Configure Prometheus and Grafana for Nexus

prometheus-nexus-exporter

Basic prometheus metrics exporter for Sonatype Nexus > **NEW IN 3.19**

The default user is `admin`, but to collect these metrics only the `nx-metrics-all` and `nx-atlas-all` privileges are required.

Usage:

After plug-in is successfully installed the following link can be used to expose **metrics: /service/metrics/prometheus**

The *prometheus.yml* settings looks like:

/data/prometheus/config/prometheus.yaml

```
- job_name: nexus-exporter
  honor_timestamps: true
  scrape_interval: 15s
  scrape_timeout: 10s
  basic_auth:
      username: 'admin'
      password: 'password123'
  metrics_path: /service/metrics/prometheus
  scheme: http
  ec2_sd_configs:
    - region: us-east-1
      access_key: AKIAXZXIY4Q4M3JKI4TO
      secret_key: 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
      profile: arn:aws:iam::536285340728:user/devplatarn
      port: 8082
      refresh_interval: 1m
  relabel_configs:
    - source_labels: [__meta_ec2_tag_Name]
      regex: '^novartis-devops-nexus$'
      action: keep
    - source_labels: [__meta_ec2_public_ip]
      regex: (.+)
      target_label: __address__
      replacement: novartis.devops.altimetrik.io:8082
```

Metrics:

You can access the metric here: **http://novartis.devops.altimetrik.io:8082/service/metrics/prometheus**

```
# HELP jvm_memory_heap_committed Generated from Dropwizard metric import
(metric=jvm.memory.heap.committed,
type=com.codahale.metrics.jvm.MemoryUsageGaugeSet$$Lambda$410/324942062)
# TYPE jvm_memory_heap_committed gauge
jvm_memory_heap_committed 1.203765248E9
# HELP jvm_thread_states_waiting_count Generated from Dropwizard metric
import (metric=jvm.thread-states.waiting.count,
```

```
type=com.codahale.metrics.jvm.ThreadStatesGaugeSet$$Lambda$420/133970824
2)
# TYPE jvm_thread_states_waiting_count gauge
jvm_thread_states_waiting_count 48.0
# HELP org_sonatype_nexus_coreui_SearchComponent_read_timer Generated
from Dropwizard metric import
(metric=org.sonatype.nexus.coreui.SearchComponent.read.timer,
type=com.codahale.metrics.Timer)
# TYPE org_sonatype_nexus_coreui_SearchComponent_read_timer summary
org_sonatype_nexus_coreui_SearchComponent_read_timer{quantile="0.5",}
0.212743869
org_sonatype_nexus_coreui_SearchComponent_read_timer{quantile="0.75",}
0.33450175000000004
org_sonatype_nexus_coreui_SearchComponent_read_timer{quantile="0.95",}
0.33450175000000004
org_sonatype_nexus_coreui_SearchComponent_read_timer{quantile="0.98",}
0.33450175000000004
org_sonatype_nexus_coreui_SearchComponent_read_timer{quantile="0.99",}
0.33450175000000004
org_sonatype_nexus_coreui_SearchComponent_read_timer{quantile="0.999",}
0.33450175000000004
org_sonatype_nexus_coreui_SearchComponent_read_timer_count 3.0
# HELP
org_sonatype_nexus_ldap_internal_ui_LdapServerComponent_verifyLogin_time
r Generated from Dropwizard metric import
(metric=org.sonatype.nexus.ldap.internal.ui.LdapServerComponent.verifyLo
gin.timer, type=com.codahale.metrics.Timer)
# TYPE
org_sonatype_nexus_ldap_internal_ui_LdapServerComponent_verifyLogin_time
r summary
org_sonatype_nexus_ldap_internal_ui_LdapServerComponent_verifyLogin_time
r{quantile="0.5",} 0.0
org_sonatype_nexus_ldap_internal_ui_LdapServerComponent_verifyLogin_time
r{quantile="0.75",} 0.0
org_sonatype_nexus_ldap_internal_ui_LdapServerComponent_verifyLogin_time
r{quantile="0.95",} 0.0
org_sonatype_nexus_ldap_internal_ui_LdapServerComponent_verifyLogin_time
r{quantile="0.98",} 0.0
org_sonatype_nexus_ldap_internal_ui_LdapServerComponent_verifyLogin_time
r{quantile="0.99",} 0.0
org_sonatype_nexus_ldap_internal_ui_LdapServerComponent_verifyLogin_time
r{quantile="0.999",} 0.0
org_sonatype_nexus_ldap_internal_ui_LdapServerComponent_verifyLogin_time
r_count 0.0
# HELP
com_sonatype_nexus_repository_nuget_internal_security_NugetApiKeyCompone
nt_resetKey_timer Generated from Dropwizard metric import
(metric=com.sonatype.nexus.repository.nuget.internal.security.NugetApiKe
yComponent.resetKey.timer, type=com.codahale.metrics.Timer)
# TYPE
```

```
com_sonatype_nexus_repository_nuget_internal_security_NugetApiKeyCompone
nt_resetKey_timer summary
com_sonatype_nexus_repository_nuget_internal_security_NugetApiKeyCompone
nt_resetKey_timer{quantile="0.5",} 0.0
com_sonatype_nexus_repository_nuget_internal_security_NugetApiKeyCompone
nt_resetKey_timer{quantile="0.75",} 0.0
com_sonatype_nexus_repository_nuget_internal_security_NugetApiKeyCompone
nt_resetKey_timer{quantile="0.95",} 0.0
com_sonatype_nexus_repository_nuget_internal_security_NugetApiKeyCompone
nt_resetKey_timer{quantile="0.98",} 0.0
com_sonatype_nexus_repository_nuget_internal_security_NugetApiKeyCompone
nt_resetKey_timer{quantile="0.99",} 0.0
