

HCL Workload Automation Observability for Dynatrace

You can use the HCL Workload Automation (HWA) Observability for Dynatrace to monitor HCL Workload Automation metrics, events, audit and infrastructure logs.

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Prerequisites

Following prerequisites must be satisfied prior to deploy Dynatrace Solution

- Kubernetes cluster(OCP V4.7 or above, GKE) with administrative access
- HWA v10 installed on the Kubernetes cluster
- Tools & Packages
 - [Helm3](#)
 - Dynatrace SaaS Version 1.252

Note: To use the HWA Observability Dashboard for Dynatrace, HWA metrics must be available. For information about HWA exposed metrics, see [Exposing metrics to monitor your workload](#).

Resources Required

The following resources correspond to the default values required to manage a production environment. These numbers might vary depending on the environment.

Component	Container resource limit	Container memory request
hwa-dynatrace-exporter	CPU: 2, Memory: 4Gi	CPU: 0.5, Memory: 0.5Gi, Storage: n/a

Language support

For dashboards provided within HWA Observability for Dynatrace, the only supported language is English.

Solution setup

1. Installing and configuring dynatrace

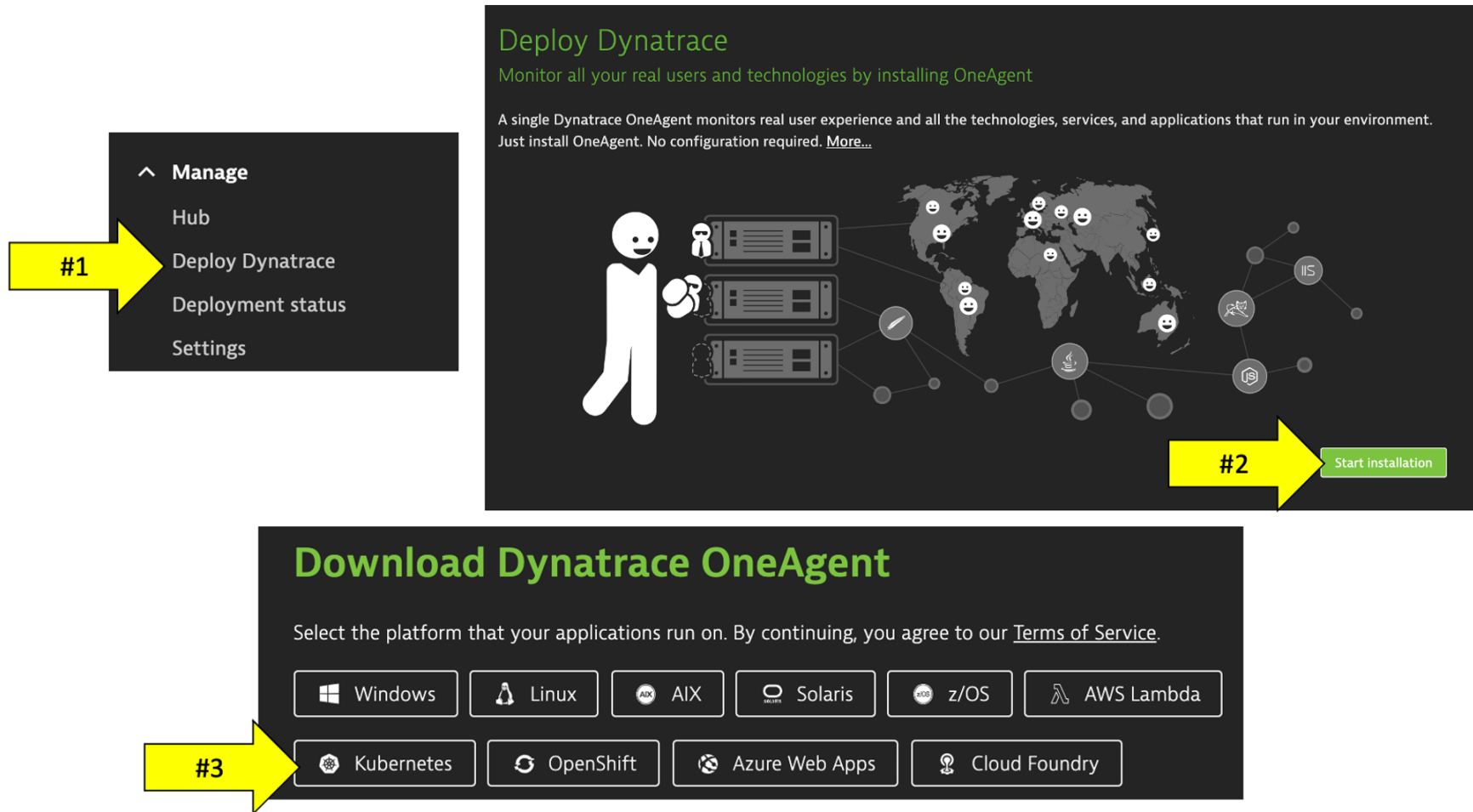
1. From [HCL License Portal](#) download the appropriate HWA Observability installation package: HWA Observability for HWA Observability Add-on
2. Installation package for Dynatrace: HWA_OBSERVABILITY_APP_FOR_DYNATRACE_10.1.0.1.tar.gz
3. Follow the below command to untar the gzip file

```
tar -xvzf HWA_OBSERVABILITY_APP_FOR_DYNATRACE_10.1.0.1.tar.gz
```

4. Follow the steps mentioned on the ReadMe file to continue solution setup.

2. Install Dynatrace Operator

To navigate to Kubernetes page, follow these steps and refer to the picture below:



1. Within Dynatrace, click on the Deploy Dynatrace menu
2. Select Start Installation button
3. Select Kubernetes or Openshift based on the HWA installed cluster

To get the Dynatrace Operator installation command, refer to the steps and pictures below:

Monitor Kubernetes / OpenShift

Choose the following options and run the resulting commands with CLI.

#1

Name (required)

dynatrace



Group (optional)

dynatrace



Dynatrace Operator token (required)

dt0c01.NRYNIJ6JSZET6G2P77W3RI...

Create token



Data ingest token (optional)

dt0c01.6C4K2UHNWALWG3IN3NIM...

Create token



☐ Skip SSL certificate check

☒ Enable volume storage. [Required](#) for GKE, Anthos, CaaS, TGKI and IKS.

#3

Kubernetes

OpenShift

Download the YAML file:

Download dynakube.yaml

Execute the following commands in your terminal:
Please note that **kubectl** must be installed.

```
kubectl create namespace dynatrace
kubectl apply -f https://github.com/Dynatrace/dynatrace-operator
kubectl -n dynatrace wait pod --for=condition=ready --selector=a
kubectl apply -f dynakube.yaml
```

Copy

#4

For more information about Dynatrace Operator, see [our documentation on GitHub](#).

For detailed instructions on monitoring Kubernetes/OpenShift, see the [Kubernetes Monitoring documentation](#).

