

IBM Db2 Data Management Console

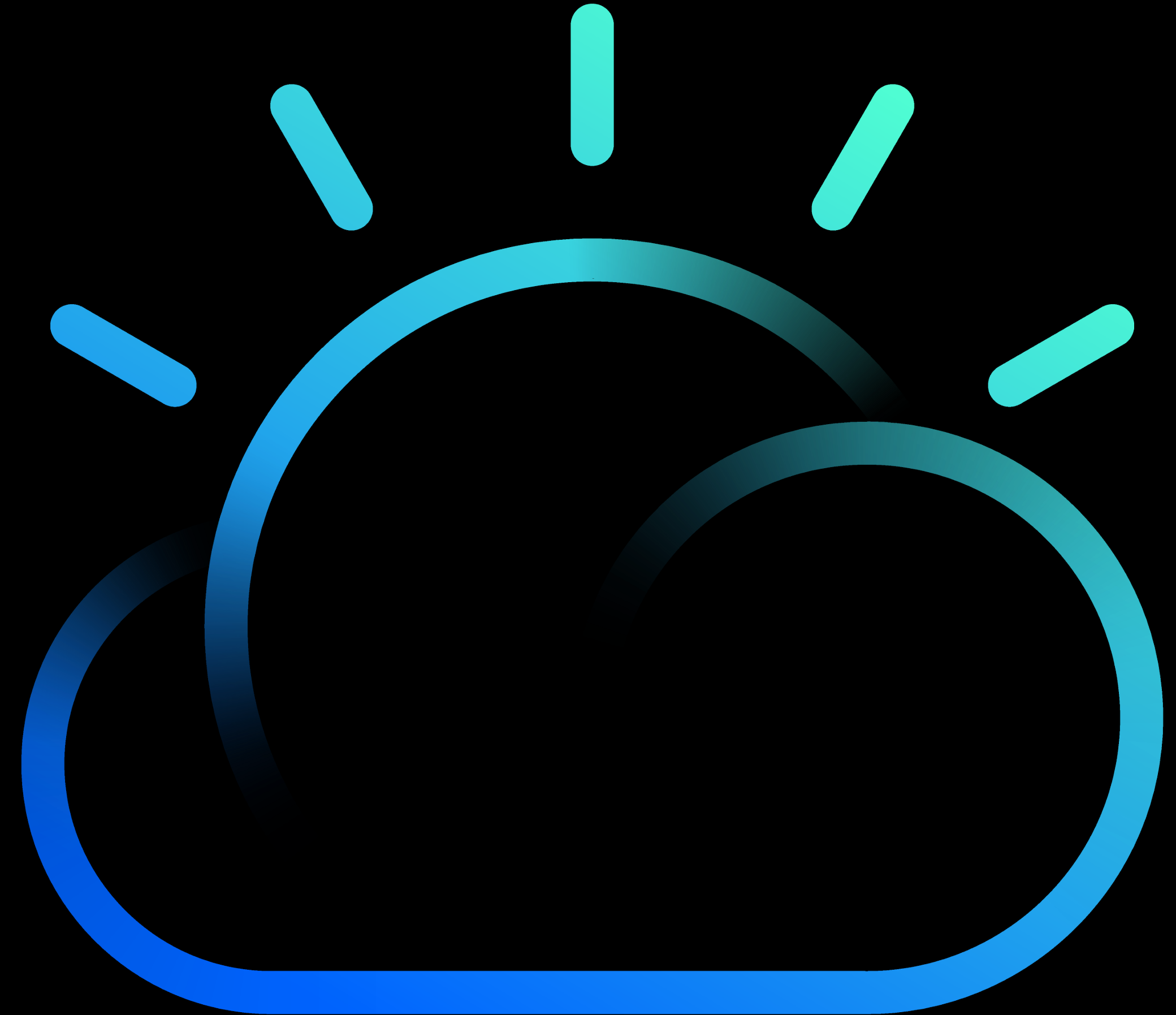


Overview deck



Maryaia Rakina
maryia.rakina@ibm.com

Offering Manager



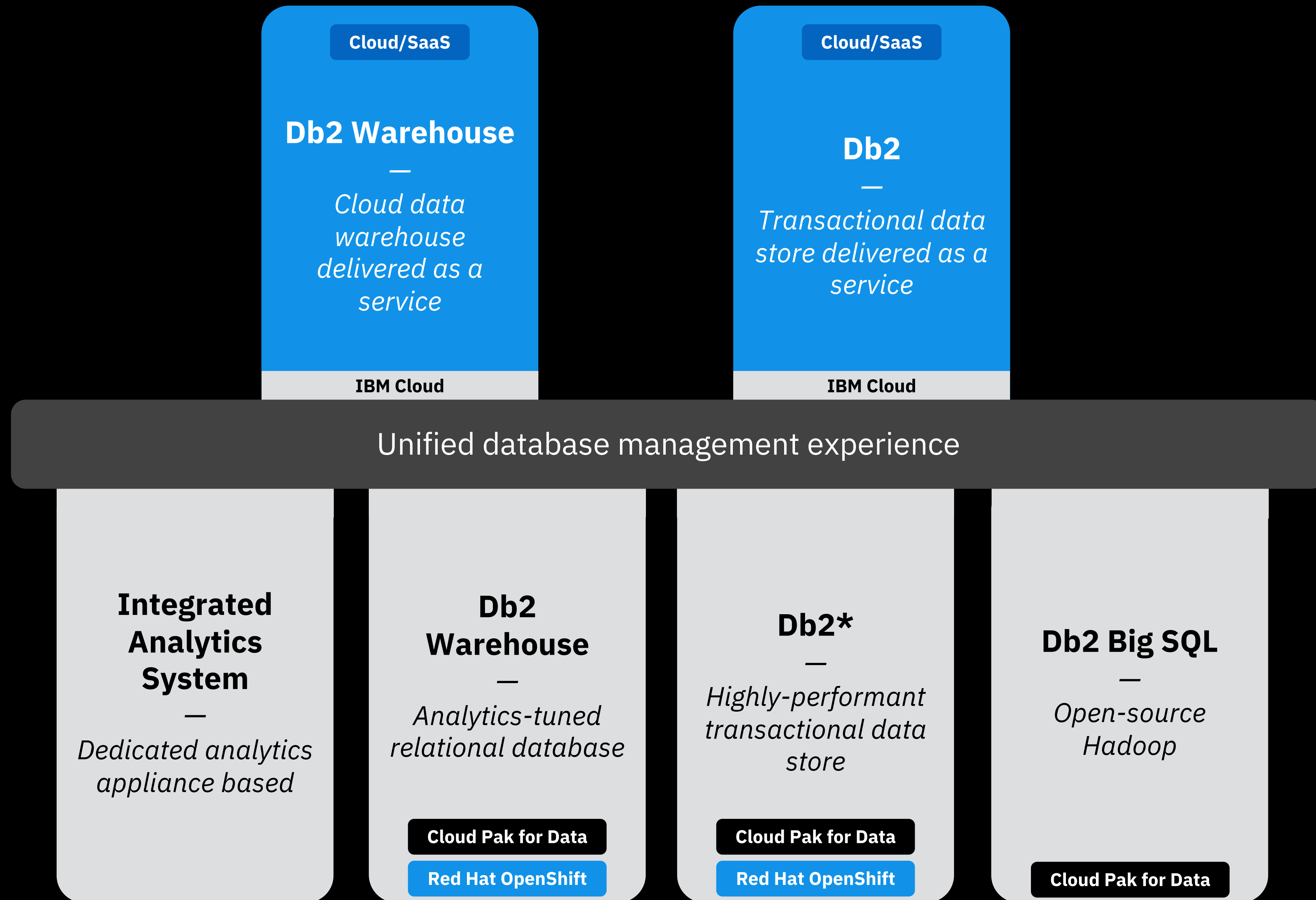
IBM Db2

IBM Db2 Data Management Console

*Single design-driven database management experience
from ground to cloud*

Our family of data stores

*Each comes with a
customized console
for a perfect fit*



IBM Db2 Data Management Console

Free with all editions and flavours of Db2

Unified experience

Manage databases deployed **on-premises, cloud, Cloud Pak for Data, Red Hat OpenShift** from a single console

Business value: reduce training costs, ensure higher productivity and greater project success across your data enterprise

Extensible & composable

Built on microservices architecture with fully documented set of RESTful services

Business value: use functions available in the UI and more using APIs; compose your personalized UI in Python notebooks

Enterprise ready with high-availability & security built in

- Monitoring: high-level view across 100s databases and detailed historical monitoring on a single database
- Integrated SQL editor for writing and running SQL queries
- Object explorer to view and manage database objects, such as tables, schemas, or stored procedures

