This deployment guide shows you how to deploy and connect to a Google Compute Engine VM running SAP Business One.

For more information about planning your deployment, see the SAP Business One planning guide (/solutions/sap/docs/sap-business-one-planning-guide).

This solution uses a GCP install script to set up SAP Business One on GCP. The solution uses the following software:

- SAP HANA 1.0 SP12

- SAP Business One 9.2 PL08

A Google account is required to work with GCP.

1. Sign up for a Google account (https://accounts.google.com/SignUp) if you don't already have one.

2. Log in to the Google Cloud Console, and create a new project (https://console.cloud.google.com/project).

3. Enable your billing account (/resource-manager/docs/quickstart#create_a_billing_account).

4. Configure SSH keys so that you are able to use them to SSH into your Compute Engine instances. Use the `gcloud` command-line tool to create a new SSH key (/compute/docs/instances/adding-removing-ssh-keys#createsshkeys), or, if you already have an existing SSH key, use the tool to format your existing SSH keys (/compute/docs/instances/adding-removing-ssh-keys#sshkeyformat).

5. Use the `gcloud` command-line tool or Cloud Console to add the SSH keys (/compute/docs/instances/adding-removing-ssh-keys#project-wide) to your project metadata. This allows you to access any Compute Engine instance created within this project, except for instances that explicitly disable project-wide SSH keys.

For security purposes, create a new network. You can control who has access by adding firewall rules or by using another access control method.

If your project has a default VPC network, don't use it. Instead, create your own VPC network so that the only firewall rules in effect are those that you create explicitly.

During deployment, VM instances typically require access to the internet to download Google's monitoring agent. If you are using one of the SAP-certified Linux images that are available from Google Cloud, the VM instance also requires access to the internet in order to register the license and to access OS vendor repositories. A configuration with a NAT gateway and with VM network tags supports this access, even if the target VMs do not have external IPs.

To set up networking:

1. Go to Cloud Shell.

   [Go to Cloud Shell](https://console.cloud.google.com/?cloudshell=true) (https://console.cloud.google.com/?cloudshell=true)

2. To create a new network in the custom subnetworks mode, run:

   where `[YOUR_NETWORK_NAME]` is the name of the new network. The network name can contain only lowercase characters, digits, and the dash character (-).

   Specify `--subnet-mode custom` to avoid using the default auto mode, which automatically creates a subnet in each Compute Engine region. For more information, see Subnet creation mode (/vpc/docs/vpc#subnet-ranges).

3. Create a subnetwork, and specify the region and IP range:

   where:

   - `[YOUR_SUBNETWORK_NAME]` is the new subnetwork.

   - `[YOUR_NETWORK_NAME]` is the name of the network you created in the previous step.

   - `[REGION]` is the region where you want the subnetwork.

- **[YOUR_RANGE]** is the IP address range, <u>specified in CIDR format</u> (https://wikipedia.org/wiki/Classless_Inter-Domain_Routing), such as 10.1.0.0/24. If you plan to add more than one subnetwork, assign non-overlapping CIDR IP ranges for each subnetwork in the network. Note that each subnetwork and its internal IP ranges are mapped to a single region.

4. Optionally, repeat the previous step and add additional subnetworks.

If you intend to create one or more VMs that will not have public IP addresses, you must create a NAT gateway so that your VMs can access the Internet to download Google's monitoring agent.

If you intend to assign an external public IP address to your VM, you can skip this step.

tant: Do not remove the public IP addresses from your new VMs until after the installation of your SAP software is ete and validated.

To create a NAT gateway:

1. Create a VM to act as the NAT gateway in the subnet you just created:

   where:

   - **[YOUR_VM_NAME]** is the name of the VM you are creating that want to use for the NAT gateway.

   - **[YOUR_ZONE]** is the zone where you want the VM.

   - **[YOUR_IMAGE_FAMILY]** and **[YOUR_IMAGE_PROJECT]** specify the <u>image you want to use</u> (/compute/docs/images#os-compute-support) for the NAT gateway.

   - **[YOUR_MACHINE_TYPE]** is any supported machine type. If you expect high network traffic, choose a machine type with that has at least eight virtual CPUs.

- [YOUR_SUBNETWORK_NAME] is the name of the subnetwork where you want the VM.

- [YOUR_VM_TAG] is a tag that is applied to the VM you are creating. If you use this VM as a bastion host, this tag is used to apply the related firewall rule only to this VM.

2. Create a route that is tagged so that traffic passes through the NAT VM instead of the default Internet gateway:

   where:

   - [YOUR_ROUTE_NAME] is the name of the route you are creating.

   - [YOUR_NETWORK_NAME] is the network you created.

   - [YOUR_VM_NAME] is the VM you are using for your NAT gateway.

   - [YOUR_ZONE] is the zone where the VM is located.

   - [YOUR_TAG_NAME] is the tag on the route that directs traffic through the NAT VM.