Show deployment status

1. On the Kubernetes configuration page, enter dynatrace for the name. This is not the cluster name, it will show up as the Kubernetes page name in Dynatrace
2. Select Create token
3. Select the Enable volume storage Check to be ON
4. Click the Copy button

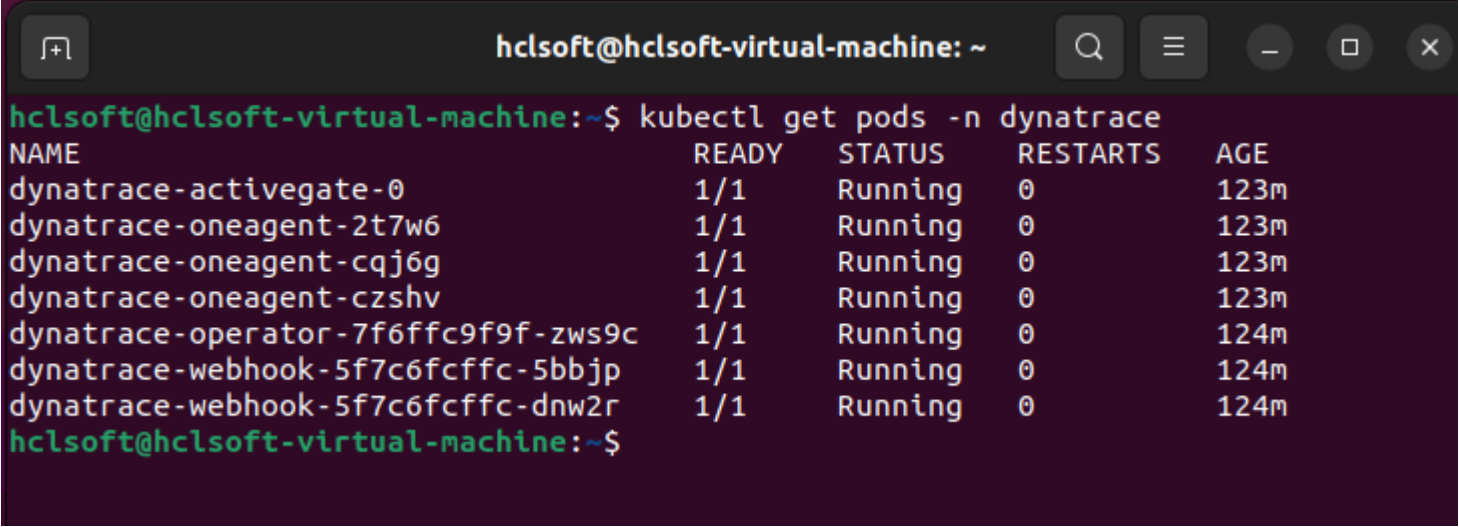
Paste the command in your environment and run it.

3. Verify Dynatrace Operator

Once the script is complete, then monitor the installation until all pods are in Running state with all pods as 1/1.

```
kubectl -n dynatrace get pods
```

Rerun the command until the output looks like this:

A terminal window with a dark background and light green text. The window title is 'hclsoft@hclsoft-virtual-machine: ~'. The command 'kubectl get pods -n dynatrace' has been executed, resulting in a table of pod information. The table has five columns: NAME, READY, STATUS, RESTARTS, and AGE. There are seven rows of pod data, all showing a 'Running' status and '1/1' ready state. The pods are: dynatrace-activegate-0, dynatrace-oneagent-2t7w6, dynatrace-oneagent-cqj6g, dynatrace-oneagent-czshv, dynatrace-operator-7f6ffc9f9f-zws9c, dynatrace-webhook-5f7c6fcffc-5bbjp, and dynatrace-webhook-5f7c6fcffc-dnw2r. The terminal prompt 'hclsoft@hclsoft-virtual-machine:~\$' is visible at the bottom.

NAME	READY	STATUS	RESTARTS	AGE
dynatrace-activegate-0	1/1	Running	0	123m
dynatrace-oneagent-2t7w6	1/1	Running	0	123m
dynatrace-oneagent-cqj6g	1/1	Running	0	123m
dynatrace-oneagent-czshv	1/1	Running	0	123m
dynatrace-operator-7f6ffc9f9f-zws9c	1/1	Running	0	124m
dynatrace-webhook-5f7c6fcffc-5bbjp	1/1	Running	0	124m
dynatrace-webhook-5f7c6fcffc-dnw2r	1/1	Running	0	124m

4. Verify Dynatrace Monitoring

1. Go to Infrastructure > Kubernetes
2. Select Dynatrace cluster name
3. Verify all namespaces are present

The screenshot displays the Dynatrace web interface for managing Kubernetes clusters. The left-hand navigation pane is open, showing the 'Infrastructure' section with various cloud and container technologies listed. The main panel is titled 'Kubernetes clusters' and provides an overview of the configured clusters. A warning banner indicates that monitoring data is missing for one of the clusters. Below the banner, a filter bar allows users to refine the view. A toggle switch is set to 'Only show clusters with data in the selected timeframe (Oct 03 11:19 - 13:19)'. The table below shows one cluster named 'dynatrace' with the following details:

Name	Namespaces	Workloads	Kubernetes services	Nodes	CPU total	Memory requested	Memory total	Actions
dynatrace	9 Namespaces	35 Workloads	14 Kubernetes services	3 Nodes	11.8 Cores	7.93 GiB	36.2 GiB	...

Log Processing and Ingestion setup

Dynatrace OneAgent collects all logs container and pods then send it to Dynatrace SaaS. The logs are unstructured so, follow the steps to process the logs.

NOTE : This Log Processing and Ingestion setup is developed and tested on Dynatrace SaaS Version 1.252.

1. Log custom attributes

1. In the Dynatrace menu, go to Settings
2. Select Settings > Log Monitoring > Log custom attributes and then select Add Custom Attribute
3. Add key as Attributes table values

4. Turn on show attribute value in side bar

5. Select Save Changes

Attributes
action.type
audit.type
framework.user
object.type
username
workstationname

2. Log processing

1. In the Dynatrace menu, go to Settings

2. Select Settings > Log Monitoring > Log processing and then select Add Processing Rule

3. Add Processor name as mentioned below

WA Log Parsing

4. Add Matcher as mentioned below.

content="auditType"

5. Add Processor definition as mentioned below


```
PARSE(content, "LD 'auditType' PUNCT? SPACE? STRING:audit.type LD 'objectType' PUNCT? SPACE? STRING:object.type LD '  
| FIELDS_ADD(audit.type:TRIM(audit.type))  
| FIELDS_ADD(object.type:TRIM(object.type))  
| FIELDS_ADD(workstationname:TRIM(workstationname))  
| FIELDS_ADD(username:TRIM(username))
```

6. Add log sample as mentioned below

```
{  
  "content":"2022-08-26T07:57:09.416740099Z stdout F {\"timestamp\": \"2022-08-26T07:57:09Z\", \"auditType\": \"PLAN  
}
```

