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# Genesys Voice Platform Private Edition Guide

Deploy Genesys Voice Platform

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Learn how to deploy Genesys Voice Platform (GVP) into a private edition environment.

### Related documentation:

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### RSS:

- [For private edition](#)

## Assumptions

- The instructions on this page assume you are deploying the service in a service-specific namespace, named in accordance with the requirements on [Creating namespaces](#). If you are using a single namespace for all private edition services, replace the namespace element in the commands on this page with the name of your single namespace or project.
- Similarly, the configuration and environment setup instructions assume you need to create namespace-specific (in other words, service-specific) secrets. If you are using a single namespace for all private edition services, you might not need to create separate secrets for each service, depending on your credentials management requirements. However, if you do create service-specific secrets in a single namespace, be sure to avoid naming conflicts.

## Deploy

### Important

Make sure to review [Before you begin](#) for the full list of prerequisites required to deploy Genesys Voice Platform.

## Prerequisites

- Consul with Service Mesh and DNS
- Availability of shared Postgres for GVP Configuration Server
- Availability of SQL Server database for Reporting Server
  - Create DB in advance (for example, DB Name: **gvp\_rs**).

- 
- There is a requirement for one user to have admin or database owner (dbo) access and a second user with read only (ro) access.
  - Use these credentials for the creation of Reporting Server secrets.

## Environment setup

### GKE

1. Log in to the gke cluster.

```
gcloud container clusters get-credentials gke1
```

2. Create a JSON file to add the gvp namespace to the GKE cluster. For example, **create-gvp-namespace.json**:

```
{
  "apiVersion": "v1",
  "kind": "Namespace",
  "metadata": {
    "name": "gvp",
    "labels": {
      "name": "gvp"
    }
  }
}
```

3. Run the following command to create the namespace:

```
kubectl apply -f apply create-gvp-namespace.json
```

4. Confirm the namespace was created:

```
kubectl describe namespace gvp
```

### AKS

1. Log in to the AKS cluster

```
az aks get-credentials --resource-group $RESOURCE_GROUP --name $AKS_CLUSTER_NAME
```

2. Create gvp project in the AKS cluster using the following manifest file:

```
{
  "apiVersion": "v1",
  "kind": "Namespace",
  "metadata": {
    "name": "gvp",
    "labels": {
      "name": "gvp"
    }
  }
}
```

```
kubectl apply -f apply create-gvp-namespace.json
```

3. Confirm the namespace creation.

---

```
kubectl describe namespace gvp
```

The order of installation matters with GVP. To deploy without errors, install in this order:

1. GVP Configuration Server
2. GVP ServiceDiscovery
3. GVP Reporting Server
4. GVP Resource Manager
5. GVP Media Control Platform

## Helm chart release URLs

Download the GVP Helm charts from JFrog using your credentials:

gvp-configserver : <https://gvp-configserver.tgz>

gvp-sd : <https://gvp-sd.tgz>

gvp-rs : <https://gvp-rs.tgz>

gvp-rm : <https://gvp-rm.tgz>

gvp-mcp : <https://gvp-mcp.tgz>

For version numbers, refer to Helm charts and containers for Genesys Voice Platform.

## 1. GVP Configuration Server

### Secrets creation

Create the following secrets that are required for the service deployment.

postgres-secret

db-hostname: Hostname of DB server

db-name: Database name

db-password: Password for DB user

db-username: Username for DB

server-name: Hostname of DB server

```
apiVersion: v1
```

---

```
kind: Secret
metadata:
  name: postgres-secret
  namespace: gvp
type: Opaque
data:
  db-username:
  db-password:
  db-hostname: cG9zdGdyZXMtencuaW5mcmEuc3ZjLmNsdXN0ZXIubG9jYWw=
  db-name: Z3Zw
  server-name: cG9zdGdyZXMtencuaW5mcmEuc3ZjLmNsdXN0ZXIubG9jYWw=
```

Run the following command:

```
kubectl apply -f postgres-secret.yaml
```

### configserver-secret

password: Password to set for Config DB

username: Username to set for Config DB

```
apiVersion: v1
kind: Secret
metadata:
  name: configserver-secret
  namespace: gvp
type: Opaque
data:
  username:
  password:
```

Run the following command:

```
kubectl apply -f configserver-secret.yaml
```

## Install Helm chart

Download the required Helm chart release from the JFrog repository and install. Refer to Helm Chart URLs.

```
helm install gvp-configserver ./ -f gvp-configserver-values.yaml
```

Set the following values in your values.yaml for Configuration Server:

priorityClassName >> Set to a priority class that exists on the cluster (or create it instead).

imagePullSecrets >> Set to your pull secret name.

### **gvp-configserver-values.yaml**

---

```

# Default values for gvp-configserver.
# This is a YAML-formatted file.
# Declare variables to be passed into your templates.

## Global Parameters
## Add labels to all the deployed resources
##
podLabels: {}

## Add annotations to all the deployed resources
##
podAnnotations: {}

serviceAccount:
  # Specifies whether a service account should be created
  create: false
  # Annotations to add to the service account
  annotations: {}
  # The name of the service account to use.
  # If not set and create is true, a name is generated using the fullname template
  name:

## Deployment Configuration
## replicaCount should be 1 for Config Server
replicaCount: 1

## Base Labels. Please do not change these.
serviceName: gvp-configserver
component: shared
# Namespace
partOf: gvp

## Container image repo settings.
image:
  confserv:
    registry: pureengage-docker-staging.jfrog.io
    repository: gvp/gvp_confserv
    pullPolicy: IfNotPresent
    tag: "{{ .Chart.AppVersion }}"
  serviceHandler:
    registry: pureengage-docker-staging.jfrog.io
    repository: gvp/gvp_configserver_servicehandler
    pullPolicy: IfNotPresent
    tag: "{{ .Chart.AppVersion }}"
  dbInit:
    registry: pureengage-docker-staging.jfrog.io
    repository: gvp/gvp_configserver_configserverinit
    pullPolicy: IfNotPresent
    tag: "{{ .Chart.AppVersion }}"

## Config Server App Configuration
configserver:
  ## Settings for liveness and readiness probes
  ## !!! THESE VALUES SHOULD NOT BE CHANGED UNLESS INSTRUCTED BY GENESYS !!!
  livenessValues:
    path: /cs/liveness
    initialDelaySeconds: 30
    periodSeconds: 60
    timeoutSeconds: 20
    failureThreshold: 3
    healthCheckAPIPort: 8300

  readinessValues:

