Performance report

DCM performance
test with an MSSQL database

blueriq

Disclaimer

The results in the following report have been achieved on a specific hardware, software and application combination. The results in this report may differ from results on other combinations of hardware, software, custom code and application settings. No rights can be derived from this document.

It is strongly recommended to perform appropriate performance tests on the application that is modelled with Blueriq before taking it into production.

Introduction

Performance testing is a type of testing intended to determine the responsiveness, throughput, reliability, and/or scalability of a system under a given workload.

This report provides an overview of the test results for the DCM performance test for **Blueriq**. The purpose of this report is to give insight in the performance of a typical Blueriq application with a typical hardware configuration. This enables Blueriq customers to estimate the performance characteristics of a Blueriq application in production and to assess infrastructure adequacy.

How to use this report
Testing and reporting on performance is complex since it depends on a large number of variables. In the documentation on the Blueriq Community you can find the test approach and assumptions for the tests. It contains the reference application, user scenarios, the test environment, the test methodology, key performance indicators and the acceptance criteria.

Hopefully, the results from this performance test can help you to estimate the hardware configuration required to support your application when "going live" to production operation.

Load testing is the simplest form of performance testing and its goal is to see how the software behaves under normal use circumstances. Except for the situations where we introduce new modules or make breaking changes to one of our existing ones, the load testing is the way to go for Blueriq in order to check the application's current shape.

blueriq

Test environment

Three separate virtual machines were used in this test: one for the Blueriq Runtime, one for the database server and one for the JMeter application which simulates the user load and runs the performance script.
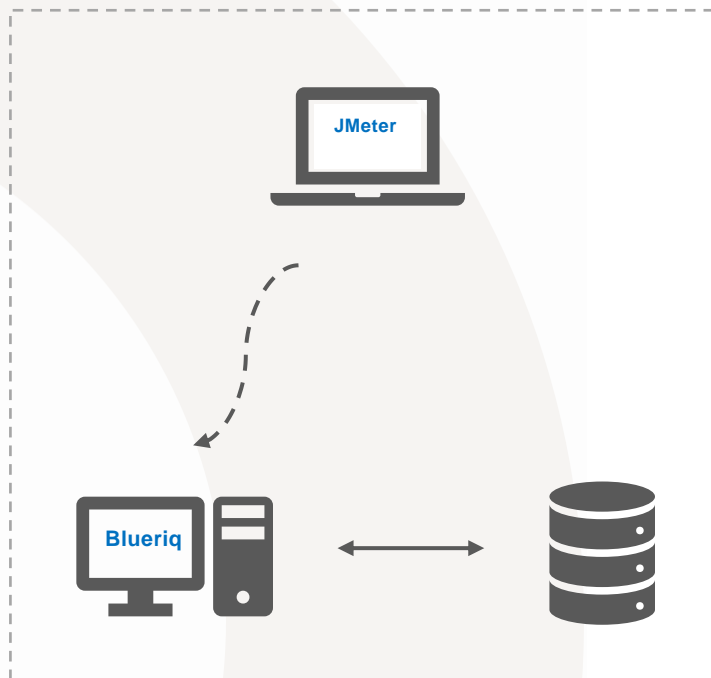
JMeter machine:
- OS Windows Server 2016 Standard
- Intel® Xeon® CPU E5-2680 v2 @ 2.80GHz 2.79GHz (2 processors)
- 2,00 GB memory (RAM)
- 39,10 GB HDD

Blueriq machine:
Server hardware
- Intel® Xeon® CPU E5-2680 v2 @ 2.80GHz 2.79GHz (4 processors)
- 6 GB Memory
- 39,10 GB HDD

Server OS/AS/Database
- Windows Server 2016 Standard
- JBoss 7.2 EAP
- JAVA 11.0.2

Database server:
Server hardware
- Intel Xeon E5-2680 @ 2.80 Ghz (4 processors)
- 4 GB RAM

Server OS/AS/Database
- Windows Server 2016 OS
- MSSQL 2017

Test results

The test results below show the results of all individual steps of scenario 2 (a description of this scenario is to be found on *https://my.blueriq.com/display/DOC/Performance+Reports*) with Blueriq version 13.10 when using an MSSQL database. The individual steps in all other scenarios are (approximately) equal to one of the steps in the scenario below.