com_sonatype_nexus_repository_nuget_internal_security_NugetApiKeyCompone
nt_resetKey_timer{quantile="0.999",} 0.0
com_sonatype_nexus_repository_nuget_internal_security_NugetApiKeyCompone
nt_resetKey_timer_count 0.0
# HELP org_sonatype_nexus_coreui_BundleComponent_read_timer Generated
from Dropwizard metric import
(metric=org.sonatype.nexus.coreui.BundleComponent.read.timer,
type=com.codahale.metrics.Timer)
# TYPE org_sonatype_nexus_coreui_BundleComponent_read_timer summary
org_sonatype_nexus_coreui_BundleComponent_read_timer{quantile="0.5",}
0.039811762
org_sonatype_nexus_coreui_BundleComponent_read_timer{quantile="0.75",}
0.118322963
org_sonatype_nexus_coreui_BundleComponent_read_timer{quantile="0.95",}
0.118322963
org_sonatype_nexus_coreui_BundleComponent_read_timer{quantile="0.98",}
0.118322963
org_sonatype_nexus_coreui_BundleComponent_read_timer{quantile="0.99",}
0.118322963
org_sonatype_nexus_coreui_BundleComponent_read_timer{quantile="0.999",}
0.118322963
org_sonatype_nexus_coreui_BundleComponent_read_timer_count 2.0
# HELP
com_sonatype_nexus_plugins_outreach_internal_ui_OutreachComponent_readSt
atus_timer Generated from Dropwizard metric import
(metric=com.sonatype.nexus.plugins.outreach.internal.ui.OutreachComponen
t.readStatus.timer, type=com.codahale.metrics.Timer)
# TYPE
com_sonatype_nexus_plugins_outreach_internal_ui_OutreachComponent_readSt
atus_timer summary
com_sonatype_nexus_plugins_outreach_internal_ui_OutreachComponent_readSt
atus_timer{quantile="0.5",} 8.06631E-4
com_sonatype_nexus_plugins_outreach_internal_ui_OutreachComponent_readSt
atus_timer{quantile="0.75",} 0.021431555
com_sonatype_nexus_plugins_outreach_internal_ui_OutreachComponent_readSt
atus_timer{quantile="0.95",} 0.021431555
com_sonatype_nexus_plugins_outreach_internal_ui_OutreachComponent_readSt
atus_timer{quantile="0.98",} 0.021431555
```

```
com_sonatype_nexus_plugins_outreach_internal_ui_OutreachComponent_readSt
atus_timer{quantile="0.99",} 0.021431555
com_sonatype_nexus_plugins_outreach_internal_ui_OutreachComponent_readSt
atus_timer{quantile="0.999",} 0.021431555
com_sonatype_nexus_plugins_outreach_internal_ui_OutreachComponent_readSt
atus_timer_count 5.0
# HELP org_eclipse_jetty_webapp_WebAppContext_requests Generated from
Dropwizard metric import
(metric=org.eclipse.jetty.webapp.WebAppContext.requests,
type=com.codahale.metrics.Timer)
# TYPE org_eclipse_jetty_webapp_WebAppContext_requests summary
org_eclipse_jetty_webapp_WebAppContext_requests{quantile="0.5",} 0.002
org_eclipse_jetty_webapp_WebAppContext_requests{quantile="0.75",} 0.025
org_eclipse_jetty_webapp_WebAppContext_requests{quantile="0.95",} 0.25
org_eclipse_jetty_webapp_WebAppContext_requests{quantile="0.98",} 0.25
org_eclipse_jetty_webapp_WebAppContext_requests{quantile="0.99",} 0.307
org_eclipse_jetty_webapp_WebAppContext_requests{quantile="0.999",} 0.307
org_eclipse_jetty_webapp_WebAppContext_requests_count 3596.0
# HELP
org_sonatype_nexus_coreui_BlobStoreComponent_readGroups_exceptions_total
Generated from Dropwizard metric import
(metric=org.sonatype.nexus.coreui.BlobStoreComponent.readGroups.exceptio
ns, type=com.codahale.metrics.Meter)
# TYPE
org_sonatype_nexus_coreui_BlobStoreComponent_readGroups_exceptions_total
counter
org_sonatype_nexus_coreui_BlobStoreComponent_readGroups_exceptions_total
0.0
# HELP
org_sonatype_nexus_blobstore_s3_internal_ui_S3Component_signertypes_exce
ptions_total Generated from Dropwizard metric import
(metric=org.sonatype.nexus.blobstore.s3.internal.ui.S3Component.signerty
