[Course Overview](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live)

[Course Overview](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live)

[Hi! My name is Vitthal Srinivasan, and I'd](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=0) [like to welcome you to this course on](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=7.448) [Leveraging Fully Managed Redis Datastores](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=9.108" \t "psplayer) [Using Google Cloud Memorystore. A little](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=11.947) [bit about myself. I have master's degrees](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=15.397200000000002) [in Financial Math and Electrical](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=17.372142857142858) [Engineering from Stanford University and](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=18.6418) [have previously worked in companies such](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=20.473666666666666) [as Google in Singapore and Credit Suisse](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=22.658714285714286) [in New York. I am now co-founder at](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=25.172800000000002) [Loonycorn, a studio for high-quality video](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=28.049374999999994) [content based in Bangalore, India. Due to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=30.229499999999998) [its in-memory nature, Memorystore features](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=33.7774) [some of the lowest latencies on the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=35.510666666666665) [platform down to the level of](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=37.870875) [sub-milliseconds. This managed Redis](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=40.202) [service is hosted on Google's highly](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=42.614) [scalable infrastructure, which means that](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=44.38) [it can support instances of up to 300 GB](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=46.768) [and network throughput of 12 gbps.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=49.575) [Memorystore offers an easy migration path](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=52.823) [for Redis users. That's a technology that](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=55.098) [is fast gaining popularity, especially for](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=57.418) [use from within Docker containers running](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=60.041) [on Kubernetes clusters. This course covers](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=62.21) [all of these aspects of working with](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=65.538) [Memorystore and explains how to get the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=67.094) [best out of this powerful managed database](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=69.258) [service. First, you will understand the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=72.68537500000002) [suite of storage products that are](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=74.20785714285711) [available on the GCP and know exactly](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=75.75985714285714) [where Memorystore fits in. You will be](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=78.73249999999999) [introduced to the capabilities of Redis](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=81.55342857142857) [for caching data, for transactions, as a](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=83.3232) [publisher/subscriber message delivery](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=86.51939999999998) [system, and you will also understand the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=87.68542857142856) [LRU eviction policies that Memorystore](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=90.19533333333332) [follows. Next, you will implement](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=92.3636) [Memorystore integrations with applications](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=95.054) [hosted on Compute Engine VM instances, App](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=97.07233333333333) [Engine, and the Google Kubernetes Engine](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=100.331) [clusters. These are the current compute](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=103.42433333333332) [options on the GCP which support working](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=105.39114285714285)[with managed Redis. Finally, you'll](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=108.44087499999998) [understand how you can configure](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=110.49199999999999) [Memorystore for high-availability](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=112.3014) [configurations. Memorystore offers two](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=114.66360000000002)[Redis tiers, basic and standard. Instances](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=116.75000000000001) [belong to one of these two tiers. Basic](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=119.44066666666664) [tier instances do not support cross-zone](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=122.39833333333333) [replication and failover, while standard](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=124.514) [tier applications are equipped with both](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=126.94000000000001) [these features. In addition, the standard](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=129.38920000000005) [tier offers far lower downtime during](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=131.60599999999997) [scaling. You'll also see how you can](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=134.42149999999998) [monitor Redis instances using Stackdriver.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=136.45924999999997) [When you're done with this course, you'll](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=139.732) [have a good understanding of how you can](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=140.924875) [use Memorystore to cache your data on the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=142.647125) [cloud and know how you can integrate](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=145.199) [managed Redis with your applications](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=147.572) [running on various compute options on the GCP.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=9424a4e0-1f2e-460f-991b-420ad8b48b83&clip=0&mode=live&start=149.708)

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This](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=0&mode=live&start=6.394) [module starts with an introduction to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=0&mode=live&start=8.382) [Redis. You may or may not be aware that](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=0&mode=live&start=11.707333333333333) [Redis is an in-memory key-value store.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=0&mode=live&start=13.812399999999995) [Well, technically Redis is just a little](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=0&mode=live&start=17.246) [bit more than a key-value store, but](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=0&mode=live&start=18.967) [that's really its most popular use case.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=0&mode=live&start=20.980374999999988) [And Redis is indeed extremely fast and](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=0&mode=live&start=24.329) [extremely popular. It often comes in at](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=0&mode=live&start=26.849) [the top of rankings of key-value stores](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=0&mode=live&start=29.26) [and NoSQL database technologies, and](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=0&mode=live&start=31.815874999999995) [Memorystore is now the Google Cloud](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=0&mode=live&start=34.904) [Platform's managed Redis service.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=0&mode=live&start=37.424)[Memorystore offers two tiers, basic and](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=0&mode=live&start=40.207) [standard, and using the standard tier,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=0&mode=live&start=42.617) [it's possible to get a combination of high](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=0&mode=live&start=45.768) [availability and on-the-fly scaling. Now](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=0&mode=live&start=48.218) [remember that Redis is an open-source](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=0&mode=live&start=52.096375) [technology. Memorystore is fully compliant](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=0&mode=live&start=54.288625) [to the Redis protocol, but its](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=0&mode=live&start=55.937999999999995) [implementation details differ quite a bit.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=0&mode=live&start=58.5036) [For instance, it does not offer](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=0&mode=live&start=60.7415) [persistence, and it does not rely on Sentinel for high availability.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=0&mode=live&start=62.52875)

[Prerequisites and Course Outline](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=1&mode=live)

[Before we jump into the concepts and](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=1&mode=live&start=1.991) [practice of Memorystore, let's spend a](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=1&mode=live&start=3.803) [moment discussing the prerequisites and an](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=1&mode=live&start=5.783) [outline of this course. Redis is a simple](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=1&mode=live&start=8.099) [technology, and this is a simple course,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=1&mode=live&start=10.960444444444446) [so you should not require very heavy prior](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=1&mode=live&start=12.907857142857141) [exposure to cloud computing. However, it](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=1&mode=live&start=16.245)[would certainly help if you have had some](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=1&mode=live&start=18.84857142857143) [exposure to the Google Cloud Platform.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=1&mode=live&start=21.201666666666668) [Just in case you don't, here are a couple](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=1&mode=live&start=23.535) [of courses from the Pluralsight catalog](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=1&mode=live&start=25.419) [which give you that exposure, Architecting](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=1&mode=live&start=27.906) [Scalable Web Applications Using Google App](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=1&mode=live&start=30.108) [Engine and Choosing and Implementing](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=1&mode=live&start=33.218142857142865) [Google Cloud Compute Solutions. Let's](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=1&mode=live&start=35.6484) [quickly outline the material coming up](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=1&mode=live&start=39.19866666666667) [ahead. We start with a look at the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=1&mode=live&start=41.04366666666667) [concepts behind both Redis and Memorystore](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=1&mode=live&start=42.977) [and the nitty-gritty involved in creating](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=1&mode=live&start=46.425) [and managing instances. Then we move on to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=1&mode=live&start=48.719) [the interplay between Memorystore and](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=1&mode=live&start=51.92262500000001) [other GCP compute solutions such as](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=1&mode=live&start=53.736) [Kubernetes, App Engine, and, of course,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=1&mode=live&start=56.65933333333333) [just Compute Engine. And we round out the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=1&mode=live&start=59.2752)[course with a detailed look at the exact](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=1&mode=live&start=61.43433333333334) [mechanics of scaling and failover in](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=1&mode=live&start=63.89299999999999) [Redis. A quick word about all of the demos](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=1&mode=live&start=66.298) [in this course. They are based on](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=1&mode=live&start=69.4985) [scenarios located in a hypothetical](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=1&mode=live&start=71.62400000000002) [e-commerce retailer called SpikeySales.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=1&mode=live&start=73.66239999999999) [SpikeySales specializes in flash sales of](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=1&mode=live&start=76.936) [trending products, deals-of-the-day types](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=1&mode=live&start=79.896) [of promotions, and these are given to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=1&mode=live&start=82.647) [spikes in user traffic. Cloud computing is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=1&mode=live&start=85.096) [a natural fit for this kind of business](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=1&mode=live&start=88.699) [model because it allows SpikeySales to pay](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=1&mode=live&start=91.06242857142855) [as it goes. It does not have to grow](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=1&mode=live&start=93.88700000000001) [provision capacity, which stays idle](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=1&mode=live&start=96.68900000000002) [during off-sale periods. In this context,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=1&mode=live&start=99.42857142857144)[Redis and Memorystore both have a really](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=1&mode=live&start=102.36000000000001) [important role to play. It also makes](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=1&mode=live&start=104.91185714285714) [sense for SpikeySales because during their](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=1&mode=live&start=107.41257142857144) [peak periods, they require really fast web](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=1&mode=live&start=109.48933333333333) [serving, and Redis provides exactly that.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=1&mode=live&start=112.51971428571429) [Redis offers millisecond-level latencies](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=1&mode=live&start=115.6095) [on lookups, and Memorystore provides an](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=1&mode=live&start=118.168)[easy migration path into the GCP, as well as high availability and ease of scaling.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=1&mode=live&start=121.31633333333333)