```

---

---

```
    path: /cs/readiness
    initialDelaySeconds: 30
    periodSeconds: 30
    timeoutSeconds: 20
    failureThreshold: 3
    healthCheckAPIPort: 8300

alerts:
  cpuUtilizationAlertLimit: 70
  memUtilizationAlertLimit: 90
  workingMemAlertLimit: 7
  maxRestarts: 2

## PVCs defined
# none

## Define service(s) for application
service:
  type: ClusterIP
  host: gvp-configserver-0
  port: 8888
  targetPort: 8888

## Service Handler configuration.
serviceHandler:
  port: 8300

## Secrets storage related settings - k8s secrets only
secrets:
  # Used for pulling images/containers from the repositories.
  imagePull:
    - name: pureengage-docker-dev
    - name: pureengage-docker-staging

  # Config Server secrets. If k8s is false, csi will be used, else k8s will be used.
  # Currently, only k8s is supported!
  configServer:
    secretName: configserver-secret
    secretUserKey: username
    secretPwdKey: password
    #csiSecretProviderClass: keyvault-gvp-gvp-configserver-secret

  # Config Server Postgres DB secrets and settings.
  postgres:
    dbName: gvp
    dbPort: 5432
    secretName: postgres-secret
    secretAdminUserKey: db-username
    secretAdminPwdKey: db-password
    secretHostnameKey: db-hostname
    secretDbNameKey: db-name
    #secretServerNameKey: server-name

## Ingress configuration
ingress:
  enabled: false
  annotations: {}
  # kubernetes.io/ingress.class: nginx
  # kubernetes.io/tls-acme: "true"
  hosts:
    - host: chart-example.local
      paths: []
  tls: []
```

---



---

```

# - secretName: chart-example-tls
#   hosts:
#     - chart-example.local

## App resource requests and limits
## ref: http://kubernetes.io/docs/user-guide/compute-resources/
##
resources:
  requests:
    memory: "512Mi"
    cpu: "500m"
  limits:
    memory: "1Gi"
    cpu: "1"

## App containers' Security Context
## ref: https://kubernetes.io/docs/tasks/configure-pod-container/security-context/#set-the-security-context-for-a-container
##
## Containers should run as genesys user and cannot use elevated permissions
##
securityContext:
  runAsUser: null
  runAsGroup: 0
  # capabilities:
  #   drop:
  #     - ALL
  # readOnlyRootFilesystem: true
  # runAsNonRoot: true
  # runAsUser: null

podSecurityContext: {}
  # fsGroup: 0

## Priority Class
## ref: https://kubernetes.io/docs/concepts/configuration/pod-priority-preemption/
## NOTE: this is an optional parameter
##
priorityClassName: system-cluster-critical

## Affinity for assignment.
## Ref: https://kubernetes.io/docs/concepts/configuration/assign-pod-node/#affinity-and-anti-affinity
##
affinity: {}

## Node labels for assignment.
## ref: https://kubernetes.io/docs/user-guide/node-selection/
##
nodeSelector: {}

## Tolerations for assignment.
## ref: https://kubernetes.io/docs/concepts/configuration/taint-and-toleration/
##
tolerations: []

## Service/Pod Monitoring Settings
## Whether to create Prometheus alert rules or not.
prometheusRule:
  create: true

## Grafana dashboard Settings
## Whether to create Grafana dashboard or not.

```

---

---

```
grafana:
  enabled: true

## Enable network policies or not
networkPolicies:
  enabled: false

## DNS configuration options
dnsConfig:
  options:
    - name: ndots
      value: "3"
```

## Verify the deployed resources

Verify the deployed resources from the CLI.

## 2. GVP Service Discovery

**NOTE:** After GVP-SD (Service Discovery) pod gets deployed, you will notice a few errors. Please ignore them and move on to the next deployment. This will start working once Resource Manager (RM) and Media Control Platform (MCP) are deployed.

### Secrets creation

Create the following secrets that are required for the service deployment.

[shared-consul-consul-gvp-token](#)

#### **shared-consul-consul-gvp-token-secret.yaml**

In regards to consul secret, you must obtain the token value from your consul deployment and replace "\$CONSUL\_TOKEN" with the actual token.

```
apiVersion: v1
kind: Secret
metadata:
  name: shared-consul-consul-gvp-token
  namespace: gvp
type: Opaque
data:
  consul-consul-gvp-token: $CONSUL_TOKEN
```

Run the following command:

```
kubectl create -f shared-consul-consul-gvp-token-secret.yaml
```

---

## ConfigMap creation

Create the following ConfigMap that is required for the service deployment.

### Caveat

If the tenant has not been deployed yet, then you will not have the information needed to populate the config map. An empty config-map can be created using:

```
kubectll create configmap tenant-inventory -n gvp
```

Create Config based on Tenant provisioning via Service Discovery Container.

### t100.json

```
{
  "name": "t100",
  "id": "80dd",
  "gws-ccid": "9350e2fc-a1dd-4c65-8d40-1f75a2e080dd",
  "default-application": "IVRAppDefault"
}
```

Run the following command:

### Add Config Map

```
kubectll create configmap tenant-inventory --from-file t100.json -n gvp
```

## Install Helm chart

Download the required Helm chart release from the JFrog repository and install. Refer to Helm Chart URLs.

```
helm install gvp-sd ./ -f gvp-sd-values.yaml
```

### gvp-sd-values.yaml

```
# Default values for gvp-sd.
# This is a YAML-formatted file.
# Declare variables to be passed into your templates.

## Global Parameters
## Add labels to all the deployed resources
##
podLabels: {}

## Add annotations to all the deployed resources
##
podAnnotations: {}

serviceAccount:
  # Specifies whether a service account should be created
  create: false
  # Annotations to add to the service account
```