pes.exceptions, type=com.codahale.metrics.Meter)
# TYPE
org_sonatype_nexus_blobstore_s3_internal_ui_S3Component_signertypes_exce
ptions_total counter
org_sonatype_nexus_blobstore_s3_internal_ui_S3Component_signertypes_exce
ptions_total 0.0
# HELP jvm_memory_pools_PS_Eden_Space_init Generated from Dropwizard
metric import (metric=jvm.memory.pools.PS-Eden-Space.init,
type=com.codahale.metrics.jvm.MemoryUsageGaugeSet$$Lambda$418/995319516)
# TYPE jvm_memory_pools_PS_Eden_Space_init gauge
jvm_memory_pools_PS_Eden_Space_init 3.145728E8
# HELP org_sonatype_nexus_coreui_TaskComponent_update_exceptions_total
Generated from Dropwizard metric import
(metric=org.sonatype.nexus.coreui.TaskComponent.update.exceptions,
type=com.codahale.metrics.Meter)
# TYPE org_sonatype_nexus_coreui_TaskComponent_update_exceptions_total
counter
org_sonatype_nexus_coreui_TaskComponent_update_exceptions_total 0.0
```

```
# HELP
org_sonatype_nexus_rapture_internal_state_StateComponent_getState_except
ions_total Generated from Dropwizard metric import
(metric=org.sonatype.nexus.rapture.internal.state.StateComponent.getStat
e.exceptions, type=com.codahale.metrics.Meter)
# TYPE
org_sonatype_nexus_rapture_internal_state_StateComponent_getState_except
ions_total counter
org_sonatype_nexus_rapture_internal_state_StateComponent_getState_except
ions_total 0.0
# HELP
org_sonatype_nexus_coreui_UserComponent_updateAccount_exceptions_total
Generated from Dropwizard metric import
(metric=org.sonatype.nexus.coreui.UserComponent.updateAccount.exceptions
, type=com.codahale.metrics.Meter)
# TYPE
org_sonatype_nexus_coreui_UserComponent_updateAccount_exceptions_total
counter
org_sonatype_nexus_coreui_UserComponent_updateAccount_exceptions_total
0.0
# HELP jvm_memory_non_heap_usage Generated from Dropwizard metric import
(metric=jvm.memory.non-heap.usage,
type=com.codahale.metrics.jvm.MemoryUsageGaugeSet$2)
# TYPE jvm_memory_non_heap_usage gauge
jvm_memory_non_heap_usage -2.24948232E8
# HELP jvm_memory_pools_Code_Cache_init Generated from Dropwizard metric
import (metric=jvm.memory.pools.Code-Cache.init,
type=com.codahale.metrics.jvm.MemoryUsageGaugeSet$$Lambda$418/995319516)
# TYPE jvm_memory_pools_Code_Cache_init gauge
jvm_memory_pools_Code_Cache_init 2555904.0
# HELP jvm_garbage_collectors_PS_Scavenge_count Generated from
Dropwizard metric import
(metric=jvm.garbage-collectors.PS-Scavenge.count,
type=com.codahale.metrics.jvm.GarbageCollectorMetricSet$$Lambda$425/4036
33594)
# TYPE jvm_garbage_collectors_PS_Scavenge_count gauge
jvm_garbage_collectors_PS_Scavenge_count 24.0
# HELP jvm_thread_states_new_count Generated from Dropwizard metric
import (metric=jvm.thread-states.new.count,
type=com.codahale.metrics.jvm.ThreadStatesGaugeSet$$Lambda$420/133970824
2)
# TYPE jvm_thread_states_new_count gauge
jvm_thread_states_new_count 0.0
# HELP
com_sonatype_nexus_migration_ui_AssistantComponent_cancel_exceptions_tot
al Generated from Dropwizard metric import
(metric=com.sonatype.nexus.migration.ui.AssistantComponent.cancel.except
ions, type=com.codahale.metrics.Meter)
# TYPE
com_sonatype_nexus_migration_ui_AssistantComponent_cancel_exceptions_tot
```
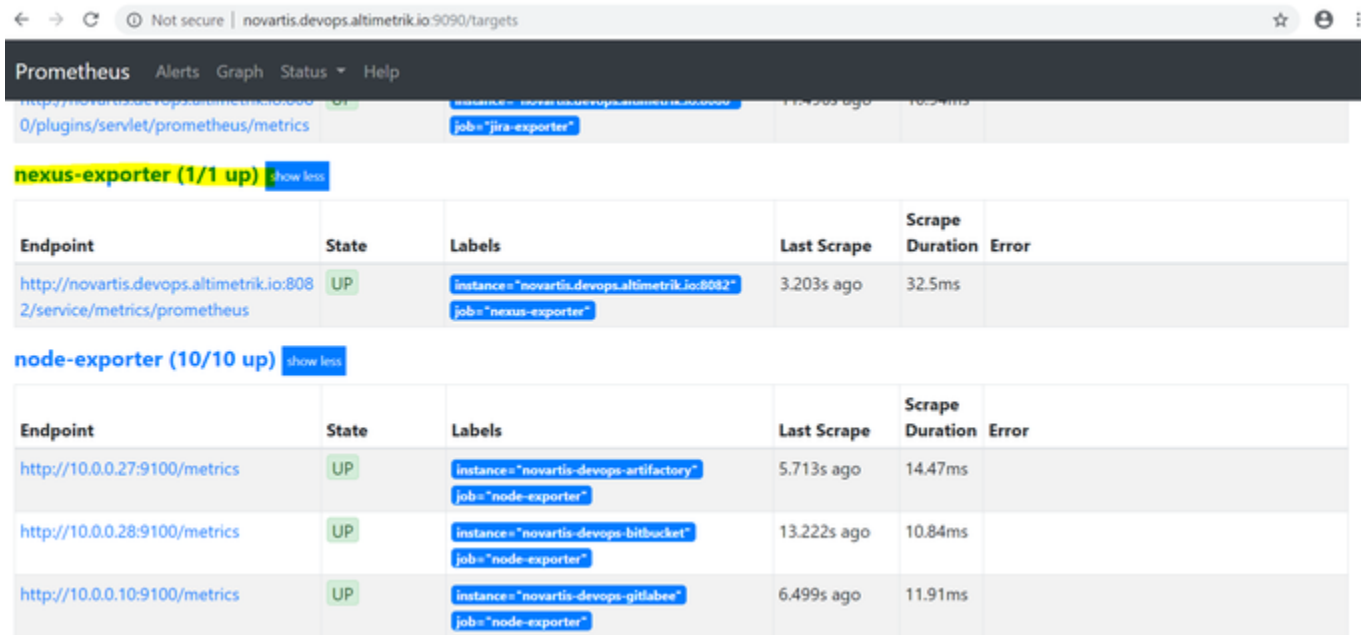
```
al counter
com_sonatype_nexus_migration_ui_AssistantComponent_cancel_exceptions_tot
al 0.0
# HELP
com_sonatype_nexus_migration_ui_AssistantComponent_abort_exceptions_tota
l Generated from Dropwizard metric import
(metric=com.sonatype.nexus.migration.ui.AssistantComponent.abort.excepti