[Introducing Redis](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live)

[In this video, we'll spend some time](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=2.204) [talking about and understanding Redis.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=3.537) [Redis is a very popular, in-memory,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=6.648) [key-value NoSQL database. We'll come back](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=9.272) [to every part of this definition in a](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=13.284250000000002) [moment, but before that, let's move on to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=15.215428571428571) [Cloud Memorystore. This is the Google](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=18.366666666666664) [managed service for Redis, and it offers](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=20.489714285714278) [scaling, high availability, and a](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=23.505999999999993) [convenient migration path if you're using](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=25.6796) [Redis on-premises. Let's now come back to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=28.98457142857142) [Redis and understand the different aspects](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=31.439499999999995) [of its definition. The first thing we're](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=33.650000000000006) [paying attention to is the adjective](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=36.08771428571428) [popular. There's a good reason why the GCP](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=39.06275000000001) [has gone ahead and launched a managed](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=41.28311111111112) [Redis service and not, say, a managed](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=43.54671428571429) [MongoDB or CouchDB service. Redis is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=46.775777777777776) [consistently ranked as one of the most](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=49.236) [popular NoSQL technologies out there. For](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=51.1975) [instance, in the db-engines rankings, it's](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=54.4545) [the most popular key-value store two years](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=57.03171428571429) [running. And in case you're wondering](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=59.58866666666667) [what's at number two, the answer is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=61.32) [Amazon's DynamoDB. And a big driver for](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=64.14166666666667) [the increase in Redis's popularity](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=66.71337500000003) [recently has been how easy it is to use](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=68.19900000000001) [Redis from within Docker containers. Redis](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=72.12399999999997) [ranks only after Nginx as the most](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=74.600375) [commonly used technology accessed from](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=76.99) [within Docker, so as Docker and Kubernetes](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=79.224) [explode in popularity, Redis is increasing](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=82.064) [along with them. Next, let's turn to the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=85.2) [in-memory nature of Redis. So typically](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=88.624) [Redis is going to hold the entire dataset](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=91.67875) [in memory. It is also possible to turn on](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=94.10050000000001) [Redis persistence. Open-source Redis](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=98.2571111111111) [offers two different mechanisms in which](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=99.8944) [the contents of the dataset can be written](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=102.05885714285715) [to file at periodic intervals. It's worth](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=105.14622222222224) [mentioning here that an important](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=107.83166666666666) [limitation of Google Cloud Memorystore is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=109.2446) [that it currently does not support](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=111.59328571428571) [persistence at all. Now this is much less](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=113.87275) [of a dealbreaker than you might imagine,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=116.53733333333332) [and that's because we are running Redis on](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=118.43757142857142) [the cloud in Memorystore, and Memorystore](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=121.08671428571431)[offers high availability and replication,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=123.4616) [which make persistence somewhat](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=126.06799999999998) [unnecessary. Another defining](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=129.31199999999998) [characteristic of Redis is its use as a](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=131.15833333333336) [key-value store. So unlike relational](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=134.5223333333333) [databases or document databases or any](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=136.7065) [other more complex kind of database, in](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=139.06912499999999) [Redis we always associate keys with](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=141.80485714285714) [values. Now technically Redis is more than](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=144.66542857142858) [just a plain old key-value store because](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=147.73942857142856) [the term key-value store is often used to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=150.72128571428573) [refer to values which can only be strings.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=153.4568) [So Redis is actually a data structure](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=156.688) [server, and the values could be data](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=158.986) [structures such as lists, sets, and so on.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=161.286)[However for all intents and purposes,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=164.4) [Redis is considered a key-value store.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=166.637) [This is a fine technical difference which](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=168.937) [not a lot of folks care about. Redis is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=170.43) [most definitely a NoSQL technology. It has](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=174.77285714285713) [its own simple commands. There are about](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=178.094) [55 right now. These include commands such](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=180.361) [as GET, SET, DEL, and so on, and you can](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=182.85428571428568) [find an exhaustive list on the Redis](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=185.56822222222223) [documentation URL. Redis definitely has](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=189.00485714285708) [additional functionality beyond being a](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=191.44799999999998) [key-value store including transactions,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=193.80280000000005) [support for a publisher/subscriber model.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=195.863) [Note that this has nothing to do with](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=199.316) [Google Pub/Sub. It also offers scripting](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=201.006) [in a language known as Lua. This has an](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=204.034) [interpreter built in to Redis. We can](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=207.42887499999998) [specify keys which have a limited time to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=209.394) [live, and Redis will eliminate them once](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=211.60399999999998) [they have expired. It's also possible to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=214.34300000000002) [use Redis as an LRU or least recently used](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=217.17355555555554) [cache. And, finally, even in open-source](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=221.45639999999995) [mode, Redis has automatic failover. As we](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=224.09016666666668) [shall see, the open-source version of](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=227.712) [automatic failover is quite different from](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=229.428) [the Cloud Memorystore version, and the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=231.24) [Cloud Memorystore version is in many ways](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=233.651) [much more robust. These features of Redis](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=235.741) [are actually quite important to getting](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=238.241) [the most out of it, so let's quickly go](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=239.8352857142858) [ahead and discuss them. Let's start by](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=242.24322222222224) [talking about transactions in Redis. The](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=244.84150000000002) [mechanics of these transactions are pretty](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=246.716) [simple. You use the MULTI command to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=249.46400000000003) [signal the start of a transaction. All](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=251.68275000000003) [commands which follow are then queued.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=254.34014285714284) [They are not actually executed until we](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=256.573) [issue an EXEC command. That EXEC command](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=258.488) [will trigger the execution of all of the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=261.50399999999996) [queued commands. In the interim, if we](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=263.88400000000007) [wish to abort the transaction, we'll type](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=265.6513333333332) [in a DISCARD command, which will simply](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=267.7815) [abandon all of the contents of the queue.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=270.30557142857145) [Now these mechanics are simple enough, but](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=273.53) [you will be right to wonder whether](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=275.50262499999997) [transactions can really guarantee the ACID](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=277.152) [properties even in a purely in-memory](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=279.616) [database. And you are right that your](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=283.4628571428573) [ability is not strictly guaranteed. Redis](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=285.6186666666667) [transactions are safe against connection](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=288.74825) [drops, so let's say a client connection](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=291.24185714285704) [drops before the EXEC command is issued.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=293.6601428571428) [All of the queue contents are lost, and so](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=296.159) [nothing is going to be executed. However,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=298.459) [let's say that the Redis server crashes or](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=300.90614285714287) [the administrator does a hard restart. In](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=303.473) [such a situation, atomicity is actually](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=306.7532857142857) [not guaranteed. It is possible for some](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=308.975) [but not all of the queued commands to be](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=311.143) [executed. If atomicity is violated, Redis](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=314.98689999999993) [is smart enough to detect this on restart,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=317.28614285714275)[and it will exit with an error. So at the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=319.9459999999999) [very least, you will be notified that the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=322.96066666666667) [transaction was only partially executed](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=325.0253333333333) [and that your system's integrity might be](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=327.0896666666667) [compromised. Redis also has a feature](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=330.57666666666665) [called Pub/Sub. This is a useful feature,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=333.30171428571435) [but it should not be confused with the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=335.27911111111104) [Google Pub/Sub technology. Pub/Sub on](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=338.1839999999999) [Redis also refers to the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=340.264) [publisher/subscriber model. Redis has](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=341.744) [commands SUBSCRIBE, UNSUBSCRIBE, and](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=344.90680000000003)[PUBLISH. So messages are organized into](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=346.8378333333333) [channels. If you are familiar with Google](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=349.42442857142856) [Cloud Pub/Sub, channels are roughly](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=351.90616666666665) [analogous to topics. Publishers then go](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=354.342) [ahead and publish messages onto these](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=357.293) [channels. Subscribers subscribe to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=359.73585714285707) [channels and, therefore, receive the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=361.43960000000004) [messages. As with any Pub/Sub](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=364.11150000000004) [implementation, this decouples the senders](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=366.4579999999999) [from the receivers. One important note is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=368.66714285714284) [that the subscribers do not know which](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=371.35014285714277)[publisher is sending a particular message.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=373.51) [Redis's implementation of Pub/Sub is not](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=377.279) [reliable. This means that, let's say, a](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=379.7458571428572) [subscriber client goes down, all of the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=381.5267142857144) [messages sent while the client was down](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=384.1099999999999) [are going to be lost. Again, I'd like to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=386.3999999999999) [emphasize that Redis Pub/Sub is completely](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=389.0250000000001)[unrelated to Google Cloud Pub/Sub. If](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=391.18899999999996) [you'd like to implement reliable messaging](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=393.7117142857143) [on Redis, there's no great way to do so on](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=396.257) [Cloud Memorystore. However, in very recent](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=400.37100000000004) [versions of Redis, version 5.2 for](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=402.7338571428571) [instance, there is something known as](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=405.224) [Redis streams. These are a way in which to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=407.7954) [get reliable messaging. Redis streams are](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=411.4778) [not supported on version 3.2, which is what's currently run by Cloud Memorystore.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=2&mode=live&start=413.54214285714284)

