Contents

Install Extension

1. Install Azure CLI: How to install the Azure CLI | Microsoft Docs
2. Install Python
3. Make sure workloads extension is not installed using "az extension list"
   a. This doc can be used to remove any existing extension: az extension | Microsoft Docs
4. Download and Install extension from Azure Extension for SAPaz solutions- Latest
   a. az extension add --source=./workloads-0.1.0-py3-none-any.whl
   b.
   ```
   PS C:\Users\gargankit\OneDrive - Microsoft\WaaS\Extension 14March> az extension add --source=./workloads-0.1.0-py3-none-any.whl
   Are you sure you want to install this extension? (y/n): y
   The installed extension 'workloads' is experimental and not covered by customer support. Please use with discretion.
   PS C:\Users\gargankit\OneDrive - Microsoft\WaaS\Extension 14March>
   ```
5. Login to correct AZ account
   a. az login
   b. az account set --subscription "<ACCOUNT_SUBSCRIPTION_ID>"
   c. az account show -otable
      i. should show correct account
6. Perform SAP Virtual Instance operations through extension
   a. Can test through basic command "az workloads –help" or "az workloads sap-virtual-instance list"
   b.
   ```
   PS C:\Users\gargankit\OneDrive - Microsoft\WaaS\Extension 14March> az workloads --help

   Group
       az workloads : Manage Workloads.
           This command group is experimental and under development. Reference and support levels:
           https://aka.ms/CLI_refstatus
   Subgroups:
       sap-application-server-instance : Manage sap application server instance with workloads.
       sap-central-instance            : Manage sap central instance with workloads.
       sap-database-instance           : Manage sap database instance with workloads.
       sap-virtual-instance            : Manage sap virtual instance with workloads.

   Commands:
       sap-availability-zone-detail    : Get SAP Availability Zone Details.
       sap-disk-configuration          : Get SAP Disk Configurations.
       sap-sizing-recommendation       : Get SAP sizing recommendations.
       sap-supported-sku               : Get SAP supported SKUs.

   To search AI knowledge base for examples, use: az find "az workloads"

   Please let us know how we are doing: https://aka.ms/azureclihats
   PS C:\Users\gargankit\OneDrive - Microsoft\WaaS\Extension 14March>
   ```

Known Issues

Feature	Commands	Details
SVI Start/Stop	az workloads sap-virtual-instance start az workloads sap-virtual-instance stop	Feature under development.

Notes while using extension

1. Use same location for Service location and Application Location.

CLI command list

CLI Command	Operation Swagger name	Comments
az workloads sap-availability-zone-detail	SAPAvailabilityZoneDetails	
az workloads sap-disk-configuration	SAPDiskConfigurations	
az workloads sap-sizing-recommendation	SAPSizingRecommendations	
az workloads sap-supported-sku	SAPSupportedSku	
VIS		
az workloads sap-virtual-instance list	ListByResourceGroup	
az workloads sap-virtual-instance list	ListBySubscription	
az workloads sap-virtual-instance show	Get	
az workloads sap-virtual-instance create	Create	
az workloads sap-virtual-instance update	Update	Replaces Tags, instead of adding them. This goes with CLI design and is correct way so that we can remove tags as well
az workloads sap-virtual-instance delete	Delete	
az workloads sap-virtual-instance start	Start	Do not use this, Feature in Development
az workloads sap-virtual-instance stop	Stop	Do not use this, Feature in Development
App Server Instance		
az workloads sap-application-server-instance list	List	
az workloads sap-application-server-instance show	Get	
az workloads sap-application-server-instance create	Create	payload Option missing. Body is readOnly, not allowed to be created separately, so this is valid
az workloads sap-application-server-instance update	Update	Replaces Tags, instead of adding them. This goes with CLI design and is correct way

		so that we can remove tags as well
az workloads sap-application-server-instance delete	Delete	
Central Server Instance		
az workloads sap-central-instance list	List	
az workloads sap-central-instance show	Get	
az workloads sap-central-instance create	Create	payload Option missing. Body is readOnly, not allowed to be created separately, so this is valid
az workloads sap-central-instance update	Update	Replaces Tags, instead of adding them. This goes with CLI design and is correct way so that we can remove tags as well
az workloads sap-central-instance delete	Delete	
Database Instance		
az workloads sap-database-instance list	List	
az workloads sap-database-instance show	Get	
az workloads sap-database-instance create	Create	payload Option missing. Body is readOnly, not allowed to be created separately, so this is valid
az workloads sap-database-instance update	Update	Replaces Tags, instead of adding them. This goes with CLI design and is correct way so that we can remove tags as well
az workloads sap-database-instance delete	Delete	

Sample commands

The following section will show you sample commands and their results. You can use these and customise the input values to your need.

Group: az workloads
Command az workloads sap-availability-zone-detail
Example
az workloads sap-availability-zone-detail --app-location "eastus" --database-type "HANA" --sap-product "S4HANA" \

--location "centralus"

az workloads sap-availability-zone-detail --app-location "northeurope" --database-type "HANA" --sap-product "S4HANA" --location "northeurope"

```
PS D:\OneDrive - Microsoft\WaaS\Extension\14March\Testing> az workloads sap-availability-zone-detail --app-location "northeurope" --da
tabase-type "HANA" --sap-product "S4HANA" --location "centralus"
Command group 'workloads' is experimental and under development. Reference and support levels: https://aka.ms/CLI_refstatus
(NoRegisteredProviderFound) No registered resource provider found for location 'centralus' and API version '2021-12-01-preview' for ty
pe 'Locations/sapVirtualInstanceMetadata'. The supported api-versions are '2021-12-01-preview'. The supported locations are 'eastus2eu
ap, eastus2, northeurope'.
PS D:\OneDrive - Microsoft\WaaS\Extension\14March\Testing> az workloads sap-availability-zone-detail --app-location "northeurope" --da
tabase-type "HANA" --sap-product "S4HANA" --location "northeurope"
Command group 'workloads' is experimental and under development. Reference and support levels: https://aka.ms/CLI_refstatus
{
  "availabilityZonePairs": [
    {
      "zoneA": 2,
      "zoneB": 3
    }
  ]
}
```

Command az workloads sap-disk-configuration

Example

az workloads sap-disk-configuration --app-location "northeurope" --database-type "HANA" --db-vm-sku "Standard_M32ts" --deployment-type "SingleServer" --environment "NonProd" --sap-product "S4HANA" --location "northeurope"

```
PS D:\OneDrive - Microsoft\WaaS\Extension\14March\Testing> az workloads sap-disk-configuration --app-location "northeurope" --database
-type "HANA" --db-vm-sku "Standard_M32ts" --deployment-type "SingleServer" --environment "NonProd" --sap-product "S4HANA" --location "
northeurope"
Command group 'workloads' is experimental and under development. Reference and support levels: https://aka.ms/CLI_refstatus
{
  "diskConfigurations": [
    {
      "diskCount": 4,
      "diskIopsReadWrite": 500,
      "diskMBpsReadWrite": 100,
      "diskSizeGb": 128,
      "diskStorageType": "Premium_LRS",
      "diskType": "P10",
      "volume": "hana/data"
    },
    {
      "diskCount": 3,
      "diskIopsReadWrite": 500,
      "diskMBpsReadWrite": 100,
      "diskSizeGb": 128,
      "diskStorageType": "Premium_LRS",
      "diskType": "P10",
      "volume": "hana/log"
    },
    {
      "diskCount": 1,
      "diskIopsReadWrite": 500,
      "diskMBpsReadWrite": 60,
      "diskSizeGb": 256,
      "diskStorageType": "StandardSSD_LRS",
      "diskType": "E15",
      "volume": "hana/shared"
    },
    {
      "diskCount": 1,
      "diskIopsReadWrite": 500,
      "diskMBpsReadWrite": 100,
      "diskSizeGb": 128,
      "diskStorageType": "Premium_LRS",
      "diskType": "P10",
      "volume": "usr/sap"
    },
    {
      "diskCount": 2,
      "diskIopsReadWrite": 500,
      "diskMBpsReadWrite": 60,
      "diskSizeGb": 256,
      "diskStorageType": "StandardSSD_LRS",
      "diskType": "E15",
      "volume": "backup"
    },
    {
      "diskCount": 1,
      "diskIopsReadWrite": 500,
      "diskMBpsReadWrite": 60,
      "diskSizeGb": 64,
      "diskStorageType": "StandardSSD_LRS",
      "diskType": "E6",
      "volume": "os"
    }
  ]
}
```