---

```

  annotations: {}
  # The name of the service account to use.
  # If not set and create is true, a name is generated using the fullname template
  name:

## Deployment Configuration
replicaCount: 1
smtp: allowed

## Name overrides
nameOverride: ""
fullnameOverride: ""

## Base Labels. Please do not change these.
component: shared
partOf: gvp

image:
  registry: pureengage-docker-staging.jfrog.io
  repository: gvp/gvp_sd
  tag: "{{ .Chart.AppVersion }}"
  pullPolicy: IfNotPresent

## PVCs defined
# none

## Define service for application.
service:
  name: gvp-sd
  type: ClusterIP
  port: 8080

## Application configuration parameters.
env:
  MCP_SVC_NAME: "gvp-mcp"
  EXTERNAL_CONSUL_SERVER: ""
  CONSUL_PORT: "8501"
  CONFIG_SERVER_HOST: "gvp-configserver"
  CONFIG_SERVER_PORT: "8888"
  CONFIG_SERVER_APP: "default"
  HTTP_SERVER_PORT: "8080"
  METRICS_EXPORTER_PORT: "9090"
  DEF_MCP_FOLDER: "MCP_Configuration_Unit\MCP_LRG"
  TEST_MCP_FOLDER: "MCP_Configuration_Unit_Test\MCP_LRG"
  SYNC_INIT_DELAY: "10000"
  SYNC_PERIOD: "60000"
  MCP_PURGE_PERIOD_MINS: "0"
  EMAIL_METERING_FACTOR: "10"
  RECORDINGS_CONTAINER: "ccerp-recordings"
  TENANT_KV_FOLDER: "tenants"
  TENANT_CONFIGMAP_FOLDER: "/etc/config"
  SMTP_SERVER: "smtp-relay.smtp.svc.cluster.local"

## Secrets storage related settings
secrets:
  # Used for pulling images/containers from the repositories.
  imagePull:
    - name: pureengage-docker-dev
    - name: pureengage-docker-staging

  # If k8s is true, k8s will be used, else vault secret will be used.
  configServer:
    k8s: true

```

---

---

```

    k8sSecretName: configserver-secret
    k8sUserKey: username
    k8sPasswordKey: password
    vaultSecretName: "/configserver-secret"
    vaultUserKey: "configserver-username"
    vaultPasswordKey: "configserver-password"

    # If k8s is true, k8s will be used, else vault secret will be used.
    consul:
      k8s: true
      k8sTokenName: "shared-consul-consul-gvp-token"
      k8sTokenKey: "consul-consul-gvp-token"
      vaultSecretName: "/consul-secret"
      vaultSecretKey: "consul-consul-gvp-token"

    # GTTS key, password via k8s secret, if k8s is true. If false, this data comes from tenant
    # profile.
    gtts:
      k8s: false
      k8sSecretName: gtts-secret
      EncryptedKey: encrypted-key
      PasswordKey: password

  ingress:
    enabled: false
    annotations: {}
    # kubernetes.io/ingress.class: nginx
    # kubernetes.io/tls-acme: "true"
    hosts:
      - host: chart-example.local
        paths: []
    tls: []
    # - secretName: chart-example-tls
    #   hosts:
    #     - chart-example.local

  resources:
    requests:
      memory: "2Gi"
      cpu: "1000m"
    limits:
      memory: "2Gi"
      cpu: "1000m"

  ## App containers' Security Context
  ## ref: https://kubernetes.io/docs/tasks/configure-pod-container/security-context/#set-the-
  ## security-context-for-a-container
  ##
  ## Containers should run as genesys user and cannot use elevated permissions
  ## Pod level security context
  podSecurityContext:
    fsGroup: 0
    runAsUser: null
    runAsGroup: 0
    runAsNonRoot: true

  ## Container security context
  securityContext:
    runAsUser: null
    runAsGroup: 0
    runAsNonRoot: true

  ## Priority Class

```

---

---

```
## ref: https://kubernetes.io/docs/concepts/configuration/pod-priority-preemption/
## NOTE: this is an optional parameter
##
priorityClassName: system-cluster-critical

## Affinity for assignment.
## Ref: https://kubernetes.io/docs/concepts/configuration/assign-pod-node/#affinity-and-anti-
affinity
##
affinity: {}

## Node labels for assignment.
## ref: https://kubernetes.io/docs/user-guide/node-selection/
##
nodeSelector: {}

## Tolerations for assignment.
## ref: https://kubernetes.io/docs/concepts/configuration/taint-and-toleration/
##
tolerations: []

## Service/Pod Monitoring Settings
prometheus:
  # Enable for Prometheus operator
  podMonitor:
    enabled: true

## Enable network policies or not
networkPolicies:
  enabled: false

## DNS configuration options
dnsConfig:
  options:
    - name: ndots
      value: "3"
```

## Verify the deployed resources

Verify the deployed resources from the CLI.

## 3. GVP Reporting Server

### Secrets creation

Create the following secrets that are required for the service deployment.

#### rs-dbreader-password

db\_hostname: Hostname of DB server

db\_name: Database name

db\_password: Password for DB user

---

db\_username: Username for DB

#### **rs-dbreader-password-secret.yaml**

```
apiVersion: v1
kind: Secret
metadata:
  name: rs-dbreader-password
  namespace: gvp
type: Opaque
data:
  db_username:
  db_password:
  db_hostname: bXNzcWxzZXJ2ZXJvcGVuc2hpZnQuZGF0YWJhc2Uud2luZG93cy5uZXQ=
  db_name: cnNfZ3Zw
```

Run the following command:

```
kubectl create -f rs-dbreader-password-secret.yaml
```

#### **shared-gvp-rs-sqlserver-secret**

db-admin-password: Password for DB admin

db-reader-password: Password for reader

#### **shared-gvp-rs-sqlserver-secret.yaml**

```
apiVersion: v1
kind: Secret
metadata:
  name: shared-gvp-rs-sqlserver-secret
  namespace: gvp
type: Opaque
data:
  db-admin-password:
  db-reader-password:
```

Run the following command:

```
kubectl create -f shared-gvp-rs-sqlserver-secret.yaml
```

### Persistent Volumes creation

Create the following Persistent Volumes (PVs) that are required for the service deployment.