[Features of Redis](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live)

[Let's keep going with our run-through of](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=2.881) [some of the cool features present in](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=4.531) [Redis. After transactions and Pub/Sub](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=7.487624999999998) [comes scripting. Redis offers a simple way](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=10.096666666666668) [to execute commands in a language called](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=12.707857142857144) [Lua. Lua is a lightweight interpreted](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=15.554166666666667) [language, and an interpreter is built in](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=18.460333333333335) [to Redis. So we can pass in arbitrary Lua](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=21.256750000000007) [syntax. This has to be specified using the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=24.892374999999987) [EVAL or the EVALSHA commands, and then the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=27.083888888888886) [Lua programs if we pass in as arguments](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=30.176428571428577) [are going to be executed in the context of](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=32.90474999999999) [the Redis server. The EVAL and EVALSHA](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=35.408999999999985) [commands also take in arguments. These](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=39.081)[arguments are going to be key names in the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=41.6025) [Redis context, and the key names will be](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=44.148) [translated into values, which will be made](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=46.84871428571428) [available to our Lua program. Redis also](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=49.71942857142857) [allows us to specify keys with a limited](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=52.705) [lifespan. These are known as limited](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=56.073888888888874) [time-to-live keys. TTL is an acronym for](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=58.831428571428575) [time to live. Effectively, we set a](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=61.429125) [timeout on a key. Redis will monitor that](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=63.59199999999999) [timeout and expire the key-value pair when](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=66.197) [the timeout expires. Such keys are said to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=69.277) [be volatile. Many operations performed on](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=72.49200000000002) [volatile keys are going to result in the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=74.86466666666666) [key timeout being transferred. This](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=77.3955) [includes rename operations. It is possible](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=79.91050000000001) [for us to convert a volatile key into a](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=82.54300000000002) [regular key using the PERSIST command. It](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=85.11366666666667) [is also possible for us to clear the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=87.78666666666666)[timeout when we use commands such as DEL,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=89.8) [SET, and other commands which actually](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=92.531) [replace the value associated with the key.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=94.772) [Another handy feature is the ability to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=98.055) [turn on LRU eviction. LRU is an acronym](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=101.18822222222222) [for least recently used. LRU eviction can](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=105.1245) [be turned on in order to automatically](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=108.035)[evict old data once our instances run out](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=110.19366666666666) [of memory. So you've got to use this with](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=113.8456) [the maxmemory directive. And as we shall](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=116.16587499999996) [see, this is one of just two Redis](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=118.45471428571425) [configuration properties which we can set](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=121.01099999999998) [in Cloud Memorystore. In general,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=123.76599999999999) [Memorystore sets default values for Redis](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=126.07266666666668)[configuration properties, and we are not](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=128.59833333333333) [allowed to change those. There are two](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=131.00900000000001) [exceptions to this, and maxmemory is one](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=133.137) [of them. LRU is just one possible eviction](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=135.9063333333333) [algorithm. Let's understand very quickly](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=139.87557142857145) [how eviction works in Redis. Let's say a](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=141.5293333333333) [client runs a new command, and this](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=143.973) [results in more data being added to our](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=146.18799999999996) [instance. Redis will check the memory](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=149.30980000000005) [usage on the instance, and if it's greater](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=151.18399999999994) [than the maxmemory limit, Redis is going](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=153.54157142857147) [to have to decide which keys have to be](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=155.85499999999996) [evicted. This decision is going to happen](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=159.4044285714286) [according to the eviction policy. When we](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=161.40900000000005) [discuss Cloud Memorystore, we will see](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=164.36814285714283) [what the possible values for the eviction](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=166.08885714285714) [policy are and when they make sense to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=168.0077142857143) [use. Let's round out this conversation](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=170.83666666666664)[with a quick look at automatic failover.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=172.4495714285714) [Open-source Redis has an automatic](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=175.819) [failover feature which relies on a program](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=177.7415) [known as Redis Sentinel, so we need to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=180.15399999999997) [explicitly run our Redis server in](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=182.98999999999992) [Sentinel mode and also run an additional](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=185.45562499999994) [Sentinel program. Sentinel will monitor](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=188.777) [our server and initiate failover if things](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=190.91) [go wrong. Now one really important note,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=194.02533333333338) [automatic failover is also present on](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=197.172) [Cloud Memorystore, but Memorystore does](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=199.24028571428565) [not use Sentinel. Instead, it makes use of](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=201.90385714285716) [its own cross-zone replication mechanism](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=205.17174999999995) [in order to provide more robust failover.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=207.06033333333335) [This is a pretty cool feature of Cloud Memorystore relative to open-source Redis.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=3&mode=live&start=211.142)

[Cloud Memorystore for Redis](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live)