Business value: access to key database functions from a single integrated interface; identify performance & availability issues before they affect your operations

Db2 Data Management Console

Supported Db2 offerings and platforms

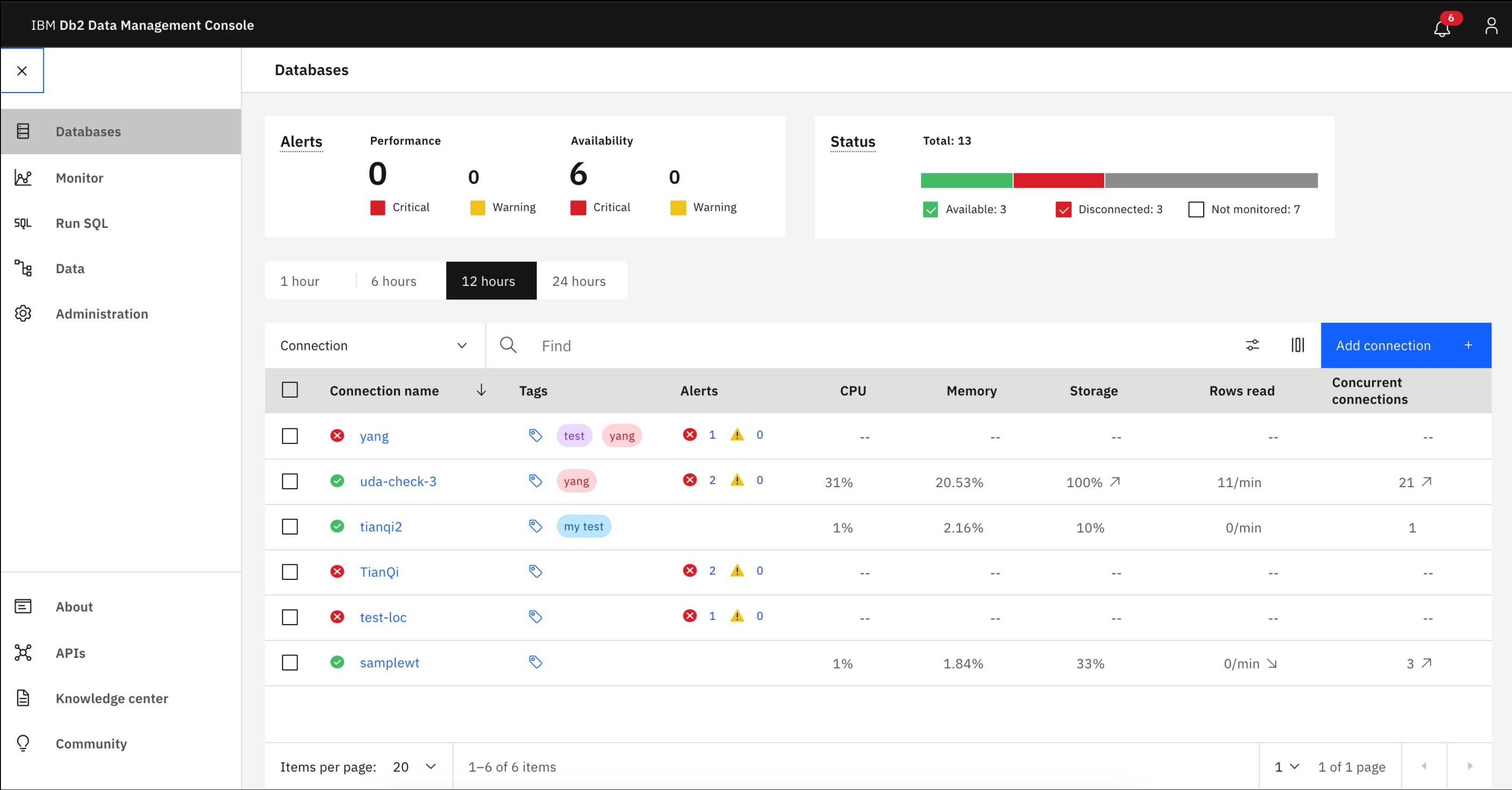
	On-premises			IBM Cloud		Cloud Pak for Data			Red Hat OpenShift		
	<i>Db2 10.5.4 and up</i>	<i>IIAS</i>	<i>Db2 Big SQL</i>	<i>Db2</i>	<i>Db2 Warehouse</i>	<i>Db2</i>	<i>Db2W</i>	<i>Data Virtualization</i>	<i>Db2 Big SQL</i>	<i>Db2</i>	<i>Db2W</i>
DMC on premises	Yes	Yes	No	Yes	Yes	Yes	Yes	No	No	Yes	Yes
DMC on Cloud Pak for Data	No			No		Yes			No		

Deploy through **Docker** or install on **Windows, Linux, MacOS, AIX, Linux on z/OS, Cloud Pak for Data**

What's new: Navigation & databases landing page

More intuitive navigation makes it simpler to find the right function and switch between console areas

Updated, more responsive home page with interactive charts and improved tagging



What's new: Jobs management and scheduling

Define jobs through SQL scripts and run on-demand or on-schedule

Sort and filter your job definitions, categorize hundreds of jobs using tags

Drill-down to job details to view results and see execution status per database

Find job

Create job +

<input type="checkbox"/>	Job	Type	Tags	Created by	Schedule	Last ran	Status
<input type="checkbox"/>	2020 sales	On-demand	🔖 Sales 2020	James Brown	N/A	Tue 7/21/2020 1:23 PM	<div><div></div><div></div><div></div></div>
<input type="checkbox"/>	Revenue	Scheduled	🔖 Revenue Sales ...	Nima Aggrawal	Every 2 week, on Tue at 12:45 PM	Tue 7/21/2020 1:23 PM	<div><div></div><div></div><div></div><div></div></div>
<input type="checkbox"/>	Revenue 2	Scheduled	🔖 Revenue	Qiao Wang	Every Mon at 3:23 AM	Wed 7/8/2020 3:56 AM	<div><div></div></div>
<input type="checkbox"/>	sales history	Scheduled	🔖 Sales	Naomi Nguyen	Every 15th, 30th at 2:00 AM	Wed 7/8/2020 5:00 AM	<div><div></div></div>
<input type="checkbox"/>	Profit	On-demand	🔖	Michael Campbell	N/A	Mon 7/20/2020 11:20 AM	<div><div></div><div></div><div></div><div></div></div>
<input type="checkbox"/>	July sales	On-demand	🔖 Sales	Kelvin Lee	N/A	Wed 7/8/2020 3:56 AM	<div><div></div><div></div><div></div><div></div></div>
<input type="checkbox"/>	July revenue	Scheduled	🔖 Revenue	Erica Smith	Not scheduled	-	<div><div></div></div>
<input type="checkbox"/>	2020 sales 2	On-demand	🔖 Sales 2020	Nima Aggrawal	N/A	Wed 7/8/2020 3:56 AM	<div><div></div></div>
<input type="checkbox"/>	2Q revenue	Scheduled	🔖 Revenue 2020	Naomi Nguyen	Every 2 weeks, on Mon, Tue, Wed at ...	Mon 7/20/2020 3:10 PM	<div><div></div></div>
<input type="checkbox"/>	1Q revenue	Scheduled	🔖 Revenue 2020	Erica Smith	Every 2 weeks, on Mon, Tue, Sat at ...	Sat 7/18/2020 1:16 PM	<div><div></div><div></div><div></div><div></div></div>

Items per page: 10

1 – 10 of 500 items

1 of 63 pages

1146clp | CLP/shell script

Description :

Schedule:

