# SQL-Based Queries the Specific-Query

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#### **SQL-Based Queries**

- New Type of Query
- Suppliments
  - General-Query
  - Simple-Query
- Blends Features of Each













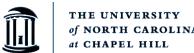


### **General-Query**

- Client/Server Call: rc/rsGenQuery
- Used Extensively
  - Clients, Server, Micro-services
- Conceptually Simple
  - No SQL or Schema Knowledge Needed
  - Request Columns, Specify Constraints, Get Rows
- ICAT Code Generates SQL
  - Applying Access Control in SQL
- Similar to an SRB Call















## Simple-Query

- rc/rsSimpleQuery
- Used for Admin Functions Only
  - Designed for iadmin
- Pre-defined SQL
- Returned in Various String Formats













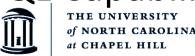


## New Specific-Query

- rc/rsSpecificQuery to Execute
- Only Admin Defined SQL
- Admin Must Ensure SQL is Safe
  - Object Information Access Control
  - Only Appropriate Columns/Rows
  - No Updates on ICAT Tables
- Optional Input Parameters
  - Bind Variables: No SQL Insertion
- Allows Full SQL Capabilities















#### **SQL-Based Queries**

- New iadmin Command to Add/Rm
- Caller Includes SQL or Alias and Parameters (if any)
- ICAT Verifies SQL is in Table
- Preset Queries to List Queries
  - 'iquest –sql ls'
- Results Returned in GenQuery Form
- Iquest sql 'SQL' or Alias [Parms]















#### Additional Information

- irods.org
  - SQL-Based Queries
  - Release Notes 2.5
- 'iquest -h'
- 'iadmin -h'