Command az workloads sap-sizing-recommendation

Example

az workloads sap-sizing-recommendation --app-location "northeurope" --database-type "HANA" --db-memory 2000 --deployment-type "SingleServer" --environment "NonProd" --sap-product "S4HANA" --saps 60000 --location "northeurope"

```
PS D:\OneDrive - Microsoft\WaaS\Extension\14March\Testing> az workloads sap-sizing-recommendation --app-location "northeurope" --datab
ase-type "HANA" --db-memory 2000 --deployment-type "SingleServer" --environment "NonProd" --sap-product "S4HANA" --saps 60000 --locati
on "northeurope"
Command group 'workloads' is experimental and under development. Reference and support levels: https://aka.ms/CLI_refstatus
{
  "deploymentType": "SingleServer",
  "vmSku": "Standard_M128s"
}
```

Command az workloads sap-supported-sku
Example

az workloads sap-supported-sku --app-location "eastus2" --database-type "HANA" --deployment-type "SingleServer" --environment "NonProd" --sap-product "S4HANA" --location "eastus2"

```
PS D:\OneDrive - Microsoft\WaaS\Extension\14March\Testing> az workloads sap-supported-sku --app-location "eastus2" --database-type "HA
NA" --deployment-type "SingleServer" --environment "NonProd" --sap-product "S4HANA" --location "eastus2"
Command group 'workloads' is experimental and under development. Reference and support levels: https://aka.ms/CLI_refstatus
{
  "supportedSkus": [
    {
      "isAppServerCertified": true,
      "isDatabaseCertified": true,
      "vmSku": "Standard_M32ts"
    },
    {
      "isAppServerCertified": true,
      "isDatabaseCertified": true,
      "vmSku": "Standard_M208ms_v2"
    },
    {
      "isAppServerCertified": true,
      "isDatabaseCertified": true,
      "vmSku": "Standard_M64s"
    },
    {
      "isAppServerCertified": true,
      "isDatabaseCertified": true,
      "vmSku": "Standard_M128ms"
    },
    {
      "isAppServerCertified": true,
      "isDatabaseCertified": true,
      "vmSku": "Standard_M416s_v2"
    },
    {
      "isAppServerCertified": true,
      "isDatabaseCertified": true,
      "vmSku": "Standard_E64ds_v4"
    },
    {
      "isAppServerCertified": true,
      "isDatabaseCertified": true,
      "vmSku": "Standard_M128s"
    },
    {
      "isAppServerCertified": true,
      "isDatabaseCertified": true,
      "vmSku": "Standard_E32ds_v4"
    },
    {
      "isAppServerCertified": true,
      "isDatabaseCertified": true,
      "vmSku": "Standard_M64ms"
    },
    {
      "isAppServerCertified": true,
      "isDatabaseCertified": true,
      "vmSku": "Standard_M416ms_v2"
    },
    {
      "isAppServerCertified": true,
      "isDatabaseCertified": true,
      "vmSku": "Standard_M208s_v2"
    },
    {
      "isAppServerCertified": true,
      "isDatabaseCertified": true,
      "vmSku": "Standard_E48ds_v4"
    }
  ]
}
```

Group: az workloads sap-virtual-instance
Command az workloads sap-virtual-instance list by RG
Example

az workloads sap-virtual-instance list --resource-group "test-rg"

PS D:\CliDev\azure-cli-extensions\src\workloads> az workloads sap-virtual-instance list --resource-group 'test-rg'

Command az workloads sap-virtual-instance list
Example
az workloads sap-virtual-instance list

```
          "createdBy": "prateekxaxa@microsoft.com",
          "createdByType": "User",
          "lastModifiedAt": "2022-03-17T11:25:34.826181+00:00",
          "lastModifiedBy": "prateekxaxa@microsoft.com",
          "lastModifiedByType": "User"
        },
        "tags": {},
        "type": "microsoft.workloads/sapvirtualinstances"
    },
    {
      "configuration": {
        "appLocation": "northeurope",
        "configurationType": "Deployment",
        "infrastructureConfiguration": {
          "appResourceGroup": "pxaxa-test3-sap-008-rg",
          "databaseType": null,
          "deploymentType": "SingleServer",
          "subnetId": "/subscriptions/49d64d54-e966-4c46-a868-1999802b762c/resourceGroups/pxaxa-vnet-ne-001-rg/providers/Microsoft.Network/virtualNetworks/pxaxa-vnet-ne-001/subnets/s
          "virtualMachineConfiguration": {
            "imageReference": {
              "exactVersion": null,
              "offer": "sles-sap-15-sp3",
              "publisher": "SUSE",
              "sharedGalleryImageId": null,
              "sku": "gen2",
              "version": "2022.01.26"
            },
            "osProfile": {
              "adminPassword": null,
              "adminUsername": "azureuser",
              "osConfiguration": {
                "disablePasswordAuthentication": true,
                "osType": "Linux",
                "ssh": {
                  "publicKeys": [
                    {
                      "keyData": "ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAABgQCFrFo5IdWyGSHpioKXQw8y5P4Z\r\nDpJDLoDXOtvpw+wA8HCu0jX1HOpwo8E+sBaws/Zezf9jN+bcvjdpmdS1rB428rEh\r\n3OzV8+dbb7IF
X/Rwxh5WwPg78Tdt5chTzUMyBBDk\r\nbe9+RD04e+Ayzsq3epE/5f+uGoGbX7QL+xaaBkaRo3x06RQgZVypJl/CTKmZswsG\r\nuITtwRNLs6KAWeyqTR2OhUlF1pbCnhW10KUd7mk= generated-by-azure\r\n"
                    }
                  ]
                }
              }
            },
            "vmSize": "Standard_E32ds_v4"
          }
        },
        "softwareConfiguration": null
      },
      "environment": "NonProd",
      "errors": {
        "properties": {
          "code": "ArmOperationFailed",
          "details": [],
          "message": "\n    The Azure operation failed with code 'WaaS:NoErrorCodeFromArm'.\n      Possible Causes: The operation failed with error: "Internal server error. Failed
        }
      },
      "health": null,
      "id": "/subscriptions/49d64d54-e966-4c46-a868-1999802b762c/resourceGroups/pxaxa-test3-sap-008-rg/providers/Microsoft.Workloads/sapVirtualInstances/Z08",
      "identity": null,
      "location": "eastus2",
      "managedResourceGroupConfiguration": {
        "name": "mrg-Z08-b728a4"
      },
      "name": "Z08",
      "provisioningState": "Failed",
      "resourceGroup": "pxaxa-test3-sap-008-rg",
      "sapProduct": "S4HANA",
      "state": "InfrastructureDeploymentFailed",
      "status": null,
      "systemData": {
        "createdAt": "2022-03-17T11:27:29.849598+00:00",
        "createdBy": "prateekxaxa@microsoft.com",
        "createdByType": "User",
        "lastModifiedAt": "2022-03-17T11:27:29.849598+00:00",
        "lastModifiedBy": "prateekxaxa@microsoft.com",
        "lastModifiedByType": "User"
      },
      "tags": {},
      "type": "microsoft.workloads/sapvirtualinstances"
    },
    {
      "configuration": {
        "appLocation": "eastus",
        "configurationType": "Deployment",
        "infrastructureConfiguration": {
          "appResourceGroup": "waasmisading",
          "applicationServer": {
            "instanceCount": 2,
            "subnetId": "/subscriptions/49d64d54-e966-4c46-a868-1999802b762c/resourceGroups/Portal_RampUpSVI/providers/Microsoft.Network/virtualNetworks/TestSVINet/subnets/default",
            "virtualMachineConfiguration": {
              "imageReference": {
                "exactVersion": null,
                "offer": "RHEL-SAP-HA",
                "publisher": "RedHat",
                "sharedGalleryImageId": null,
                "sku": "82sapha-gen2",
                "version": "8.2.2021091202"
              },
              "osProfile": {
                "adminPassword": null,
                "adminUsername": "azureuser",
                "osConfiguration": {
                  "disablePasswordAuthentication": true,
                  "osType": "Linux",
                  "ssh": {
                    "publicKeys": [
                      {
                        "keyData": "ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAABgQD1/ItrBMCx2mF3KlEnm4Hrc8/f\r\nBnNmQV6WFDpxS1PMLxciLNrv5xG6KTlaFDg7WpwSsoD2hJ6O4vuY1Fz2YKQ2ntk5\r\n6pVF7j1s+Z
OhBqFMS87dDXqex7tYxzxru1S8dj mA\r\nrnegGYYhILgLfZ+g6w06ombIXj1FAIBarTcCi3B1Q29c2BUdox1B1cp1OImVhUdg\r\nWwh09zKXJeSFbLkuW/ng/3ADeZYSPMhBabP7D+0= generated-by-azure\r\n"
                      }
                    ]
                  }
                }
              }
            },
            "vmSize": "Standard_E16ds_v4"
          },
          "centralServer": {
            "instanceCount": 2,
            "subnetId": "/subscriptions/49d64d54-e966-4c46-a868-1999802b762c/resourceGroups/Portal_RampUpSVI/providers/Microsoft.Network/virtualNetworks/TestSVINet/subnets/default",
            "virtualMachineConfiguration": {
              "imageReference": {
                "exactVersion": null,
                "offer": "RHEL-SAP-HA",
                "publisher": "RedHat",
                "sharedGalleryImageId": null,
```