NA

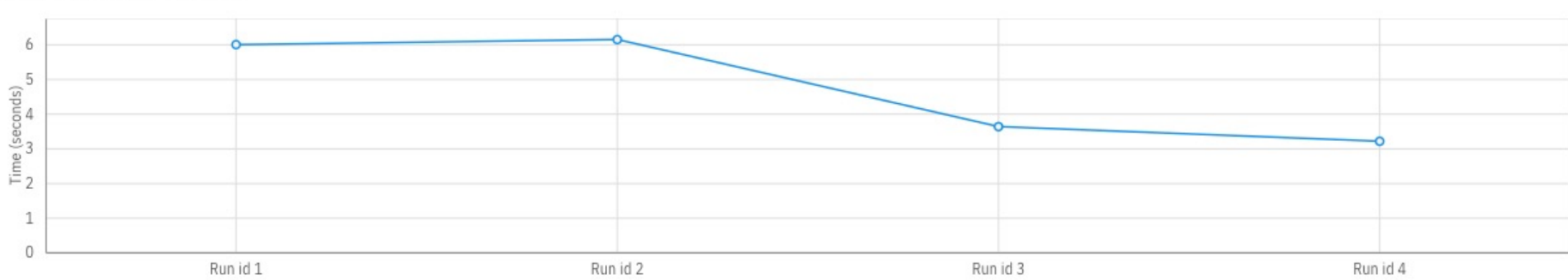
Total:4



Running	0	Success	4
Warning	0	Stopping...	0
Stopped	0	Error	0

Job duration

Average job duration : 4.73 s



History

1 item selected View Run Delete Cancel

<input type="checkbox"/>	Database	Start time	Duration	Started by	Status
<input type="checkbox"/>	db2v11146	Thu 01/21/2021 01:31 PM	5.986 s	CONSOLE_SCHEDULE	Success
<input checked="" type="checkbox"/>	db2v11146	Thu 01/21/2021 01:27 PM	6.13 s	CONSOLE_SCHEDULE	Success
<input type="checkbox"/>	db2v11146	Wed 01/06/2021 10:29 PM	3.621 s	CONSOLE_SCHEDULE	Success
<input type="checkbox"/>	db2v11146	Wed 01/06/2021 10:28 PM	3.2 s	CONSOLE_SCHEDULE	Success

Items per page: 25

1–4 of 4 items

1 of 1 page

What's new: Monitoring reports

Create on-demand or scheduled database performance reports

Customize which charts to show in the report

New enterprise trends report provides a view of top-10 databases with

- highest resource consumption
- throughput
- executed statements

Create on-demand report

Select type

Define

Finish

Customize report

Select the metric(s) to be shown in report

Throughput

☒ Statements per minute

☒ Rows read per minute

Contention

☒ Lock waits

☒ Connections

Resource usage

☒ CPU

☒ Memory

☒ Storage

☒ Log space

Time spent

☒ Time spent

Top 10 statements

☒ Longest running queries

☒ Most expensive queries

☒ Most run queries

Interval

Select a time range. The report will be generated using the data collected during this interval.

12 hours

1 day

3 days

1 week

1 month

Custom

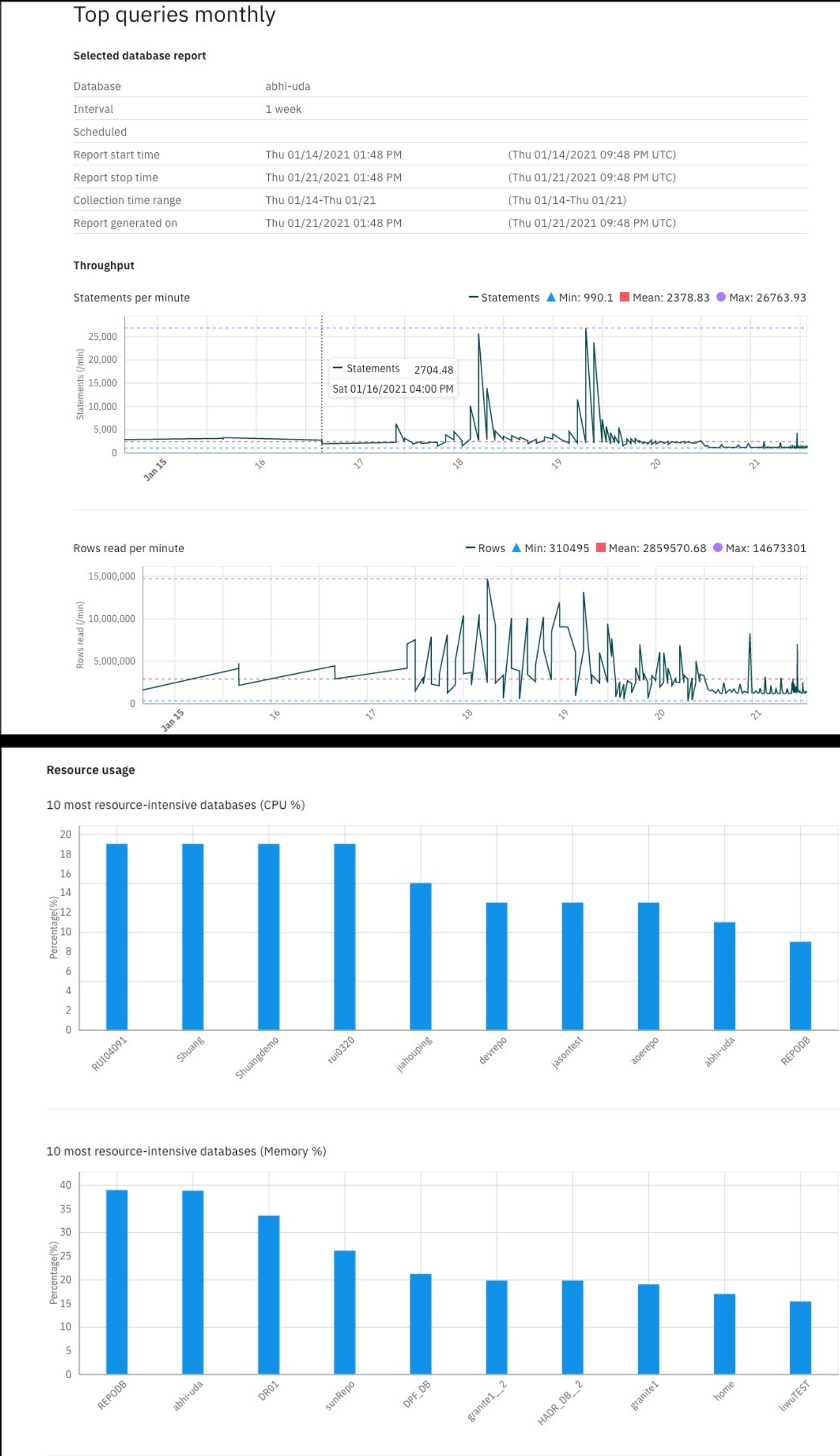
Notifications

Receive an email whenever a report is already

Separate multiple email addresses by line or with a comma and space

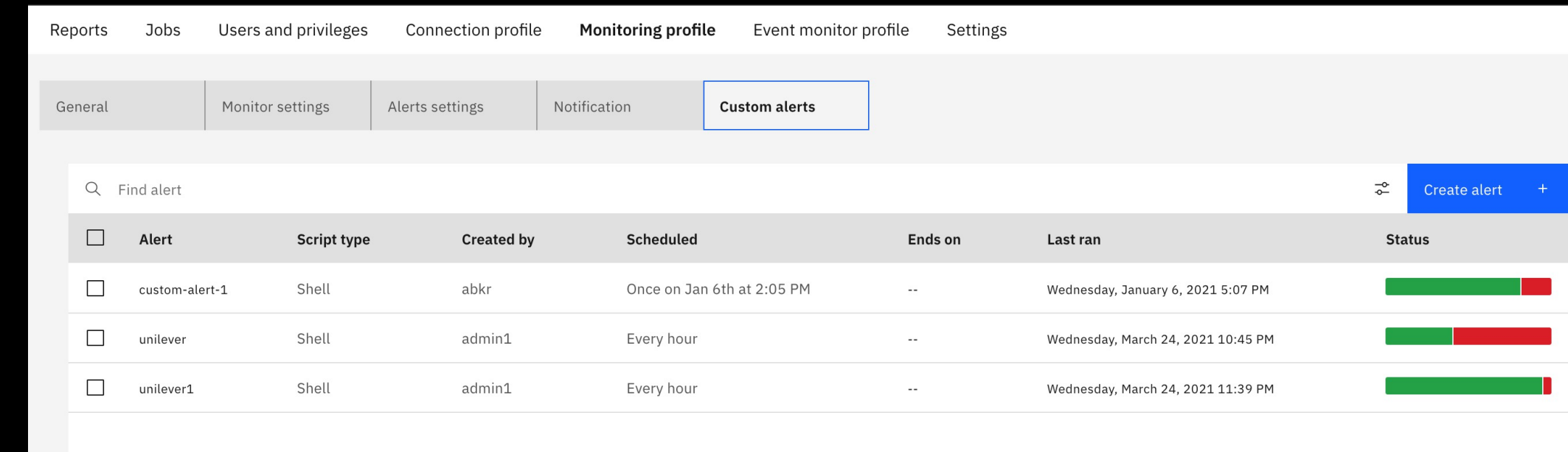
Email(s)

