



Qlik Meetup London

WORKFLOW MANAGEMENT WITH QRS API
&
BACKUP AUTOMATION WITH POWERSHELL

- Kabir Rab



Shirajul Kabir Rab
(Kab/Kabir)



Quick Introduction

- ▶ Solution Architect @ Tahola.
- ▶ Work across -
 - ▶ BI
 - ▶ Infrastructure (including AWS, Azure)
 - ▶ Application integration
- ▶ BI Experience - (Data warehousing, visualisations, ETL etc)
 - ▶ Worked with BI Tools such as QlikView, Qlik Sense, MS BI Stack, SAP Business Objects, Oracle (OBIEE, Endeca)
- ▶ Application development (.net core, c#, JavaScript, HTML).
- ▶ Hobbies – Playing with new technologies...
- ▶ Father of 2 very active boys.
- ▶ Interesting Fact – Former e-gamer

Agenda

- ▶ QRS API
 - ▶ Authentication to the API
 - ▶ HTTP Header
 - ▶ Server Certificate
 - ▶ ~~Windows user account~~
 - ▶ Use case demo
- ▶ Automation of Qlik Sense Enterprise backup using PowerShell.



QRS API – Basics

Authentication URL Template

Direct connection with client certificate

`https://<QRS machine name>:4242/<path>`

HTTP Header connection via Virtual Proxy

`https://<QRS machine name>/<virtual proxy>/<path>`

REST methods can be performed on QRS API:

- ▶ **GET**
- ▶ **POST**
- ▶ **PUT**
- ▶ **DELETE**

Common Response Codes

General responses

The table below lists the general HTTP response codes.

Response code	Description
404	Invalid path
404	Module not authorized
404/405	Method not allowed (for unsupported operations on a path)

Expected responses to POST methods

The table below lists the expected responses to POST methods.

Response code	Description
200/201	Successful call
400	Invalid input (but in correct format)
406	Not acceptable (the client places too many restrictions via Accept-*

Expected responses to GET methods

The table below lists the expected responses to GET methods.

Response code	Description
200	Successful call
406	Not acceptable (the client places too many restrictions via Accept-*

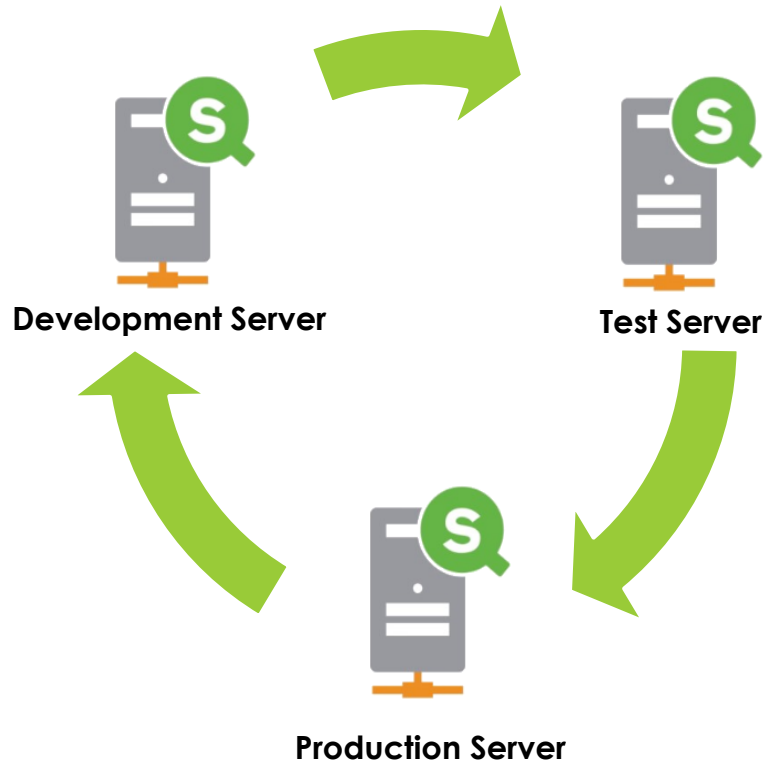
QRS API Connection & Endpoints Demo

QS App Migration Use Case

Business 'A' has 3 QS servers

- ▶ Production Server
- ▶ Development Server
- ▶ Test Server

Their development process is as follows –



Production Server –
Move app to
development server to
carry out changes

Move app to Test Server
for QA and UAT

Development Server -
Developers updates the
app

Promote app to production
server

**Apps need to be saved externally before each stage to allow version control

QRS API Workflow Demo

QRS API – Useful Links

QRS API Reference: <https://help.qlik.com/en-US/sense-developer/June2018/APIs/repositoryserviceapi/index.html>

QRS API Qlik Help: https://help.qlik.com/en-US/sense-developer/February2019/Subsystems/RepositoryServiceAPI/Content/Sense_RepositoryServiceAPI/RepositoryServiceAPI-Introduction.htm

Examples: https://help.qlik.com/en-US/sense-developer/September2018/Subsystems/RepositoryServiceAPI/Content/Sense_RepositoryServiceAPI/RepositoryServiceAPI-Example.htm

Qlik .NET REST SDK by Øystein Kolsrud: https://github.com/kolsrud/qlik_rest_sdk

QRSpy – Python wrapper for QRS API: <https://clintcarr.github.io/qrs.py/>



Qlik Sense Enterprise Backup Automation



PowerShell Backup Automation Script Demo

Backup Automation – Useful Links

Guide to the backup script:

<https://kabonline.net/2018/05/30/qlik-sense-enterprise-backup-automation-via-powershell/> (Updated version)

Or @Tahola - http://news.tahola.co.uk/blog_posts/time-flies-by-dot-dot-dot-72295

PostgreSQL: <https://www.postgresql.org/docs/9.6/backup.html>

Another example script by [Pranav Prakash](#) - <https://pranavprakash.net/2017/05/16/automated-postgresql-backups/>

Q & A

ANY QUESTIONS?



Contact

Shirajul Kabir Rab (Kab/Kabir)

Solution Architect

Tahola LTD



 [@kab1983](https://twitter.com/kab1983)

 <https://www.linkedin.com/in/kabir-rab/>

 kabir.rab@tahola.com

 <https://kabonline.net/>

Thank You