SQL-Based Queries the Specific-Query

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DICE-UCSD
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'