For each step (Key Performance Indicator) the following values are given:
- The T-value used for calculating the Apdex value (as defined on the Blueriq community in chapter 2)
- The Apdex value with the colour indicating the rating (as defined on the Blueriq community in chapter 2)

Key Performance indicator (Dutch)	Actions	T-Value (ms)	Apdex value R13.8	Apdex value R13.9	Apdex value R13.10	Apdex value R13.12	Apdex value R14.0
1. Start OndernemerDashboard	Start the application. Display login screen;	500	1,00	1,00	1,00	1,00	1,00
2. Login	Log in applicant; Display dashboard.	500	1,00	1,00	1,00	1,00	1,00
3. Starten Aanvraag	Display simple form in dashboard.	500	1,00	1,00	1,00	1,00	1,00
4. Press OK in aanvraag	Create case; Create tasks(2); Display case dashboard.	3000	1,00	0,99	1,00	1,00	1,00
5. Opvoeren aanvraaggegevens start	Start task; Display applicant form.	500	0,99	0,99	0,97	0,99	0,99

6. Invullen en press OK	Validate form; Update case; Close task; Decision logic; Display applicant case dashboard;	1000	0,83	0,86	0,90	0,84	0,82
7. Toevoegen bewijsstukken start	Start task. Display; Dashboard with simple form	500	0,98	0,97	0,98	0,98	0,98
8. Press OK	Update case; Upload document (42 Kb); Close task; Decision logic; Create task; Display Applicant Case dashboard	2000	1,00	1,00	0,98	0,99	1,00
9. Indienen aanvraag start	Start task; Display dashboard with simple form;	500	1,00	0,99	0,98	0,99	0,98
10. Invullen en press OK	Update case; Close task; Decision logic; Create task (beoordelen); Display Applicant Case dashboard	2000	0,98	0,99	0,99	0,99	0,98
11. Logout	Logout;	500	1,00	1,00	1,00	1,00	1,00
12. Start OverheidsDashboard	Start application; Display login screen	500	1,00	1,00	1,00	1,00	1,00
13. Login intaker	Login; Knowledge Worker Overview dashboard	2000	1,00	1,00	1,00	1,00	1,00

14. Neem aanvraag in behandeling	Assign handler; Create tasks (2x); Knowledge Worker Case dashboard; Knowledge Worker Overview dashboard	2500	0,51	0,5	0,5	0,49	0,49
15. Controleren juistheid	Open task; Display dashboard + simple form	500	0,94	0,92	0,96	0,96	0,94
16. Invullen en press OK	Decision logic; Create task; Knowledge Worker Case dashboard	1500	0,93	0,95	0,88	0,95	0,96
17. Logout	Logout;	500	1,00	1,00	1,00	1,00	1,00
18. Start OverheidsDashboard	Start application; Display login screen	500	1,00	1,00	1,00	1,00	1,00
19. Login beoordeler	Login; Knowledge Worker Overview dashboard	2000AP dex	1,00	1,00	1,00	1,00	1,00
20. Neem aanvraag in behandeling	Assign handler; Create tasks (2x); Knowledge Worker Case dashboard; Knowledge Worker Overview dashboard	2600	0,96	0,81	0,63	0,76	0,80
21. Beoordelen inhoudelijke toets	Open task; Display dashboard + simple form	500	0,94	0,99	0,95	0,97	0,94
22. Invullen en press OK	Update case; Close task; Decision logic; Generate document (~90 Kb); Knowledge Worker Case dashboard	2500	1,00	1,00	1,00	1,00	1,00
23. Logout	Logout	500	0,99	0,99	0,98	0,98	0,98

Conclusion

Overall, we conclude that the performance for Blueriq release 14.0 is stable and in line with the previous versions. It should be noticed though that the apdexes are low on some steps and the results are overall worse than the one obtained by running Blueriq with an Oracle database.

We are aware of this problem and we are going to prioritize and fix this as soon as possible.