Command az workloads sap-virtual-instance show
Example
az workloads sap-virtual-instance show --resource-group "test-rg" --name "NEW"

```
(venv) PS D:\CliDev\azure-cli-extensions\src\workloads> az workloads sap-virtual-instance show --resource-group "test-rg" --name "NEW"
Command group 'workloads' is experimental and under development. Reference and support levels: https://aka.ms/CLI_refstatus
{
  "configuration": {
    "appLocation": "eastus",
    "configurationType": "Deployment",
    "infrastructureConfiguration": {
      "appResourceGroup": "test-rg",
      "databaseType": null,
      "deploymentType": "SingleServer",
      "subnetId": "/subscriptions/49d64d54-e966-4c46-a868-1999802b762c/resourceGroups/test123/providers/Microsoft.Network/virtualNetworks/vnet-001/subnets/default",
      "virtualMachineConfiguration": {
        "imageReference": {
          "exactVersion": null,
          "offer": "RHEL-SAP-HA",
          "publisher": "RedHat",
          "sharedGalleryImageId": null,
          "sku": "8.1",
          "version": "8.1.2021040901"
        },
        "osProfile": {
          "adminPassword": null,
          "adminUsername": "azureuser",
          "osConfiguration": {
            "disablePasswordAuthentication": true,
            "osType": "Linux",
            "ssh": {
              "publicKeys": [
                {
                  "keyData": "ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAABgQDVyuB2rUgIrTCExPVeJvaKrMMp\r\nxfrPGW3T1QyNS/9NZJSdy9iSIoy0mg57Npjjol7tvVgR4Lv67pvP+DAIJFQPEh03\r\
gqjghN1kfltzw1xi+FMATI6rjb3jXsHJTcwU42ntTsg9MaIyUNkT78\r\ngISY74BqF8a4ssQqPrHWXQb1AJ9OO+4TOvr223Sj0M39etcSKVb/zhXXcBckBaSF\r\n1Hlr/1fNm4LdQyGKs21ihA4VRL3uFKL4q6gpdzq2"
                }
              ]
            }
          }
        },
        "vmSize": "Standard_E32ds_v4"
      }
    },
    "softwareConfiguration": {
      "bomUrl": "https://sapbitsstrage.blob.core.windows.net/sapbits/sapfiles/boms/S41909SPS03_v0009ms/S41909SPS03_v0009ms.yaml",
      "highAvailabilitySoftwareConfiguration": null,
      "sapBitsStorageAccountId": "/subscriptions/49d64d54-e966-4c46-a868-1999802b762c/resourceGroups/yb-SapInstall/providers/Microsoft.Storage/storageAccounts/sapbits",
      "sapFqdn": "contoso.system.net",
      "softwareInstallationType": "ServiceInitiated",
      "softwareVersion": "SAP S/4HANA 1909 SPS 03",
      "sshPrivateKey": null
    }
  },
  "environment": "NonProd",
  "errors": {
    "properties": {
      "code": "AnsibleTaskExecutionFailed",
      "details": [
        {
          "code": "AnsibleTaskExecutionFailed",
          "details": null,
          "message": "\n    The ansible task 'roles-sap/3.3.1-bom-utility : BOM Processing:  Register downloaded BOM (HCMT_v0001ms)' has failed on host newvm.\n"
        }
      ],
      "message": "\n    The ansible task 'roles-sap/3.3.1-bom-utility : BOM: HCMT_v0001ms Check is file HCMT_v0001ms is already downloaded to the storage account'"
    }
  },
  "health": null,
  "id": "/subscriptions/49d64d54-e966-4c46-a868-1999802b762c/resourceGroups/test-rg/providers/Microsoft.Workloads/sapVirtualInstances/NEW",
  "identity": null,
  "location": "eastus2euap",
  "managedResourceGroupConfiguration": {
    "name": "mrg-NEW-48a7d9"
  },
  "name": "NEW",
  "provisioningState": "Failed",
  "resourceGroup": "test-rg",
  "sapProduct": "S4HANA",
  "state": "SoftwareInstallationFailed",
  "status": null,
  "systemData": {
    "createdAt": "2022-03-10T16:11:22.019107+00:00",
    "createdBy": "adityashukla@microsoft.com",
    "createdByType": "User",
    "lastModifiedAt": "2022-03-10T16:59:21.605325+00:00",
    "lastModifiedBy": "adityashukla@microsoft.com",
    "lastModifiedByType": "User"
  },
  "tags": {},
  "type": "microsoft.workloads/sapvirtualinstances"
}
```

Command az workloads sap-virtual-instance create

Example

3 tier create infra

Payload

Input_CreateInfra_Dist
ributedNonHA_config.