[We've now understood a lot of the features](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=2.284) [of Redis. Let's now turn our attention to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=3.955) [Cloud Memorystore. As we've already](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=6.549) [discussed, Cloud Memorystore is a Google](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=8.651) [managed service for Redis, which offers](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=11.14) [high availability, a smooth migration](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=13.723) [path, and ease of scaling. Memorystore](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=16.584666666666667)[brings with it many of the common](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=19.409) [advantages of cloud-based managed](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=21.360666666666667) [services. The first is ease of deployment.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=23.53366666666667) [It's trivial for us to deploy a single](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=26.443) [instance. The second is high-availability](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=29.42344444444443) [because managed Redis has replication](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=31.636000000000003) [across zones, that's available in the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=34.35599999999999) [standard tier, and we also have fast](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=36.82266666666667) [automatic failover. Finally, security is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=39.731) [an important consideration for Redis users](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=41.846799999999995) [particularly because it offers telnet as a](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=44.5376) [way to connect. The Google Memorystore](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=47.50033333333334) [service makes sure through a combination](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=49.772999999999996) [of firewall rules and other Google](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=51.79842857142858) [hardening that Redis is actually pretty](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=54.03066666666666) [secure. Memorystore also makes it really](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=57.42) [easy to scale on an as-needed basis. We](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=59.82928571428573) [can scale our Redis instances to a maximum](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=63.355625) [of 300 GB, and GCP will also provide](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=65.2995) [commensurate network throughput up to 12](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=68.8918) [Gbps. There are important differences in](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=72.17099999999999) [the way in which standard and basic tier](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=74.66585714285715) [instances scale. We'll discuss those in](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=77.71499999999999) [more detail. And, finally, when we use](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=80.02166666666668) [Memorystore, we get all of the benefits of](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=82.32266666666666) [the Stackdriver suite such as monitoring,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=83.99975) [logging, and so on. A couple of important](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=86.907) [notes. Billing, which happens for Redis](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=90.71855555555551) [instances, is on the basis of provisioned](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=92.92500000000001)[capacity. This is billing by the hour.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=96.18528571428568) [Also the version of Redis that is provided](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=99.191) [by Memorystore is currently 3.2 .11. This](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=101.083) [is maintained by the GCP. This is another](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=105.80433333333333) [advantage of using a cloud managed](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=109.092625) [service. Applying critical patches is not](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=111.09179999999999) [our responsibility. As we've already](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=114.355) [mentioned on a couple of occasions, Redis](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=116.070125) [instances in Memorystore come in two](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=118.0912) [service tiers, basic and standard.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=121.198375) [Standard tier instances offer](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=123.704) [high-availability using cross-zone](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=125.413) [replication. What's more, they can be](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=128.27275) [scaled up and down without significant](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=130.5093333333333) [downtime. On the other hand, basic tier](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=132.76933333333335) [instances will experience downtime if they](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=135.0634285714285) [are scaled, and their cache is going to be](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=137.34633333333332) [flushed. We will come back to these](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=140.76033333333334) [differences in much more detail. But for](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=142.28449999999998) [now, let's just summarize them. The basic](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=143.91949999999994) [tier does not have any kind of](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=146.11100000000005) [replication, so the data resides in a](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=148.287) [single zone. Standard tier instances have](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=150.74200000000002) [masters and replicas, so there's a pair.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=153.03933333333336) [The pair exists in different zones. Basic](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=155.908) [instances do not have any failover, so if](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=159.53185714285715) [there is a zone or an instance outage, our](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=162.00233333333335) [application is going to go down. Standard](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=164.33050000000003) [tier instances do, indeed, have failover](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=167.3054) [replicas, and in this way they implement](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=169.3447142857143) [high-availability. Both basic and standard](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=173.031) [tier instances can be scaled. However,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=175.23528571428577) [basic tier instances do not perform very](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=177.38299999999998) [well on scaling because there is a](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=179.9375) [blocking period when read and write calls](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=182.129125) [do not go through. Also, when the new](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=184.29366666666664) [scaled up version comes back online, it's](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=186.89900000000003)[cache has been completely flushed.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=189.36725) [Standard tier instances, on the other](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=191.681) [hand, bring up the larger instance before](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=193.19814285714293) [switching over. As a result, they have far](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=196.009) [smaller downtime. Because of these](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=198.201) [differences, basic tier instances tend to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=201.222) [be used for pure caching use cases. If](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=203.607) [you'd like to use Redis as a database and](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=206.5776666666667) [not merely as a cache, then it makes sense](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=208.80655555555555) [for you to go with a standard tier](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=211.32477777777777) [instance because of the persistence. Note](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=213.067) [that the persistence in a standard tier](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=215.8812857142857) [instance is not obtained using the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=217.62128571428573) [open-source Redis mechanisms. Rather, we](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=219.627) [simply get it because of the cross-zone replication.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=4&mode=live&start=222.15249999999997)

[Memorystore vs. Other GCP Storage Services](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live)

[Redis is a very unusual technology. It's](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=2.651) [not quite a storage technology. It's not](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=5.953) [quite a pure caching key-value service.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=8.1615) [It's some combination of the two. It's](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=10.782) [also pretty new to the GCP, so it's worth](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=13.380444444444445) [our while understanding where exactly it](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=15.718333333333334) [fits in relative to other GCP storage](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=18.182000000000002) [services. In order to orient ourselves,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=21.766000000000005) [let's first draw out a taxonomy of the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=23.660857142857147) [different storage options. The first](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=25.640285714285717) [decision parameter is whether our data is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=28.054000000000002) [structured or unstructured. If it's](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=30.811142857142848) [unstructured, then we might either place](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=33.37200000000001) [it in cloud storage buckets, which are](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=35.251874999999984) [globally available and infinitely scaling](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=37.70139999999999) [in size, or we could place them on](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=40.36733333333333) [persistent disks for ease of access from](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=43.21974999999999) [within compute. If, on the other hand, our](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=45.987857142857145) [data is structured and it adheres to clear](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=47.856500000000004) [schemas and specifications, then we've got](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=50.81757142857144) [to decide on how the data is going to be](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=52.751) [accessed. If it's mostly going to be](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=56.288199999999996) [accessed by human users, it probably makes](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=57.94400000000001) [sense for us to go with a SQL-based](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=60.145999999999994) [technology. If, on the other hand, our](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=63.30800000000001) [data is mostly meant for programmatic](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=65.68199999999999) [access, such as from within other web](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=67.68757142857143) [applications, NoSQL is an excellent](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=70.35414285714288) [choice. Within the world of SQL](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=72.58828571428572) [technologies, there are both transaction](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=75.632)[processing and analytical processing use](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=77.701) [cases. For transaction processing, we need](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=80.52599999999998) [ACID support, and the GCP has Cloud SQL](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=83.02850000000001) [and Cloud Spanner, both of which provide](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=86.11799999999997) [all of the ACID properties. Just as an](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=88.24175000000001) [aside, ACID is an acronym for atomicity,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=91.78071428571431) [consistency, isolation, and durability.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=95.069)[The ACID guarantees provided by full-scale](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=98.184) [relational databases like Cloud SQL or](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=100.579) [Cloud Spanner are ironclad. They are much](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=103.058) [stronger than what we get using, say,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=105.83662500000001) [Redis transactions. If, on the other hand,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=108.50450000000001) [we are most interested in analytical](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=110.37362500000002) [queries, such as data warehousing](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=112.11650000000002) [applications might provide, BigQuery is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=114.43599999999999) [the way to go on the GCP. Let's now turn](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=116.85859999999998) [our attention to the NoSQL fork in the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=120.961) [tree. The current GCP offerings there are](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=123.60771428571427) [BigTable and Datastore. Datastore is in](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=126.935) [the process of being rebranded and merged](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=129.23528571428568) [into Firestore, but basically the idea is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=131.9794) [the same. BigTable for very fast, low](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=135.36157142857147) [latency reads and writes on truly huge](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=138.18557142857145) [datasets, Datastore for hierarchical](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=141.38833333333335) [document-oriented data. As we've already](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=143.296) [discussed, Redis and Memorystore do not](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=146.786) [conveniently fit into this classification.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=149.15500000000003) [However, if we did have to pick, the most](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=151.39733333333334) [likely spot here for Memorystore would be](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=154.59644444444444) [somewhere close to Datastore. And here we](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=157.69642857142858) [are mostly referring to Memorystore used](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=160.94000000000003) [as a database and not merely as a cache.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=162.608) [Let's quickly go ahead and compare](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=166.21999999999997) [Memorystore and Datastore. Memorystore](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=168.92000000000002) [offers a maximum of 300 GB of data.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=171.04611111111112) [Datastore, on the other hand, can easily](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=174.999) [scale into the terabyte range. Memorystore](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=176.504) [makes use of a server that's a Redis](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=179.566) [instance. Datastore is serverless. Scaling](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=182.535) [in Memorystore is manual, and it has some](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=185.92114285714285) [very real limitations. Datastore's scaling](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=188.926) [is automatic and quite seamless. Redis is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=191.822) [for all intents and purposes a key-value](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=195.74224999999998)[server. More generally it belongs to the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=197.807) [category known as data structure servers.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=200.61585714285712) [Datastore, on the other hand, supports](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=202.44299999999998) [document object data and fairly complex](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=205.10966666666667) [data models. Memorystore is ideal for](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=208.7835) [key-based lookup. Datastore supports far](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=212.47200000000004) [more complex hierarchical queries. The](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=214.94040000000004) [latency in Memorystore is really, really](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=218.62300000000002) [low because of its in-memory nature. This](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=220.73857142857142) [is on the order of sub-milliseconds.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=223.4622857142857) [Datastore has latency on the order of](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=226.104)[milliseconds, so that's pretty fast as](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=228.064) [well. Perhaps the most important of all of](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=231.04085714285722) [these differences is the last one.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=233.15662500000008) [Memorystore runs Redis. Redis is free of](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=235.688) [platform lock-in, and, what's more, it's](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=239.1081428571428) [extremely popular. It's a technology on](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=241.6656) [the rise. Datastore, on the other hand, is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=244.15266666666668) [very GCP-specific, and frankly Datastore's](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=246.5425714285714) [adoption has probably not quite lived up](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=250.01) [to GCP's expectations. So Memorystore is a](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=252.5719999999999) [technology with a very bright future.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=255.999)[Datastore is probably in the process of being folded into Firestore.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=5&mode=live&start=258.538)