gvp-rs-0

#### **gvp-rs-pv.yaml**

```
apiVersion: v1
```

---

---

```
kind: PersistentVolume
metadata:
  name: gvp-rs-0
  namespace: gvp
spec:
  capacity:
    storage: 30Gi
  accessModes:
    - ReadWriteOnce
  persistentVolumeReclaimPolicy: Retain
  storageClassName: gvp
  nfs:
    path: /export/vol1/PAT/gvp/rs-01
    server: 192.168.30.51
```

Run the following command:

```
kubectl create -f gvp-rs-pv.yaml
```

## Install Helm chart

Download the required Helm chart release from the JFrog repository and install. Refer to Helm Chart URLs.

```
helm install gvp-rs ./ -f gvp-rs-values.yaml
```

Set the following values in your values.yaml:

- `priorityClassName` >> Set to a priority class that exists on the cluster (or create it instead).
- `imagePullSecrets` >> Set to your pull secret name.
- `keyVaultSecret: false` >> Make sure this is false to force use of k8s secrets.
- `storageClass: genesys-gvp` >> Set to your storage class.

### gvp-rs-values.yaml

```
## Global Parameters
## Add labels to all the deployed resources
##
labels:
  enabled: true
  serviceGroup: "gvp"
  componentType: "shared"

serviceAccount:
  # Specifies whether a service account should be created
  create: false
  # Annotations to add to the service account
  annotations: {}
  # The name of the service account to use.
  # If not set and create is true, a name is generated using the fullname template
  name:

## Primary App Configuration
```

---



---

```
##
# primaryApp:
# type: ReplicaSet
# Should include the defaults for replicas
deployment:
  replicaCount: 1
  strategy: Recreate
  namespace: gvp
  nameOverride: ""
  fullnameOverride: ""

image:
  registry: pureengage-docker-staging.jfrog.io
  gvprsrepository: gvp/gvp_rs
  snmprepository: gvp/gvp_snmp
  rsinitrepository: gvp/gvp_rs_init
  rstag:
  rsinittag:
  snmptag: v9.0.040.07
  pullPolicy: Always
  imagePullSecrets:
    - name: "pureengage-docker-staging"

## liveness and readiness probes
## !!! THESE OPTIONS SHOULD NOT BE CHANGED UNLESS INSTRUCTED BY GENESYS !!!
livenessValues:
  path: /ems-rs/components
  initialDelaySeconds: 30
  periodSeconds: 120
  timeoutSeconds: 3
  failureThreshold: 3

readinessValues:
  path: /ems-rs/components
  initialDelaySeconds: 10
  periodSeconds: 60
  timeoutSeconds: 3
  failureThreshold: 3

## PVCs defined
volumes:
  pvc:
    storageClass: managed-premium
    claimSize: 20Gi
    activemqAndLocalConfigPath: "/billing/gvp-rs"

## Define service(s) for application. Fields many need to be modified based on `type`
service:
  type: ClusterIP
  restapiport: 8080
  activemqport: 61616
  envinjectport: 443
  dnsport: 53
  configserverport: 8888
  snmpport: 1705

## ConfigMaps with Configuration
## Use Config Map for creating environment variables
context:
  env:
    CFGAPP: default
    GVP_RS_SERVICE_HOSTNAME: gvp-rs.gvp.svc.cluster.local
    #CFGPASSWORD: password
```

---

---

```
#CFGUSER: default
CFG_HOST: gvp-configserver.gvp.svc.cluster.local
CFG_PORT: '8888'
CMDLINE: ./rs_startup.sh
DBNAME: gvp_rs
#DBPASS: 'jbIKfoS6LpfgaU$E'
DBUSER: DBAdmin
rsDbSharedUsername: DBAdmin
DBPORT: 1433
ENVTYPE: staging
GenesysIURegion: westus2
localconfigcachepath: /billing/gvp-rs/data/cache
HOSTFOLDER: Hosts
HOSTOS: CFGRedHatLinux
LCAPORT: '4999'
MSSQLHOST: mssqlserver.database.windows.net
RSAPP: azure_rs
RSJVM_INITIALHEAPSIZE: 500m
RSJVM_MAXHEAPSIZE: 1536m
RSFOLDER: Applications
RS_VERSION: 9.0.032.22
STDOUT: 'true'
WRKDIR: /usr/local/genesys/rs/
SNMPAPP: azure_rs_snmp
SNMP_WORKDIR: /usr/sbin
SNMP_CMDLINE: snmpd
SNMPFOLDER: Applications

RSCONFIG:
messaging:
  activemq.memoryUsageLimit: "256 mb"
  activemq.dataDirectory: "/billing/gvp-rs/data/activemq"
log:
  verbose: "trace"
  trace: "stdout"
dbmp:
  rs.db.retention.operations.daily.default: "40"
  rs.db.retention.operations.monthly.default: "40"
  rs.db.retention.operations.weekly.default: "40"
  rs.db.retention.var.daily.default: "40"
  rs.db.retention.var.monthly.default: "40"
  rs.db.retention.var.weekly.default: "40"
  rs.db.retention.cdr.default: "40"

# Default secrets storage to k8s secrets with csi able to be optional
secret:
  # keyVaultSecret will be a flag to between secret types(k8's or CSI). If keyVaultSecret was
  set to false k8's secret will be used
  keyVaultSecret: false
  #RS SQL server secret
  rsSecretName: shared-gvp-rs-sqlserver-secret
  # secretProviderClassName will not be used when keyVaultSecret set to false
  secretProviderClassName: keyvault-gvp-rs-sqlserver-secret-00
  dbreadersecretFileName: db-reader-password
  dbadminsecretFileName: db-admin-password
  #Configserver secret
  #If keyVaultSecret set to false the below parameters will not be used.
  configserverProviderClassName: gvp-configserver-secret
  cfgSecretFileNameForCfgUsername: configserver-username
  cfgSecretFileNameForCfgPassword: configserver-password
  #If keyVaultSecret set to true the below parameters will not be used.
  cfgServerSecretName: configserver-secret
  cfgSecretKeyNameForCfgUsername: username
```