Command

```
az workloads sap-virtual-instance create --location "eastus2" --configuration
"@Input_CreateInfra_DistributedNonHA_config.json" --environment "Prod" --sap-product
"S4HANA" --resource-group "gargankit_cliTest_2" --sap-virtual-instance-name "AG5"
```

```json
"configuration": {
  "application": "eastus",
  "configurationType": "Deployment",
  "infrastructureConfiguration": {
    "appResourceGroup": "gargankit_cliTest_2",
    "applicationServer": {
      "instanceCount": 2,
      "subnetId": "/subscriptions/49d64d54-e966-4c46-a868-1999802b762c/resourceGroups/SAP-E2ETest-rg/providers/Microsoft.Network/virtualNetworks/install-test-vnet/subnets/appsubnet",
      "virtualMachineConfiguration": {
        "imageReference": {
          "exactVersion": null,
          "offer": "sles-sap-15-sp3",
          "publisher": "SUSE",
          "sharedGalleryImageId": null,
          "sku": "gen2",
          "version": "2022.01.26"
        },
        "osProfile": {
          "adminPassword": null,
          "adminUsername": "azureuser",
          "osConfiguration": {
            "disablePasswordAuthentication": true,
            "osType": "Linux",
            "ssh": {
              "publicKeys": [
                {
                  "keyData": "ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAABgQCSvOMb/d1gA3tm5tdWCHUWQ11G1QCtqnbi8ooz4gwnEoL3uXCLfR15fSWsxym4oZv2x+BK+P5EcQ6GWAcWH/SicNONFUJan21wV+9Z9DeGxLksEwvNEEE/LQCnFLyPfe2dBtTvbR8fiS3aEFOY34wPJ7hB/OMDWeGaiX/H9LBAtLGB3xPpG91UySOfL94UdX7QxEW+gDEOmhJ25+LhZbN7sAlEhP0rBHpdTrXLD3JvYPFZL5ncKLnGYGcsdRNMvGTUHE4rGVtPE6zTBcsZQpxidOpm9AzyJU+DTmF2FIxu/9V51Cb+GDmn36ew+hE= generated-by-azure"
                }
              ]
            }
          }
        }
      },
      "vmSize": "Standard_E4ds_v4"
    }
  },
  "centralServer": {
    "instanceCount": 1,
    "subnetId": "/subscriptions/49d64d54-e966-4c46-a868-1999802b762c/resourceGroups/SAP-E2ETest-rg/providers/Microsoft.Network/virtualNetworks/install-test-vnet/subnets/appsubnet",
    "virtualMachineConfiguration": {
      "imageReference": {
        "exactVersion": null,
        "offer": "sles-sap-15-sp3",
        "publisher": "SUSE",
        "sharedGalleryImageId": null,
        "sku": "gen2",
        "version": "2022.01.26"
      },
      "osProfile": {
        "adminPassword": null,
        "adminUsername": "azureuser",
        "osConfiguration": {
          "disablePasswordAuthentication": true,
          "osType": "Linux",
          "ssh": {
            "publicKeys": [
              {
                "keyData": "ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAABgQCSvOMb/d1gA3tm5tdWCHUWQ11G1QCtqnbi8ooz4gwnEoL3uXCLfR15fSWsxym4oZv2x+BK+P5EcQ6GWAcWH/SicNONFUJan21wV+9Z9DeGxLksEwvNEEE/LQCnFLyPfe2dBtTvbR8fiS3aEFOY34wPJ7hB/OMDWeGaiX/H9LBAtLGB3xPpG91UySOfL94UdX7QxEW+gDEOmhJ25+LhZbN7sAlEhP0rBHpdTrXLD3JvYPFZL5ncKLnGYGcsdRNMvGTUHE4rGVtPE6zTBcsZQpxidOpm9AzyJU+DTmF2FIxu/9V51Cb+GDmn36ew+hE= generated-by-azure"
              }
            ]
          }
        }
      }
    },
    "vmSize": "Standard_E8ds_v4"
  },
```

```json
    "databaseServer": {
      "databaseType": "HANA",
      "instanceCount": 1,
      "subnetId": "/subscriptions/49d64d54-e966-4c46-a868-1999802b762c/resourceGroups/SAP-E2ETest-rg/providers/Microsoft.Network/virtualNetworks/install-test-vnet/subnets/dbsubnet",
      "virtualMachineConfiguration": {
        "imageReference": {
          "exactVersion": null,
          "offer": "sles-sap-15-sp3",
          "publisher": "SUSE",
          "sharedGalleryImageId": null,
          "sku": "gen2",
          "version": "2022.01.26"
        },
        "osProfile": {
          "adminPassword": null,
          "adminUsername": "azureuser",
          "osConfiguration": {
            "disablePasswordAuthentication": true,
            "osType": "Linux",
            "ssh": {
              "publicKeys": [
                {
                  "keyData": "ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAABgQCSvOMb/d1gA3tm5tdWCHUWQ11G1QCtqnbi8ooz4gwnEoL3uXCLfR15fSWsxym4oZv2x+BK+P5EcQ6GWAcWH/SicNONFUJan21wV+9Z9DeGxLksEwvNEEE+/LQCnFLyPfe2dBtTvbR8fiS3aEFOY34wPJ7hB/OMDWeGaiX/H9LBAtLGB3xPpG91UySOfL94UdX7QxEW+gDEOmhJ25+LhZbN7sAlEhP0rBHpdTrXLD3JvYPFZL5ncKLnGYGcsdRNMvGTUHE4rGVtPE6zTBcsZQpxidOpm9AzyJU+DTmF2FIxu"
                }
              ]
            }
          }
        }
      },
      "vmSize": "Standard_M32ts"
    }
  },
  "deploymentType": "ThreeTier",
  "highAvailabilityConfig": null
},
"softwareConfiguration": null
},
"environment": "Prod",
"errors": null,
"health": null,
"id": "/subscriptions/49d64d54-e966-4c46-a868-1999802b762c/resourceGroups/gargankit_cliTest_2/providers/Microsoft.Workloads/sapVirtualInstances/AG5",
"identity": null,
"location": "eastus2",
"managedResourceGroupConfiguration": {
  "name": "mrg-AG5-d28184"
},
"name": "AG5",
"provisioningState": "Succeeded",
"resourceGroup": "gargankit_cliTest_2",
"sapProduct": "S4HANA",
"state": "SoftwareInstallationPending",
"status": null,
"systemData": {
  "createdAt": "2022-03-23T10:35:26.256742+00:00",
  "createdBy": "gargankit@microsoft.com",
  "createdByType": "User",
  "lastModifiedAt": "2022-03-23T10:35:26.256742+00:00",
  "lastModifiedBy": "gargankit@microsoft.com",
  "lastModifiedByType": "User"
},
"tags": null,
"type": "microsoft.workloads/sapvirtualinstances"
}
(venv) PS D:\OneDrive - Microsoft\WaaS\Extension\23March\Testing>
```

Creation triggered

PS D:\development\Checkpoints\CliTest\14march> az workloads sap-virtual-instance create --location "eastus2" --configuration "project_createinfra_distributednonhs_config.json" --environment "Prod" --sap-product "S4HANA" --resource-group "ankitTestRG" --sap-virtual-instance-name "X30"
Command group 'workloads' is experimental and under development. Reference and support levels: https://aka.ms/CLI_refstatus
\ Running ..

SVI visible on portal

X30
Virtual Instance for SAP solutions | PREVIEW

✕

▷ Start	☐ Stop	↻ Refresh	📱 Open in mobile	🗑 Delete

⚠ **Install SAP software** on this Virtual Instance to begin managing it.

∧ Essentials   View Cost   JSON View

Resource group	Health
ankitTestRG	⬤ Unknown
Status	Managed resource group
Unknown	mrg-X30-38a0f3
Subscription	App location
Az WaaS Test 1	East US
Subscription ID	SAP product
49d64d54-e966-4c46-a868-1999802b762c	S/4HANA
Location	Environment
eastus2euap	Production
	Virtual network/subnet
	install-test-vnet-appsubnet
	SAP software
	ⓘ Install

Tags (edit)
Click here to add tags

Get Started   Properties   Monitoring

Install SAP software

Before you can begin managing your SAP system using the best of Azure features, you will need to install SAP software. Learn more

Install SAP software

Confirm already installed software

Discovery
Example

n51_discovery.json

Command
az workloads sap-virtual-instance create --location "eastus2" --configuration "@n51_discovery.json" --environment "Prod" --sap-product "S4HANA" --resource-group "gargankit_cliTest_3" --sap-virtual-instance-name "N51"

PS D:\OneDrive - Microsoft\WaaS\Extension\23March\Testing> az workloads sap-virtual-instance create --location "eastus2" --configuration "@n51_discovery.json" --environment "Prod" --sap-product "S4HANA" --resource-group "gargankit_cliTest_3" --sap-virtual-instance-name "N51"
Command group 'workloads' is experimental and under development. Reference and support levels: https://aka.ms/CLI_refstatus
\ Running ..

PS D:\OneDrive - Microsoft\WaaS\Extension\23March\Testing> az workloads sap-virtual-instance create --location "eastus2" --configuration "gens_discovery.json" --environment "Prod" --sap-product "s4hana" --resource-group "gargankit_cliTest_3" --sap-virtual-instance-name "N51"
Command group 'workloads' is experimental and under development. Reference and support levels: https://aka.ms/CLI_refstatus
{
  "configuration": {
    "appLocation": "eastus",
    "centralServerVmId": "/subscriptions/49d64d54-e966-4c46-a868-1999802b762c/resourceGroups/SVI-E2E-INSTALL-22MAR-AVSET-INFRA-RG-SLES-SAP-12-SP4-GEN2/providers/Microsoft.Compute/virtualMachines/n51ascsvm1",
    "configurationType": "Discovery"
  },
  "environment": "Prod",
  "errors": null,
  "health": null,
  "id": "/subscriptions/49d64d54-e966-4c46-a868-1999802b762c/resourceGroups/gargankit_cliTest_3/providers/Microsoft.Workloads/sapVirtualInstances/N51",
  "identity": null,
  "location": "eastus2",
  "managedResourceGroupConfiguration": {
    "name": "mrg-N51-d7me59"
  },
  "name": "N51",
  "provisioningState": "Succeeded",
  "resourceGroup": "gargankit_cliTest_3",
  "sapProduct": "S4HANA",
  "state": "RegistrationComplete",
  "status": null,
  "systemData": {
    "createdAt": "2022-03-23T11:30:01.825997+00:00",
    "createdBy": "gargankit@microsoft.com",
    "createdByType": "User",
    "lastModifiedAt": "2022-03-23T11:38:09.607112+00:00",
    "lastModifiedBy": "ea21b132-560f-4b0b-9876-903b6bca7b9d",
    "lastModifiedByType": "Application"
  },
  "tags": null,
  "type": "microsoft.workloads/sapvirtualinstances"
}