[Memorystore Limitations](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live)

[Let's spend some time understanding](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=2.675) [Memorystore's limitations. Perhaps the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=4.311) [most real of these has to do with Redis](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=6.865444444444445) [parameters. On Memorystore, most Redis](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=9.921000000000001) [parameters are preconfigured, and the user](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=12.330999999999996) [cannot change them. There are just two](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=15.04014285714286) [exceptions to this. These are the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=17.71971428571428)[maxmemory-policy directive and the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=20.372399999999995) [notify-keyspace-events directive. Let's go](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=22.8665) [ahead and understand each one of these in](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=24.561) [turn. The maxmemory-policy directive](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=26.529666666666664) [basically serves to define the eviction](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=28.707250000000002) [policy. This is something we had discussed](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=31.687499999999996) [in the context of LRU eviction. When a](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=33.1505) [client runs a new command which results in](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=36.08375) [adding memory into our instance, Redis is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=38.21742857142858) [going to check the memory usage, and if it](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=40.72975) [is greater than the maxmemory limit, then](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=43.401999999999994) [the maxmemory-policy comes into play.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=45.791) [There are many possible eviction policies](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=48.551) [which we could go with starting with a](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=50.319)[noeviction policy. Here once the memory](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=52.915000000000006) [limit has been reached, our instance is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=54.98728571428572) [going to throw an error if we try to add](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=56.980000000000004) [any additional data. If our queries follow](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=60.291999999999994) [a power law distribution, in other words,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=62.80214285714285) [if we have some keys which are widely](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=65.1814285714286) [popular and referenced all the time, then](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=67.79128571428573) [we probably ought to go with something](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=70.19814285714283) [called allkeys-lru. This is going to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=73.48157142857146) [remove the less recently used or LRU keys](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=75.60500000000002) [first in order to make space. If we have a](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=78.85339999999998) [habit of marking the less commonly used](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=83.07133333333331) [keys as volatile, we could go with an](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=85.037) [eviction policy of volatile-lru. This](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=88.25300000000001) [would restrict the LRU eviction only to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=90.56842857142857) [the ones which have an associated timeout.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=93.12575000000001) [Then there is the allkeys-random policy.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=96.435) [This is going to take a key at random for](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=99.269)[eviction, and it makes sense if we have a](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=101.357) [uniform usage of keys within a dataset. We](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=103.653) [could restrict the random eviction merely](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=108.07266666666666) [to volatile keys. To do so, we go with the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=110.30275) [volatile-random eviction policy. Finally,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=113.75925) [there is also a really interesting one](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=115.10085714285715) [called volatile-ttl. This is going to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=118.66019999999999) [evict keys which have the shortest time to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=120.963) [live or TTL first. Let's now turn our](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=123.55528571428573) [attention to the other configuration](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=126.25399999999999) [policy which users can actually control](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=127.5006) [with Memorystore. This one has to do with](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=130.456) [keyspace notifications. This is a](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=134.37175) [configuration property which is by default](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=136.055) [set to blank. However, we need to enable](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=138.0642) [it if we would like to make use of the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=140.6675555555556) [Redis Pub/Sub feature. To enable Pub/Sub](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=144.01933333333326) [on Redis, we've got to set the notify](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=146.007375) [keyspace events property to a string,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=148.72671428571428) [which combines different characters from](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=151.421) [this table onscreen now. In particular,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=153.55300000000003) [the first character of the string needs to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=156.10928571428573) [be either K or E. K stands for keyspace](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=158.51125) [events, E stands for keyevent events. If](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=161.69) [we use K, our notifications are going to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=164.74999999999997) [contain the name of the event. If we you](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=167.74428571428572) [E, our notifications are going to contain](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=170.43400000000003) [the name of the key. Memorystore also has](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=172.45742857142864) [some other limitations, notably that it](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=175.57262500000007) [does not currently support persistence. As](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=177.58057142857137) [we have discussed, this is not that much](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=180.70711111111112) [of a dealbreaker because we can get high](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=182.628) [availability in Memorystore using](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=185.039) [cross-zone replication. In any case, the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=187.173) [open-source Redis persistence mechanisms,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=190.9243333333333) [which are RDB and AOF, are not supported](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=192.568) [by Memorystore. And, finally, there are](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=196.78666666666663) [several Redis commands which are blocked.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=199.07299999999998) [We will not talk about these in detail,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=201.03) [but you can get a full list of the blocked](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=203.646) [commands which are not available in Memorystore from the Google docs.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=6&mode=live&start=205.718)

[Create a Memorystore Instance](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live)

