



USA Staffing[®]
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USA Staffing Reporting & Analytics

Reporting and Analytics Workgroup Meeting

July 24, 2018



OPM HR SOLUTIONS
by government, for government

U.S. Office of Personnel Management
1900 E Street, NW, Washington, DC 20415

Agenda

- **Program Updates**
 - Cognos Performance Updates and Goals
 - USA Staffing Upgrade Applicant Flow Data Status
- **Modifications to Reports/Data Models**
 - Staffing Reports
- **Cognos Tips**
 - Filtering reports with multiple queries



- **Open Q&A/Demo**



Cognos Performance Updates and Goals





Cognos Performance Update

Issue:

Query performance continues to be an issue. In particular, the New Hire, Application, and Assessment areas (Staffing Reports) has slowed down in recent months. This is due to a few factors:

- Increased data volume in the USA Staffing Upgrade (Applications)
- Complexity in the underlying data structure (New Hire and Assessment)

Solutions:

- **Short term:** Build end-of-day models for the problematic areas, modify existing views where possible
- **Long term:** Move all reporting (except for DSS) to the data warehouse



Short-term solution

New end-of-day models for problem areas

- Build specific data models that will be updated nightly
- These new models will replace the source for current namespaces/query subjects, but data item paths will remain consistent to the extent possible
- Currently developing a new model for New Hire data, scheduled to be deployed to Production with Sprint 80 (September)

Impact:

- Users **will not** need to re-develop existing reports

Estimated Timeframe:



- Data will be updated nightly **Summer-**
- Query performance should drastically improve **Winter 2018**

Long-term solution

Replace the Staffing Reports (transactional) package with the Staffing Analytics (data warehouse) package

- Move all reporting (except for DSS) over to the data warehouse
- Data will be updated nightly
- After Upgrade AFD is complete (scheduled to be deployed to Production with Sprint 79 (August), the team will start working on developing Staffing Reports-type data in the data warehouse