ons, type=com.codahale.metrics.Meter)
# TYPE
com_sonatype_nexus_migration_ui_AssistantComponent_abort_exceptions_tota
l counter
com_sonatype_nexus_migration_ui_AssistantComponent_abort_exceptions_tota
l 0.0
# HELP org_sonatype_nexus_coreui_RoleComponent_readSources_timer
Generated from Dropwizard metric import
(metric=org.sonatype.nexus.coreui.RoleComponent.readSources.timer,
type=com.codahale.metrics.Timer)
# TYPE org_sonatype_nexus_coreui_RoleComponent_readSources_timer summary
org_sonatype_nexus_coreui_RoleComponent_readSources_timer{quantile="0.5"
,} 0.0
org_sonatype_nexus_coreui_RoleComponent_readSources_timer{quantile="0.75
",} 0.0
org_sonatype_nexus_coreui_RoleComponent_readSources_timer{quantile="0.95
",} 0.0
org_sonatype_nexus_coreui_RoleComponent_readSources_timer{quantile="0.98
",} 0.0
org_sonatype_nexus_coreui_RoleComponent_readSources_timer{quantile="0.99
",} 0.0
org_sonatype_nexus_coreui_RoleComponent_readSources_timer{quantile="0.99
9",} 0.0
org_sonatype_nexus_coreui_RoleComponent_readSources_timer_count 0.0
# HELP
com_sonatype_nexus_migration_ui_AssistantComponent_syncStatus_timer
Generated from Dropwizard metric import
(metric=com.sonatype.nexus.migration.ui.AssistantComponent.syncStatus.ti
mer, type=com.codahale.metrics.Timer)
# TYPE
com_sonatype_nexus_migration_ui_AssistantComponent_syncStatus_timer
summary
com_sonatype_nexus_migration_ui_AssistantComponent_syncStatus_timer{quan
tile="0.5",} 0.0
com_sonatype_nexus_migration_ui_AssistantComponent_syncStatus_timer{quan
tile="0.75",} 0.0
com_sonatype_nexus_migration_ui_AssistantComponent_syncStatus_timer{quan
tile="0.95",} 0.0
com_sonatype_nexus_migration_ui_AssistantComponent_syncStatus_timer{quan
tile="0.98",} 0.0
com_sonatype_nexus_migration_ui_AssistantComponent_syncStatus_timer{quan
tile="0.99",} 0.0
com_sonatype_nexus_migration_ui_AssistantComponent_syncStatus_timer{quan
```

```
tile="0.999",} 0.0
com_sonatype_nexus_migration_ui_AssistantComponent_syncStatus_timer_coun
t 0.0
# HELP
org_sonatype_nexus_coreui_RepositoryComponent_getBrowseableFormats_excep
tions_total Generated from Dropwizard metric import
(metric=org.sonatype.nexus.coreui.RepositoryComponent.getBrowseableForma
ts.exceptions, type=com.codahale.metrics.Meter)
# TYPE
org_sonatype_nexus_coreui_RepositoryComponent_getBrowseableFormats_excep
tions_total counter
org_sonatype_nexus_coreui_RepositoryComponent_getBrowseableFormats_excep
tions_total 0.0
# HELP org_sonatype_nexus_coreui_SelectorComponent_update_timer
Generated from Dropwizard metric import
(metric=org.sonatype.nexus.coreui.SelectorComponent.update.timer,
type=com.codahale.metrics.Timer)
# TYPE org_sonatype_nexus_coreui_SelectorComponent_update_timer summary
org_sonatype_nexus_coreui_SelectorComponent_update_timer{quantile="0.5",
} 0.0
org_sonatype_nexus_coreui_SelectorComponent_update_timer{quantile="0.75"
,} 0.0
org_sonatype_nexus_coreui_SelectorComponent_update_timer{quantile="0.95"
,} 0.0
org_sonatype_nexus_coreui_SelectorComponent_update_timer{quantile="0.98"
,} 0.0
org_sonatype_nexus_coreui_SelectorComponent_update_timer{quantile="0.99"
,} 0.0
org_sonatype_nexus_coreui_SelectorComponent_update_timer{quantile="0.999
",} 0.0
org_sonatype_nexus_coreui_SelectorComponent_update_timer_count 0.0
# HELP org_eclipse_jetty_webapp_WebAppContext_options_requests Generated
```

```
from Dropwizard metric import
(metric=org.eclipse.jetty.webapp.WebAppContext.options-requests,
type=com.codahale.metrics.Timer)
```