---

---

```

    cfgSecretKeyNameForCfgPassword: password

## Ingress configuration
ingress:
  enabled: false
  annotations: {}
  # kubernetes.io/ingress.class: nginx
  # kubernetes.io/tls-acme: "true"
  hosts:
    - host: chart-example.local
      paths: []
  tls: []
  # - secretName: chart-example-tls
  #   hosts:
  #     - chart-example.local

networkPolicies:
  enabled: false

## primaryAppresource requests and limits
## ref: http://kubernetes.io/docs/user-guide/compute-resources/
##
resourceForRS:
  # We usually recommend not to specify default resources and to leave this as a conscious
  # choice for the user. This also increases chances charts run on environments with little
  # resources, such as Minikube. If you do want to specify resources, uncomment the following
  # lines, adjust them as necessary, and remove the curly braces after 'resources:'.
  requests:
    memory: "500Mi"
    cpu: "200m"
  limits:
    memory: "1Gi"
    cpu: "300m"

resouceceForSnmp:
  requests:
    memory: "500Mi"
    cpu: "100m"
  limits:
    memory: "1Gi"
    cpu: "150m"

## primaryApp containers' Security Context
## ref: https://kubernetes.io/docs/tasks/configure-pod-container/security-context/#set-the-
security-context-for-a-container
##
## Containers should run as genesys user and cannot use elevated permissions
securityContext:
  runAsNonRoot: true
  runAsUser: null
  runAsGroup: 0

podSecurityContext:
  fsGroup: 0

## Priority Class
## ref: https://kubernetes.io/docs/concepts/configuration/pod-priority-preemption/
##
priorityClassName: ""

## Affinity for assignment.
## Ref: https://kubernetes.io/docs/concepts/configuration/assign-pod-node/#affinity-and-anti-
affinity

```

---

---

```
##
affinity: {}

## Node labels for assignment.
## ref: https://kubernetes.io/docs/user-guide/node-selection/
##
nodeSelector: {}

## Tolerations for assignment.
## ref: https://kubernetes.io/docs/concepts/configuration/taint-and-toleration/
##
tolerations: []

## Extra labels
## ref: https://kubernetes.io/docs/concepts/overview/working-with-objects/labels/
##
# labels: {}

## Extra Annotations
## ref: https://kubernetes.io/docs/concepts/overview/working-with-objects/annotations/
##
# annotations: {}

## Service/Pod Monitoring Settings
monitoring:
  podMonitorEnabled: true
  prometheusRulesEnabled: true
  grafanaEnabled: true

monitor:
  prometheusPort: 9116
  monitorName: gvp-monitoring
  module: [if_mib]
  target: [127.0.0.1:1161]

##DNS Settings
dnsConfig:
  options:
    - name: ndots
      value: "3"
```

## Verify the deployed resources

Verify the deployed resources from the CLI.

## 4. GVP Resource Manager

**Note:** Resource Manager and forward will not pass readiness checks until an MCP has registered properly. This is because this service is not available without MCPs.

### Persistent Volumes creation

Create the following PVs that are required for the service deployment.

**Note:** If your deployment is capable of self-provisioning of Persistent Volumes, you can skip this step. The provisioner will create the volumes.

---

gvp-rm-01

### **gvp-rm-01-pv.yaml**

```
apiVersion: v1
kind: PersistentVolume
metadata:
  name: gvp-rm-01
spec:
  capacity:
    storage: 30Gi
  accessModes:
    - ReadWriteOnce
  persistentVolumeReclaimPolicy: Retain
  storageClassName: gvp
  nfs:
    path: /export/vol1/PAT/gvp/rm-01
    server: 192.168.30.51
```

Run the following command:

```
kubectl create -f gvp-rm-01-pv.yaml
```

gvp-rm-02

### **gvp-rm-02-pv.yaml**

```
apiVersion: v1
kind: PersistentVolume
metadata:
  name: gvp-rm-02
spec:
  capacity:
    storage: 30Gi
  accessModes:
    - ReadWriteOnce
  persistentVolumeReclaimPolicy: Retain
  storageClassName: gvp
  nfs:
    path: /export/vol1/PAT/gvp/rm-02
    server: 192.168.30.51
```

Run the following command:

```
kubectl create -f gvp-rm-02-pv.yaml
```

gvp-rm-logs-01

### **gvp-rm-logs-01-pv.yaml**

```
apiVersion: v1
kind: PersistentVolume
metadata:
  name: gvp-rm-logs-01
spec:
  capacity:
    storage: 10Gi
  accessModes:
    - ReadWriteOnce
  persistentVolumeReclaimPolicy: Recycle
```

---

```
storageClassName: gvp
nfs:
  path: /export/vol1/PAT/gvp/rm-logs-01
  server: 192.168.30.51
```

Run the following command:

```
kubectl create -f gvp-rm-logs-01-pv.yaml
```

**gvp-rm-logs-02**

### **gvp-rm-logs-02-pv.yaml**

```
apiVersion: v1
kind: PersistentVolume
metadata:
  name: gvp-rm-logs-02
spec:
  capacity:
    storage: 10Gi
  accessModes:
    - ReadWriteOnce
  persistentVolumeReclaimPolicy: Recycle
  storageClassName: gvp
  nfs:
    path: /export/vol1/PAT/gvp/rm-logs-02
    server: 192.168.30.51
```

Run the following command:

```
kubectl create -f gvp-rm-logs-02-pv.yaml
```

## **Install Helm chart**

Download the required Helm chart release from the JFrog repository and install. Refer to Helm Chart URLs.

```
helm install gvp-rm ./ -f gvp-rm-values.yaml
```

Set the following values in your values.yaml for Configuration Server:

- `priorityClassName` >> Set to a priority class that exists on the cluster (or create it instead).
- `imagePullSecrets` >> Set to your pull secret name.
- Set `cfgServerSecretName` if you changed it from default.