7. Select Save Changes

3. Log metrics

1. In the Dynatrace menu, go to Settings
2. Select Settings > Log Monitoring > Log metrics and then select Add log metric
3. Add Key as mentioned below

```
log.wa.content
```

4. Add Query as mentioned below.

```
content="auditType"
```

5. Select Measure as mentioned below

Occurrence of logs records

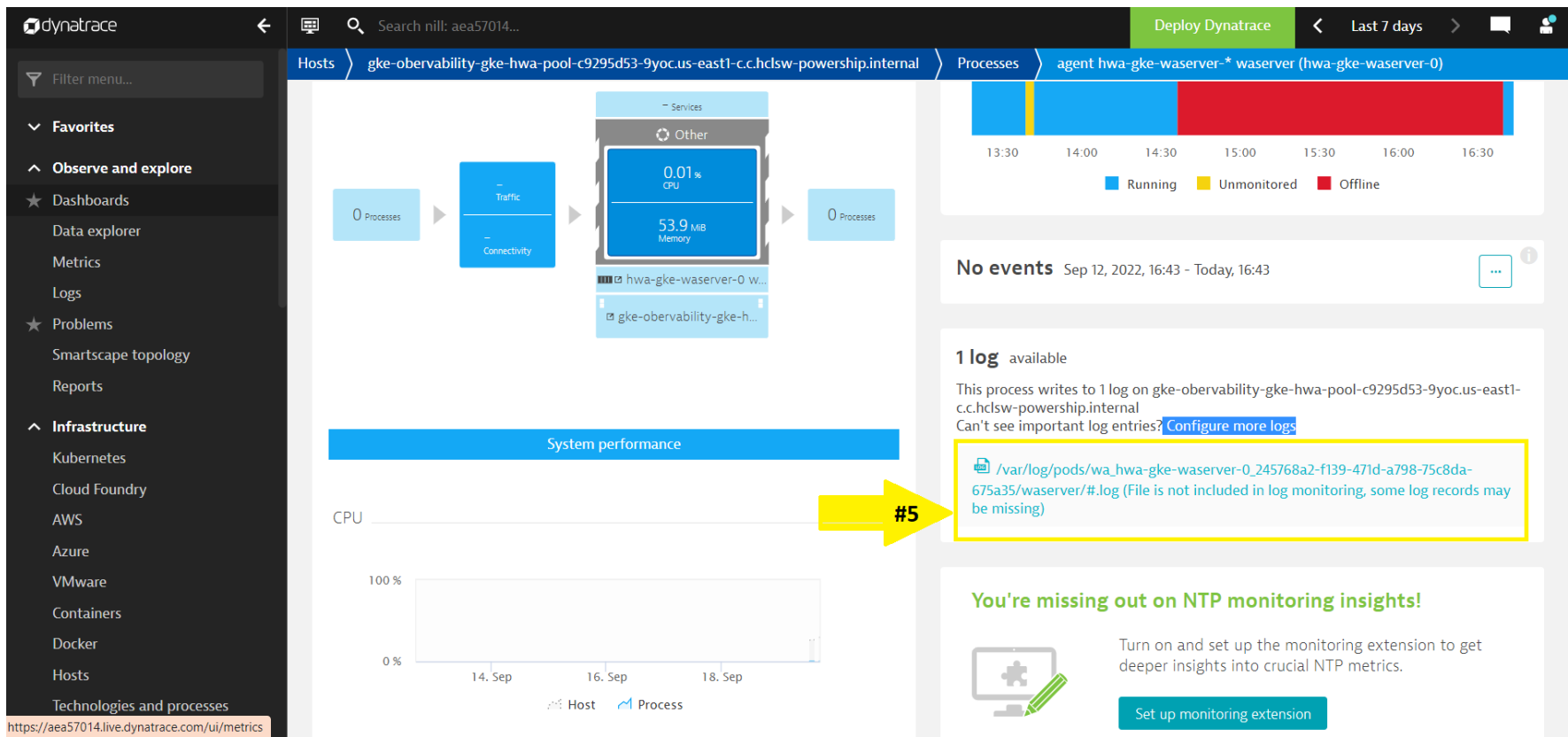
6. Add all the Dimension mentioned below

Dimension
action.type
audit.type
framework.user
object.type
username
workstationname

7. Select Save Changes

4. Configure more logs

1. In the Dynatrace menu, go to Kubernetes
2. Select Kubernetes > Dynatrace { your cluster } > wa { your namespace }
3. Select hwa-gke-waserver {workloads} > hwa-gke-waserver-0 {pods}
4. Select agent hwa-gke-waserver-* waserver (hwa-gke-waserver-0) { Processes }



5. Copy your waserver log path. It looks like below.

```
/var/log/pods/wa_hwa-gke-waserver-0_245768a2-f139-471d-a798-75c8da675a35/waserver/#.log
```

6. Select configure more logs and then select Add new log monitoring

7. Replace your waserve log path with waserver-plan-auditing then Save. Follow this same process for waserver-db-auditing ,waserver-bm-events. Examples are given below.

```
/var/log/pods/wa_hwa-gke-waserver-0_245768a2-f139-471d-a798-75c8da675a35/waserver-plan-auditing/#.log
```

```
/var/log/pods/wa_hwa-gke-waserver-0_245768a2-f139-471d-a798-75c8da675a35/waserver-db-auditing/#.log
```

```
/var/log/pods/wa_hwa-gke-waserver-0_245768a2-f139-471d-a798-75c8da675a35/waserver-bm-events/#.log
```

The screenshot shows the Dynatrace web interface. On the left is a dark sidebar with navigation links: Metrics, Logs, Problems, Smartscape topology, Reports, Infrastructure (expanded), Kubernetes, Cloud Foundry, AWS, Azure, VMware, Containers, Docker, Hosts, Technologies and processes, Network, Extensions, Cloud Automation, Applications & Microservices, Application Security, and Digital Experience. The main content area has a top navigation bar with 'Technologies', 'Process group agent hwa-gke-waserver-* waserver', 'Settings', and 'Log monitoring'. Below this, the 'Process group settings' for 'agent hwa-gke-waserver-* waserver' are shown. The 'Log monitoring' tab is active, displaying a section titled 'Manually added process logs'. It includes a description: 'Dynatrace automatically detects and monitors logs where process events are recorded so you can measure process health across all monitored technologies in your environment. In some cases you may need to add a log manually. [More...](#)'. Below this is a button 'Add new log for monitoring'. A table lists three logs with their paths and icons for delete (X) and edit (pencil):

Log Path	Delete	Edit
/var/log/pods/wa_hwa-gke-waserver-0_cae529eb-ae6-470c-926b-895ecff39fbf/waserver-plan-auditing/#.log	X	✎
/var/log/pods/wa_hwa-gke-waserver-0_cae529eb-ae6-470c-926b-895ecff39fbf/waserver-db-auditing/#.log	X	✎
/var/log/pods/wa_hwa-gke-waserver-0_cae529eb-ae6-470c-926b-895ecff39fbf/waserver-bm-events/#.log	X	✎

NOTE : Follow the same step for Openshift solution and select the workloads ,pods contains **waserver** name.

