Metacat - Bug #109

query speed slows as database grows

08/30/2000 11:36 AM - Chad Berkley

Status:	Resolved		**Start date:**	08/30/2000
Priority:	Normal		**Due date:**	
Assignee:	Chad Berkley		**% Done:**	0%
Category:	metacat		**Estimated time:**	0.00 hour
Target version:	Beta1 (AnnMeet2000)		**Spent time:**	0.00 hour
Bugzilla-Id:	109			

Description

As the database grows in size, the speed at which a query result is returned becomes greater. The database size to query result time ratio seems to grow at a large rate. These results were obtained by the experiment described below:

First of all, I wrote a script that adds an xml file to the database repetitively using the command line INSERT feature of DocumentImpl.java. I used this script for the following tests. When I started, the database (under the jones username) had about 15 documents in it and queries were returned pretty quickly (within 5 seconds or so). I started by adding several different small xml document (<20 lines, <500 bytes) to the database about 10-15 times each. Query speed was not noticably effected by adding these documents. It took about 5 seconds or so to add each document. Then I added a larger document (973 lines, 34,000 bytes). I added it about 10 times and it averaged about 30 seconds for the INSERT. After inserting this document query time was noticable slower. It took about 10 seconds to return any simple query. Next, I added a bohemith document (~5000 lines, 186,000 bytes). I added this document only once. It took it 5 min. 20 sec. to insert. After inserting this document, queries are now slowed to about 15-20 seconds/query. The database now contains 105 documents and xml_nodes contains 37,449 records. I think we expected these results, and after loading the 5000 line file, I actually expected it to take much longer to retrieve a query.

History

#1 - 09/01/2000 05:40 PM - Matt Jones

Reassigned to berkley.

#2 - 09/11/2000 08:04 AM - Chad Berkley

Changed the queries to reduce the number of subqueries which increased the speed of the query signifigantly.

#3 - 03/27/2013 02:13 PM - Redmine Admin

Original Bugzilla ID was 109