[Let's go ahead and get started with our](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=2.792) [first demo in which we will create our](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=4.146) [first Memorystore instance. We begin from](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=6.546) [the Google Cloud Platform. The project](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=11.020714285714286) [that we are in is called spikey-redis. We](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=13.241444444444445) [can see the project name over up top. It](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=15.711777777777778) [is important that billing be enabled for](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=18.433125) [this project. We can tell this from the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=20.359) [Billing card in the middle right. Other](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=22.606) [important information about the project](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=26.169999999999998) [such as the project ID is in the top left](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=27.609333333333336) [card. Down below, we also have the various](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=30.826500000000003) [resources currently in use. Let's click on](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=34.222) [the three horizontal lines over on the top](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=37.07228571428573) [left. These are called the Navigation menu](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=39.6556) [toolbar, or the hamburger, and they are](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=42.179) [the most convenient way to navigate around](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=44.474124999999994) [the different services on the Google Cloud](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=46.52999999999998) [Platform. The first thing we need to do is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=49.437428571428555) [to enable the required APIs, so we find](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=51.35880000000001) [the APIs and Services section and click on](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=53.77266666666666) [the Library tab. We are taken to a search](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=57.294) [page. There we type Google Cloud](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=60.510000000000005) [Memorystore or any variant of that, and](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=63.05314285714286) [that in turn selects just the one result,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=65.44787499999998) [the Google Cloud Memorystore for Redis](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=68.01514285714288) [API. Let's click on that and then go ahead](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=71.05440000000002) [and enable using the big blue button. This](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=73.25855555555559) [takes us into the Overview section where](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=77.22800000000001) [we can confirm that the activation status](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=79.2177142857143) [of the Memorystore API is enabled. We are](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=81.44114285714286) [now ready to go ahead and create our first](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=84.8488) [instance. So we go back into the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=86.518375) [Navigation menu, search for Memorystore,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=88.327) [and once we click there, we are prompted](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=91.772) [to create our first instance. We click](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=93.66088888888892) [through and enter an instance ID. Let's](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=97.92175000000002) [call this spikey-test-cache. Note that the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=100.8615) [version of Redis currently supported by](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=103.7297142857143)[Google Cloud Memorystore is 3.2. Next,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=105.91942857142857) [perhaps the most important choice related](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=109.17983333333333) [to creating a Redis instance, this is the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=111.11233333333332) [instance tier. There are two tiers, basic](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=114.66159999999999) [and standard. The basic tier is obviously](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=117.21428571428574) [cheaper but does not provide high](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=119.7985714285714) [availability and is a strictly zonal](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=121.75699999999999) [resource. The standard tier offers](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=125.43866666666668) [instances which are far more robust](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=128.05933333333334) [because they have cross-zonal replication,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=130.02928571428575) [as well as high availability. They are](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=132.24942857142855) [also much more expensive. Moving on, we](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=136.01533333333333) [can see that this basic tier configuration](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=138.17133333333334) [with 1 GB of memory is going to set us](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=140.40275) [back by around $36 a month. That works out](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=144.16) [to around $ 0.049 /GB/hr, which is really](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=148.029625) [quite expensive when you consider that a](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=151.27771428571427) [cross-regional bucket costs $ 0.026](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=154.20499999999996) [/GB/month. But then, of course, this is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=157.48666666666657) [talking about in-memory storage and not](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=159.56800000000007) [persistent disk. Moving on, we need to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=162.3323333333334) [specify a region and a zone. So let's go](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=164.76977777777773)[ahead and pick the region as being](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=167.24844444444446) [us-central1. We could optionally pick a](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=171.09425) [zone within this region, or we could just](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=173.32037499999998) [go ahead and leave it with the default](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=175.4613333333333) [value of Any. Remember that basic tier](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=178.24228571428574) [instances are zonal resources. They do not](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=181.22666666666663) [have cross-zone replication, so if we are](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=183.46399999999994) [going to be using Memorystore from, say, a](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=186.14100000000005) [GCE compute engine instance, we would like](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=188.64187500000006) [to keep the data as close as possible](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=190.8568571428571) [ideally in the same zone. Moving on, we](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=193.1062500000001) [have a slider there for the instance](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=195.3295555555555) [capacity. This refers to the memory](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=198.06933333333333) [provisioned for Redis usage. The default](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=200.07742857142858) [value is 1 GB, and this is what costs $](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=202.821) [35.77 up above. Notice that the network](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=207.79599999999996) [throughput supported is also a function of](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=210.49239999999998) [the memory, so at 1 GB for a basic tier](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=213.10625000000007) [instance, the GCP will support network](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=216.7857777777778) [throughput of up to 375 Mbps. Let's modify](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=218.8385714285715) [the value on that slider. So let's say we](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=222.75133333333332) [increase it to 126 GB. That now leads to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=225.7657499999999) [an estimated cost of $1471 a month. Do](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=229.62988888888884) [notice, however, that the price per GB has](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=235.19171428571428) [dropped significantly from $ 0.049 /GB/hr](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=237.95639999999997) [to just $ 0.016 /GB/hr. Increasing the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=241.99874999999997) [instance capacity also increases the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=246.646) [supported network throughput. The maximum](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=248.9074) [for basic tier instances is currently 1.5](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=251.1872857142857) [Gbps. If we take the slider all the way to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=253.67900000000003) [the maximum of 300 GB, that is going to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=258.3612222222221) [set us back by around $3500 a month. Note](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=260.99188888888887) [that the per-gigabyte rate stays constant](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=264.19714285714275) [at around $ 0.016 /GB/hr. Please note also](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=267.41249999999997) [that these are specific to each region, so](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=270.75725) [if we change the region from us-central1](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=272.84374999999994) [to, let's say, asia-east1, the price of](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=275.42966666666666) [the instance is going to go up, and that's](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=278.3576666666667) [because memory in that region costs $](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=280.52899999999994) [0.019 /GB/hr. And we can see that by](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=283.72759999999994) [choosing different values, the cost of our](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=286.23924999999986) [instance can vary quite a bit. That's](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=288.1681249999999) [quite a bit more than we can afford, so](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=290.17866666666663) [let's just go back to the default value,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=292.27759999999995) [that was us-central1, and just the 1 GB of](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=295.02479999999997) [instance capacity. This also gets the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=299.7577499999999) [supported network throughput back down to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=301.8206666666667) [375 Mbps. The next item on the agenda is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=304.9983333333333) [picking the authorized network on which](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=307.88377777777765) [our Redis instance is going to reside. Now](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=309.80600000000004) [this is a much more important choice than](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=312.94712499999997) [we might imagine at first. The whole point](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=315.2411666666667) [of using an in-memory store like Redis is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=317.86825000000005) [to get latencies down to the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=320.22066666666666) [sub-millisecond range. And once we are at](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=322.188) [those low latencies, it matters whether we](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=325.7452500000001) [are on the same VPC network or not. So we](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=328.0272222222222) [should be sure to keep our compute very](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=331.1272222222223) [close to our storage if we are going with Cloud Memorystore.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=7&mode=live&start=333.71399999999994)

[Create Redis Instances from the Command Line](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live)