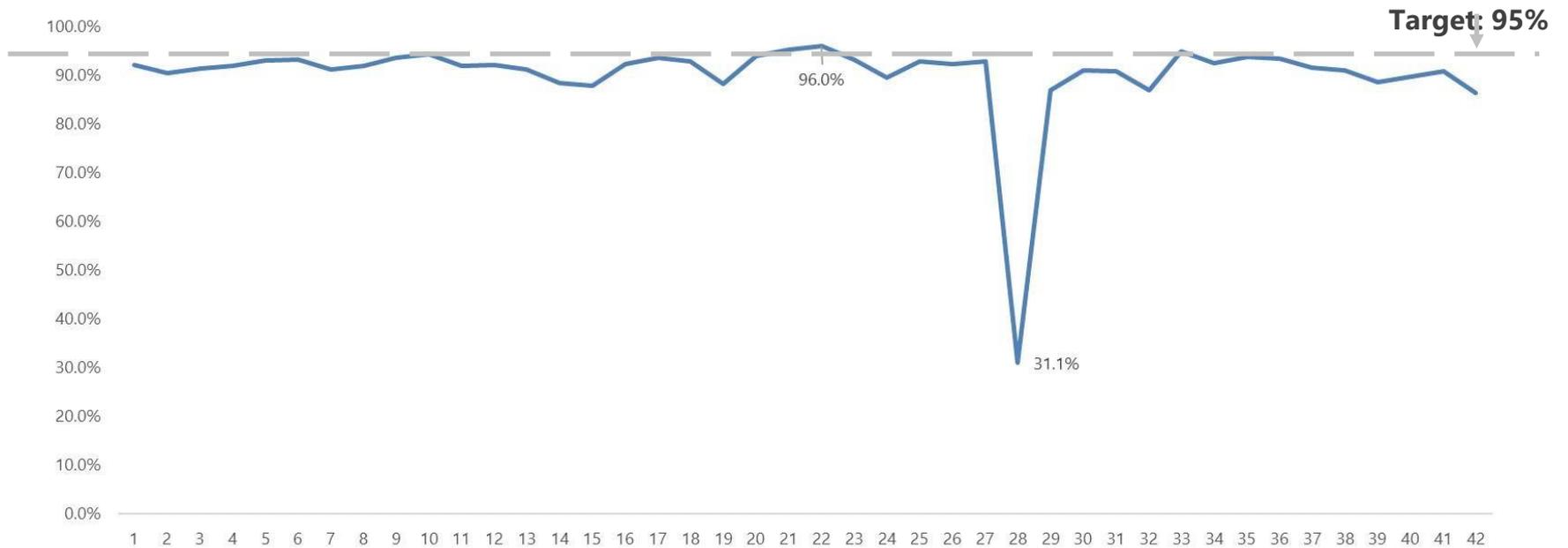


- Staffing Analytics is a different data structure; existing reports would need to be redeveloped.
- Both Staffing Reports and Staffing Analytics will be available in parallel as we work to fully develop Staffing Analytics **Impact:**
- Users will need to re-develop existing reports **Estimated Timeframe:**
- Data will be updated nightly **FY 2019-20**
- Query performance should drastically improve



Report Run Success Rate

Report Run Success Rate by Fiscal Week (FY 2018 thru July 14th)



- Median: 92.1%
- Target: 95%



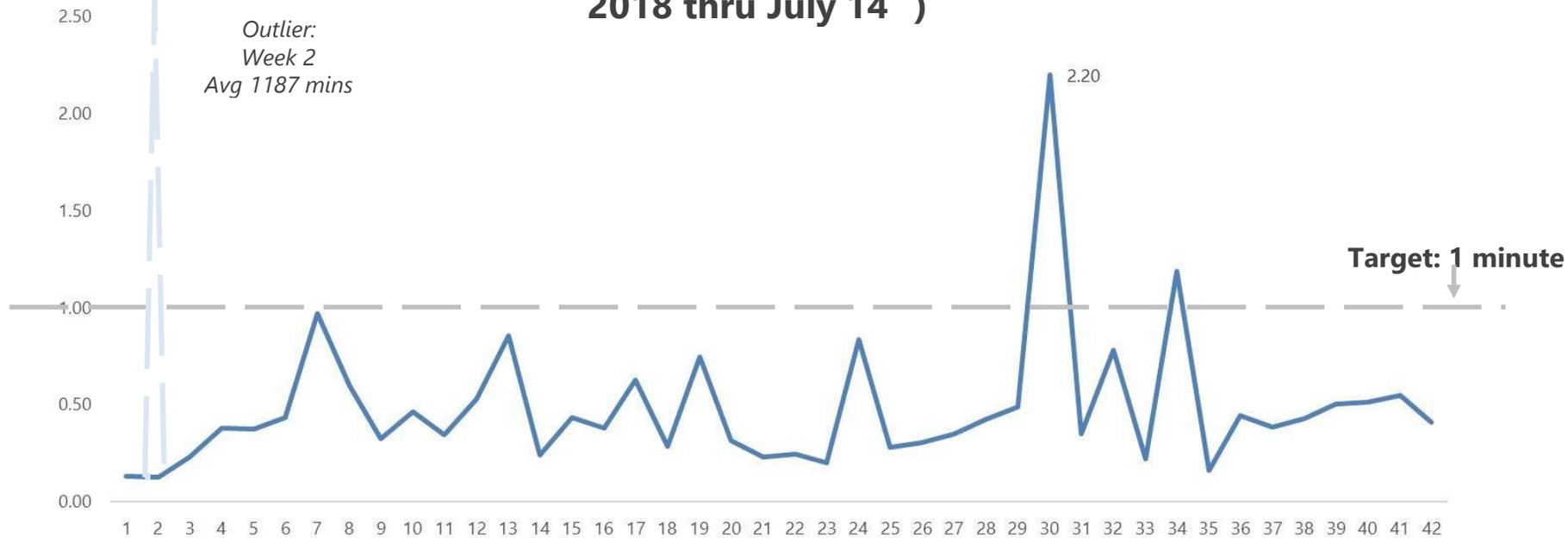
- *Includes both reports and batch (scheduled) reports* **Report**