5. Log storage configuration

1. In the Dynatrace menu, go to Settings
2. Select Settings > Log Monitoring > Log storage configuration and then select Add rule
3. Add Rule name as WA Log Storage
4. Select Rule type as Include in storage
5. Select Add Matcher and then select Matcher attribute as Log Source.
6. Add Value as the log path of waserver-plan-auditing, waserver-db-auditing, waserver-bm-events from the previous step and then select Add Matcher.

Settings
Log Monitoring
Log storage configuration
Create rule

Add matcher
Cancel

Matcher attribute	Value	Delete	Edit
Log source	<div> <div>/var/log/pods/wa_hwa-gke-waserver-0_91b4f4b3-cb97-4ce0-9c30-bb6fe591f442/waserver-plan-auditing/#.log,</div> <div>/var/log/pods/wa_hwa-gke-waserver-0_91b4f4b3-cb97-4ce0-9c30-bb6fe591f442/waserver-db-auditing/#.log,</div> <div>/var/log/pods/wa_hwa-gke-waserver-0_91b4f4b3-cb97-4ce0-9c30-bb6fe591f442/waserver-bm-auditing/#.log</div> </div>	X	^

Matcher attribute

Log source

Value

/var/log/pods/wa_hwa-gke-waserver-0_91b4f...

/var/log/pods/wa_hwa-gke-waserver-0_91b4f...

/var/log/pods/wa_hwa-gke-waserver-0_91b4f...

This matcher will match any of the given sources. For details on supported values, please review [the documentation](#).

You have unsaved changes

Save changes
Discard changes

7. Select Save Changes

NOTE : if the waserver is deleted and recreated the logs path gets changed. So, follow the step 4 and 5 again once its re-deployed.

WA Monitoring Dashboards and Alerts setup in Dynatrace

Follow the below steps to upload and configure the WA Monitoring Dashboards and Alerts.

NOTE : This Alerts and Email Notification setup is developed and tested on Dynatrace SaaS Version 1.252.

1. Getting Environment Link

1. Select the user icon at the top right corner
2. Select Account > Account Settings
3. Go to Consumption by Environment section
4. Select your Environment and copy the link address of Environment.

2. Create Access Token

1. In the Dynatrace menu, go to Access Token and then select Generate new Token
2. Add your Token name , Expiration date
3. Select template as None
4. Select the scopes mentioned below table.

Scope
Write configuration
Ingest metrics

5. Select Generate Token and then Copy the Generated Token for further use.

3. Create Dashboards and Alerts

1. Run the starter.sh with your ***ENVIRONMENT_LINK, ACCESS_TOKEN*** as parameters. Follow this below command as example.

```
$ sh ./starter.sh ENVIRONMENT_LINK ACCESS_TOKEN
```

```
sample@sample-virtual-machine: ~  
sample@sample-virtual-machine:~$ sh ./starter.sh https://zoz64731.live.dynatrace.com dt0c01.CXMEFFPRJ0XR5XBIE66H5EJV.JDSQ53640JK3U6D2ZU6MUMEZ53SAQHTOP5M3OVZKGUMUTAHH2Z2B4JUT7M5HYM7S  
{ "id": "ce5e7127-daf2-421f-ac6e-f7f860c35022", "name": "Audit Dashboard2" } { "id": "128e6d78-293c-4cf1-bdca-1c9024351c6e", "name": "Infrastructure Dashboard2" } { "id": "5c9b0e25-b65c-4428-9a4d-81518e3962f8", "name": "Jobs and JS dashboard2" } { "id": "c83add93-ae9f-455a-a9d6-870a1972f824", "name": "KPI and Workstation Dashboard2" } { "id": "4c3102cb-6257-4e73-9a2c-d7b3ecb42148", "name": "Overview Dashboard2" } { "id": "e69b60a5-24fd-48a4-819a-9cf792012508", "name": "WA_Broker_Status", "description": "The {metricname} value of {severity} was {alert_condition} your custom threshold of {threshold}." } { "id": "74b082e8-6009-4ec3-b195-96dd90fb7f00", "name": "WA_DB_connected", "description": "The {metricname} value of {severity} was {alert_condition} your custom threshold of {threshold}." } { "id": "4f3a5410-4812-4b70-a110-9cd3b621ac66", "name": "WA_FINAL_Error", "description": "The {metricname} value of {severity} was {alert_condition} your custom threshold of {threshold}." } { "id": "24c9de4d-5d7d-4f50-9600-009a2c4f3db7", "name": "WA_FINAL_Late", "description": "The {metricname} value of {severity} was {alert_condition} your custom threshold of {threshold}." }  
sample@sample-virtual-machine:~$
```

2. Copy the Dashboard ID from terminal for further use

3. In the Dynatrace menu, go to Dashboards

- Turn ON show all tenant dasboards option
- Select Owner as HWA Monitoring
- Verify all the dashboards are created



Dashboards

Overview of all dashboards you are permitted to view or edit.

Show all tenant dashboards (for admin users only)

Filter by Owner: HWA Monitoring X Clear all

Ownership

☒ Any

☐ Mine

☐ Shared with me

Favorite

☒ Any

☐ Yes

☐ No

Owner

☐ Any

☐ Dynatrace

☒ HWA Monitoring

☐ dynatrace.test126@gmail...

5 Dashboards Import dashboard Create dashboard

Favorite ▼	Name ↕	Popularity ↕	Modified at ↕	Owner ↕	
★	Jobs and Job Streams Dashboard	<div><div></div></div>	Oct 19 18:09	HWA Monitoring	...
★	KPIs and Workstations Dashboard	<div><div></div></div>	Oct 21 15:28	HWA Monitoring	...
★	HWA Observability Dashboard	<div><div></div></div>	Oct 21 12:39	HWA Monitoring	...
★	Infrastructure Dashboard <small>Preset</small>	<div><div></div></div>	Oct 21 12:41	HWA Monitoring	...
★	Auditing Dashboard	<div><div></div></div>	Oct 19 18:07	HWA Monitoring	...