### **gvp-rm-values.yaml**

```
## Global Parameters
## Add labels to all the deployed resources
##
labels:
  enabled: true
  serviceGroup: "gvp"
  componentType: "shared"

## Primary App Configuration
##
```

---

```

# primaryApp:
# type: ReplicaSet
# Should include the defaults for replicas
deployment:
  replicaCount: 2
  deploymentEnv: "UPDATE_ENV"
  namespace: gvp
  clusterDomain: "svc.cluster.local"
nameOverride: ""
fullnameOverride: ""

image:
  registry: pureengage-docker-staging.jfrog.io
  gvprmrepository: gvp/gvp_rm
  cfghandlerrepository: gvp/gvp_rm_cfghandler
  snmprepository: gvp/gvp_snmp
  gvprmtestrepository: gvp/gvp_rm_test
  cfghandlertag:
  rmtesttag:
  rmtag:
  snmptag: v9.0.040.07
  pullPolicy: Always
  imagePullSecrets:
    - name: "pureengage-docker-staging"

dnsConfig:
  options:
    - name: ndots
      value: "3"

# Pod termination grace period 15 mins.
gracePeriodSeconds: 900

## liveness and readiness probes
## !!! THESE OPTIONS SHOULD NOT BE CHANGED UNLESS INSTRUCTED BY GENESYS !!!
livenessValues:
  path: /rm/liveness
  initialDelaySeconds: 60
  periodSeconds: 90
  timeoutSeconds: 20
  failureThreshold: 3

readinessValues:
  path: /rm/readiness
  initialDelaySeconds: 10
  periodSeconds: 60
  timeoutSeconds: 20
  failureThreshold: 3

## PVCs defined
volumes:
  billingpvc:
    storageClass: managed-premium
    claimSize: 20Gi
    mountPath: "/rm"
  logpvc:
    EnablePVForLogStorage: true
    storageClass: managed-premium
    claimSize: 5Gi
    accessMode: ReadWriteOnce
    mountPath: "/mnt/log"
    # If PV is not used for log storage by disabling the flag EnablePVForLogStorage: false,
    the given host path will be used for log storage.

```

---

---

```

    LogStorageHostPath: /mnt/log

## Define service(s) for application. Fields many need to be modified based on `type`
service:
  type: ClusterIP
  port: 5060
  rmHealthCheckAPIPort: 8300

## ConfigMaps with Configuration
## Use Config Map for creating environment variables
context:
  env:
    cfghandler:
      CFGSERVER: gvp-configserver.gvp.svc.cluster.local
      CFGSERVERBACKUP: gvp-configserver.gvp.svc.cluster.local
      CFGPORT: "8888"
      CFGAPP: "default"
      RMAPP: "azure_rm"
      RMFOLDER: "Applications\\RM_MicroService\\RM_Apps"
      HOSTFOLDER: "Hosts\\RM_MicroService"
      MCPFOLDER: "MCP_Configuration_Unit\\MCP_LRG"
      SNMPFOLDER: "Applications\\RM_MicroService\\SNMP_Apps"
      EnvironmentType: "prod"
      CONFSERVERAPP: "confserv"
      RSAPP: "azure_rs"
      SNMPAPP: "azure_rm_snmp"
      STDOUT: "true"
      VOICEMAILSERVICEDIDNUMBER: "55551111"

RMCONFIG:
  rm:
    sip-header-for-dnis: "Request-Uri"
    ignore-gw-lrg-configuration: "true"
    ignore-ruri-tenant-dbid: "true"
  log:
    verbose: "trace"
  subscription:
    sip.transport.dnsharouting: "true"
    sip.headerutf8verification: "false"
    sip.transport.setuptimer.tcp: "5000"
    sip.threadpoolsize: "1"
  registrar:
    sip.transport.dnsharouting: "true"
    sip.headerutf8verification: "false"
    sip.transport.setuptimer.tcp: "5000"
    sip.threadpoolsize: "1"
  proxy:
    sip.transport.dnsharouting: "true"
    sip.headerutf8verification: "false"
    sip.transport.setuptimer.tcp: "5000"
    sip.threadpoolsize: "16"
    sip.maxtcpconnections: "1000"
  monitor:
    sip.transport.dnsharouting: "true"
    sip.maxtcpconnections: "1000"
    sip.headerutf8verification: "false"
    sip.transport.setuptimer.tcp: "5000"
    sip.threadpoolsize: "1"
  ems:
    rc.cdr.local_queue_path: "/rm/ems/data/cdrQueue_rm.db"
    rc.ors.local_queue_path: "/rm/ems/data/orsQueue_rm.db"

# Default secrets storage to k8s secrets with csi able to be optional

```

---



---

```

secret:
  # keyVaultSecret will be a flag to between secret types(k8's or CSI). If keyVaultSecret was
  set to false k8's secret will be used
  keyVaultSecret: false
  #If keyVaultSecret set to false the below parameters will not be used.
  configserverProviderClassName: gvp-configserver-secret
  cfgSecretFileNameForCfgUsername: configserver-username
  cfgSecretFileNameForCfgPassword: configserver-password
  #If keyVaultSecret set to true the below parameters will not be used.
  cfgServerSecretName: configserver-secret
  cfgSecretKeyNameForCfgUsername: username
  cfgSecretKeyNameForCfgPassword: password

## Ingress configuration
ingress:
  enabled: false
  annotations: {}
  # kubernetes.io/ingress.class: nginx
  # kubernetes.io/tls-acme: "true"
  paths: []
  hosts:
    - chart-example.local
  tls: []
  # - secretName: chart-example-tls
  #   hosts:
  #     - chart-example.local
networkPolicies:
  enabled: false
sip:
  serviceName: sipnode

## primaryAppresource requests and limits
## ref: http://kubernetes.io/docs/user-guide/compute-resources/
##
resourceForRM:
  # We usually recommend not to specify default resources and to leave this as a conscious
  # choice for the user. This also increases chances charts run on environments with little
  # resources, such as Minikube. If you do want to specify resources, uncomment the following
  # lines, adjust them as necessary, and remove the curly braces after 'resources:'.
  requests:
    memory: "1Gi"
    cpu: "200m"
    ephemeral-storage: "10Gi"
  limits:
    memory: "2Gi"
    cpu: "250m"

resouceceForSnmpp:
  requests:
    memory: "500Mi"
    cpu: "100m"
  limits:
    memory: "1Gi"
    cpu: "150m"

## primaryApp containers' Security Context
## ref: https://kubernetes.io/docs/tasks/configure-pod-container/security-context/#set-the-
security-context-for-a-container
##
## Containers should run as genesys user and cannot use elevated permissions
securityContext:
  fsGroup: 500
  runAsNonRoot: true