Joseph.Miller@ibm.com

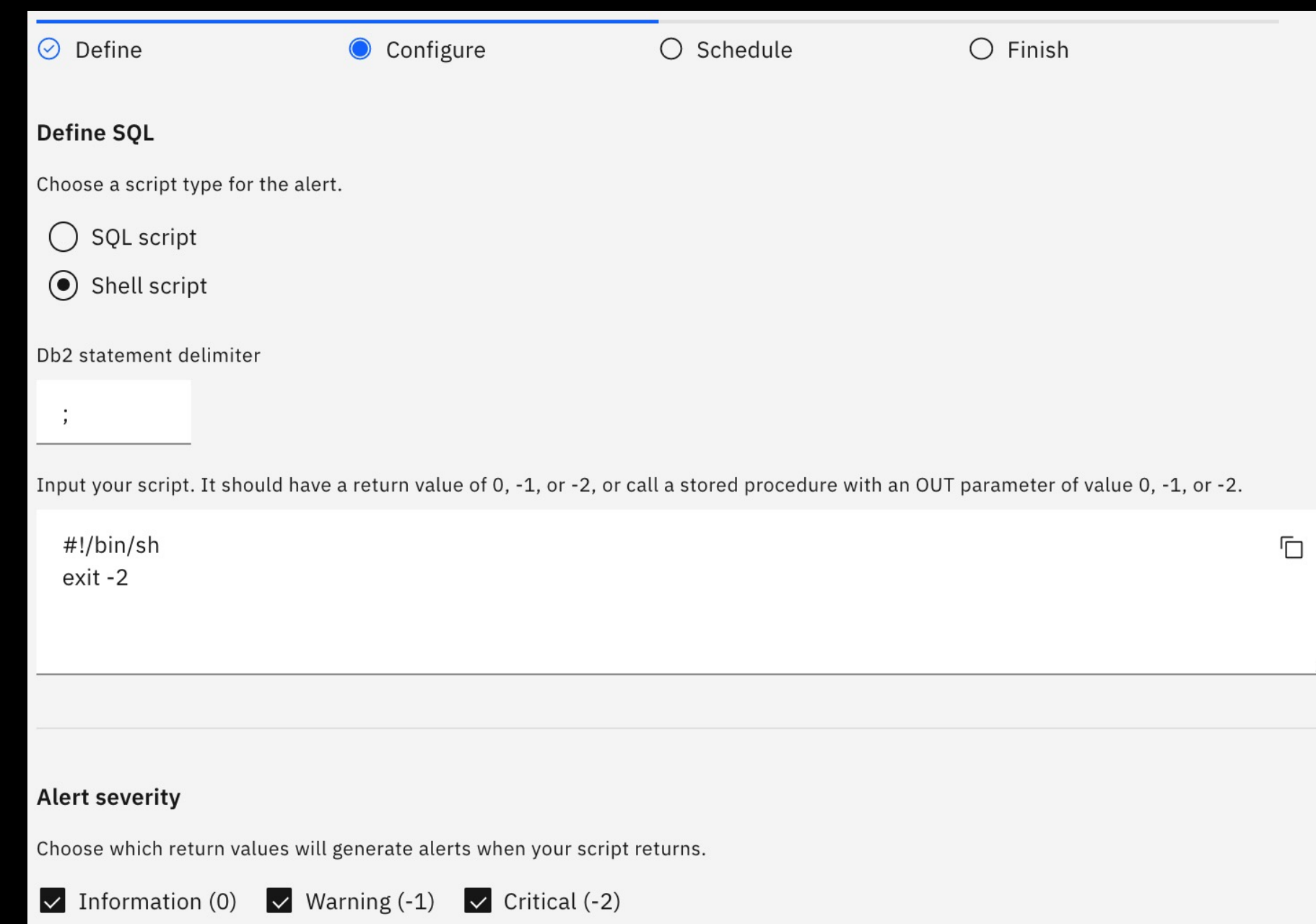


What's new: Other key highlights

- Create **custom (user-defined) alerts** with SQL/shell script; the feature is integrated into monitoring profile and alerting framework
- Additional monitoring KPIs: logging performance, prefetcher, table space performance
- Tablespaces, indexes support in Object Explorer
- **DDL generation** with Db2 stored procedure in the GUI for tables, views, indexes, alias, MQTs, schemas
- Set up and schedule monitoring blackouts through APIs
- Audit logging using APIs



Monitoring profile							
Custom alerts							
Find alert							
<input type="checkbox"/>	Alert	Script type	Created by	Scheduled	Ends on	Last ran	Status
<input type="checkbox"/>	custom-alert-1	Shell	abkr	Once on Jan 6th at 2:05 PM	--	Wednesday, January 6, 2021 5:07 PM	<div><div></div></div>
<input type="checkbox"/>	unilever	Shell	admin1	Every hour	--	Wednesday, March 24, 2021 10:45 PM	<div><div></div></div>
<input type="checkbox"/>	unilever1	Shell	admin1	Every hour	--	Wednesday, March 24, 2021 11:39 PM	<div><div></div></div>



Define SQL

Choose a script type for the alert.

☐ SQL script

☒ Shell script

Db2 statement delimiter

;

Input your script. It should have a return value of 0, -1, or -2, or call a stored procedure with an OUT parameter of value 0, -1, or -2.

```
#!/bin/sh
exit -2
```

Alert severity

Choose which return values will generate alerts when your script returns.

☒ Information (0) ☒ Warning (-1) ☒ Critical (-2)

Roadmap for Db2 Data Management Console

V3.1.4

- Support Db2 10.5.4, IIAS, Db2 on RHOS, CP4D connections
- More monitoring KPIs and database objects (tablespaces)
- Set up schedule for blackouts using API
- Adjust “timeout after X minutes of inactivity” setting
- DDL generation
- Usability enhancements:
 - Enhanced home page & revised navigation
 - Monitoring reports customization
 - Show formatted SQL script

V3.1.6

- Enhanced monitoring drill-down experience:
 - New monitoring dashboard and data charts
 - Adaptive Workload Management
 - Monitoring KPI customization
- Events center for all enterprise events with actions
- Enhancements to object explorer
- Backup and restore
- Other enhancements based on user feedback

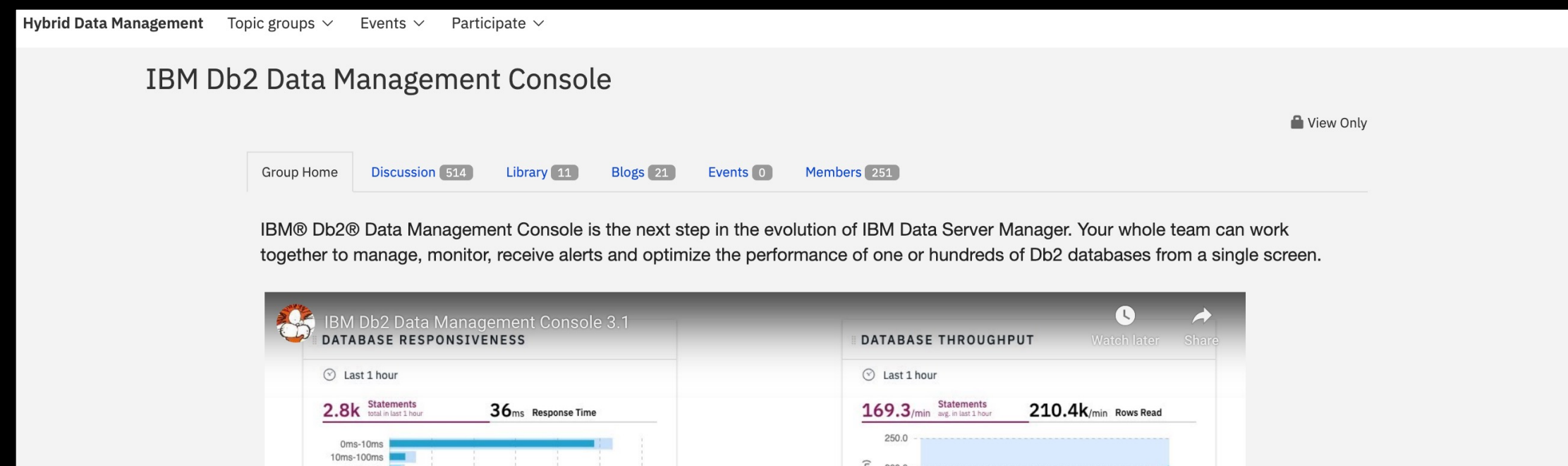


Roadmap: ibm.biz/DMCRoadmap

Get your Data Management Console today!

