

Monitoring JAVA Application Servers

Aimilios Tsouvelekakis, Artur Wiecek, Luis Rodríguez Fernández, Viktor Kozlovsky

Introduction

- Introduce a platform for effective JAVA application monitoring used by different CERN communities.

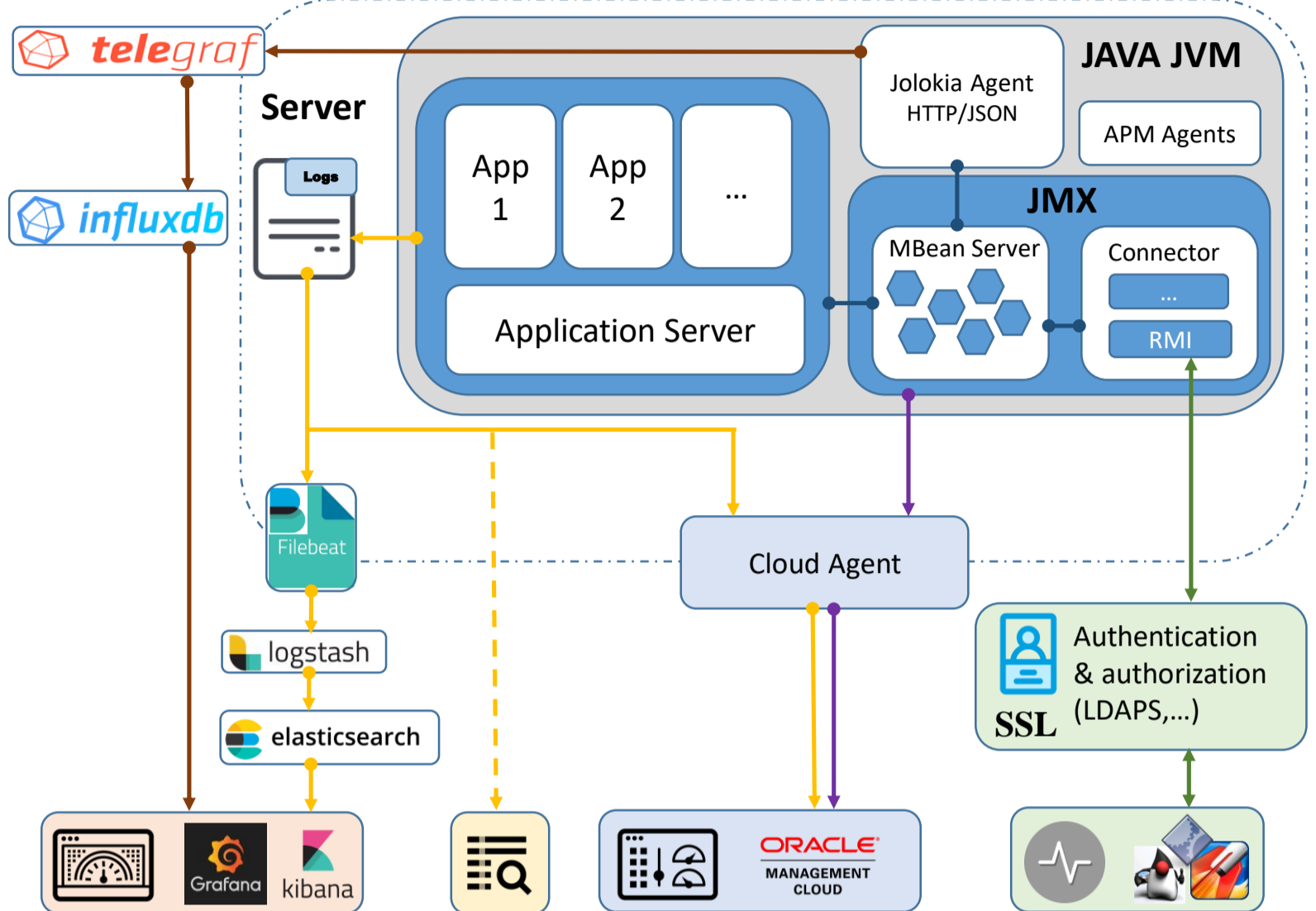
Deliverables

- Ability to locate errors quickly
- Flexible dashboards
- Immediate feedback

Challenges

- System scalability
- Historical data collecting
- Diversity of sources
- Community separation
- Application logging standardization

Monitoring Infrastructure



Pros & Cons



Dashboard Analysis

- **Conveniences**
 - Data drill down
 - Dedicated dashboards
 - Collective overview
- **Inconveniences**
 - Dashboard load time depends on the amount of data
 - Only stored data



Log Analysis

- **Conveniences**
 - Post analysis processing
- **Inconveniences**
 - Data filtering
 - Access control
 - Individual cases



Cloud Monitoring

- **Conveniences**
 - Forecastable costs
 - High availability
 - Data drill down
 - Dedicated dashboards
 - Collective overview
- **Inconveniences**
 - Internet connection
 - Data privacy



Live Monitoring

- **Conveniences**
 - Control & awareness
 - Easy access rules
 - Application profiling
 - Connect with client tools
- **Inconveniences**
 - Set up & configuration

Future Evaluation

- Instance behavior tracking (flight recording)
- Kubernetes cluster monitoring

Acknowledgements

- CERN IT-DB members
- Oracle openlab team

References

- Borja Aparicio Cotarelo - poster, Oracle Weblog on Kubernetes CHEP 2018 Conference, Sofia, Bulgaria
- Scott Hurley (2018), Configuring Technologies to Work with Java Mission Control <https://db-blog.web.cern.ch/blog/scott-james-hurley/2018-10-configuring-technologies-work-java-mission-control>
- Viktor Kozlovsky (2018), JMX connection with SSL <https://db-blog.web.cern.ch/blog/viktor-kozlovsky/2018-10-jmx-connection-ssl>
- Scott Hurley (2018), Java Mission Control Evaluation <https://zenodo.org/record/1470508#.XD9PgpzTXmF>