4. In the Dynatrace menu, go to Settings

- Go to Setting > Anomaly detection > Custom events for alerting
- Verify all the created alerts

Settings

- Monitoring
 - Setup and overview
 - Monitored technologies
 - Monitoring overview
 - Host naming
 - OS services monitoring
 - NetTracer traffic
- Cloud Automation
 - Setup and configuration
- Processes and containers
 - Monitoring, detection and naming
- Web and mobile monitoring
 - Real user and synthetic monitoring
- Cloud and virtualization
 - Connect cloud and virtualization types
- Server-side service monitoring

Custom events for alerting

Create custom event for alerting

Start typing to filter this view

Title	Severity	Entity scope	On/Off	Delete	Edit
WA_LicenseUncounted	Custom alert	wa.metricboard.application_wa_l...	<input checked="" type="checkbox"/>	X	
WA_FINAL_Late	Custom alert	wa.metricboard.application_wa_...	<input checked="" type="checkbox"/>	X	
WA_FINAL_Error	Custom alert	wa.metricboard.application_wa_...	<input checked="" type="checkbox"/>	X	
WA_DB_connected	Custom alert	wa.metricboard.application_wa_...	<input checked="" type="checkbox"/>	X	
WA_Broker_Status	Custom alert	wa.metricboard.application_wa_...	<input checked="" type="checkbox"/>	X	

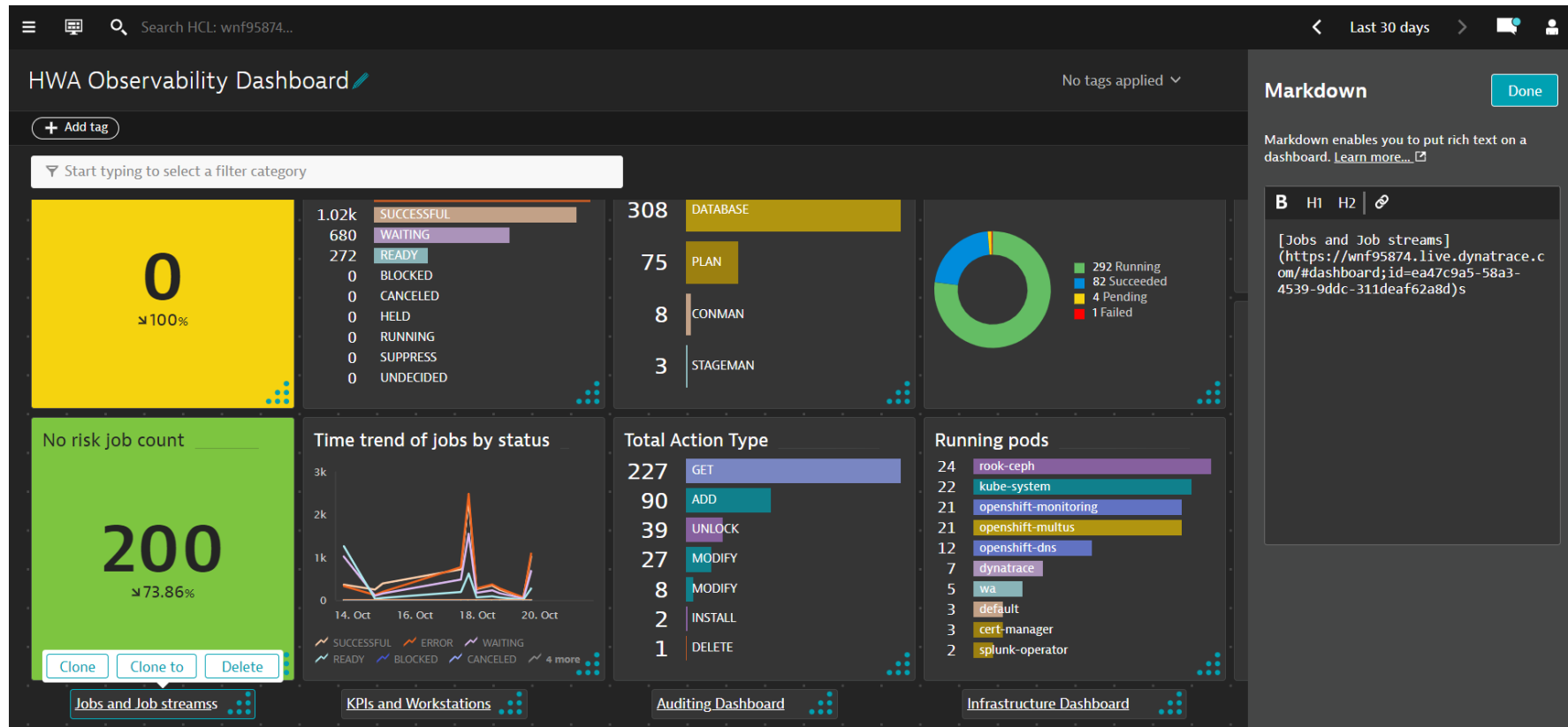
5. In the Dynatrace menu, go to Problems and check the raised alerts or select the icon at top right corner

4. Configuring dashboard markdown link

The HWA Observability Dashboard provides the link to all dashboards. Once the dashboard is created, new dashboard id is generated for each and every dashboards. So every dashboard id needs to be updated on the HWA Observability Dashboard markdown component.

1. Get the copied dashboard id from the Create dashboard step
2. In the Dynatrace menu, go to Dashboards
3. Select HWA Observability Dashboard
 - o Select Edit option at the top right corner
 - o Go to the bottom of the dashboard

- Select the markdown component as shown in the image and replace your ENVIRONMENT_LINK and id with your respective dashboard id
- Do this same step for all dashboards. (Jobs and Job Streams,KPIS and Workstation,Auditing Dashboard,Infrastructure Dashboard)



4. Select Done

5. Setup Email Notification for Alerts (Optional)

a). Configuring Alert Profile

1. In the Dynatrace menu, go to Settings > Alerting > Alerting profiles
2. Type a name for the new profile in the Create new alerting profile field and select Create

3. Select Add severity rule then select Problem severity level as **Custom**
4. Add Problem send delay in minutes as per your requirement. For example, if you add 30, then an email notification will be sent only if the problem remains open for 30 minutes.
5. Select Save Changes. Keep a note of your Alert Profile Name for future use.

The screenshot shows the Dynatrace Settings interface. The left sidebar contains a navigation menu with categories like VMware, Containers, Docker, Hosts, Technologies and processes, Network, Extensions, Cloud Automation, Applications & Microservices, Application Security, Digital Experience, Manage, and Deploy Dynatrace. The main content area is titled 'Settings > Alerting > Problem alerting profiles'. It features a list of settings on the left, including Service Detection, Log Monitoring, Anomaly detection, Alerting (selected), Dashboards, Metrics, Integration, and Problem notifications. The right pane shows the configuration for the 'Problem alerting profiles'. It includes a 'Name' field set to 'Default', a 'Management zone' dropdown set to 'Optional', and a 'Severity rules' section with an 'Add severity rule' button. Below this is a search bar for 'Custom alert' and a table with one entry: 'Custom alert (After 0 mins; Include all entities)'. The 'Problem severity level' is set to 'Custom', and the 'Problem send delay in minutes' is set to '30'.

Problem alerting profiles

Manage and customize service monitoring

Alerting
Configure alerting settings

Problem alerting profiles

Dashboards
Configure dashboard settings

Metrics
Configure metrics settings

Integration
Integrate Dynatrace with 3rd party systems

Problem notifications

Name
Default

Management zone
Optional

Define management zone filter for profile

Severity rules
Define severity rules for profile. A maximum of 100 severity rules is allowed.