Join our Db2 Community & download the console:

Link: ibm.biz/Db2Console



Learn how to use the console on IBM demos:

- Review installation & overview videos
- Click through product tours
- Complete a hands-on lab: “Automating IBM Db2 with Db2 Data Management Console”

Link: <https://www.ibm.com/demos/collection/IBM-Db2-Data-Management-Console>

IBM Db2 Data Management Console

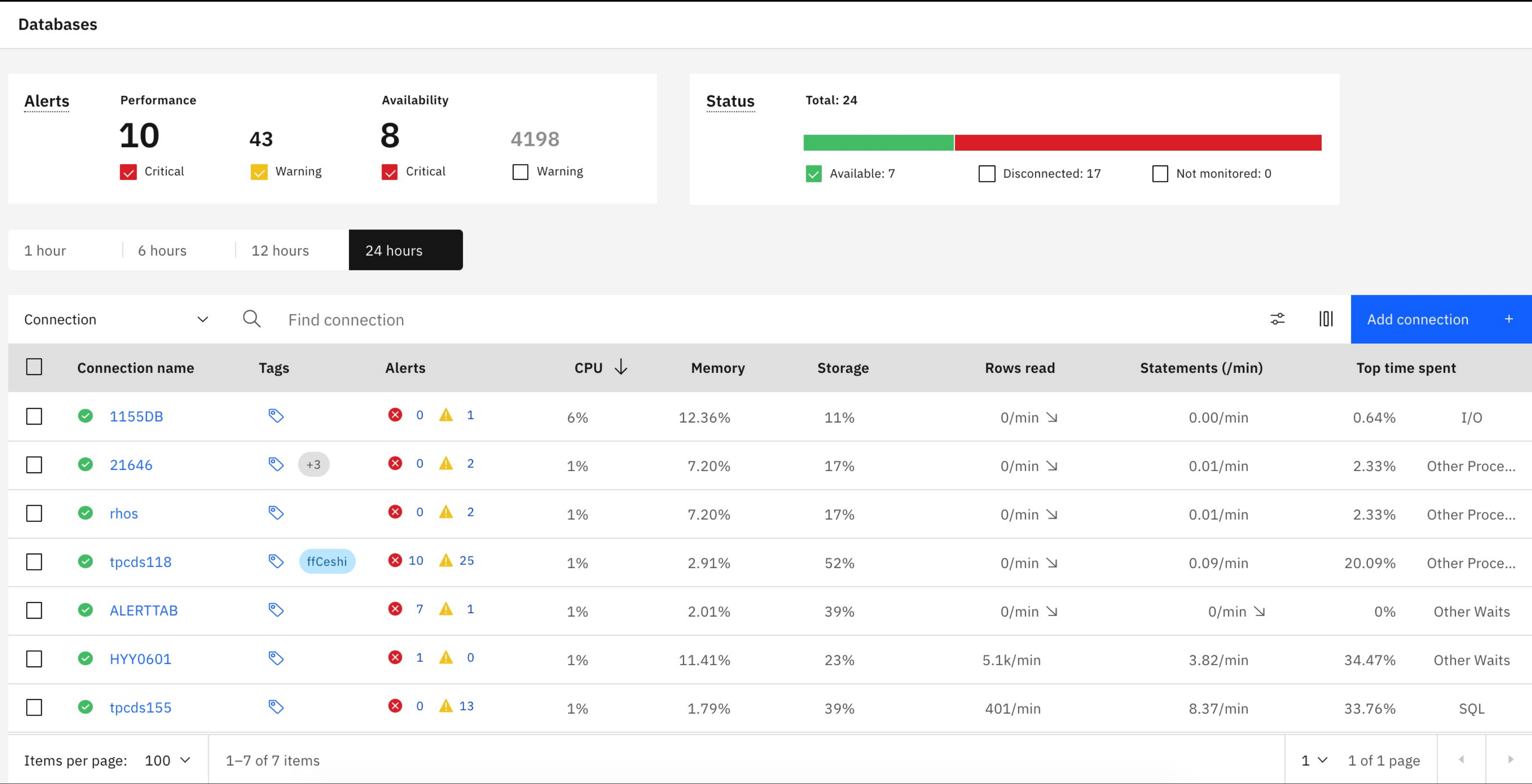
Overview

Enterprise overview

Monitor 100s databases
from one screen

Drill down to database
overview for more details

Tagging, dynamic filtering
by key KPIs



Database dashboard

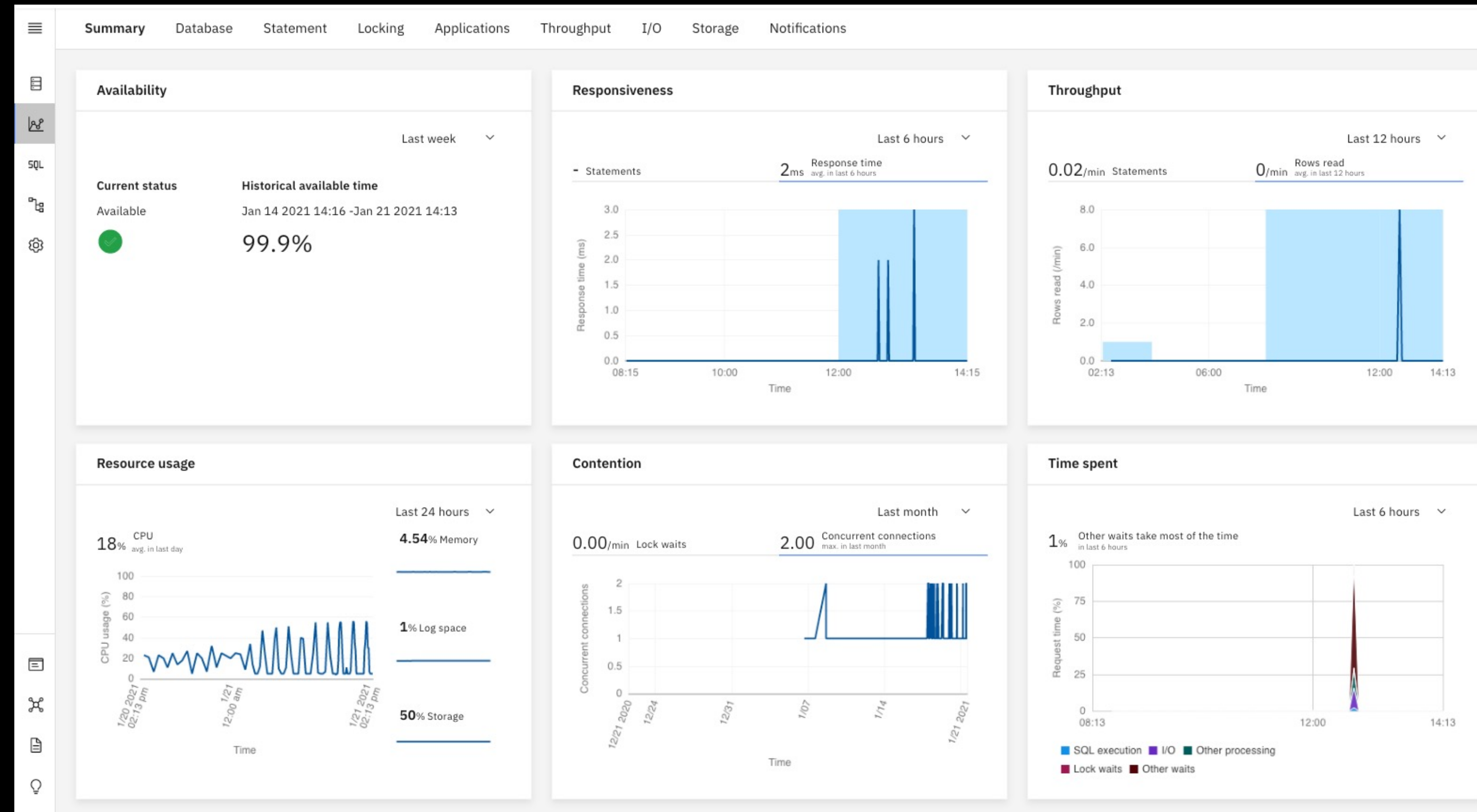
Each widget tells a story about your system:

- Is it available?
- Running short or long statements?
- Doing a lot or little work?
- In conflict?
- Running out of resources?
- Spending time in wrong area?