Command az workloads sap-virtual-instance update

Example

az workloads sap-virtual-instance update --resource-group "test-rg" --name "NEW" --tags Tag1='TagValue'

```
      "sapFqdn": "contoso.system.net",
      "softwareInstallationType": "ServiceInitiated",
      "softwareVersion": "SAP S/4HANA 1909 SPS 03",
      "sshPrivateKey": null
    }
  },
  "environment": "NonProd",
  "errors": {
    "properties": {
      "code": "AnsibleTaskExecutionFailed",
      "details": [
        {
          "code": "AnsibleTaskExecutionFailed",
          "details": null,
          "message": "\n      The ansible task 'roles-sap/3.3.1-bom-ut
n, if the issue persists contact support.\n     "
        }
      ],
      "message": "\n      The ansible task 'roles-sap/3.3.1-bom-utilit
Recommended Action: Retry the operation again, if the issue persists c
    }
  },
  "health": null,
  "id": "/subscriptions/49d64d54-e966-4c46-a868-1999802b762c/resourceG
  "identity": null,
  "location": "eastus2euap",
  "managedResourceGroupConfiguration": {
    "name": "mrg-NEW-48a7d9"
  },
  "name": "NEW",
  "provisioningState": "Failed",
  "resourceGroup": "test-rg",
  "sapProduct": "S4HANA",
  "state": "SoftwareInstallationFailed",
  "status": null,
  "systemData": {
    "createdAt": "2022-03-10T16:11:22.019107+00:00",
    "createdBy": "adityashukla@microsoft.com",
    "createdByType": "User",
    "lastModifiedAt": "2022-03-23T10:40:20.814106+00:00",
    "lastModifiedBy": "gargankit@microsoft.com",
    "lastModifiedByType": "User"
  },
  "tags": {
    "Tag1": "TagValue"
  },
  "type": "microsoft.workloads/sapvirtualinstances"
}
PS C:\WINDOWS\system32>
```

Command az workloads sap-virtual-instance delete

Example

az workloads sap-virtual-instance delete --resource-group "gargankit_cliTest_1" --name "AG4"

```
PS D:\OneDrive - Microsoft\WaaS\Extension\14March\Testing> az workloads sap-virtual-instance delete --resource-group "ankitTestPassDistributedAvZoneSuse" --sap-virtual-instance-name "AG2" --verbose
Command group 'workloads' is experimental and under development. Reference and support levels: https://aka.ms/CLI_refstatus
Are you sure you want to perform this operation? (y/n): y
\ Running ..

PS C:\WINDOWS\system32> az workloads sap-virtual-instance delete --resource-group "gargankit_cliTest_1" --name "AG4"
Command group 'workloads' is experimental and under development. Reference and support levels: https://aka.ms/CLI_refstatus
Are you sure you want to perform this operation? (y/n): y
{
  "endTime": null,
  "error": null,
  "id": "/subscriptions/49d64d54-e966-4c46-a868-1999802b762c/providers/Microsoft.Workloads/locations/EASTUS2/operationStatuses/a2b335b8-503c-4c26-883d-624e98127be9*387FCA400F952D85BC01C8E95FD9A152D05AD1617B6896270A9D8075DCF935B5",
  "name": "a2b335b8-503c-4c26-883d-624e98127be9*387FCA400F952D85BC01C8E95FD9A152D05AD1617B6896270A9D8075DCF935B5",
  "operations": null,
  "percentComplete": null,
  "properties": null,
  "resourceId": "/subscriptions/49d64d54-e966-4c46-a868-1999802b762c/resourceGroups/gargankit_cliTest_1/providers/Microsoft.Workloads/sapVirtualInstances/AG4",
  "startTime": "2022-03-23T10:35:53.119581+00:00",
  "status": "Succeeded"
}
PS C:\WINDOWS\system32>
```

Command az workloads sap-virtual-instance start

Example

az workloads sap-virtual-instance start --sap-password "pwd" --sap-username "user" --resource-group "gargankit_cliTest_2" --name "AG5"

API unavailable (Under development)

(venv) PS D:\OneDrive - Microsoft\WaaS\Extension\23March\Testing> az workloads sap-virtual-instance start --sap-password "pwd" --sap-username "user" --resource-group "gargankit_cliTest_2" --name "AG5"
Command group 'workloads' is experimental and under development. Reference and support levels: https://aka.ms/CLI_refstatus
(ResourcePostActionFailed) ResourcePostActionFailed: Not Found
Code: ResourcePostActionFailed
Message: ResourcePostActionFailed: Not Found
(venv) PS D:\OneDrive - Microsoft\WaaS\Extension\23March\Testing>

Command az workloads sap-virtual-instance stop

Example

az workloads sap-virtual-instance stop --sap-password "pwd" --sap-username "user" --resource-group "gargankit_cliTest_2" --name "AG5"

API unavailable (Under development)

(venv) PS D:\OneDrive - Microsoft\WaaS\Extension\23March\Testing> az workloads sap-virtual-instance stop --sap-password "pwd" --sap-username "user" --resource-group "gargankit_cliTest_2" --name "AG5"
Command group 'workloads' is experimental and under development. Reference and support levels: https://aka.ms/CLI_refstatus
(ResourcePostActionFailed) ResourcePostActionFailed: Not Found
Code: ResourcePostActionFailed
Message: ResourcePostActionFailed: Not Found
(venv) PS D:\OneDrive - Microsoft\WaaS\Extension\23March\Testing>

Group: az workloads sap-central-instance

Command az workloads sap-central-instance list

Example

az workloads sap-central-instance list --resource-group "gargankit_cliTest_2" --sap-virtual-instance-name "AG5"

(venv) PS D:\OneDrive - Microsoft\WaaS\Extension\23March\Testing> az workloads sap-central-instance list --resource-group "gargankit_cliTest_2" --sap-virtual-instance-name "AG5"
Command group 'workloads' is experimental and under development. Reference and support levels: https://aka.ms/CLI_refstatus
[
  {
    "enqueueServerProperties": null,
    "errors": null,
    "gatewayServerProperties": null,
    "health": "Unknown",
    "id": "/subscriptions/49d64d54-e966-4c46-a868-1999802b762c/resourceGroups/gargankit_cliTest_2/providers/Microsoft.Workloads/sapVirtualInstances/AG5/centralInstances/cs0",
    "instanceNo": null,
    "kernelPatch": null,
    "kernelVersion": null,
    "location": "eastus2",
    "messageServerProperties": null,
    "name": "cs0",
    "provisioningState": "Succeeded",
    "resourceGroup": "gargankit_cliTest_2",
    "status": "Unavailable",
    "subnet": null,
    "systemData": {
      "createdAt": "2022-03-23T10:37:31.655275+00:00",
      "createdBy": "ea21b132-560f-4b0b-9876-903b6bca7b9d",
      "createdByType": "Application",
      "lastModifiedAt": "2022-03-23T10:40:41.359389+00:00",
      "lastModifiedBy": "ea21b132-560f-4b0b-9876-903b6bca7b9d",
      "lastModifiedByType": "Application"
    },
    "tags": {
      "SapArtifact": "CentralServer"
    },
    "type": "microsoft.workloads/sapvirtualinstances/centralinstances",
    "vmDetails": [
      {
        "type": "Primary",
        "virtualMachineId": "/subscriptions/49d64d54-e966-4c46-a868-1999802b762c/resourceGroups/gargankit_cliTest_2/providers/Microsoft.Compute/virtualMachines/ag5ascsvm"
      }
    ]
  }
]
(venv) PS D:\OneDrive - Microsoft\WaaS\Extension\23March\Testing>

Command az workloads sap-central-instance show

Example

az workloads sap-central-instance show --central-instance-name "cs0" --resource-group "gargankit_cliTest_2" --sap-virtual-instance-name "AG5"