Installation and setup is finished. You can collect metrics. Prometheus will be available at http://novartis.devops.altimetrik.io:9090/

Grafana Configuration

We will use Grafana to visualize metrics stored in Prometheus. There are a couple of example dashboards in the official site https://grafana.com/grafana/dashboards

Download the latest release of Grafana for your platform, then extract it:

Here i am building manually using query.
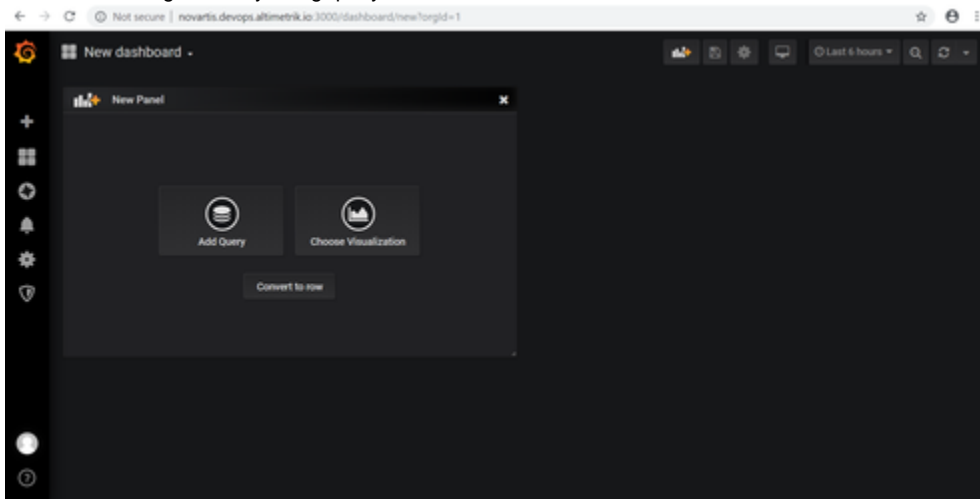
Web Requests
Metrics -org_eclipse_jetty_webapp_WebAppContext_delete_requests

Metrics -org_eclipse_jetty_webapp_WebAppContext_get_requests

Metrics -org_eclipse_jetty_webapp_WebAppContext_head_requests

Metrics -org_eclipse_jetty_webapp_WebAppContext_move_requests

Metrics -org_eclipse_jetty_webapp_WebAppContext_options_requests

Metrics -org_eclipse_jetty_webapp_WebAppContext_other_requests

Metrics -org_eclipse_jetty_webapp_WebAppContext_post_requests

Metrics -org_eclipse_jetty_webapp_WebAppContext_put_requests

Metrics -org_eclipse_jetty_webapp_WebAppContext_requests

Memory Usage
Metrics - jvm_memory_heap_committed{instance="novartis.devops.altimetrik.io:8082",job="nexus-exporter"}

Metrics - jvm_memory_non_heap_usage{instance="novartis.devops.altimetrik.io:8082",job="nexus-exporter"}

Metrics - sum(100 - jvm_memory_non_heap_usage{instance="novartis.devops.altimetrik.io:8082",job="nexus-exporter"} - jvm_memory_heap_committed{instance="novartis.devops.altimetrik.io:8082",job="nexus-exporter"})

Active Web Requests
Metrics - org_eclipse_jetty_webapp_WebAppContext_active_dispatches

Metrics - org_eclipse_jetty_webapp_WebAppContext_active_requests

Metrics - org_eclipse_jetty_webapp_WebAppContext_active_suspended

Thread-States

Metrics - jvm_thread_states_terminated_count

Metrics - jvm_thread_states_waiting_count

Metrics - jvm_thread_states_runnable_count jvm_thread_states_blocked_count jvm_thread_states_new_count

Web Response Codes
Metrics - org_eclipse_jetty_webapp_WebAppContext_1xx_responses_total
Metrics - org_eclipse_jetty_webapp_WebAppContext_2xx_responses_total

Metrics - org_eclipse_jetty_webapp_WebAppContext_3xx_responses_total

Metrics - org_eclipse_jetty_webapp_WebAppContext_4xx_responses_total

Metrics - org_eclipse_jetty_webapp_WebAppContext_5xx_responses_total

After a couple of minutes you will be able to view your metrics on the Dashboard. You can also add new panels to the Dashboard.