[We are still in the process of configuring](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=2.28) [our first instance. In our example, it's](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=4.144) [fine to just go with the default VPC as](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=7.189555555555556) [the authorized network. Next, we get to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=9.846) [the Redis configuration section. An](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=13.113999999999999) [unmanaged Redis instance would have a](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=15.15857142857143) [redis.conf configuration file. This would](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=17.106) [contain a number of directives. It turns](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=20.694285714285712) [out that because we are using the managed](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=22.968333333333334) [Memorystore Redis version here, there are](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=25.0332) [only two of those many Redis parameters](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=28.000999999999998) [which we can tweak. Those are the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=30.4148) [maxmemory-policy and the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=34.063) [notify-keyspace-events. There are a large](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=35.676) [number of additional Redis parameters](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=39.109) [which we cannot tweak. Those will always](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=40.84433333333333) [simply take default values provided by the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=43.872499999999995) [GCP Memorystore service. We go ahead and](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=47.242857142857154) [set a value for the maxmemory-policy. This](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=50.446) [is going to determine how our instance](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=52.90875) [behaves when the maxmemory limit or the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=54.587) [instance capacity is reached. We can see](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=57.395) [that there are several possible policies](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=60.48474999999999) [that we could go with. Here we will just](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=61.76233333333334) [go with the noeviction policy. This will](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=64.9121111111111) [result in an error being thrown when the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=67.38349999999998) [instance capacity is reached. To be](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=70.07966666666667) [precise, this policy comes into play when](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=72.836) [we have reached the instance capacity, and](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=75.02614285714286) [a new command is run which seeks to go](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=77.2898) [ahead and add more data. The next](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=79.673) [configuration parameter we can specify is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=83.09500000000001) [the notify-keyspace-events. This is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=86.35600000000001) [something which we need to enable in order](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=88.87549999999999) [to make use of the Pub/Sub functionality](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=90.88924999999999) [within Redis. Just to be clear, Pub/Sub in](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=93.20700000000001) [this context simply refers to publisher](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=96.61925) [and subscriber and not to the GCP Pub/Sub](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=98.99399999999999) [service. We'll have a lot more to say on](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=102.39642857142853) [this. For now, let's simply set the value](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=104.46411111111114) [to be Ks. This is going to enable one of](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=107.09059999999998) [the two types of Pub/Sub notifications on](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=109.83677777777777) [Redis. K is going to allow keyspace](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=112.68749999999999) [events, and s is for set commands. If we](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=115.37133333333335) [had omitted a value, this would have](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=118.94922222222223) [disabled Pub/Sub notifications. We now are](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=120.938) [finally ready to go ahead and create our](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=124.89266666666668) [first Redis instance. It comes into](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=127.6212) [existence. It's called spikey-test-cache.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=130.38375) [Notice that it has an IP address, a port](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=133.183) [number, and it has the instance capacity](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=136.11075) [of 1 GB. We should be aware that this IP](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=138.4247777777778) [address is an internal IP address, that](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=142.17499999999998) [is, it is an RFC1918 IP address. This will](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=144.9655) [only be accessible from within this](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=148.5755714285714) [project and this VPC network. The link for](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=150.41766666666666) [the instance ID is a clickable one. So if](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=153.88110000000003) [we click through into it, there's a](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=156.7591111111111) [dashboard up top to keep tabs on one of](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=158.583) [many important properties. By default this](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=160.938) [is measuring memory usage versus the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=164.19700000000003) [maximum of 1 GB. If we scroll down, we can](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=166.741) [see the instance properties such as the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=169.66966666666667) [Redis version, the authorized network, and](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=171.9873333333333) [the maxmemory policy, which is noeviction.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=174.89066666666665) [Also we can find the connection](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=178.678) [properties, which include the IP address](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=180.712) [and the port number. Let's scroll back up](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=183.0126666666667) [and customize the dashboard. Notice as an](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=186.27750000000003) [aside that we are currently using 3.58 MB](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=188.58799999999997) [out of the maximum allowable instance](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=190.9) [capacity of 1 GB. In the drop-down, we can](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=193.6292) [measure a different metric. We can have](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=197.04957142857145) [the cache hit ratio, the number of calls,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=199.06800000000004) [the number of keys in the database,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=201.64225) [information about the evicted and expired](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=204.40900000000002) [keys, instance uptime, the number of](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=207.37539999999996) [connected and blocked clients, and the CPU](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=209.82500000000005) [utilization. Most of these graphs will](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=213.63585714285716)[currently be empty because we don't have](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=215.54557142857138) [any data inside our instance, so the cache](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=217.6485) [hit ratio or the number of calls, these](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=219.9867777777778) [simply say that there is no data for the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=222.54271428571425) [chart. We are now ready to connect to our](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=225.7775714285714) [instance, so let's go ahead and activate](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=227.551) [Cloud Shell. Cloud Shell is a](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=229.26) [browser-based terminal window, which is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=231.978) [hosted on a GCP VM instance. And to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=233.97) [activate it, we click on the little icon](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=237.4207777777778) [over on the top right. Cloud Shell opens](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=239.49450000000002) [up, and we launch it into a separate](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=242.76233333333337) [browser window. We then change our prompt.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=245.031) [You can see that the default Cloud Shell](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=248.003) [prompt includes both the signed-in user,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=249.763) [as well as the name of the project. Let's](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=252.372) [just change it so it occupies a lot less](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=254.73544444444445) [screen real estate. To do this, we export](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=256.803) [the PS1 environment variable, and we are](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=260.0770000000001) [now ready to run our first Redis-related](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=262.1167777777779) [command. Here we are going to go ahead and](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=265.5363333333333) [create yet another Redis instance using](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=268.0581111111111) [the gcloud utility. The command we run is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=271.05599999999987) [gcloud redis instances create followed by](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=274.31328571428566) [the name of the instance and the various](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=276.5658571428571)[properties. Here size refers to the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=279.9563333333333) [instance capacity in gigabytes. We also](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=282.09385714285713) [need to specify the tier, which here we](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=284.27200000000005) [have chosen to be standard. We run this,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=287.31922222222215) [and it brings our instance into existence.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=289.92) [If we now switch back into the web](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=291.649) [console, we will see that we now have two](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=294.0027777777778) [instances there. Notice how the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=296.7) [spikey-prod-cache is of standard tier.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=299.05550000000005) [Let's switch back to the Cloud Shell](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=301.5955) [window and run a describe command. So this](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=304.23544444444445) [is gcloud redis instances describe](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=307.0355714285715) [followed by the name of our instance. All](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=309.10928571428576) [of the configuration information is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=312.7955) [onscreen now. We can see that because this](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=315.746)[is a regional instance and not a zonal](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=318.5856666666667) [one, there is also an alternative data](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=320.8885555555557) [location. This is going to be used for the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=324.03549999999996) [cross-zone redundancy. We can also list](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=327.3541999999998) [all of the Memorystore Redis instances](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=328.9795000000001) [using this command. Because we are](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=331.0802) [filtering by the region, there is only the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=333.82957142857146) [one instance, the spikey-test-cache in](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=336.4956666666667) [us-central1. If we rerun the command with](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=339.64275000000004) [the other region, that's us-east1, we get](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=341.89425000000006) [our spikey-prod-cache as well. Let's also](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=344.39199999999994)[demonstrate the use of gcloud to delete an](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=347.88849999999996) [instance. So we run gcloud redis instances](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=350.37550000000005) [delete. When we run this command, it takes](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=353.34416666666664) [quite a while even after we've given our](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=357.05525) [confirmation. So we wait for a](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=360.49) [considerable length of time, and](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=362.38137499999993) [eventually the deletion is successful. If](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=364.47528571428575) [we now switch back into the web console](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=368.2033333333333) [and refresh the list of instances, we can](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=370.542) [see that we have just the one instance in existence, that's the spikey-prod-cache.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=8&mode=live&start=372.9486666666666)

[Connect to Redis Using Telnet](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live)

[Let us now go ahead and connect to our](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=2.621) [Memorystore Redis instance using telnet.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=4.452) [Let's pick up the action from the web](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=8.675) [console. We are going to create a VM](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=10.800333333333331) [instance because we have to be on the same](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=12.886) [VPC network in order to be able to use the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=15.585111111111118) [internal IP address of our Redis instance.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=17.804) [So we click on the Create button in order](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=21.346) [to add a new VM instance. We specify a VM](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=24.194) [name. Let's call this spikey-vm. And then](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=28.766000000000005) [we've got to specify the region and the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=32.095) [zone. It's very important for us to select](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=34.112249999999996) [the exact same region, so this is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=37.102000000000004) [us-east1. Let's also go ahead and pick a](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=40.93800000000002) [zone. Ideally this should be the same zone](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=43.87912500000001) [as our primary zone for our instance, and](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=45.83877777777778) [that's why we pick us-east1-b. We then go](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=48.544142857142845) [ahead and specify the machine type, as](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=52.547124999999994) [well as the boot disk image. Neither of](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=54.564249999999994) [these matters too much for our particular](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=57.029999999999994) [use case. Let's just go with a small](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=58.574) [machine, 1 vCPU, and Debian 9/Linux. The](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=61.470142857142854) [next important bit is this firewall](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=66.15050000000001) [configuration. We've got to allow both](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=69.09950000000002) [HTTP and HTTPS traffic for our connection](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=71.53349999999998) [to work successfully. At this point, we](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=74.80642857142855) [can go ahead and create this VM instance.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=77.219) [Once it comes into existence, we can SSH](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=79.32314285714284) [into it. And the first command that we are](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=82.96399999999998) [going to run there is sudo apt-get install](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=85.25100000000005) [telnet. Telnet is a protocol which is used](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=88.89300000000001) [for interactive text-based communication,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=91.08199999999997) [and when we run this command, we are](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=94.396) [installing the telnet client. Now this is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=95.804) [a slightly controversial operation. Telnet](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=99.66685714285715) [is not used a lot these days. It's](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=101.83149999999999)[actually been out-of-favor for several](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=104.38866666666667) [years, even decades, because it's not very](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=105.852) [secure. Redis offers a telnet connectivity](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=109.10087499999997) [option. This is okay to use in this](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=112.66) [context because our Redis instance, as](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=115.58122222222218) [well as all of our VM hosts, lie within](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=117.21588888888888) [the same GCP network. In any case, this](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=120.68850000000002) [method of accessing Redis is also present](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=124.2045) [in the Google docs, so let's go ahead and](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=126.40157142857143) [study it. We need to copy the IP address](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=129.3414285714286) [of our telnet instance, as well as the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=131.6572222222222) [port on which it's listening. We can then](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=133.9894999999999) [switch back to Cloud Shell and run the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=136.4925) [telnet client with both of these](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=138.437625) [parameters. This opens up a telnet](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=140.77649999999997) [connection with our Memorystore Redis](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=142.64625000000007) [instance. And now we can interact with](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=145.24966666666666) [Redis just as usual. Let's start with the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=148.48000000000005) [customary PING, and the response that we](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=151.5226666666667) [get back is PONG. If we try to retrieve a](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=153.9565555555555) [key which we have not yet set, we get back](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=156.57459999999998) [a -1. Let's set a key-value pair that's PS](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=159.93600000000004)[and Pluralsight. And if we now go ahead](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=163.76599999999993) [and get this key, we find that Redis works](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=166.25739999999996) [exactly as we would expect it to. We have](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=168.64899999999994) [successfully created a Redis instance and then connected to it using telnet.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=9&mode=live&start=171.4947142857143)