3. If you also want to use the NAT gateway VM as a bastion host, run the following command. This command creates a firewall rule that allows inbound SSH access to this instance from the Internet:

   where:

   - [YOUR_NETWORK_NAME] is the network you created.

   - [YOUR_VM_TAG] is the tag you specified when you created the NAT gateway VM. This tag is used so this firewall rule applies only to the VM that hosts the NAT gateway, and not to all VMs in the network.

Download the SAP HANA and SAP Business One binaries.

1. Access the SAP installation page (https://launchpad.support.sap.com/#/softwarecenter).

   If your SAP Support Portal account does not allow access to the software and you believe that you should have access to the software, contact the SAP Global Support Customer Interaction Center (http://support.sap.com/contactus).

2. Download all applicable parts of the following software to your local machine:

   - SAP HANA Platf.Ed.1.0 SPS12

   - SAP Business One 9.2 PL08

3. Use the Cloud Console to create a Cloud Storage bucket (/storage/docs/cloud-console#_creatingbuckets) for storing the SAP HANA installation files. Note that the bucket name must be unique across GCP. During bucket creation, choose **Standard** in the **Default storage class** section, then choose **us-west1** in the **Location** section.

   ★ **Important:** For now, do not extract the downloaded SAP HANA software. Just stage the files in a Cloud Storage bucket as-is. Extraction and installation are covered later.

4. Configure bucket permissions. By default, as owner of the bucket, you have read-write access to the bucket. If you want, you can allow other members in your group or individual users to access your bucket, as shown here:
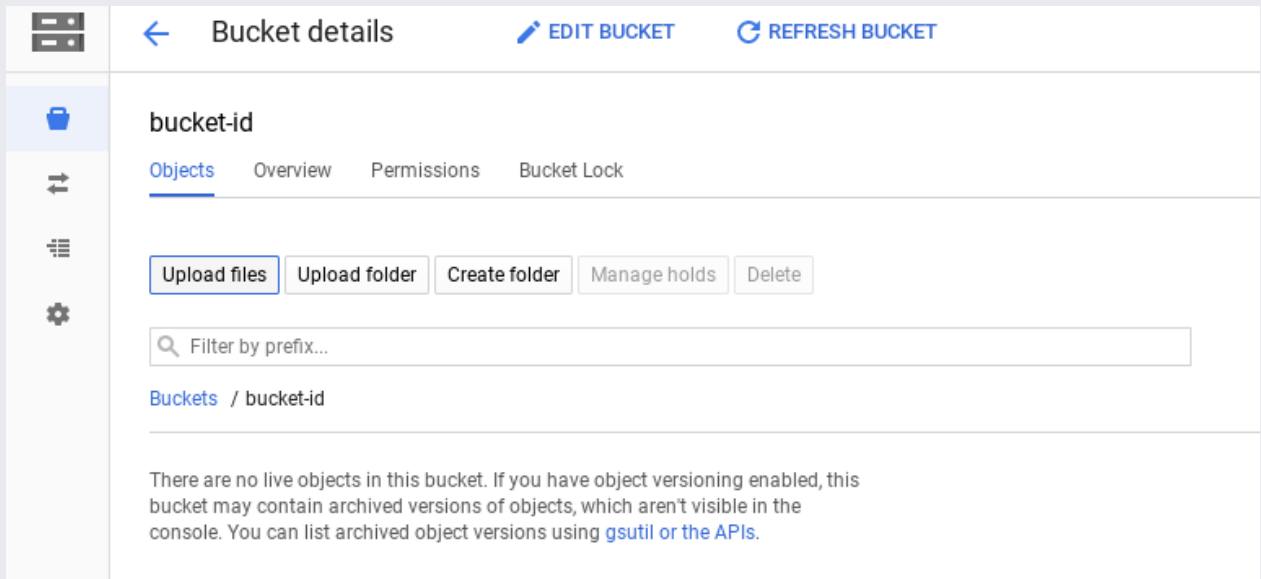
ghanabinaries permissions
These permissions only affect the bucket itself and do not apply to existing
objects in the bucket.

Share your bucket with this URL

https://pantheon.corp.google.com/storage/browser/ghanabinaries

ENTITY	NAME	ACCESS ⓘ	
Project ▾	owners-743476479958	Owner ▾	✕
Project ▾	editors-743476479958	Owner ▾	✕
Project ▾	viewers-743476479958	Reader ▾	✕
User ▾	enter ID, email, or domain...	Reader ▾	✕

＋ Add item

CANCEL   SAVE

5. In the Cloud Console, in the Cloud Storage bucket page, choose **Upload Files** to upload the
software to your bucket from your local machine:

← Bucket details   ✏ EDIT BUCKET   ⟳ REFRESH BUCKET

bucket-id

Objects   Overview   Permissions   Bucket Lock

Upload files   Upload folder   Create folder   Manage holds   Delete

🔍 Filter by prefix...