Runtime

Average Runtime (Minutes) for Successful Reports by Fiscal Week (FY



2018 thru July 14th)

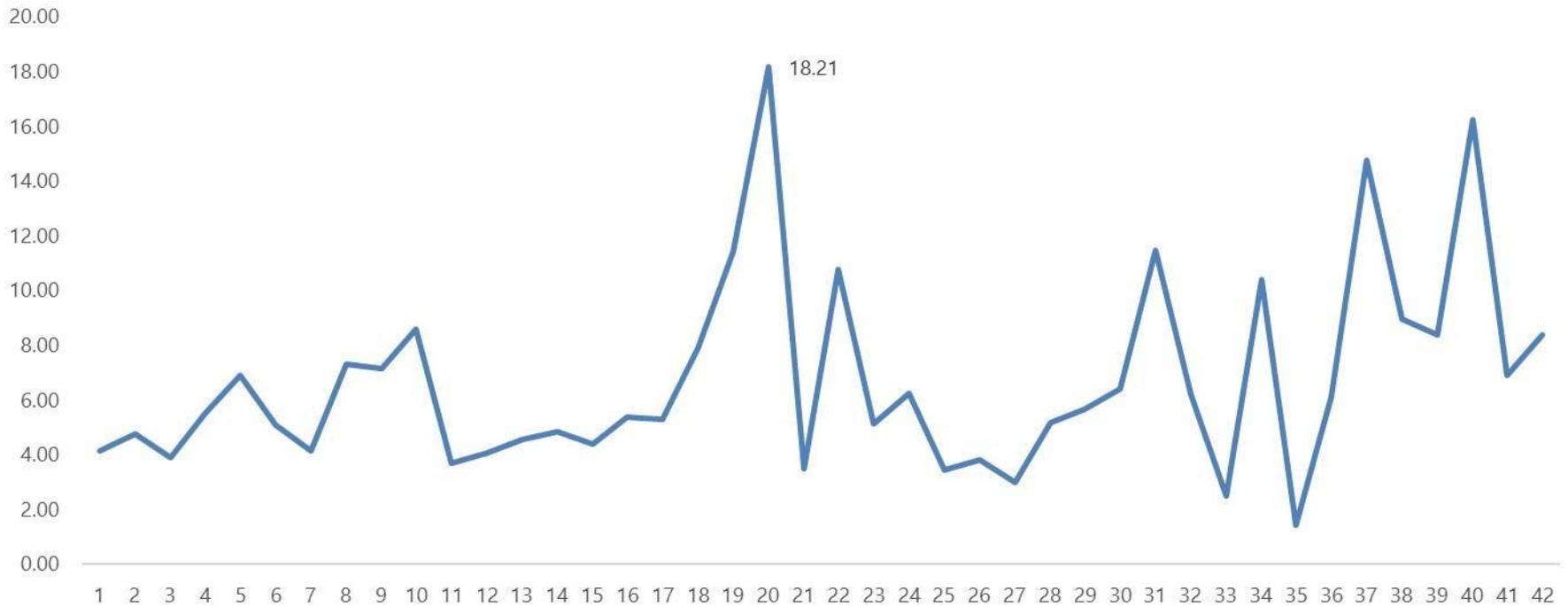


- Median: 0.4 minutes (24 seconds)
- Target: 1 minute
- Only includes Reports (reports directly run by a user)

Batch Report Runtime



Average Runtime (Minutes) for Successful Batch Reports by Fiscal Week (FY 2018 thru July 14th)

