



Business Intelligence Performance Tuning Case Study

Title: Performance Tuning
Domain: Retail
Client: Major Retailer
Location: Northville, MI

Project Description

The purpose of this project is to research any known issues with MicroStrategy 9 using Informix IDS 10.x and help with any immediate performance optimization testing and implementation & recommend the overall performance tuning approach.

Environment

Windows, Informix IDS 10.x, SQL Server 2008

BI Tools

MicroStrategy 9.0

Other Tools/ Languages

SQL









Subject Area

Performance Tuning

CLIENT: Major Retail**PROJECT DETAILS:**

The purpose of this project is to research any known issues with MicroStrategy 9 using Informix IDS 10.x and help with any immediate performance optimization testing and implementation & recommend the overall performance tuning approach.

From the initial research & findings Reliable Software has decomposed the assessment into below areas to identify the current bottle necks of the performance related issues as indicated in the table below.

| Subject Area | Comments/Remarks | Status |
|--------------------------------|--|---|
| MicroStrategy 9.0 Installation | Verified |  |
| MicroStrategy 9.0 Settings | Verified |  |
| Concurrent Database Processing | There are more than normal threads open in MicroStrategy. DB processing is slow in case of concurrent SQL accessing same table |  |
| MicroStrategy Metadata Size | There are 8000 + number of reports and documents. A metadata cleanup may help optimize system resources |  |
| MicroStrategy Architecture | The architecture looks good for the most part. However many Report SQLs are long and accessing fact table multiple times. A relook at the architecture design will help improve report performance and maintenance |  |
| Data Warehouse Design | Data Warehouse design looks good from a dimensional data modeling perspective. |  |
| Intelligent Cubes | Report performance can be improved with ICubes. Reports accessing ICubes are instantaneous and does not require DB processing |  |
| Distribution Services | Distribution Services is a new feature in MicroStrategy 9.0 and report scheduling can be done directly on the MicroStrategy Web without having to use Narrowcast Server. |  |

With the above said observations, Reliable Software has started working on the DB performance and found that concurrent SQL statements are accessing the same fact table with a total DB memory allocated reaching to the maximum limit, which is directly affecting the overall speed of the SQL execution. Reliable Software therefore implemented database optimization techniques to streamline the SQL execution and configured the Informix database for optimal performance.

In addition the MicroStrategy Metadata is significantly large with 8000 + reports and documents and in this case Reliable Software worked with the client to identify redundant reports and clean obsolete objects that are not required to reduce the size of the metadata which directly impacted on the overall system performance. Further Reliable Software also implemented new features in MicroStrategy 9.0 such as Intelligent Cubes which have been utilized for instantaneous report access, Distribution Services for report scheduling to improve the performance.

BENEFITS OF THE PROJECT

The primary benefit of the project was enhancing the overall performance of the BI Reporting system. Secondly, utilizing the new features of MicroStrategy 9.0 product for faster report execution.

PROJECT TIMELINES & MILESTONES

| Sr. No | Project Phase | Phase Period (Working Days) |
|--------|---------------------------------------|-----------------------------|
| 1 | Requirements gathering | 2 |
| 2 | Analysis for Technical Specifications | 5 |
| 3 | Development | 25 |
| 4 | User Training | 2 |
| 5 | User Documentation | 2 |
| 6 | Acceptance Testing | 4 |
| 7 | Warranty Support | 30 |
| | Total (excluding warranty Support) | 40 |

PROJECT METRICS

Total team strength - 1

End User base - 500

This project was completely executed at our off-site facility in Northville, MI from start to finish and our client was able to leverage our cost effective model for this project.

Our off-site model is an attractive alternative for our clients looking for more cost-effective solutions without compromising quality. Our off-site delivery program is unique with below highlights.

Offsite Delivery Model Highlights:

- Priced at approximately 50% of equivalent onsite services.
- Highly qualified certified consultants.
- Excellent communication and project control - Same country and same time zone.
- Flexible scalable model - the capability of scaling projects on demand for any duration.
- Flexing to your methodology - adapting to clients way of doing business and managing projects, instead of making you fit a standard methodology or process.

About Reliable Software Resources, Inc.

Reliable Software Resources Inc. is a leading provider of information technology consulting and provides high-value, industry-specific IT solutions and is a pure-play IT project implementation and system Integration Company with cost effective delivery model for its clients. Our project delivery solution emphasizes local accountability and a flexible mix of global resources. The result is more-practical and actionable recommendations and the right-sized services that tightly align to your needs. Reliable Software's services are offered on a project- or strategic-staffing basis, across all technology platforms, operating systems and infrastructures. Reliable Software Resources Inc., Consulting practice has national foot print in United States and has been recognized as one of the fastest growing companies by Inc. Visit us online at www.rsrit.com or follow us on Linked In, Facebook & Twitter.



Phone : +1 248 477 3555
Fax : +1 248 715 6434
Email : info@rsrit.com

© Copyright 2011, Reliable Software Resources Inc. All rights reserved. No part of this document may be reproduced, stored in a retrieval system, transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the express written permission from Reliable Software Resources Inc. The information contained herein is subject to change without notice. All other trademarks mentioned herein are the property of their respective owners.