Historical view as far back as one month in time

Extensive flyover details

Drill down for an in-depth analysis



Detailed real-time and historical monitoring

Monitor key database areas:

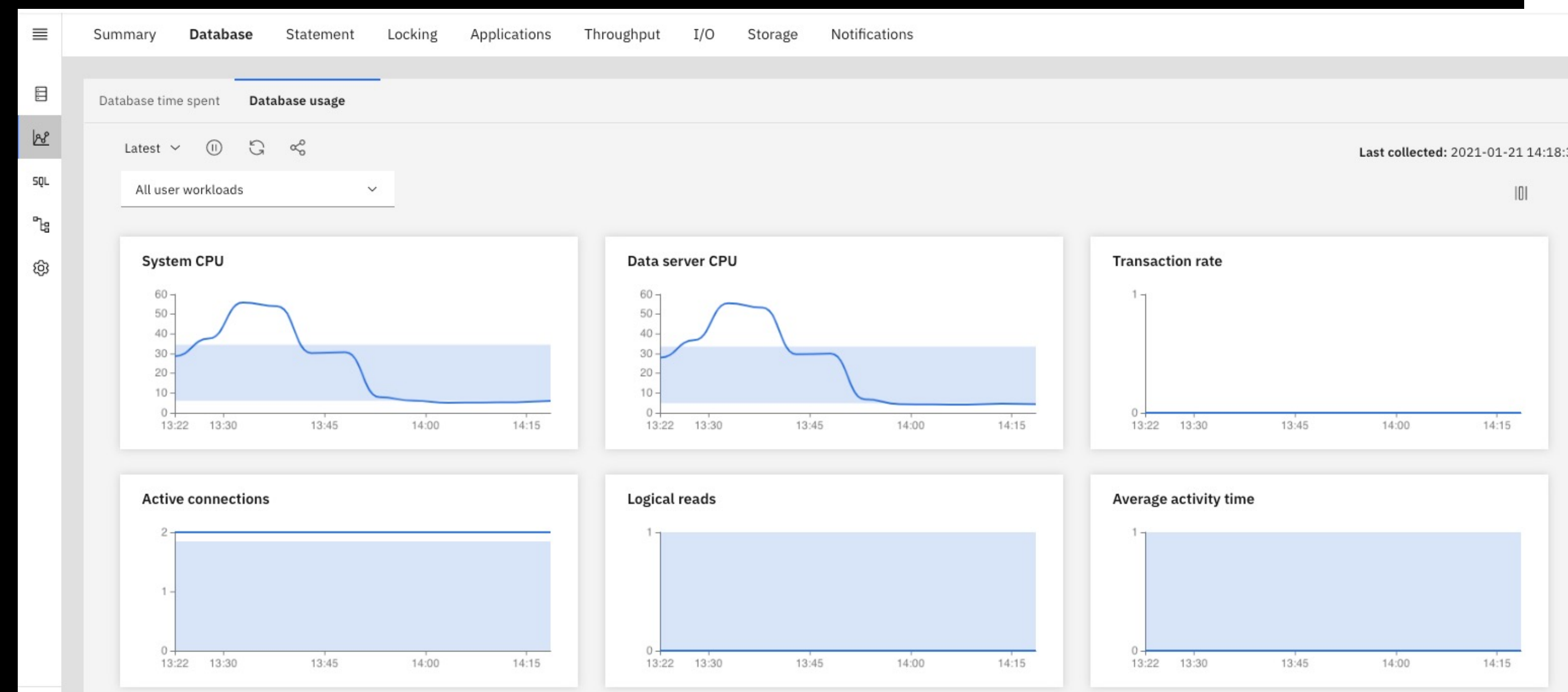
- Statements
- Locking
- Applications
- Throughout
- I/O
- Storage

Support for pureScale KPIs:

- pureScale status
- pureScale member
- pureScale CF summary

Set up event monitors:

- Configure event monitor profiles for database connections
- Enable activity, locking, utility, and statistics event monitors



No need to switch between real-time and history view – adjust time using a time-selector

Monitor	
Summary	
Database time spent	
Database usage	
Statement	
In-flight executions	
Individual executions	
Package cache	
Stored procedures	
Locking	
Blocking and waiting connections	
Connection statistics	
Locked objects with waiting conn...	
Find locked objects	
Locking event monitor	
Applications	
Top consumers	
Connections	
Utilities	
Utilities event monitor	
Units of work(UOW)	
Throughput	
Connection summary	
Partition summary	
WLM workload summary	
WLM service class summary	
Operating system time spent	
I/O	
Buffer pools	
Storage	
Table performance	
Storage	

Monitoring reports

Create on-demand or scheduled database performance reports to download or share with your team

Customize which metrics to show in the report

Enterprise trends report provides a view of top-10 databases with highest resource consumption

Create on-demand report

Select type

Define

Finish

Customize report

Select the metric(s) to be shown in report

Throughput

☒ Statements per minute

☒ Rows read per minute

Contention

☒ Lock waits

☒ Connections

Resource usage

☒ CPU

☒ Memory

☒ Storage

☒ Log space

Time spent

☒ Time spent

Top 10 statements

☒ Longest running queries

☒ Most expensive queries

☒ Most run queries

Interval

Select a time range. The report will be generated using the data collected during this interval.

12 hours

1 day

3 days

1 week

1 month

Custom

Notifications

Receive an email whenever a report is already

Separate multiple email addresses by line or with a comma and space

Email(s)

Joseph.Miller@ibm.com

Top queries monthly

Selected database report		
Database	abhi-uda	
Interval	1 week	
Scheduled		
Report start time	Thu 01/14/2021 01:48 PM	(Thu 01/14/2021 09:48 PM UTC)
Report stop time	Thu 01/21/2021 01:48 PM	(Thu 01/21/2021 09:48 PM UTC)
Collection time range	Thu 01/14-Thu 01/21	(Thu 01/14-Thu 01/21)
Report generated on	Thu 01/21/2021 01:48 PM	(Thu 01/21/2021 09:48 PM UTC)

Throughput

Statements per minute

Statements ▲ Min: 990.1 ■ Mean: 2378.83 ● Max: 26763.93

Rows read per minute

Rows ▲ Min: 310495 ■ Mean: 2859570.68 ● Max: 14673301

Resource usage

10 most resource-intensive databases (CPU %)

10 most resource-intensive databases (Memory %)

IBM Data & AI, Hybrid Data Management
©2021 IBM Corporation

Alerts

Over 100 alerts for availability, performance, and configuration:

- Create monitor profiles for your database sets
- Adjust critical & warning alert thresholds
- Define customer alerts using SQL

Manage alerts in Notification center:

- Smart SQL statement monitoring
- View problem analysis and suggested resolution
- Apply auto-fixes for some configuration alerts

SNMP, email, RESTful API, ServiceNow integration

HADR & pureScale support

IBM Db2 Data Management Console

Databases / Notification center

Notification center

Updated 3:22:32 PM

Filter by:

All connecti...

All severities

Open

All groups

High to low

New to old

From

YYYY-MM-DD

To

YYYY-MM-DD

10 items selected

Delete

Close

Email

Cancel

Name

Total activity time

PERFORMANCE | STATEMENTS

dpf - May 18, 2020 6:04:56 AM

The elapsed time that has been spent executing the SQL statement exceeded the t...

Total activity time

PERFORMANCE | STATEMENTS

rui0320 - May 11, 2020 3:12:58 AM

The elapsed time that has been spent executing the SQL statement exceeded the t...

Total activity time

PERFORMANCE | STATEMENTS

rui0320 - May 11, 2020 12:25:20 AM

The elapsed time that has been spent executing the SQL statement exceeded the t...

Total activity time

PERFORMANCE | STATEMENTS

dpf - Apr 29, 2020 2:59:50 AM

The elapsed time that has been spent executing the SQL statement exceeded the t...

Total activity time

PERFORMANCE | STATEMENTS

db2oc - Apr 28, 2020 6:36:27 AM

The elapsed time that has been spent executing the SQL statement exceeded the t...

Items per page: 10

11–20 of 31 items

2

2 of 4 pages

Notification center

Updated 15:21:34

Critical08

Warning17

Sorted by Severity & Time

Database availability

Status

newmppv2dev2 - Jun 11, 2020 7:05:33 AM

The database is not available.

Database availability

Status

newmppv2dev2 - Jun 3, 2020 6:42:25 AM

The database is not available.

Database availability

Status

db2wocadmin - May 26, 2020 7:53:41 PM

The database is not available.

Database availability

Status

dpf - May 26, 2020 10:25:47 AM

The database is not available.

Database availability

Status

syptest2 - May 26, 2020 10:25:37 AM

The database is not available.

Database availability

Status

syddb4 - May 26, 2020 10:25:37 AM

The database is not available.

Database availability

Status

syptest1 - May 26, 2020 10:25:37 AM

The database is not available.