Buckets / bucket-id

There are no live objects in this bucket. If you have object versioning enabled, this
bucket may contain archived versions of objects, which aren't visible in the
console. You can list archived object versions using gsutil or the APIs.

6. Note the name of the bucket that you uploaded the binaries to. You will need to use it when
installing the SAP software.

Next, set up the two configuration files that are used by the install script.

1. Create a text file named `install.cfg` and add the following lines:

2. Create a text file named `b1.cfg` and add the following lines:

3. Upload these two files into the root of the Cloud Storage bucket you created in the previous steps.

4. Delete these two files from your local machine as a security precaution, because they contain password information.

The following instructions create an SAP-certified `n1-highmem-32` instance with all of the required disk configuration, and then install SAP HANA on the instance. Please refer to the pricing (/solutions/sap/docs/sap-hana-planning-guide#costs) section to understand the costs.

1. Navigate to Cloud Shell.

   OPEN THE CLOUD SHELL (https://console.cloud.google.com/?cloudshell=true)

2. Set the following environment variables. Replace `[YOUR_BUCKET]` with your bucket name, `[NETWORK]` with your network name, and `[SUBNETWORK]` with your subnetwork name.

3. Create the instance:

   The above command specifies an installation script that initiates after VM creation completes. The script downloads the SAP HANA and SAP Business One software from your bucket, and installs the software using the values specified in the configuration files. The script takes approximately 40 minutes to complete.

   Copy the internal and external IP addresses that appear when the script begins. You will need to use one of these addresses to connect to SAP Business One in the next step.

1. After approximately 40 minutes has passed, navigate to your SAP Business One site address. You can use a VPN to connect to the internal IP, or you can open ports on your instance to use the external IP. Access the following URL using the applicable IP address.
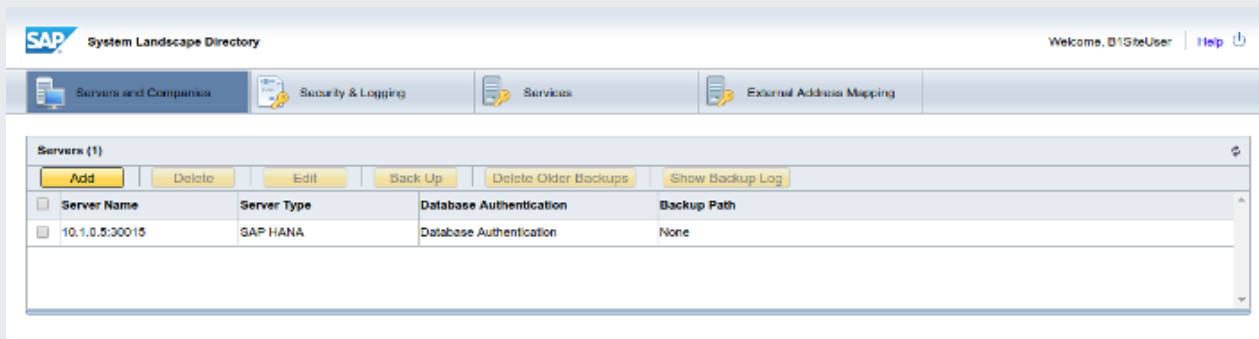
You should see the following screen:
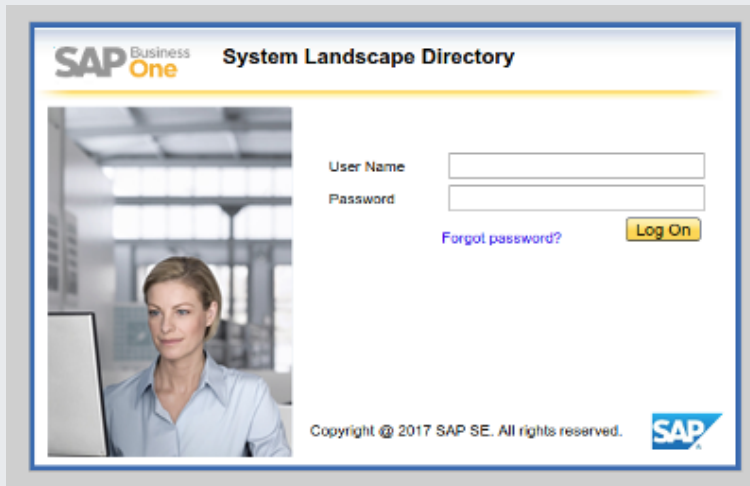
2. Login using the following credentials:

     a. Username: `B1SiteUser`, which is the value defined in `SITE_USER_ID` in `b1.cfg`.

     b. Password: The value defined in `SITE_USER_PASSWORD` in `b1.cfg`.

3. Ensure that the login works and takes you to the SAP Business One landing page.

- Learn more about planning this deployment in the SAP Business One Planning Guide (/solutions/sap/docs/sap-business-one-planning-guide).