Data Access with DCE

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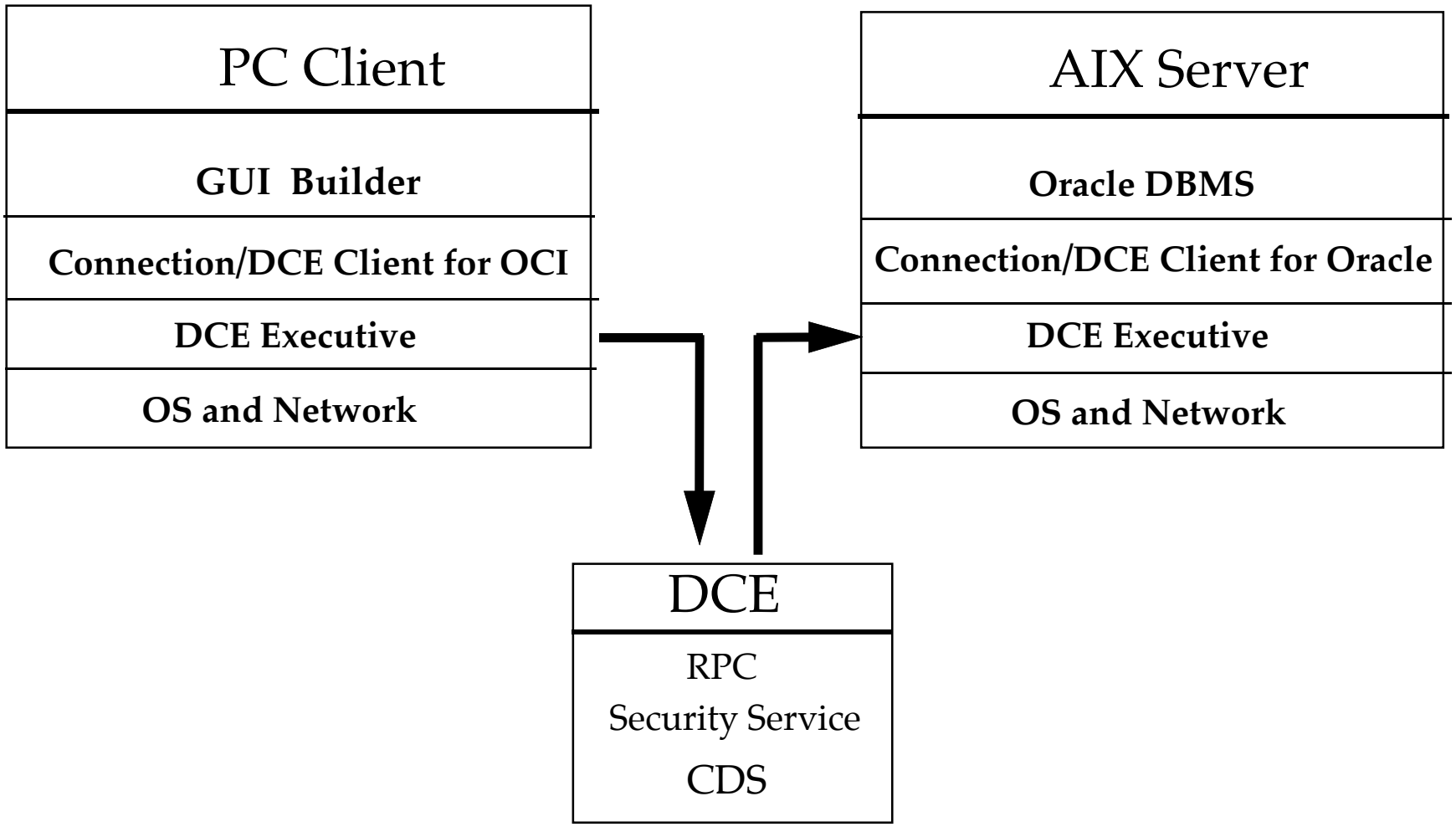
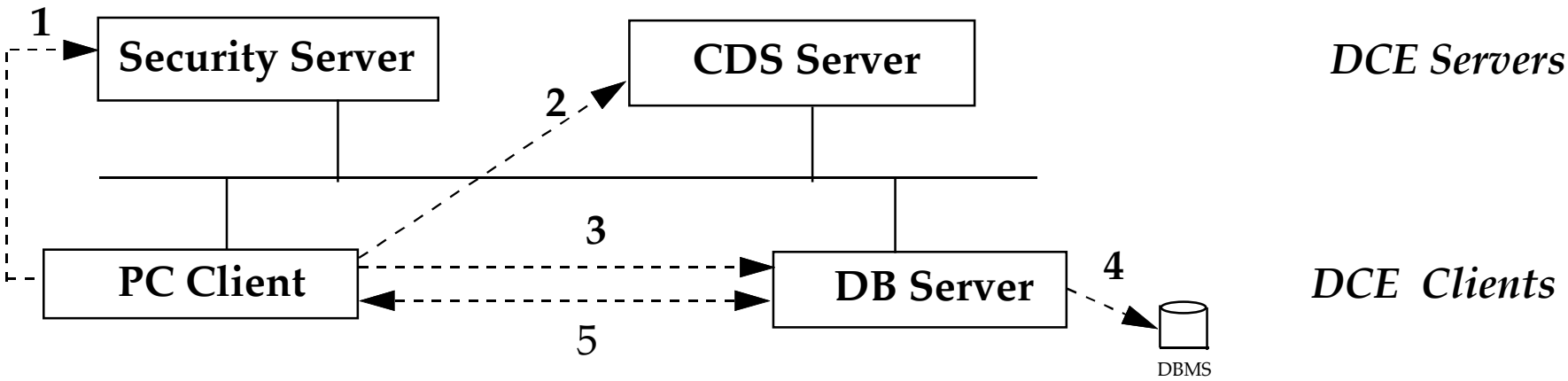
Approaches