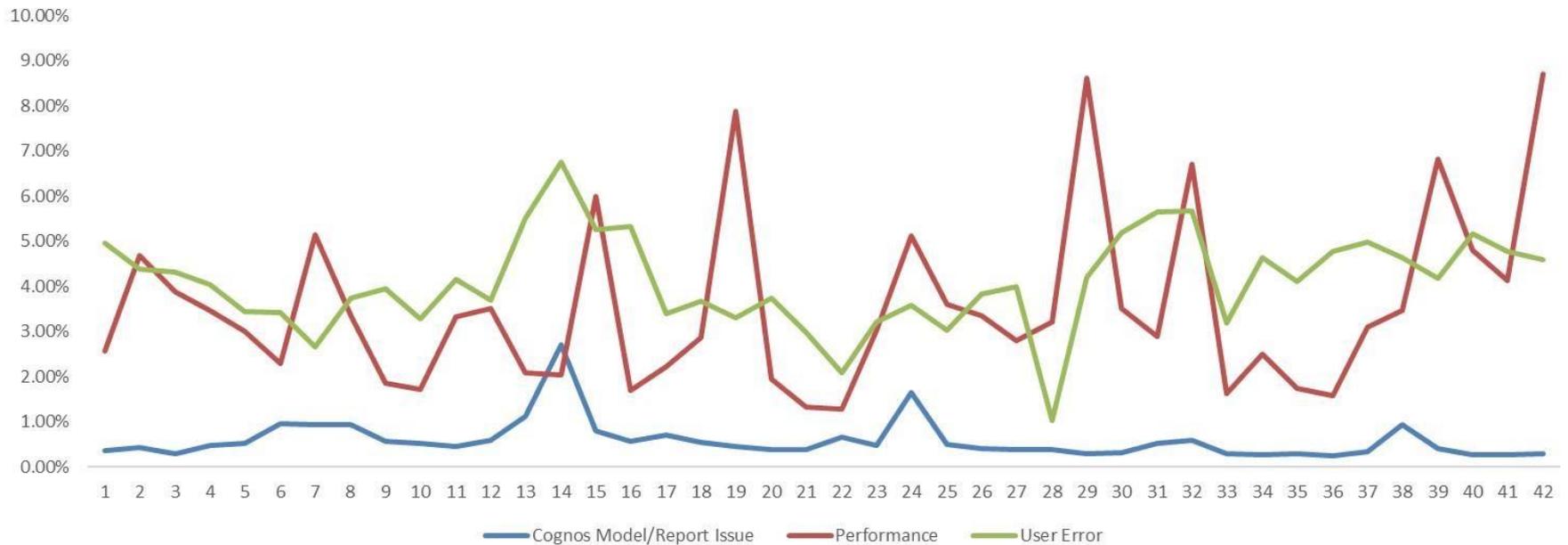


- *Median: 5.58 minutes*
- *Only includes Batch Reports (reports scheduled or run in background)*



Cognos Error Codes

Report Fail Rate by Error Code and Fiscal Week (FY 2018 thru July 14th)



- **Cognos Model/Report Issue:** errors related to the structure of Cognos data models or Administration



- **Performance:** errors related to the overall system architecture, including Query service is busy, request was cancelled by user, and insufficient memory
- **User Error:** errors related to incorrect query or function syntax, cross-joins, etc

USA Staffing Upgrade Applicant Flow Data Status



Applicant Flow Data Status

Legacy USA Staffing: Data continues to be loaded monthly (Certificates) and quarterly (Vacancy). We do not expect to make any additional modifications to Legacy AFD data or reports.

Upgrade USA Staffing: Data is currently only available for applications submitted in FY 2017. We are in the process of building data that covers all fiscal years.