(venv) PS D:\OneDrive - Microsoft\WaaS\Extension\23March\Testing> az workloads sap-central-instance show --central-instance-name "cs0" --resource-group "gargankit_cliTest_2" --sap-virtual-instance-name "AG5"
Command group 'workloads' is experimental and under development. Reference and support levels: https://aka.ms/CLI_refstatus
{
  "enqueueServerProperties": null,
  "errors": null,
  "gatewayServerProperties": null,
  "health": "Unknown",
  "id": "/subscriptions/49d64d54-e966-4c46-a868-1999802b762c/resourceGroups/gargankit_cliTest_2/providers/Microsoft.Workloads/sapVirtualInstances/AG5/centralInstances/cs0",
  "instanceNo": null,
  "kernelPatch": null,
  "kernelVersion": null,
  "location": "eastus2",
  "messageServerProperties": null,
  "name": "cs0",
  "provisioningState": "Succeeded",
  "resourceGroup": "gargankit_cliTest_2",
  "status": "Unavailable",
  "subnet": null,
  "systemData": {
    "createdAt": "2022-03-23T10:37:31.655275+00:00",
    "createdBy": "ea21b132-560f-4b0b-9876-903b6bca7b9d",
    "createdByType": "Application",
    "lastModifiedAt": "2022-03-23T10:40:41.359389+00:00",
    "lastModifiedBy": "ea21b132-560f-4b0b-9876-903b6bca7b9d",
    "lastModifiedByType": "Application"
  },
  "tags": {
    "SapArtifact": "CentralServer"
  },
  "type": "microsoft.workloads/sapvirtualinstances/centralinstances",
  "vmDetails": [
    {
      "type": "Primary",
      "virtualMachineId": "/subscriptions/49d64d54-e966-4c46-a868-1999802b762c/resourceGroups/gargankit_cliTest_2/providers/Microsoft.Compute/virtualMachines/ag5ascsvm"
    }
  ]
}

Command az workloads sap-central-instance create

Example

az workloads sap-central-instance create --location "westcentralus" --resource-group "test-rg" \
--sap-virtual-instance-name "X00"

Not Allowed (Hence payload missing from input)

(venv) PS D:\OneDrive - Microsoft\WaaS\Extension\23March\Testing> az workloads sap-central-instance create --central-instance-name "cs1" --location="eastus2" --resource-group "gargankit_cliTest_2" --sap-virtual-instance-name "AG5"
Command group 'workloads' is experimental and under development. Reference and support levels: https://aka.ms/CLI_refstatus
(OperationNotAllowed) This operation is not allowed.
Code: OperationNotAllowed
Message: This operation is not allowed.
(venv) PS D:\OneDrive - Microsoft\WaaS\Extension\23March\Testing>

Command az workloads sap-central-instance update

Example

az workloads sap-central-instance update --tags Tag1="Value1" --central-instance-name "cs0" --resource-group "gargankit_cliTest_2" --sap-virtual-instance-name "AG5"

(venv) PS D:\OneDrive - Microsoft\WaaS\Extension\23March\Testing> az workloads sap-central-instance update --tags Tag1="Value1" --central-instance-name "cs0" --resource-group "gargankit_cliTest_2" --sap-virtual-instance-name "AG5"
Command group 'workloads' is experimental and under development. Reference and support levels: https://aka.ms/CLI_refstatus
{
  "enqueueServerProperties": null,
  "errors": null,
  "gatewayServerProperties": null,
  "health": "Unknown",
  "id": "/subscriptions/49d64d54-e966-4c46-a868-1999802b762c/resourceGroups/gargankit_cliTest_2/providers/Microsoft.Workloads/sapVirtualInstances/AG5/centralInstances/cs0",
  "instanceNo": null,
  "kernelPatch": null,
  "kernelVersion": null,
  "location": "eastus2",
  "messageServerProperties": null,
  "name": "cs0",
  "provisioningState": "Succeeded",
  "resourceGroup": "gargankit_cliTest_2",
  "status": "Unavailable",
  "subnet": null,
  "systemData": {
    "createdAt": "2022-03-23T10:37:31.655275+00:00",
    "createdBy": "ea21b132-560f-4b0b-9876-903b6bca7b9d",
    "createdByType": "Application",
    "lastModifiedAt": "2022-03-23T10:50:29.602025+00:00",
    "lastModifiedBy": "gargankit@microsoft.com",
    "lastModifiedByType": "User"
  },
  "tags": {
    "Tag1": "Value1"
  },
  "type": "microsoft.workloads/sapvirtualinstances/centralinstances",
  "vmDetails": [
    {
      "type": "Primary",
      "virtualMachineId": "/subscriptions/49d64d54-e966-4c46-a868-1999802b762c/resourceGroups/gargankit_cliTest_2/providers/Microsoft.Compute/virtualMachines/ag5ascsvm"
    }
  ]
}
(venv) PS D:\OneDrive - Microsoft\WaaS\Extension\23March\Testing>

Command az workloads sap-central-instance delete

Example

az workloads sap-central-instance delete --central-instance-name "cs0" --resource-group "gargankit_cliTest_2" --sap-virtual-instance-name "AG5"

(venv) PS D:\OneDrive - Microsoft\WaaS\Extension\23March\Testing> az workloads sap-central-instance delete --central-instance-name "cs0" --resource-group "gargankit_cliTest_2" --sap-virtual-instance-name "AG5"
Command group 'workloads' is experimental and under development. Reference and support levels: https://aka.ms/CLI_refstatus
Are you sure you want to perform this operation? (y/n): y
(venv) PS D:\OneDrive - Microsoft\WaaS\Extension\23March\Testing>
(venv) PS D:\OneDrive - Microsoft\WaaS\Extension\23March\Testing> az workloads sap-central-instance list --resource-group "gargankit_cliTest_2" --sap-virtual-instance-name "AG5"
Command group 'workloads' is experimental and under development. Reference and support levels: https://aka.ms/CLI_refstatus
[]
(venv) PS D:\OneDrive - Microsoft\WaaS\Extension\23March\Testing>

Group: az workloads sap-application-server-instance
Command az workloads sap-application-server-instance list
Example

az workloads sap-application-server-instance list --resource-group "gargankit_cliTest_2" --sap-virtual-instance-name "AG5"

(venv) PS D:\OneDrive - Microsoft\WaaS\Extension\23March\Testing> az workloads sap-application-server-instance list --resource-group "gargankit_cliTest_2" --sap-virtual-instance-name "AG5"
Command group 'workloads' is experimental and under development. Reference and support levels: https://aka.ms/CLI_refstatus
[
  {
    "errors": null,
    "gatewayPort": null,
    "health": "Unknown",
    "hostname": null,
    "icmHttpPort": null,
    "icmHttpsPort": null,
    "id": "/subscriptions/49d64d54-e966-4c46-a868-1999802b762c/resourceGroups/gargankit_cliTest_2/providers/Microsoft.Workloads/sapVirtualInstances/AG5/applicationInstances/app0",
    "instanceNo": null,
    "ipAddress": "",
    "kernelPatch": null,
    "kernelVersion": null,
    "location": "eastus2",
    "name": "app0",
    "provisioningState": "Succeeded",
    "resourceGroup": "gargankit_cliTest_2",
    "status": "Starting",
    "subnet": null,
    "systemData": {
      "createdAt": "2022-03-23T10:37:30.202170+00:00",
      "createdBy": "ea21b132-560f-4b0b-9876-903b6bca7b9d",
      "createdByType": "Application",
      "lastModifiedAt": "2022-03-23T10:40:41.125016+00:00",
      "lastModifiedBy": "ea21b132-560f-4b0b-9876-903b6bca7b9d",
      "lastModifiedByType": "Application"
    },
    "tags": {
      "SapArtifact": "ApplicationServer"
    },
    "type": "microsoft.workloads/sapvirtualinstances/applicationinstances",
    "virtualMachineId": "/subscriptions/49d64d54-e966-4c46-a868-1999802b762c/resourceGroups/gargankit_cliTest_2/providers/Microsoft.Compute/virtualMachines/ag5appvm0"
  },
  {
    "errors": null,
    "gatewayPort": null,
    "health": "Unknown",
    "hostname": null,
    "icmHttpPort": null,
    "icmHttpsPort": null,
    "id": "/subscriptions/49d64d54-e966-4c46-a868-1999802b762c/resourceGroups/gargankit_cliTest_2/providers/Microsoft.Workloads/sapVirtualInstances/AG5/applicationInstances/app1",
    "instanceNo": null,
    "ipAddress": "",
    "kernelPatch": null,
    "kernelVersion": null,
    "location": "eastus2",
    "name": "app1",
    "provisioningState": "Succeeded",
    "resourceGroup": "gargankit_cliTest_2",
    "status": "Starting",
    "subnet": null,
    "systemData": {
      "createdAt": "2022-03-23T10:37:30.780273+00:00",
      "createdBy": "ea21b132-560f-4b0b-9876-903b6bca7b9d",
      "createdByType": "Application",
      "lastModifiedAt": "2022-03-23T10:40:41.250023+00:00",
      "lastModifiedBy": "ea21b132-560f-4b0b-9876-903b6bca7b9d",
      "lastModifiedByType": "Application"
    },
    "tags": {
      "SapArtifact": "ApplicationServer"
    },
    "type": "microsoft.workloads/sapvirtualinstances/applicationinstances",
    "virtualMachineId": "/subscriptions/49d64d54-e966-4c46-a868-1999802b762c/resourceGroups/gargankit_cliTest_2/providers/Microsoft.Compute/virtualMachines/ag5appvm1"
  }
]
(venv) PS D:\OneDrive - Microsoft\WaaS\Extension\23March\Testing>