Add severity rule

Custom alert

Summary	Delete	Details
Custom alert (After 0 mins; Include all entities)	X	^

Problem severity level
Custom

Problem send delay in minutes
30

Send a notification if a problem remains open longer than X minutes.

b). Configuring Email Integration

Follow this [Email Integration](#) documentation to configure email notification for alerts.

Alerting profile

AlertProfile

Default

Default for ActiveGate Token Expiry

Type to search for other options

related to this integration.

NOTE : Select the Alerting Profile Name you have configured in the previous step.

Metric Processing and Ingestion setup

1. Metric Ingestion

We are getting KPI metrics from WA API endpoint using Exporter. Exporter transforms kpi data into dynatrace-supported metric-ingestion format and then, pushes to dynatrace server by making a POST call to Dynatrace [Metrics v2](#). Metrics are ingested with [Metric Ingestion Protocol](#).

Exporter can be deployed in Kubernetes environment by using the Exporter helm chart. The public Exporter helm chart can be cloned from by using the below command:

```
git clone https://github.com/HCL-TECH-SOFTWARE/HCL-Workload-Automation-Observability-for-Dynatrace.git
```

After downloading helm charts, set all required environment variables present in the values.yaml file present in CHART-NAME/values.yaml file.

List of environment variables present in values.yaml file are:

Environment Variables
INTERVAL_OMETRICS
WA_OMETRICS
DYNATRACE_SERVER_URL
API_TOKEN

Note: Refer to above steps to get Dynatrace API token and Server URL.

a). Create the Secret

If you already have a license then you can proceed to obtain your entitlement key. To learn more about acquiring an HCL Workload Automation license, contact HWAINFO@hcl.com.

Obtain your entitlement key and store it on your cluster by creating a Kubernetes Secret. Using a Kubernetes secret allows you to securely store the key on your cluster and access the registry to download the chart and product images.

Access the entitled registry. Contact your HCL sales representative for the login details required to access the HCL Entitled Registry.

To create a pull secret for your entitlement key that enables access to the entitled registry, run the following command:

```
$ kubectl create secret docker-registry exporter-secret --docker-server=<registry_server> --docker-username=<user_n
```



After setting the required environment variables in the values.yaml file, to install the chart into namespace 'default' with the release name my-exporter-release use the below commands:

```
$ helm install RELEASE_NAME HELMCHART_DIR
```

2. Ingested metrics in Dynatrace

After making successful POST call to ingest KPI metrics to the dynatrace server, it is required to see ingested data in Dynatrace UI.

There are two ways to witness ingestion:

1. Dashboards:

- Menu of Dynatrace UI: Observe and Explore > Dashboards
- Now, select any of the dashboard mentioned below to look for information of your choice:
 - HWA Observability Dashboard
 - Jobs and Job Streams Dashboard
 - KPIs and Workstations Dashboard

Ingested changes must be reflecting in dashboards.

2. Data Explorer

- Menu of Dynatrace UI: Observe and Explore > Metrics
- Set time duration in the top right corner of Dynatrace UI according to the period over which you want to see ingestion.
- In filter, select text and enter "wa.metric". All of the ingested metrics will start appearing there. Choose metrics among them which you were looking for.

3. Setting Metadata

There are a few metrics to which you are required to provide metadata to have good analysis on dashboards.

Metric name	Display name
application_wa_criticalJob_highRisk_boolean	High risk jobs
application_wa_criticalJob_potentialRisk_boolean	Potential risk jobs
application_wa_criticalJob_incompletePredecessor_jobs	No risk jobs
application_wa_DB_connected_boolean	DB connection
application_wa_JobsByFolder_jobs	Jobs by folder
application_wa_JobsByWorkstation_jobs	Jobs by workstation

Steps to follow:

1. Go to Menu , Observe and Explore > Metrics
2. In filter bar, enter the name of any metrics mentioned above and that metric will be filtered out.
3. Select Edit metadata
4. Give Display name which is given in above table respectively.
5. Follow this exercise for all the metrics.

Getting Started with Workload Automation Monitoring

The HWA Observability Dashboard provides a single, consolidated view for monitoring the workload status. By selecting the dashboard on the list, you can see the information related to that dashboard.

HWA Observability Dashboard:



By clicking a button or menu option, you open a new tab displaying the selected dashboard information. The following dashboards are supported:

- Jobs and Job Streams. This dashboard shows the status of Jobs, Critical Jobs, and Job Streams.

Source of Information: HWA Deployment events sidecar container and HWA server Logs.

- KPIs and Workstations. This dashboard shows the HWA KPIs information for each host and allows drilldown to see the timeseries data in a visual representation for the defined KPIs.

Source of Information: API exposed by HWA Server on port 31116.

- Auditing Dashboard. This dashboard shows details of audit information such as user actions. Users can view audit information for selected time range, user, and object.

Source of Information: HWA Deployment sidecar audit containers, for example: waserver-db-auditing, waserver-plan-auditing etc.

- Infrastructure Dashboard. This dashboard provides an overview of the infrastructure details of HWA deployed on Kubernetes cluster. Filter by your Kubernetes namespace and view the dashboard as shown below.



Source of Information: : OneAgent Monitors the workload automation infrastructures and sent it as metric to Dynatrace.

- Custom Alerts and Problems. Custom Alerts are created out of HWA Monitoring Application. Follow this [Metric events for alerting](#) documentation to create your problems. The following table shows some of the out-of-the-box alert definitions that come with the HWA Observability Dashboard:

Alert Name	Threshold Condition
WA_Broker_Status	==0 (more than 5 minutes in 5 minutes slot)
WA_DB_connected	==0 (more than 1 minutes in 3 minutes slot)
WA_FINAL_Error	==1 (more than 1 minutes in 3 minutes slot)

Alert Name	Threshold Condition
WA_FINAL_Late	== 1 (more than 1 minutes in 3 minutes slot)
WA_LicenseUncounted	> 0 (more than 60 minutes in 60 minutes slot)

FAQs

1. How many dashboards are available?

You can import and use the following 5 dashboards:

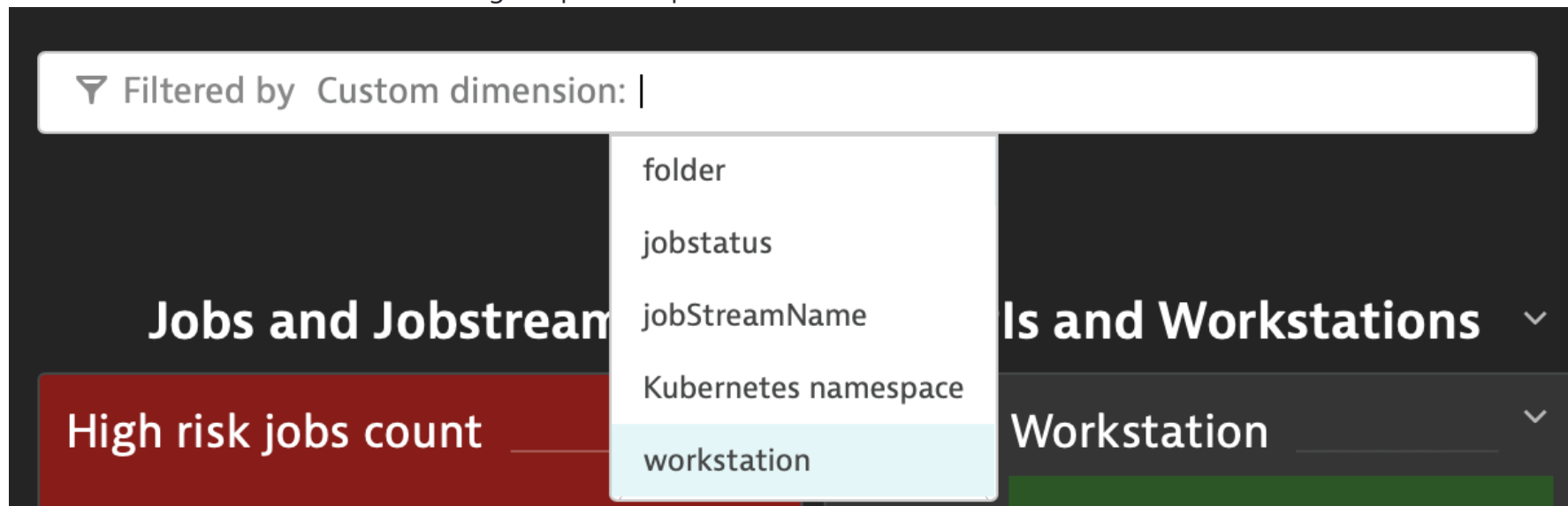
- HWA Observability Dashboard (Overview Dashboard)
- Jobs and Job Streams Dashboard
- KPIs and Workstations Dashboard
- Auditing Dashboard
- Infrastructure Dashboard

2. How can I get quick glimpses of various information ?

Use the HWA Observability Dashboard for this purpose.

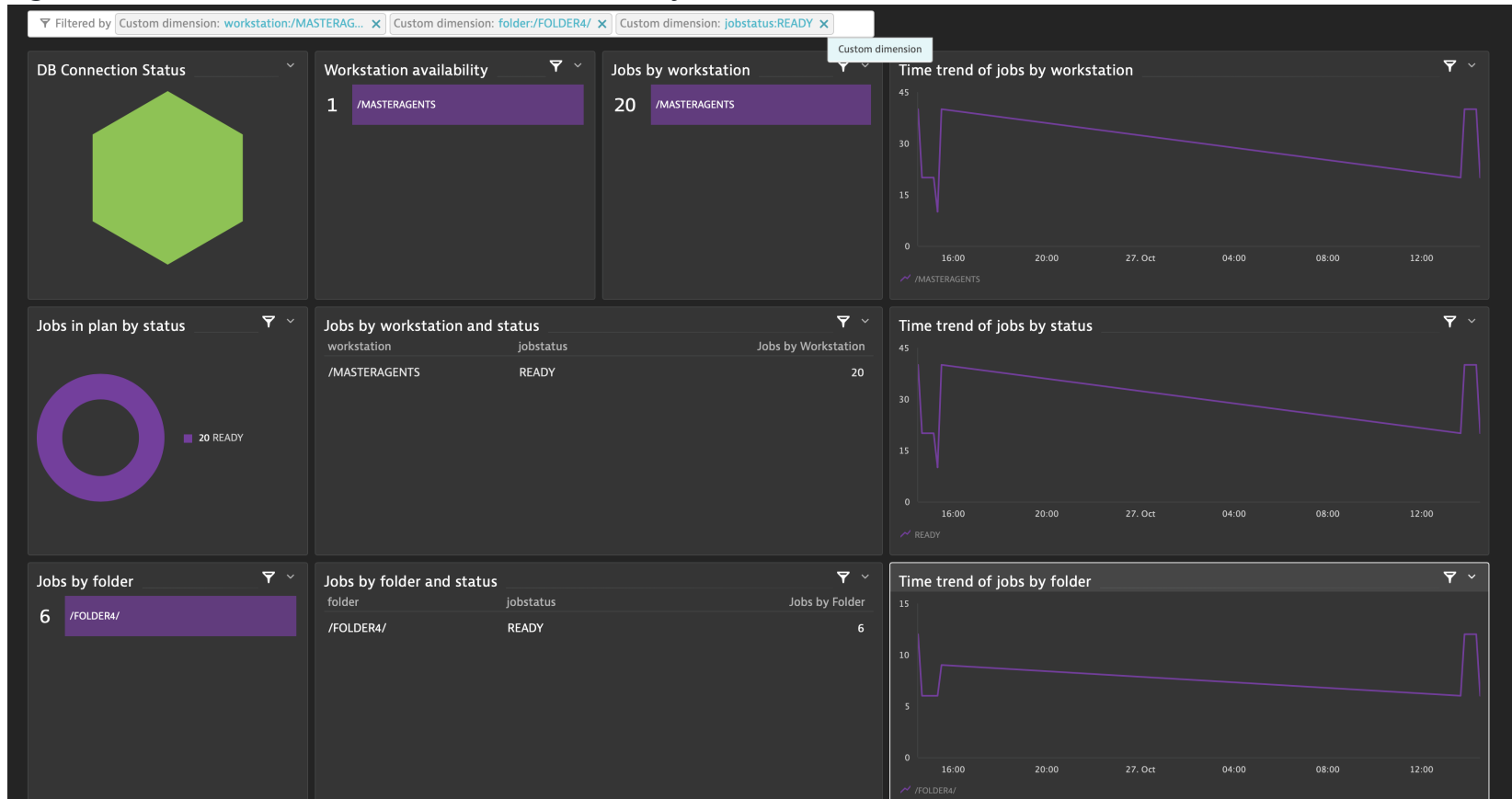
3. How can I filter information on dashboards ?

There is a dynamic filter on each dashboard. Multiple custom dimensions are already present specific to each dashboard. You can use these custom dimensions and give specific input to the filter.



- Steps:
 - Choose Custom dimension over which you want to filter the dashboard. E.g. folder, jobstatus, jobname etc
 - Give any valid dimension value to Custom dimension. The value is case sensitive and should consist of all alphanumeric values and symbols like underscore, hyphen, and so on. For example, if the workstation name is /HWA-GKE-SERVE_XA, value should be same with initial backslash, hyphens at same places and underscore before XA.
 - Use cases allowed: - Filtering based on multiple dimension values for the same custom dimension can be given simultaneously. E.g. folder be filtered with /FOLDER1/ and /FOLDER3/ - Filtering based on multiple custom dimensions simultaneously. Just keep adding dimensions one by one.

