SAP certifies a wide range of Compute Engine virtual machines for use with SAP HANA on Google Cloud. SAP also certifies Compute Engine VMs for SAP HANA dynamic tiering.

The following table shows the Compute Engine virtual machine (VM) types and operating systems that are certified by SAP for production use on Google Cloud. Except where noted in the table, SAP supports the VM types in both single-host (scale-up) and multi-host (scale-out) installations. Scale-out installations can include up to 15 worker hosts, for a total of 16 hosts.

Custom VM types are also certified by SAP, as long as the number of vCPUs is between 32 and 64, and the ratio of memory to vCPUs is 6.5 GB per vCPU.

The table also lists the certified versions of both the Red Hat Enterprise Linux (RHEL) and SUSE Linux Enterprise Server operating systems.

For more information about the supported operating systems, see Operating system support for SAP HANA on GCP (/solutions/sap/docs/sap-hana-os-support).

For more information about different VM types and their use cases, see machine types (/compute/docs/machine-types).

Some VM types might not be available in all Google Cloud regions. To confirm that a machine type is available in a region, see Available regions & zones (/compute/docs/regions-zones/#available).

SAP lists the certified VM instance types for SAP HANA in the SAP HANA Hardware Directory (https://www.sap.com/dmc/exp/2014-09-02-hana-hardware/enEN/iaas.html#categories=Google%20Cloud%20Platform).

The prefix in the following machine names changed from "**n1**" to "**m1**" to more clearly identify the machines as membe memory-optimized machine-type family:

n1-megamem-96 is now **m1-megamem-96**

n1-ultramem-40 is now **m1-ultramem-40**

n1-ultramem-80 is now **m1-ultramem-80**

n1-ultramem-160 is now **m1-ultramem-160**

achines themselves did not change and the former names are still supported as aliases for these machines.

Google Cloud instance type	vCPU	Memory (GB)	Operating system	CPU platform
N1 high-memory, general-purpose machine types				
n1-highmem-32	32	208	RHEL 7.3 for SAP RHEL 7.4 for SAP RHEL 7.6 for SAP SLES 11 SP4 SLES 12 SP1 SLES 12 SP1 for SAP SLES 12 SP2 SLES 12 SP2 for SAP SLES 12 SP4 SLES 12 SP4 for SAP SLES 15 SLES 15 for SAP SLES 15 SP1 SLES 15 SP1 for SAP	Intel Broadwell
n1-highmem-64	64	416	RHEL 7.3 for SAP RHEL 7.4 for SAP RHEL 7.6 for SAP SLES 11 SP4 SLES 12 SP1 SLES 12 SP1 for SAP SLES 12 SP2 SLES 12 SP2 for SAP SLES 12 SP4 SLES 12 SP4 for SAP SLES 15 SLES 15 for SAP SLES 15 SP1 SLES 15 SP1 for SAP	Intel Broadwell

Google Cloud instance type	vCPU	Memory (GB)	Operating system	CPU platform
n1-highmem-96	96	624	RHEL 7.3 for SAP RHEL 7.4 for SAP RHEL 7.6 for SAP SLES 11 SP4 SLES 12 SP1 SLES 12 SP1 for SAP SLES 12 SP2 SLES 12 SP2 for SAP SLES 12 SP4 SLES 12 SP4 for SAP SLES 15 SLES 15 for SAP SLES 15 SP1 SLES 15 SP1 for SAP	Intel Skylake
M1 memory-optimized machine types				
m1-megamem-96	96	1,433	RHEL 7.3 for SAP RHEL 7.4 for SAP RHEL 7.6 for SAP SLES 11 SP4 SLES 12 SP1 SLES 12 SP1 for SAP SLES 12 SP2 SLES 12 SP2 for SAP SLES 12 SP4 SLES 12 SP4 for SAP SLES 15 SLES 15 for SAP SLES 15 SP1 SLES 15 SP1 for SAP	Intel Skylake
m1-ultramem-40 (Scale up only, OLTP workloads only)	40	Up to 961	RHEL 7.4 for SAP RHEL 7.6 for SAP SLES 12 SP2 SLES 12 SP2 for SAP SLES 12 SP3 SLES 12 SP3 for SAP SLES 12 SP4 SLES 12 SP4 for SAP SLES 15 SLES 15 for SAP SLES 15 SP1 SLES 15 SP1 for SAP	Intel Broadwell

Google Cloud instance type	vCPU	Memory (GB)	Operating system	CPU platform
m1-ultramem-80 (Scale up only, OLTP workloads only)	80	Up to 1,922	RHEL 7.4 for SAP RHEL 7.6 for SAP SLES 12 SP2 SLES 12 SP2 for SAP SLES 12 SP3 SLES 12 SP3 for SAP SLES 12 SP4 SLES 12 SP4 for SAP SLES 15 SLES 15 for SAP SLES 15 SP1 SLES 15 SP1 for SAP	Intel Broadwell
m1-ultramem-160	160	Up to 3,844	RHEL 7.4 for SAP RHEL 7.6 for SAP SLES 12 SP1 SLES 12 SP1 for SAP SLES 12 SP2 SLES 12 SP2 for SAP SLES 12 SP3 SLES 12 SP3 for SAP SLES 12 SP4 SLES 12 SP4 for SAP SLES 15 SLES 15 for SAP SLES 15 SP1 SLES 15 SP1 for SAP	Intel Broadwell
M2 memory-optimized machine types				
m2-ultramem-208 (Scale up only, OLTP workloads only)	208	Up to 5,888	RHEL 7.6 for SAP SLES 12 SP3 SLES 12 SP3 for SAP SLES 12 SP4 SLES 12 SP4 for SAP SLES 15 SLES 15 for SAP SLES 15 SP1 SLES 15 SP1 for SAP	Intel Cascade Lake

Google Cloud instance type	vCPU	Memory (GB)	Operating system	CPU platform
m2-ultramem-416 (Scale up only, OLTP workloads only)	416	Up to 11,776	RHEL 7.6 for SAP SLES 12 SP3 SLES 12 SP3 for SAP SLES 12 SP4 SLES 12 SP4 for SAP SLES 15 SLES 15 for SAP SLES 15 SP1 SLES 15 SP1 for SAP	Intel Cascade Lake
Custom general-purpose machines				
Custom	32-64	6.5 GB for each vCPU	RHEL 7.4 for SAP RHEL 7.6 for SAP SLES 12 SP1 SLES 12 SP1 for SAP SLES 12 SP2 SLES 12 SP2 for SAP SLES 12 SP3 SLES 12 SP3 for SAP SLES 12 SP4 SLES 12 SP4 for SAP SLES 15 SLES 15 for SAP SLES 15 SP1 SLES 15 SP1 for SAP	Intel Broadwell

If the instance types that are available from Compute Engine don't meet the memory requirements of your SAP HANA system, additional options are available through partners that provide managed services. To find a partner that offers managed services for SAP HANA, contact sales (https://cloud.google.com/contact/?form=SAP).

On Google Cloud, SAP HANA dynamic tiering must be installed on a dedicated virtual machine (VM). The following table shows the Compute Engine virtual machines that are certified by SAP for SAP HANA dynamic tiering on Google Cloud.

Warm store capacity	Production certified VM shapes

Warm store capacity	Production certified VM shapes
512 GB	n1-highmem-8
1,300 GB	n1-highmem-16
5,000 GB	n1-highmem-32
10,000 GB	n1-megamem-96
	Custom configurations