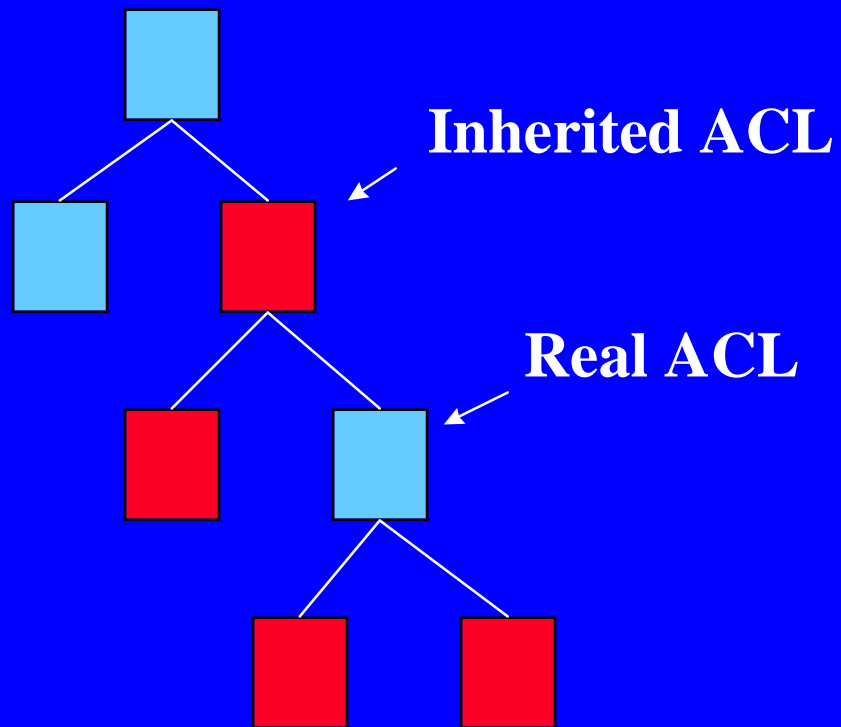
# Authorization Model

- Authorization performed by the server which controls the resource being protected
- Authorization model based on identity including group membership
- Authorization information contained in an ACL using a standard format
- DCE ACL model is extended to support *sparse ACLs*

# Sparse ACLs

- Not necessary to create a separate ACL for each object in the hierarchy
- Objects without specific ACLs have an *inherited ACL* - ACL of superior object
- Inheritance is evaluated at access time as opposed to creation time
- Deleting an ACL makes it an inherited ACL
- Real ACLs can be created - inferior objects inherit new ACL immediately

# Sparse ACLs (cont'd.)





# *Technology to Product*

---

- DCE Web technology has been implemented as a product called *WebCrusader*
- Based on work done by the Open Group Research Institute

# Questions?

---

- **For more information:**
  - <http://www.gradient.com/support/dceweb/intro.htm>
  - <http://www.osf.org/www/dceweb/>
- **[schimpf@gradient.com](mailto:schimpf@gradient.com)**