Command az workloads sap-application-server-instance show
Example

az workloads sap-application-server-instance show --resource-group "gargankit_cliTest_2" --sap-virtual-instance-name "AG5" --application-instance-name "app1"

```
(venv) PS D:\OneDrive - Microsoft\WaaS\Extension\23March\Testing> az workloads sap-application-server-instance show --resource-group "gargankit_cliTest_2" --sap-virtual-instance-name "AG5"
--application-instance-name "app1"
Command group 'workloads' is experimental and under development. Reference and support levels: https://aka.ms/CLI_refstatus
{
  "errors": null,
  "gatewayPort": null,
  "health": "Unknown",
  "hostname": null,
  "icmHttpPort": null,
  "icmHttpsPort": null,
  "id": "/subscriptions/49d64d54-e966-4c46-a868-1999802b762c/resourceGroups/gargankit_cliTest_2/providers/Microsoft.Workloads/sapVirtualInstances/AG5/applicationInstances/app1",
  "instanceNo": null,
  "ipAddress": "",
  "kernelPatch": null,
  "kernelVersion": null,
  "location": "eastus2",
  "name": "app1",
  "provisioningState": "Succeeded",
  "resourceGroup": "gargankit_cliTest_2",
  "status": "Starting",
  "subnet": null,
  "systemData": {
    "createdAt": "2022-03-23T10:37:30.780273+00:00",
    "createdBy": "ea21b132-560f-4b0b-9876-903b6bca7b9d",
    "createdByType": "Application",
    "lastModifiedAt": "2022-03-23T10:40:41.250023+00:00",
    "lastModifiedBy": "ea21b132-560f-4b0b-9876-903b6bca7b9d",
    "lastModifiedByType": "Application"
  },
  "tags": {
    "SapArtifact": "ApplicationServer"
  },
  "type": "microsoft.workloads/sapvirtualinstances/applicationinstances",
  "virtualMachineId": "/subscriptions/49d64d54-e966-4c46-a868-1999802b762c/resourceGroups/gargankit_cliTest_2/providers/Microsoft.Compute/virtualMachines/ag5appvm1"
}
(venv) PS D:\OneDrive - Microsoft\WaaS\Extension\23March\Testing>
```

Command az workloads sap-application-server-instance create

Example

az workloads sap-application-server-instance create --resource-group "gargankit_cliTest_2" --sap-virtual-instance-name "AG5" --application-instance-name "app3" --location "eastus2"

OperationNotAllowed (Hence no payload)

```
(venv) PS D:\OneDrive - Microsoft\WaaS\Extension\23March\Testing> az workloads sap-application-server-instance create --resource-group "gargankit_cliTest_2" --sap-virtual-instance-name "AG5"  --application-instance-name "app3" --location "eastus2"
Command group 'workloads' is experimental and under development. Reference and support levels: https://aka.ms/CLI_refstatus
(OperationNotAllowed) This operation is not allowed.
Code: OperationNotAllowed
Message: This operation is not allowed.
(venv) PS D:\OneDrive - Microsoft\WaaS\Extension\23March\Testing>
```

Command az workloads sap-application-server-instance update

Example

az workloads sap-application-server-instance update --resource-group "gargankit_cliTest_2" --sap-virtual-instance-name "AG5" --application-instance-name "app1" --tags tag1=value1

```
(venv) PS D:\OneDrive - Microsoft\WaaS\Extension\23March\Testing> az workloads sap-application-server-instance update --resource-group "gargankit_cliTest_2" --sap-virtual-instance-name "AG5"  --application-instance-name "app1" --tags tag1=value1
Command group 'workloads' is experimental and under development. Reference and support levels: https://aka.ms/CLI_refstatus
{
  "errors": null,
  "gatewayPort": null,
  "health": "Unknown",
  "hostname": null,
  "icmHttpPort": null,
  "icmHttpsPort": null,
  "id": "/subscriptions/49d64d54-e966-4c46-a868-1999802b762c/resourceGroups/gargankit_cliTest_2/providers/Microsoft.Workloads/sapVirtualInstances/AG5/applicationInstances/app1",
  "instanceNo": null,
  "ipAddress": "",
  "kernelPatch": null,
  "kernelVersion": null,
  "location": "eastus2",
  "name": "app1",
  "provisioningState": "Succeeded",
  "resourceGroup": "gargankit_cliTest_2",
  "status": "Starting",
  "subnet": null,
  "systemData": {
    "createdAt": "2022-03-23T10:37:30.780273+00:00",
    "createdBy": "ea21b132-560f-4b0b-9876-903b6bca7b9d",
    "createdByType": "Application",
    "lastModifiedAt": "2022-03-23T10:55:48.625728+00:00",
    "lastModifiedBy": "gargankit@microsoft.com",
    "lastModifiedByType": "User"
  },
  "tags": {
    "tag1": "value1"
  },
  "type": "microsoft.workloads/sapvirtualinstances/applicationinstances",
  "virtualMachineId": "/subscriptions/49d64d54-e966-4c46-a868-1999802b762c/resourceGroups/gargankit_cliTest_2/providers/Microsoft.Compute/virtualMachines/ag5appvm1"
}
(venv) PS D:\OneDrive - Microsoft\WaaS\Extension\23March\Testing>
```

Command az workloads sap-application-server-instance delete

Example

az workloads sap-application-server-instance delete --resource-group "gargankit_cliTest_2" --sap-virtual-instance-name "AG5" --application-instance-name "app1"

(venv) PS D:\OneDrive - Microsoft\WaaS\Extension\23March\Testing> az workloads sap-application-server-instance delete --resource-group "gargankit_cliTest_2" --sap-virtual-instance-name "AG5" --application-instance-name "app1"
Command group 'workloads' is experimental and under development. Reference and support levels: https://aka.ms/CLI_refstatus
Are you sure you want to perform this operation? (y/n): y
(venv) PS D:\OneDrive - Microsoft\WaaS\Extension\23March\Testing> az workloads sap-application-server-instance list --resource-group "gargankit_cliTest_2" --sap-virtual-instance-name "AG5"

Command group 'workloads' is experimental and under development. Reference and support levels: https://aka.ms/CLI_refstatus
[
  {
    "errors": null,
    "gatewayPort": null,
    "health": "Unknown",
    "hostname": null,
    "icmHttpPort": null,
    "icmHttpsPort": null,
    "id": "/subscriptions/49d64d54-e966-4c46-a868-1999802b762c/resourceGroups/gargankit_cliTest_2/providers/Microsoft.Workloads/sapVirtualInstances/AG5/applicationInstances/app0",
    "instanceNo": null,
    "ipAddress": "",
    "kernelPatch": null,
    "kernelVersion": null,
    "location": "eastus2",
    "name": "app0",
    "provisioningState": "Succeeded",
    "resourceGroup": "gargankit_cliTest_2",
    "status": "Starting",
    "subnet": null,
    "systemData": {
      "createdAt": "2022-03-23T10:37:30.202170+00:00",
      "createdBy": "ea21b132-560f-4b0b-9876-903b6bca7b9d",
      "createdByType": "Application",
      "lastModifiedAt": "2022-03-23T10:40:41.125016+00:00",
      "lastModifiedBy": "ea21b132-560f-4b0b-9876-903b6bca7b9d",
      "lastModifiedByType": "Application"
    },
    "tags": {
      "SapArtifact": "ApplicationServer"
    },
    "type": "microsoft.workloads/sapvirtualinstances/applicationinstances",
    "virtualMachineId": "/subscriptions/49d64d54-e966-4c46-a868-1999802b762c/resourceGroups/gargankit_cliTest_2/providers/Microsoft.Compute/virtualMachines/ag5appvm0"
  }
]
(venv) PS D:\OneDrive - Microsoft\WaaS\Extension\23March\Testing>