- Connection/DCE (Open Horizon)
  - Full fledged product for Data access (built on top of DCE)
- Entera Database utilities (OEC)
  - DCE Rapid development toolkit with database utilities
- Native DCE API
  - set of API's exported by DCE

Connection/DCE Overview



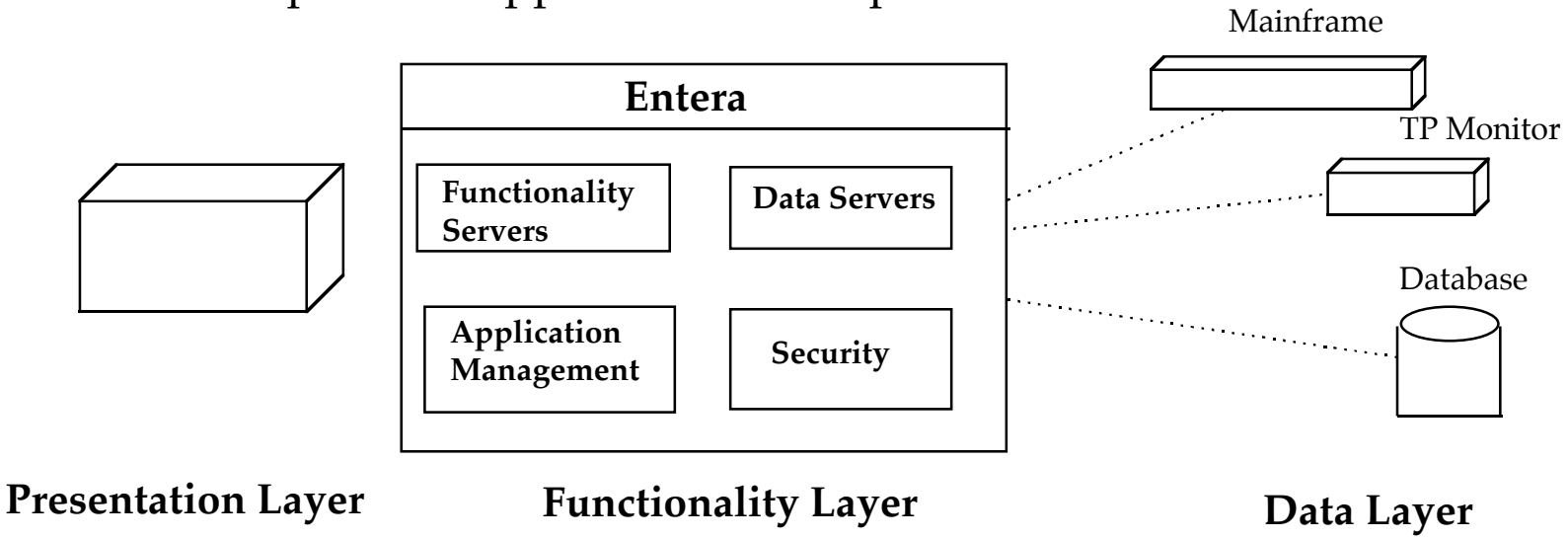
Steps



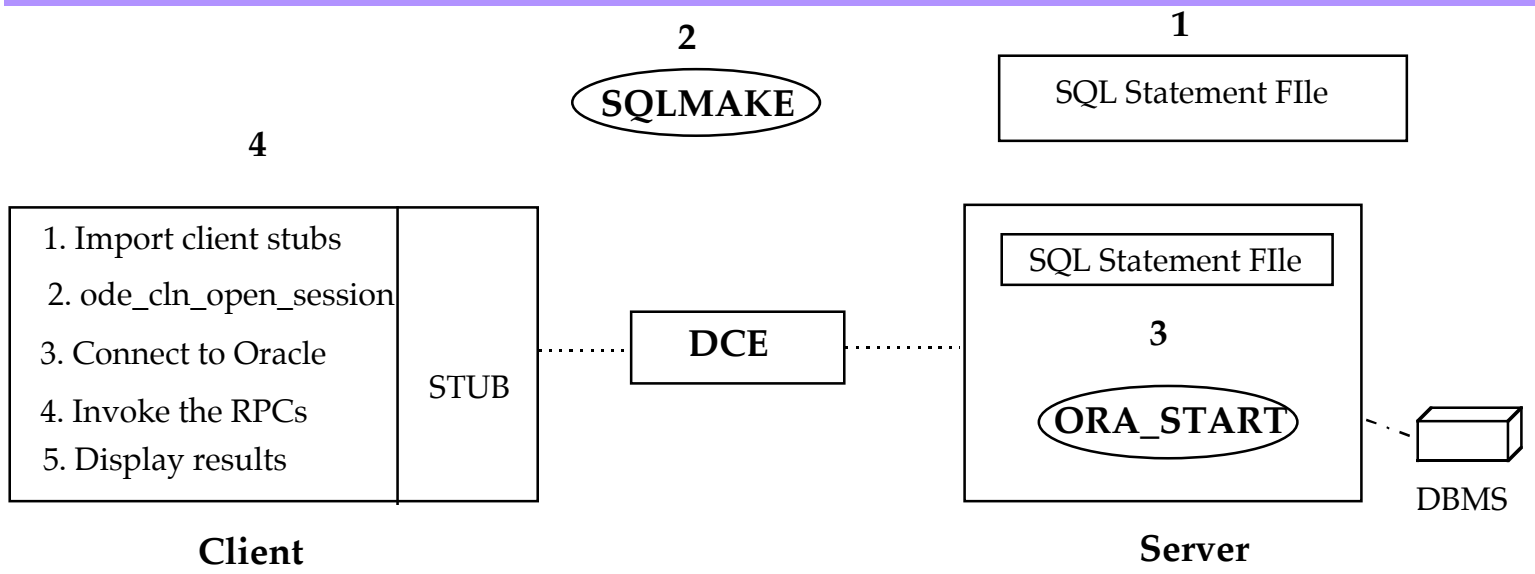
1. Authenticate: get DCE credentials
2. Get Database Server location from CDS
3. Connect to the DB Server
4. Do a Proxy Login to the DBMS
5. Execute queries (authenticated RPCs)

Entera Overview

Rapid DCE application development toolkit



Steps



1. Write the SQL statement file (entera compliant format)
2. Run SQLMAKE to generate the definition file and client stubs
3. Start the database server (using ORA_START utility)
4. Write the client application

Using the Native DCE API set

- Complexities
  - 600 API calls
  - C is the only supported language
  - Need lots of DCE skills
    - multithreaded apps, ACL manager, server initialization
  - Interfacing with Oracle
    - knowlege of OCI, translate SQL queries into DCE IDL, integrate with Oracle security.
- Advantages
  - have the full DCE API set to customize application.
  - No need to buy additional software.

Issues

	Connection/DCE	Entera
Setting Protection Levels	User controlled runtime parameter	
Transparent database access	Binding stored in CDS	
Connecting to the database	•Proxy Login •Passwords not sent across wire	•User needs to specify DB login and password
Modifying existing applications	Seamless integration with existing applications	Need to rewrite application
DCE Skills	No DCE skills required	•Need some DCE skills •But Entera API set is far less than native DCE API set.
Applications	Database access	Any distributed application

Highlights

- Connection/DCE
  - specialized DCE PRODUCT for database access
  - Proxy Login
    - Good: User need not specify DB Login/Passwd
      Restrictive: User cannot access account without Connection
  - No need to modify existing applications
- Entera Data Access Utilities
  - Rapid DCE application development tool
  - sqlmake: generates IDL files from SQL statement file
  - DBMS specific server start_up tools (ora_start)
  - Support for stub generation in multiple languages
- Native DCE API Set
  - No need to buy additional software.