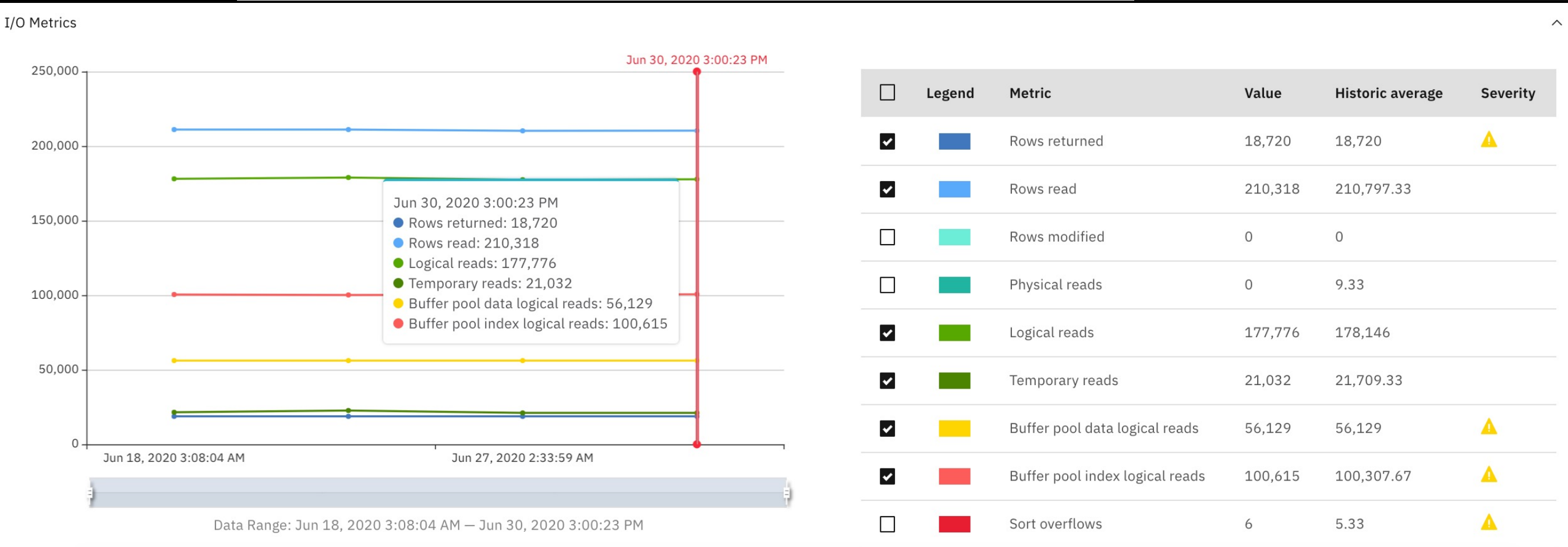
Database availability

Status

db2oc - May 3, 2020 3:38:56 PM

The database is not available.

View notification center



Job management and scheduling

Define jobs through SQL scripts and run on-demand or on-schedule

Sort and filter your job definitions, categorize hundreds of jobs easily using tags

Run jobs and see execution status from landing page

Drill-down to jobs history page to view logs, results, and script execution status per database

Find job

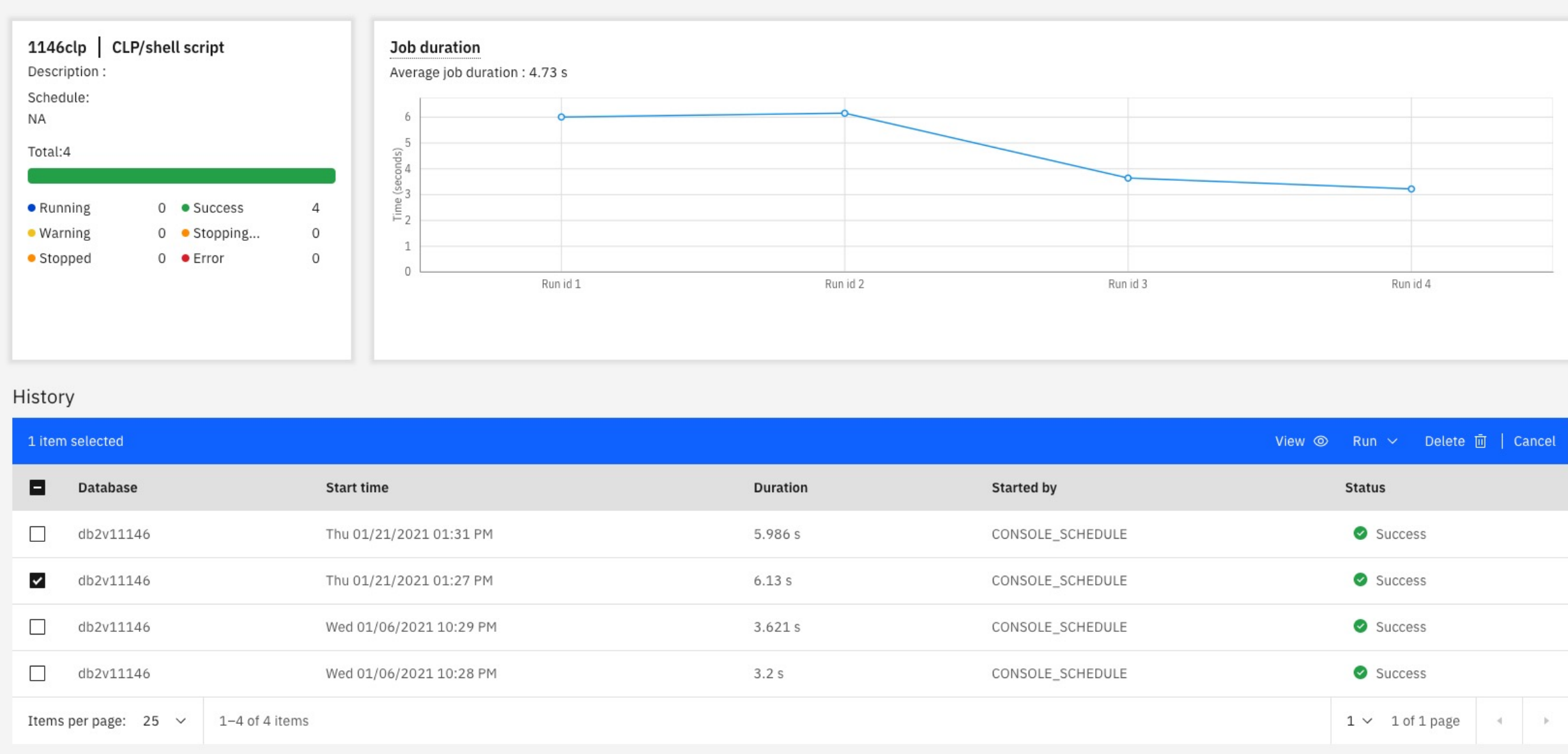
Create job +

<input type="checkbox"/>	Job	Type	Tags	Created by	Schedule	Last ran	Status
<input type="checkbox"/>	2020 sales	On-demand	Sales 2020	James Brown	N/A	Tue 7/21/2020 1:23 PM	<div><div></div><div></div><div></div></div>
<input type="checkbox"/>	Revenue	Scheduled	Revenue Sales ...	Nima Aggrawal	Every 2 week, on Tue at 12:45 PM	Tue 7/21/2020 1:23 PM	<div><div></div><div></div><div></div><div></div></div>
<input type="checkbox"/>	Revenue 2	Scheduled	Revenue	Qiao Wang	Every Mon at 3:23 AM	Wed 7/8/2020 3:56 AM	<div><div></div></div>
<input type="checkbox"/>	sales history	Scheduled	Sales	Naomi Nguyen	Every 15th, 30th at 2:00 AM	Wed 7/8/2020 5:00 AM	<div><div></div></div>
<input type="checkbox"/>	Profit	On-demand		Michael Campbell	N/A	Mon 7/20/2020 11:20 AM	<div><div></div><div></div><div></div><div></div></div>
<input type="checkbox"/>	July sales	On-demand	Sales	Kelvin Lee	N/A	Wed 7/8/2020 3:56 AM	<div><div></div><div></div><div></div><div></div></div>
<input type="checkbox"/>	July revenue	Scheduled	Revenue	Erica Smith	Not scheduled	-	<div><div></div></div>
<input type="checkbox"/>	2020 sales 2	On-demand	Sales 2020	Nima Aggrawal	N/A	Wed 7/8/2020 3:56 AM	<div><div></div></div>
<input type="checkbox"/>	2Q revenue	Scheduled	Revenue 2020	Naomi Nguyen	Every 2 weeks, on Mon, Tue, Wed at ...	Mon 7/20/2020 3:10 PM	<div><div></div></div>
<input type="checkbox"/>	1Q revenue	Scheduled	Revenue 2020	Erica Smith	Every 2 weeks, on Mon, Tue, Sat at ...	Sat 7/18/2020 1:16 PM	<div><div></div><div></div><div></div><div></div></div>

Items per page: 10

1 – 10 of 500 items

1 of 63 pages



SQL editor & Visual Explain

Fast and responsive SQL editor with integrated parsing:

- Use multiple tabs to keep all your work a click away
- Export SQL results to CSV and Excel

Use interactive Visual Explain tool to display query plans

Run SQL

Template - Selec...