```

---

---

```
runAsUserRM: 500
runAsGroupRM: 500
runAsUserCfghandler: 500
runAsGroupCfghandler: 500

## Priority Class
## ref: https://kubernetes.io/docs/concepts/configuration/pod-priority-preemption/
##
priorityClassName: ""

## Affinity for assignment.
## Ref: https://kubernetes.io/docs/concepts/configuration/assign-pod-node/#affinity-and-anti-
affinity
##
affinity: {}

## Node labels for assignment.
## ref: https://kubernetes.io/docs/user-guide/node-selection/
##
nodeSelector:

## Tolerations for assignment.
## ref: https://kubernetes.io/docs/concepts/configuration/taint-and-toleration/
##
tolerations: []

## Service/Pod Monitoring Settings
monitoring:
  podMonitorEnabled: true
  prometheusRulesEnabled: true
  grafanaEnabled: true

monitor:
  monitorName: gvp-monitoring
  prometheusPort: 9116
  prometheusPortlogs: 8200
  logFilePrefixName: RM
  module: [if_mib]
  target: [127.0.0.1:1161]
```

## Verify the deployed resources

Verify the deployed resources from the CLI.

## 5. GVP Media Control Platform

### Persistent Volumes creation

Create the following PVs that are required for the service deployment.

gvp-mcp-logs-01

#### **gvp-mcp-logs-01-pv.yaml**

```
apiVersion: v1
```

---

```
kind: PersistentVolume
metadata:
  name: gvp-mcp-logs-01
spec:
  capacity:
    storage: 10Gi
  accessModes:
    - ReadWriteOnce
  persistentVolumeReclaimPolicy: Recycle
  storageClassName: gvp
  nfs:
    path: /export/vol1/PAT/gvp/mcp-logs-01
    server: 192.168.30.51
```

Run the following command:

```
kubectl create -f gvp-mcp-logs-01-pv.yaml
```

**gvp-mcp-logs-02**

### **gvp-mcp-logs-02-pv.yaml**

```
apiVersion: v1
kind: PersistentVolume
metadata:
  name: gvp-mcp-logs-02
spec:
  capacity:
    storage: 10Gi
  accessModes:
    - ReadWriteOnce
  persistentVolumeReclaimPolicy: Recycle
  storageClassName: gvp
  nfs:
    path: /export/vol1/PAT/gvp/mcp-logs-02
    server: 192.168.30.51
```

Run the following command:

```
kubectl create -f gvp-mcp-logs-02-pv.yaml
```

**gvp-mcp-rup-volume-01**

### **gvp-mcp-rup-volume-01-pv.yaml**

```
apiVersion: v1
kind: PersistentVolume
metadata:
  name: gvp-mcp-rup-volume-01
spec:
  capacity:
    storage: 40Gi
  accessModes:
    - ReadWriteOnce
  persistentVolumeReclaimPolicy: Recycle
  storageClassName: disk-premium
  nfs:
    path: /export/vol1/PAT/gvp/mcp-logs-01
    server: 192.168.30.51
```

Run the following command:

---

```
kubectl create -f gvp-mcp-rup-volume-01-pv.yaml
```

gvp-mcp-rup-volume-02

### **gvp-mcp-rup-volume-02-pv.yaml**

```
apiVersion: v1
kind: PersistentVolume
metadata:
  name: gvp-mcp-rup-volume-02
spec:
  capacity:
    storage: 40Gi
  accessModes:
    - ReadWriteOnce
  persistentVolumeReclaimPolicy: Recycle
  storageClassName: disk-premium
  nfs:
    path: /export/vol1/PAT/gvp/mcp-logs-02
    server: 192.168.30.51
```

Run the following command:

```
kubectl create -f gvp-mcp-rup-volume-02-pv.yaml
```

gvp-mcp-recording-volume-01

### **gvp-mcp-recordings-volume-01-pv.yaml**

```
apiVersion: v1
kind: PersistentVolume
metadata:
  name: gvp-mcp-recording-volume-01
spec:
  capacity:
    storage: 40Gi
  accessModes:
    - ReadWriteOnce
  persistentVolumeReclaimPolicy: Recycle
  storageClassName: gvp
  nfs:
    path: /export/vol1/PAT/gvp/mcp-logs-01
    server: 192.168.30.51
```

Run the following command:

```
kubectl create -f gvp-mcp-recordings-volume-01-pv.yaml
```

gvp-mcp-recording-volume-02

### **gvp-mcp-recordings-volume-02-pv.yaml**

```
apiVersion: v1
kind: PersistentVolume
metadata:
  name: gvp-mcp-recording-volume-02
spec:
  capacity:
    storage: 40Gi
  accessModes:
```

---

```
- ReadWriteOnce
persistentVolumeReclaimPolicy: Recycle
storageClassName: gvp
nfs:
  path: /export/vol1/PAT/gvp/mcp-logs-02
  server: 192.168.30.51
```

Run the following command:

```
kubectl create -f gvp-mcp-recordings-volume-02-pv.yaml
```

## Install Helm chart

Download the required Helm chart release from the JFrog repository and install. Refer to Helm Chart URLs.

```
helm install gvp-mcp ./ -f gvp-mcp-values.yaml
```

Set the following values in your values.yaml:

- Set **logicalResourceGroup: "MCP\_Configuration\_Unit"** to add MCPs to the Real Configuration Unit (rather than test).

### gvp-mcp-values.yaml

```
## Default values for gvp-mcp.
## This is a YAML-formatted file.
## Declare variables to be passed into your templates.

## Global Parameters
## Add labels to all the deployed resources
##
podLabels: {}

## Add annotations to all the deployed resources
##
podAnnotations: {}

serviceAccount:
  # Specifies whether a service account should be created
  create: false
  # Annotations to add to the service account
  annotations: {}
  # The name of the service account to use.
  # If not set and create is true, a name is generated using the fullname template
  name:

## Deployment Configuration
deploymentEnv: "UPDATE_ENV"
replicaCount: 2
terminationGracePeriod: 3600

## Name and dashboard overrides
nameOverride: ""
fullnameOverride: ""
dashboardReplicaStatefulsetFilterOverride: ""

## Base Labels. Please do not change these.
serviceName: gvp-mcp
component: shared
```