Group: az workloads sap-database-instance
Command az workloads sap-database-instance list
Example

az workloads sap-database-instance list --resource-group "gargankit_cliTest_2" --sap-virtual-instance-name "AG5"

(venv) PS D:\OneDrive - Microsoft\WaaS\Extension\23March\Testing> az workloads sap-database-instance list --resource-group "gargankit_cliTest_2" --sap-virtual-instance-name "AG5"
Command group 'workloads' is experimental and under development. Reference and support levels: https://aka.ms/CLI_refstatus
[
  {
    "databaseSid": null,
    "databaseType": null,
    "errors": null,
    "id": "/subscriptions/49d64d54-e966-4c46-a868-1999802b762c/resourceGroups/gargankit_cliTest_2/providers/Microsoft.Workloads/sapVirtualInstances/AG5/databaseInstances/db0",
    "ipAddress": "",
    "location": "eastus2",
    "name": "db0",
    "provisioningState": "Succeeded",
    "resourceGroup": "gargankit_cliTest_2",
    "status": "Starting",
    "subnet": null,
    "systemData": {
      "createdAt": "2022-03-23T10:37:32.092786+00:00",
      "createdBy": "ea21b132-560f-4b0b-9876-903b6bca7b9d",
      "createdByType": "Application",
      "lastModifiedAt": "2022-03-23T10:40:41.453141+00:00",
      "lastModifiedBy": "ea21b132-560f-4b0b-9876-903b6bca7b9d",
      "lastModifiedByType": "Application"
    },
    "tags": {
      "SapArtifact": "DatabaseServer"
    },
    "type": "microsoft.workloads/sapvirtualinstances/databaseinstances",
    "vmDetails": [
      {
        "status": null,
        "virtualMachineId": "/subscriptions/49d64d54-e966-4c46-a868-1999802b762c/resourceGroups/gargankit_cliTest_2/providers/Microsoft.Compute/virtualMachines/ag5dbvm"
      }
    ]
  }
]
(venv) PS D:\OneDrive - Microsoft\WaaS\Extension\23March\Testing>

Command az workloads sap-database-instance show
Example

az workloads sap-database-instance show --resource-group "gargankit_cliTest_2" --sap-virtual-instance-name "AG5" --database-instance-name "db0"

(venv) PS D:\OneDrive - Microsoft\WaaS\Extension\23March\Testing> az workloads sap-database-instance show --resource-group "gargankit_cliTest_2" --sap-virtual-instance-name "AG5" --database-instance-name "db0"
Command group 'workloads' is experimental and under development. Reference and support levels: https://aka.ms/CLI_refstatus
{
  "databaseSid": null,
  "databaseType": null,
  "errors": null,
  "id": "/subscriptions/49d64d54-e966-4c46-a868-1999802b762c/resourceGroups/gargankit_cliTest_2/providers/Microsoft.Workloads/sapVirtualInstances/AG5/databaseInstances/db0",
  "ipAddress": "",
  "location": "eastus2",
  "name": "db0",
  "provisioningState": "Succeeded",
  "resourceGroup": "gargankit_cliTest_2",
  "status": "Starting",
  "subnet": null,
  "systemData": {
    "createdAt": "2022-03-23T10:37:32.092786+00:00",
    "createdBy": "ea21b132-560f-4b0b-9876-903b6bca7b9d",
    "createdByType": "Application",
    "lastModifiedAt": "2022-03-23T10:40:41.453141+00:00",
    "lastModifiedBy": "ea21b132-560f-4b0b-9876-903b6bca7b9d",
    "lastModifiedByType": "Application"
  },
  "tags": {
    "SapArtifact": "DatabaseServer"
  },
  "type": "microsoft.workloads/sapvirtualinstances/databaseinstances",
  "vmDetails": [
    {
      "status": null,
      "virtualMachineId": "/subscriptions/49d64d54-e966-4c46-a868-1999802b762c/resourceGroups/gargankit_cliTest_2/providers/Microsoft.Compute/virtualMachines/ag5dbvm"
    }
  ]
}
(venv) PS D:\OneDrive - Microsoft\WaaS\Extension\23March\Testing>

Command az workloads sap-database-instance create

Example

az workloads sap-database-instance create --resource-group "gargankit_cliTest_2" --sap-virtual-instance-name "AG5" --database-instance-name "db0" --location "eastus2"

OperationNotAllowed (Hence no payload)

(venv) PS D:\OneDrive - Microsoft\WaaS\Extension\23March\Testing> az workloads sap-database-instance create --resource-group "gargankit_cliTest_2" --sap-virtual-instance-name "AG5" --database-instance-name "db1" --location "eastus2"
Command group 'workloads' is experimental and under development. Reference and support levels: https://aka.ms/CLI_refstatus
(OperationNotAllowed) This operation is not allowed.
Code: OperationNotAllowed
Message: This operation is not allowed.
(venv) PS D:\OneDrive - Microsoft\WaaS\Extension\23March\Testing>

Command az workloads sap-database-instance update

Example

az workloads sap-database-instance update --resource-group "gargankit_cliTest_2" --sap-virtual-instance-name "AG5" --database-instance-name "db0" --tags key1=value1

(venv) PS D:\OneDrive - Microsoft\WaaS\Extension\23March\Testing> az workloads sap-database-instance update --resource-group "gargankit_cliTest_2" --sap-virtual-instance-name "AG5" --database-instance-name "db0" --tags key1=value1
Command group 'workloads' is experimental and under development. Reference and support levels: https://aka.ms/CLI_refstatus
{
  "databaseSid": null,
  "databaseType": null,
  "errors": null,
  "id": "/subscriptions/49d64d54-e966-4c46-a868-1999802b762c/resourceGroups/gargankit_cliTest_2/providers/Microsoft.Workloads/sapVirtualInstances/AG5/databaseInstances/db0",
  "ipAddress": "",
  "location": "eastus2",
  "name": "db0",
  "provisioningState": "Succeeded",
  "resourceGroup": "gargankit_cliTest_2",
  "status": null,
  "subnet": null,
  "systemData": {
    "createdAt": "2022-03-23T10:37:32.092786+00:00",
    "createdBy": "ea21b132-560f-4b0b-9876-903b6bca7b9d",
    "createdByType": "Application",
    "lastModifiedAt": "2022-03-23T11:01:00.747310+00:00",
    "lastModifiedBy": "gargankit@microsoft.com",
    "lastModifiedByType": "User"
  },
  "tags": {
    "key1": "value1"
  },
  "type": "microsoft.workloads/sapvirtualinstances/databaseinstances",
  "vmDetails": [
    {
      "status": null,
      "virtualMachineId": "/subscriptions/49d64d54-e966-4c46-a868-1999802b762c/resourceGroups/gargankit_cliTest_2/providers/Microsoft.Compute/virtualMachines/ag5dbvm"
    }
  ]
}
(venv) PS D:\OneDrive - Microsoft\WaaS\Extension\23March\Testing>

Command az workloads sap-database-instance delete

Example

az workloads sap-database-instance delete --resource-group "gargankit_cliTest_2" --sap-virtual-instance-name "AG5" --database-instance-name "db0"

(venv) PS D:\OneDrive - Microsoft\WaaS\Extension\23March\Testing> az workloads sap-database-instance delete --resource-group "gargankit_cliTest_2" --sap-virtual-instance-name "AG5" --database-instance-name "db0"
Command group 'workloads' is experimental and under development. Reference and support levels: https://aka.ms/CLI_refstatus
Are you sure you want to perform this operation? (y/n): y
(venv) PS D:\OneDrive - Microsoft\WaaS\Extension\23March\Testing> az workloads sap-database-instance list --resource-group "gargankit_cliTest_2" --sap-virtual-instance-name "AG5"
Command group 'workloads' is experimental and under development. Reference and support levels: https://aka.ms/CLI_refstatus
[]
(venv) PS D:\OneDrive - Microsoft\WaaS\Extension\23March\Testing>