

Controlling Databases – Key for business applications

This application note describes the benefits of monitoring your business critical databases and how you can do it with op5 Monitor.

Introduction

Databases are commonly used by everyone, from small to large enterprises. With a general trend of centralizing and by that minimizing the actual number of databases, each database serves a multitude of higher applications. Different databases from different vendors are also being interconnected to provide new services. All of this creates a mesh that increases the need for good monitoring and fast core problem identification.

[Proactive monitoring](#) helps identifying potential problems and performance degradations before they turn into real and costly downtime. Proper analysis with scheduled proactive reporting enables trend and forecasting in day to day operations and planning the overall database architecture.

[op5 Monitor](#) currently supports a number of key features enabling this control.

Note that the features described in this application note are all op5 standard controls/checks. Adding unique scripts to these can greatly enhance the controls even more.

Methods

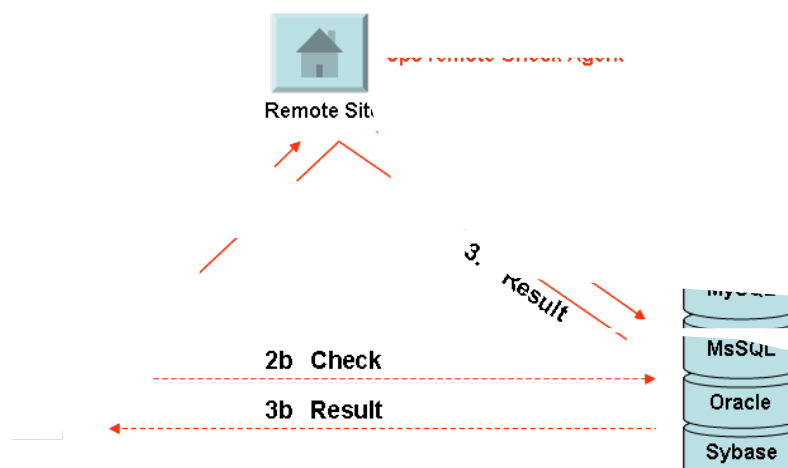
op5 Monitor works in a two dimensional model:

- Direct checks of individual key databases performance indicators
- Combining series of direct checks in to a logical flow and tracking overall performance

The check can be executed directly from the op5 Monitor system or from a software client. The software client set up is particularly interesting as it gives a direct end user perspective of the database performance, quality and uptime.

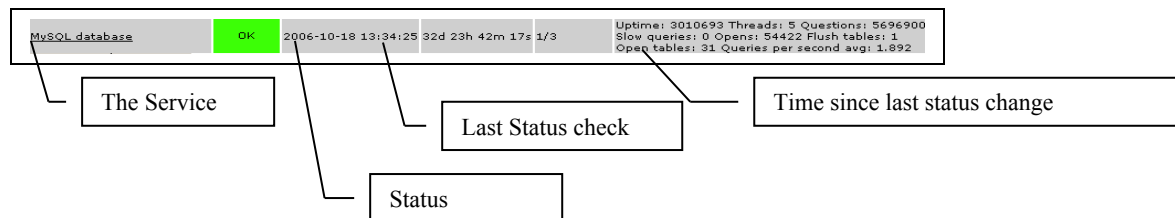
Example checks:

- Connect ok?
- Database online?
- System Load?
- SQL Query
- etc.etc.



[op5 Monitor](#) connects to the database and issues SQL queries like any other client would. This gives the administrator the same view, performance and SLA perspective of the database as the users have.

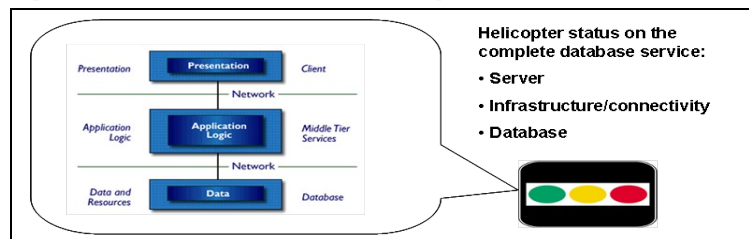
Example on status output for MySQL within op5 Monitor web interface



Databases and relationships

All databases from all vendors are dependent on external services such as connectivity and actual server performance. op5 Monitor enables you to combined logical and non logical groups for clear and direct views of the overall database and the services needed for quality assurance. It's called service groups. They greatly reduce problem resolution time and also create proper analysis with online or scheduled automatic reports.

op5 Monitor Service Groups:



Monitoring features supported for all databases

- Status of the associated process / service
- CPU Load
- Disk usage
- Memory usage
- Paging file (swap) usage

Microsoft SQL

- Connect to database
- Check if database is online
- Execute an SQL query and match the output

Oracle

- login
- cache
- max extents
- datafiles usage
- archiving turned on
- tablespace in backup mode or not
- tnsing the selected SID
- Check that database is running
- Compute the cache hit ratio in %.
- Check tablespace usage
- Check datafile usage
- Check the total number of datafiles
- Check available extents
- Check that log archiving is enabled
- Check if in backupmode
- Execute a user defined query and process the result

MySQL

- Connect to database
- Database status information

PostgreSQL

- Connect to database

Sybase

- Connect to database
- Check if database is online

- Execute an SQL query and match the output

MaxDB, Formerly known as SAP DB

- Database status
- Free space in DATA
- Free space in Log
- Autolog on
- Data Backup Run/Result
- Log Backup Result
- Execute an SQL query and match the output

DB2

- Connect to database
- Execute an SQL query and match the output

Quick facts about op5

Our business concept is to offer the market the most cost effective solution for IT support organizations. Our solutions provide significant and fully measurable improvements from both a quantity (uptime) and quality perspective. We offer our customers a maximum of cost efficiency because we base our product development on Open Source.

We utilize the power and efficiency of Open Source as the prime component in our product development as this further enhances the openness and flexibility for our customers. And it prevents old fashion "lock in" or proprietary based future enhancements. op5 is a Swedish Company, founded in spring year 2003.

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