---

```

partOf: gvp

## Command-line arguments to the MCP process
args:
  - "gvp-configserver"
  - "8888"
  - "default"
  - "/etc/mcpconfig/config.ini"

## Container image repo settings.
image:
  mcp:
    registry: pureengage-docker-staging.jfrog.io
    repository: gvp/multicloud/gvp_mcp
    tag: "{{ .Chart.AppVersion }}"
    pullPolicy: IfNotPresent
  serviceHandler:
    registry: pureengage-docker-staging.jfrog.io
    repository: gvp/multicloud/gvp_mcp_servicehandler
    tag: "{{ .Chart.AppVersion }}"
    pullPolicy: IfNotPresent
  configHandler:
    registry: pureengage-docker-staging.jfrog.io
    repository: gvp/multicloud/gvp_mcp_confighandler
    tag: "{{ .Chart.AppVersion }}"
    pullPolicy: IfNotPresent
  snmp:
    registry: pureengage-docker-staging.jfrog.io
    repository: gvp/multicloud/gvp_snmp
    tag: v9.0.040.21
    pullPolicy: IfNotPresent
  rup:
    registry: pureengage-docker-staging.jfrog.io
    repository: cce/recording-provider
    tag: 9.0.000.00.b.1432.r.ef30441
    pullPolicy: IfNotPresent

## MCP specific settings
mcp:
  ## Settings for liveness and readiness probes of MCP
  ## !!! THESE VALUES SHOULD NOT BE CHANGED UNLESS INSTRUCTED BY GENESYS !!!
  livenessValues:
    path: /mcp/liveness
    initialDelaySeconds: 30
    periodSeconds: 60
    timeoutSeconds: 20
    failureThreshold: 3
    healthCheckAPIPort: 8300

  # Used instead of startupProbe. This runs all initial self-tests, and could take some time.
  # Timeout is = 2
  # maxUnavailable = 1
hpa:
  enabled: false
  minReplicas: 2
  maxUnavailable: 1
  maxReplicas: 4
  podManagementPolicy: Parallel
  targetCPUAverageUtilization: 20
  scaleupPeriod: 15
  scaleupPods: 4
  scaleupPercent: 50
  scaleupStabilizationWindow: 0

```

---

---

```

scaleupPolicy: Max
scaledownPeriod: 300
scaledownPods: 2
scaledownPercent: 10
scaledownStabilizationWindow: 3600
scaledownPolicy: Min

## Service/Pod Monitoring Settings
prometheus:
  mcp:
    name: gvp-mcp-snmp
    port: 9116

  rup:
    name: gvp-mcp-rup
    port: 8080

  podMonitor:
    enabled: true

grafana:
  enabled: false

#log:
#  name: gvp-mcp-log
#  port: 8200

## Pod Disruption Budget Settings
podDisruptionBudget:
  enabled: true

## Enable network policies or not
networkPolicies:
  enabled: false

## DNS configuration options
dnsConfig:
  options:
    - name: ndots
      value: "3"

## Configuration overrides
mcpConfig:
  # MCP config overrides
  mcp.mpc.numdispatchthreads: 4
  mcp.log.verbose: "interaction"
  mcp.mpc.codec: "pcmu pcma telephone-event"
  mcp.mpc.transcoders: "PCM MP3"
  mcp.mpc.playcache.enable: 1
  mcp.fm.http_proxy: ""
  mcp.fm.https_proxy: ""

#MRCP v2 ASR config overrides
mrcpv2_asr.provision.vrm.client.connectpersetup: true
mrcpv2_asr.provision.vrm.client.disablehotword: false
mrcpv2_asr.provision.vrm.client.hotkeybasepath: "/usr/local/genesys/mcp/grammar/nuance/
hotkey"
mrcpv2_asr.provision.vrm.client.noduplicatedgramuri: true
mrcpv2_asr.provision.vrm.client.sendswmsparams: false
mrcpv2_asr.provision.vrm.client.transportprotocol: "MRCPv2"
mrcpv2_asr.provision.vrm.client.sendloggingtag: true
mrcpv2_asr.provision.vrm.client.resource.name: "NuanceASRv2"
mrcpv2_asr.provision.vrm.client.resource.uri: "sip:mresources@speech-server-clusterip:5060"

```

---

---

```
mrcpv2_asr.provision.vrm.client.tlscertificatekey: "/usr/local/genesys/mcp/config/
x509_certificate.pem"
mrcpv2_asr.provision.vrm.client.tlsprivatekey: "/usr/local/genesys/mcp/config/
x509_certificate.pem"
mrcpv2_asr.provision.vrm.client.tlspassword: ""
mrcpv2_asr.provision.vrm.client.tlsprotocoltype: "TLSv1"
mrcpv2_asr.provision.vrm.client.confidencescale: 1
mrcpv2_asr.provision.vrm.client.sendsessionxml: true
mrcpv2_asr.provision.vrm.client.supportfornuance11: true
mrcpv2_asr.provision.vrm.client.uniquegramid: true

#MRCP v2 TTS config overrides
mrcpv2_tts.provision.vrm.client.connectpersetup: true
mrcpv2_tts.provision.vrm.client.speechmarkerencoding: "UTF-8"
mrcpv2_tts.provision.vrm.client.transportprotocol: "MRCPv2"
mrcpv2_tts.provision.vrm.client.sendloggingtag: true
mrcpv2_tts.provision.vrm.client.resource.name: "NuanceTTSv2"
mrcpv2_tts.provision.vrm.client.resource.uri: "sip:mresources@speech-server-clusterip:5060"
mrcpv2_tts.provision.vrm.client.tlscertificatekey: "/usr/local/genesys/mcp/config/
x509_certificate.pem"
mrcpv2_tts.provision.vrm.client.tlsprivatekey: "/usr/local/genesys/mcp/config/
x509_certificate.pem"
mrcpv2_tts.provision.vrm.client.tlspassword: ""
mrcpv2_tts.provision.vrm.client.tlsprotocoltype: "TLSv1"
mrcpv2_tts.provision.vrm.client.nospeechlanguageheader: true
mrcpv2_tts.provision.vrm.client.sendsessionxml: true
mrcpv2_tts.provision.vrm.client.supportfornuance11: true
```

## Verify the deployed resources

Verify the deployed resources from Google console/CLI.