SQL

Syntax assistant

REPODB: Result - Jul 2, 2020 3:29:57 PM

Script summary

1 SELECT 'TABLE' AS OBJECT_TYPE, COUNT(NAME) AS COUNT

2 FROM SYSIBM.SYSTABLES

3 WHERE TYPE='T'

4 UNION

5 SELECT 'VIEW', COUNT(NAME)

6 FROM SYSIBM.SYSTABLES

7 WHERE TYPE = 'V'

8 ORDER BY 1;

9

Run all

Remember my selection

SELECT 'TABLE' AS OBJECT_TYPE, COUNT(NAME) AS COUNT FROM SYS...

Run time: 0.018 s

Result set 1

OBJECT_TYPE	COUNT
TABLE	325
VIEW	337

Find nodes

Systables Sysibm

Tbscan 172.30

Grpby 172.32

Union 344.65

Sort 344.65

Tbscan 344.65

Return 344.65

Systables Sysibm

Tbscan 172.30

Grpby 172.32

Description

Properties

Name	Value
Operator identifier	3
Operator type	Sort rows
Uniqueness required flag	TRUE
Duplicates warning flag	TRUE
Estimated number of rows	2
KEYS	1
Estimated width of rows	12.000000
Temporary table page size	4096
SORTKEY	2: Q9.COUNT(A)
Cost Information	
Estimated output cardinality	2.00
Cumulative total cost	344.65
Cumulative CPU cost	4,505,571.00
Cumulative I/O cost	186.00
Cumulative first row total cost	344.65
Total cost	~0.00
CPU cost	5,173.00
I/O cost	0.00
Estimated bufferpool buffers	186.00

Streams

Object & privilege management

Manipulate objects and explore relationships

Automatically generate SQL based on the table definition

Set and manage object privileges (by user, group, role)

Run changes immediately or build a script to automate change

The screenshot displays the IBM Data & AI console interface for managing database objects. The top navigation bar includes tabs for 'Tables', 'Views', 'Indexes', 'Remote tables', 'Aliases', 'MQTs', 'Schemas', 'Sequences', 'Storage objects', 'Application objects', 'Authorization', and 'Workloads'. A search bar labeled 'Find schemas or tables' is located below the navigation bar. The main content area is divided into two panels. The left panel, titled 'Tables', shows a list of tables under the 'COREPREF' schema. The table list has columns for 'Name', 'Schema', and 'Properties'. The tables listed are 'COREPREF', 'RUNSQL_TEST', and 'TABLE', all belonging to the 'DB2INST1' schema. The right panel, titled 'Table definition', shows the structure of the 'COREPREF' table. It includes a table with columns: 'Name', 'Data type', 'Nullable', 'Length', and 'Scale'. The columns defined are 'PREF_ID' (VARCHAR, 1024, N), 'PREF_PROFILE_NAME' (VARCHAR, 255, Y), 'PREF_VALUE' (VARCHAR, 16384, Y), 'DATATYPE' (VARCHAR, 10, Y), 'USER_ID' (VARCHAR, 255, Y), and 'NEW_COLUMN1' (CHAR, 5, Y). A 'View data' button is located at the bottom right of the table definition panel. The status bar at the bottom indicates 'Total: 3, selected: 0'.

Name	Schema	Properties
COREPREF	DB2INST1	...
RUNSQL_TEST	DB2INST1	...
TABLE	DB2INST1	...

Name	Data type	Nullable	Length	Scale
PREF_ID	VARCHAR	N	1024	0
PREF_PROFILE_NAME	VARCHAR	Y	255	0
PREF_VALUE	VARCHAR	Y	16384	0
DATATYPE	VARCHAR	Y	10	0
USER_ID	VARCHAR	Y	255	0
NEW_COLUMN1	CHAR	Y	5	0

Federation of remote data

Easily make remote data from numerous sources look and act like local tables

Configure through the user interface or through DDL

Easily define and reuse remote database connections

Discover remote tables

Databases / Explore / Remote tables / Create server

Remote tables

Server type:	Apache Hive ^
Server name:	Apache Hive
Database:	Apache Spark SQL
Host:	Cloudera Impala
Port:	IBM Big SQL
Driver version:	7.1 v
Remote user name:	
Remote user password:	

[Cancel](#) [Generate DDL](#) [Create](#)

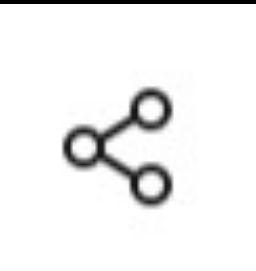
Open APIs & team collaboration

Everything in the UI is also available through a fully documented set of RESTful services

(samples in JSON, Curl, Java, JavaScript, Python)

Compose UI seamlessly and integrate within a Python notebook

Send links to monitoring widgets, SQL editor scrips, visual explain documents to your team



Share this page

URL

Python

JavaScript

Html

```
http://9.30.231.191:11080/console/#/share/link/%7B%22p%22%3A%22%2Fmonitor%2Fsummary%3Fprofile%3DDSM215N_TEST%22%2C%22c%22%3A%7B%22interval%22%3A%7B%22value%22%3A%221day%22%2C%22label%22%3A%22Last%2024%20hours%22%2C%22secondaryLabel%22%3A%2224%20hours%22%2C%22obj%22%3A%7B%22num%22%3A1%2C%22unit%22%3A%22day%22%7D%2C%22sliderKey%22%3A40%2C%22sliderMark%22%3A%2224h%22%7D%2C%22customInterval%22%3A%7B%7D%2C%22currentInterval%22%3A%7B%22index%22%3A3%2C%22name%22%3A%2224h%22%7D%2C%22syncCharts%22%3Afalse%7D%2C%22t%22%3A1587602534087%2C%22u%22%3A%22admin1%22%2C%22r%22%3A%7B%22shell%22%3A%7B%22localTime%22%3Atrue%7D%7D%7D
```

Close

In [26]:

Iframe(database+'/console/?mode=compact#monitor/inflight_executions', width=1400, height=360)

Out[26]:

IN-FLIGHT EXECUTIONS

Last collected: 2019-04-30 11:11:39

Refresh interval: 5 mins

Latest

	CLIENT IP ADDRESS	APPLICATION NAME	USER ID	START TIME	ESTIMATED RUNTIME	ACTIVITY STA...	SQL	WLM QUEUE TIME	IDLE TI...	EXECUTION
<input type="checkbox"/>	9.30.57.20	DSMRtMonBg	BIGSQL	2019-04-30 0...	0:33:26.324	EXECUTING	/* IBM_DSM */ WITH unicode_	0.000	0.000	
<input type="checkbox"/>	127.0.0.1	DB2ATS	BIGSQL	2019-04-30 0...	0.000	EXECUTING	CALL "SYSHADOOP"."HCAT_AL	0.000	0:04.105	
<input type="checkbox"/>	9.30.57.20	DSSNAP activeQueries	BIGSQL	2019-04-27 1...	0:19:59.029	IDLE	/* IBM_DSM */ WITH UNICODI	0.000	0.000	

In [25]:

```
r = databaseAPI.getInflightCurrentList()
if (databaseAPI.getStatusCode(r)==200):
    json = databaseAPI.getJSON(r)
    from pandas.io.json import json_normalize
    df = pd.DataFrame(json_normalize(json['resources']))
    print(' '.join(list(df)))
    display(df[['application_name','stmt_text','estimated_runtime_ms']].head(10))
```

activity_id, activity_state, adm_bypassed, application_handle, application_name, client_ipaddr, effective_query_degree, entry_time, estimated_runtime_ms, exec_time_ms, idle_time_ms, max_estimated_shrheap_per_part_percent, max_shrheap_allocated_per_part_percent, max_shrheap_peak_per_part_percent, query_cost_estimate_timerons, queue_time_ms, rows_read, session_auth_id, stmt_text, uow_id

	application_name	stmt_text	estimated_runtime_ms
0	DSMMYMON	/* IBM_DSSNAP */ WITH unicode_fix(x) AS(\n\t\t...	135445
1	DSSNAP_activeQueries	/* IBM_DSM */ WITH UNICODI_FIX(x) AS (SELECT N...	1199029
2	DB2ATS	CALL "SYSHADOOP"."HCAT_AUTOSYNC_OBJECTS"()	0