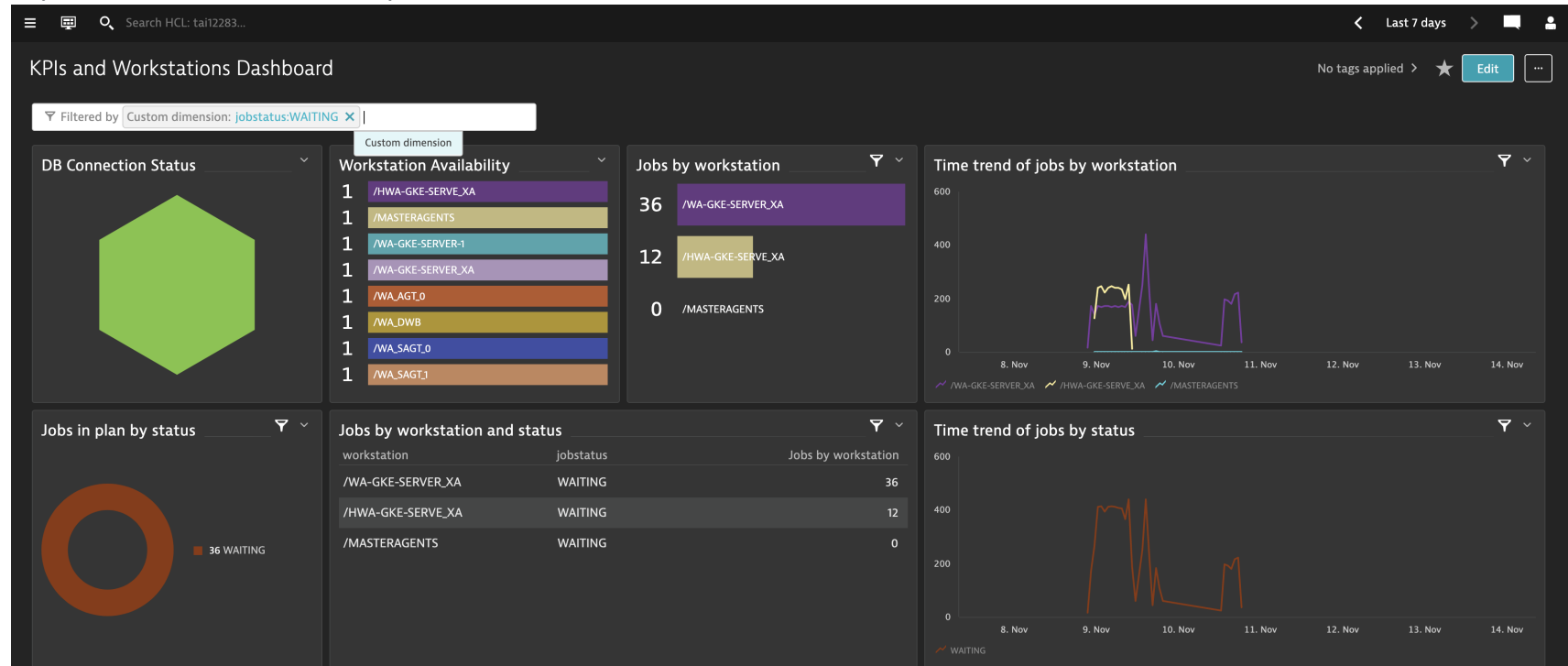
E.g.workstation:/MASTERAGENTS;folder:/FOLDER4;/jobstatus:READY



- o If you use incorrect filters, **No data** will appear in certain related blocks in dashboard.



4. How to resolve if am witnessing conflicting information on dashboard? I am assuming that by conflicting information you mean that for same KPI metric different information is visible on on different blocks of dashboard. Actually, it is expected situation. Let me explain how:



Outcomes which dashboard in above image is indicating :

- Jobs By Workstation:
 - 36 jobs in /WA-GKE-SERVER_XA workstation
 - 12 jobs in /HWA-GKE-SERVE_XA workstation
- Jobs in plan by status:
 - 36 jobs are in WAITING
- Jobs by workstation and status:
 - 36 jobs in WAITING in /WA-GKE-SERVER_XA workstation

- 12 jobs in WAITING in /HWA-GKE-SERVE_XA workstation

So, we might feel that Jobs in plan by status is giving incongruent information from Jobs By Workstation and Jobs by workstation and status. Ideally, Jobs in plan by status should have shown 48 jobs in WAITING. Actually, **this incongruency is not error**. What must have been is that 12 jobs of WAITING job status might have got closed in the past days (duration set is 7 days) as the analysis which we are getting is aggregated for time duration. Though, Jobs in plan by status doesn't include those closed 12 WAITING jobs but, rest blocks have considered that information too. Similar situation can occur for other KPI metrics too.

5. How to add audit type e.g., Stageman in Auditing Dashboard?

Replace filter condition with your AuditType e.g. Stageman and follow this procedure for all the new AuditType component:

- Select Edit option
- Clone the Dashboard or Plan AuditType component
- Select Configure tile in Data Explorer
- Replace the filter condition the following `eq("audit.type","STAGEMAN")`
- Select Save changes to dashboard

6. Pods and container names are not matching on configure more logs step for OpenShift?

Follow the same steps for OpenShift solution and select the workloads, pods contain ***waserver*** name.

7. After pods are deleted and recreated the logs path are changed, so the logs are not ingested.

Follow the below Log ingestion steps again:

- [Configure more logs](#)
- [Log storage configuration](#)

8. HWA Observability Dashboard infrastructure details not specific cluster?

Filter by your Kubernetes namespace and view the infrastructure details .

9. How to get Email if Problem/Alert exist for more than 30 minutes?

- In the Dynatrace menu, go to Settings > Alerting > Alerting profiles.
- Select your Alerting profiles integrated with problem notification.
- Select Severity rule > Custom Alerts > Add your Problem send delay in minutes.

10. Which version of Dynatrace this setup is supported?

This setup is supported for Dynatrace SaaS Version 1.252

11. How to uninstall the exporter?

Run the following command **helm uninstall RELEASE_NAME**

12. Job and jobs stream and KPIs and Workstation information are displayed as metrics name?

Follow the [Setting Metadata](#) to update the metrics metadata name.

13. Common mistake on [WA Monitoring Dashboards and Alerts setup in Dynatrace](#) step?

Not copying the Dashboard ID from terminal for further use

14. What are the other ways to get the Dashboard ID?

Open the Dashboard in the browser and copy the ID field from browser URL.

15. Duplicate Dashboard and Alert are created on the Dynatrace?

Retrying [Create Dashboards and Alerts](#) step mutiple times will create duplicate entry on Dynatrace. So the script is executed wait for some minutes and refresh the Dyntarce and check the Dashboards.

16. How to improvise analysis using dashboard further?

- In the dashboard, for the pie-chart representation there is a quick way to see specific analysis.
- Select any of the option which you want to omit e.g., Ready in Job status
- Select ready and thus, pie-chart will not show results of Ready in pie-chart

17. How to Clone dashboard?

- In the Dynatrace menu, go to Dashboards
- Filter the respective dashboard and click more symbol
- Select Clone option.