Current Estimate

for Upgrade USA

August 2018

Staffing AFD:

Modifications to Reports/Data Models

Sprint 77 was deployed to Production on July 5th **Sprint 78** is planned for deployment to Production on July 28th



Staffing Reports

Data Model Changes

New Hire Onboarding Invitation – July 5

Added information on the invitation to the New Hire to start the onboarding process, including who sent the invitation, when it was sent, and response received

[New Hires].[New Hire Onboarding Invitations]

New Hire Form Accepted– July 5

Added attributes on who accepted New Hire forms and when they were accepted



Staffing Reports

[New Hires],[New Hire Forms]

Data Model Changes

Certificate Applicant List Name– July 5

Added the name of the Applicant List the certificate was created from

[Certificates].[Certificate].[Certificate Applicant List Name]

Applicant Review and Consideration Attributes– July 5

Added new attributes related to the applicant review process, the original application submission date, and whether or not an application is expired



Staffing Reports

Applications:

Application is Expired
Application is Reviewed By
Application is Reviewed
Date/Time



Application Original Submitted

Staffing Reports

Date/Time

Certificates:



Staffing Reports

Certificate Application Eligibility
End Date
Certificate Application Eligibility
Start Date
Certificate Application is Expired
Certificate Application is Followup
Certificate Application is Reviewed

Workflow Status and Task Rules – July 5

Certificate Application is Reviewed By
Certificate Application is Reviewed
Date/Time
Certificate Application Last Update
Date/Time
Certificate Application Original
Submitted Date/Time

Data Model Changes

Added Workflow status (draft, published) and the rule stating the trigger for the task

[New Hires].[New Hire Onboarding Invitations]

Workflow and Time to Hire Goal – July 5

Added the workflow assigned to a request and the associated time to hire goal to multiple namespaces

[Applications].[Request Workflows]



Staffing Reports

[Assessment Packages].[Assessment Request Workflows]

[Certificates].[Certificate Request Workflows]

[Tasks].[Task Request Workflows]

New/Modified Reports

Modified Application History Tracker Report – July 5

Added Applicant Phone Number and a link that brings users back to the vacancy case file page

Team Content > USA Staffing Packages and Folders > Staffing Reports > Staffing > Application



Staffing Reports

Requests Pending Announcements Report – July 28

New report that displays a list of approved requests where an announcement has not yet been created, sorted by how many days have elapsed since Request Approval

Team Content > USA Staffing Packages and Folders > Staffing Reports > Staffing > Application



Cognos Tips:

Filtering reports with multiple queries **Common issues with Long-running reports**

Long-running reports can affect overall Cognos performance for our entire user community

- Full outer joins
- Only filtering at the highest level of data
- Extraneous query items



- Unnecessary joins

Pgs 367-368 in the IBM Cognos Analytics User Guide includes some helpful suggestions on improving your report performance:

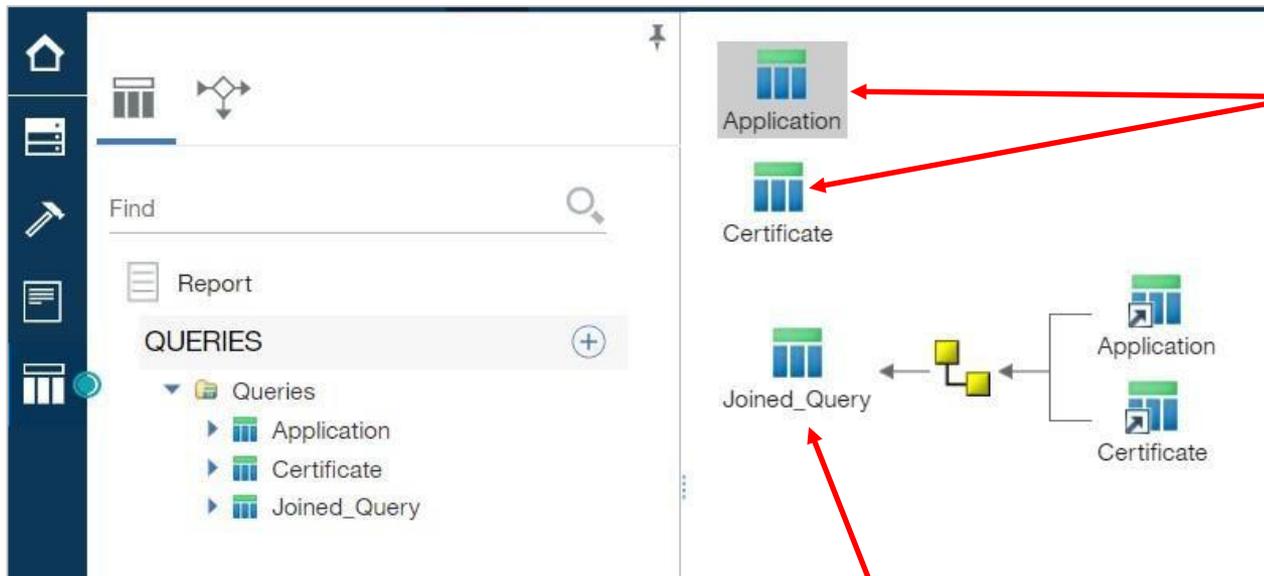
https://www.ibm.com/support/knowledgecenter/SSEP7J_11.0.0/com.ibm.swg.ba.cognos.ug_cr_rptstd.doc/ug_cr_rptstd.pdf?view=kc



Filtering Reports with Multiple Queries

Including filters at the lowest query-level will **reduce the number of records to match during the join process, improving query performance**





Instead, add filters in the first queries

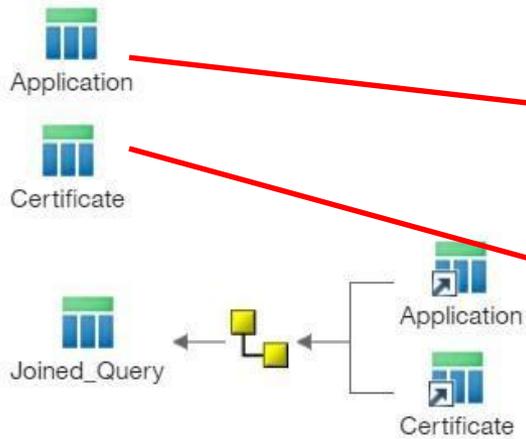
Whenever possible, don't just add filters on the final, joined query



Filtering Reports with Multiple Queries

Add a filter to each applicable subquery using the same parameter, in this case, the ?date? parameter





Detail filter expression - Application

Available Components:

- Staffing Reports
 - Presentation View

Expression Definition:

```
[Application Last Submitted Date/Time] in_range ?date?
```

Detail filter expression - Certificate

Available Components:

- Staffing Reports
 - Presentation View

Expression Definition:

```
[Certificate Application Last Submitted Date/Time] in_range ?date?
```

The report will filter on the appropriate data item even when you are using the same parameter







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Resources and Contacts

IBM Cognos Analytics User Guide

The official IBM user guide for Reporting via Cognos Analytics:

https://www.ibm.com/support/knowledgecenter/SSEP7J_11.0.0/com.ibm.swg.ba.cognos.ug_cr_rptstd.doc/ug_cr_rptstd.pdf?view=kc

USA Staffing Resource Center

Under the Reports and Analytics section, you'll find presentations from previous workgroup sessions and other resources:

https://help.usastaffing.gov/USASUpgrResCtr/index.php/USA_Staffing_Upgrade_Resource_Center

Cognos Report Author Training Sessions

An overview of USA Staffing data with practical exercises in running standard reports and developing custom reports in Cognos. Contact your Account Manager if you are interested in scheduling a session for the report authors in your organization



Need Help?

If you are experiencing issues accessing Cognos or need help to create or troubleshoot a report, submit a HelpDesk ticket through USA Staffing. If you are unable to submit a HelpDesk ticket, please contact us at **USASTaffingData@opm.gov**