[Connect to Redis Using CLI](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live)

[There are two standard ways of connecting](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=2.492) [directly to a Redis instance. One of these](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=4.084) [is using telnet, and the other, and the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=7.26875) [recommended one, is using the Redis CLI.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=9.58114285714286) [We've already seen how to use Redis. Let's](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=12.059000000000001) [now try out the other method. Let's pick](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=15.264333333333331) [up the action from an SSH connection into](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=18.3175) [our VM instance. The first thing that we](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=20.899400000000004) [need to do is to run sudo apt-get update.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=23.5065) [This is to get the latest version of](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=26.221) [apt-get, which we are going to need in a](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=28.196) [moment to install Redis server. So the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=30.979) [next command we run is sudo apt-get](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=34.508111111111106) [install redis-server. You might now be](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=36.297) [wondering why we are installing Redis](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=39.46200000000001) [server when, after all, we actually need a](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=41.16633333333334) [Redis client. And the answer to that is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=44.49033333333333) [that the Redis server package comes along](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=46.78966666666668) [with a Redis CLI. The CLI, a command line](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=49.467999999999996) [utility, can then we used to connect to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=53.07612499999999) [our Memorystore instance on its internal](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=55.72185714285713) [IP address. So once we've got Redis server](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=58.706999999999994) [installed, we switch back to the web](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=61.92585714285715) [console and copy the IP address, and then](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=63.53928571428572) [we connect to it using redis-cli -h](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=66.15812499999998)[followed by that private IP address.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=69.69142857142855) [Again, please remember that this is an](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=72.643) [RFC1918 IP address, and that's why we have](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=74.275) [to be in the same VPC network. This opens](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=77.571) [up a terminal connection. Notice how it](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=81.93566666666666) [has both the IP address and the port,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=83.93766666666667) [which here is the standard 6379. Let's](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=86.561) [start with the customary PING greeting,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=90.423) [and we get back the message PONG. Next,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=92.240875) [let's go ahead and use the SET command to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=95.797125) [set the key visitor to have the value 1.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=98.06633333333335) [SET is pretty much the simplest Redis](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=101.58175) [command. If a key already holds a value,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=104.20512500000001) [it's going to be overwritten. This command](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=107.3275) [also has variants in which we can specify](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=109.91099999999999) [an expiry time and whether or not to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=112.19225) [override an existing key. Next, let's go](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=115.612) [ahead and use the MULTI command. This is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=118.52233333333335) [going to start a transaction. All of the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=121.239) [commands which follow this keyword MULTI](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=123.71957142857141) [until the next EXEC command are together](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=125.703) [going to point to a transaction and be](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=128.8387142857143) [executed in an all-or-nothing fashion. So](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=131.547) [having initiated the transaction using the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=135.35433333333333) [MULTI command, we then increment the value](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=137.23585714285713) [of the physical variable twice and,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=139.6462857142857) [finally, invoke EXEC so that at the end of](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=142.774) [this, our visitor has the value 3. Note](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=145.901) [that when we next run GET visitor, we get](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=149.800875) [the string value 3 because Redis does not](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=152.50849999999997) [have a dedicated integer type. Also note](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=155.206) [how the commands to increment the value of](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=158.11425) [visitor were both queued, and they were](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=160.53900000000002) [only executed when we finally invoked EXEC](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=162.571) [after them. Let's also demonstrate the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=165.29433333333333)[publisher/subscriber functionality that's](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=168.77566666666667) [offered by Redis. For this let's switch](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=170.888) [back into the web console and open up yet](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=172.822) [another SSH window into this VM instance.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=175.76322222222223) [The most convenient way to view this is to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=179.173) [have the two browser windows placed side](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=181.127) [by side so we have two Redis CLIs. So we](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=183.3617500000001) [invoke the same command in both of these](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=187.56988888888893) [SSH connections. Then in the window up](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=189.84466666666668) [top, we make use of the SUBSCRIBE command,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=192.82199999999995)[SUBSCRIBE followed by the channel name,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=195.7054) [which here is just offers. When we run](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=198.84855555555555) [this command, the output is three elements](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=202.07100000000003) [in length. The first is subscribe, which](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=204.60399999999998) [is just telling us what command we ran.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=207.17342857142856) [The second is a list of the channels that](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=209.928) [we subscribe to. Here there is just one,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=211.779) [that's offers. And, finally, the number of](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=214.179) [channels that we subscribe to, which is 1.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=216.503) [Next, let's go ahead and switch to the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=220.239) [lower window. And here we will invoke the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=221.84) [PUBLISH command followed by the channel on](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=224.159) [which we wish to publish the message,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=227.335) [that's called offers, and, finally, the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=229.759) [message body, which is "The winter sale is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=232.907) [here. " And when we run this, Redis is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=235.29760000000002) [going to send out this message to everyone](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=237.913) [who has subscribed on this channel. So](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=240.551) [over up top, we get a message, this is on](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=243.6463) [the channel offers, and the message body.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=246.03675) [In this way, we can see that Redis has a](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=249.206)[publisher/subscriber mechanism. Now this](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=251.567) [is not reliable, but it does serve to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=254.28233333333333) [decouple senders from receivers. Notice](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=256.6574) [that the receiver, that's the subscriber](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=259.227) [up top, did not have any way of](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=260.9145555555555) [identifying which publisher the message](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=263.055) [came from. We've now come to the end of](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=265.898) [this first module in which we spent most](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=271.2556666666665) [of our time understanding the conceptual](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=272.9643333333332) [basics behind Redis. We saw how Redis is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=275.6549999999999) [an in-memory, key-value store. Well,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=279.67100000000005)[technically it's a little more than that.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=281.539125) [It's a data structure serving store, but](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=283.192) [for all intents and purposes, it's used](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=285.940875) [for key-value serving applications. Redis](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=287.872) [is extremely fast because of its in-memory](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=291.1267142857143) [nature, and it's also very popular. It has](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=293.52957142857144) [emerged as one of the big winners from the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=296.7676666666666) [recent increasing popularity of](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=299.337) [containers. Because of Redis's great](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=301.6569999999999) [popularity and ease of use, the Google](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=303.76500000000004) [Cloud Platform has now launched its own](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=306.17275000000006)[managed Redis service. That is Cloud](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=308.8584285714286) [Memorystore. Cloud Memorystore is fully](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=311.83325) [Redis compliant. However, it relies on its](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=314.26599999999996) [own mechanism for various important](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=316.755875) [internal aspects such as high](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=318.4166666666667) [availability. Memorystore offers two tiers](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=320.4624) [of instances, basic and standard. Using](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=323.3953333333333) [the standard tier, it is possible for the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=326.444625) [user to get many of the benefits of](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=328.3341111111111) [working on the cloud, high availability](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=330.423) [and on-demand scaling. We will now turn](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=332.76814285714295) [our attention from concepts to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=335.8461428571427) [implementation. And in the module coming](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=338.6755999999999) [up ahead, we will see how Redis and](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=340.27322222222216) [Memorystore can be accessed from App](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=342.60242857142856) [Engine, Compute Engine, and Kubernetes Engine.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3e361daa-16e3-42f5-bdaa-4e6406529b6f&clip=10&mode=live&start=344.92799999999994)

[Configuring and Using Cloud Memorystore](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=0&mode=live)

[Module Overview](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=0&mode=live)

[Hello, and welcome to this module on](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=0&mode=live&start=0) [Configuring and Using Cloud Memorystore.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=0&mode=live&start=3.733) [This module is a fairly simple one. It's](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=0&mode=live&start=7.014) [devoted to the use of Memorystore and](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=0&mode=live&start=9.847750000000001) [Redis instances from the compute options](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=0&mode=live&start=12.044) [on the GCP. These include Memorystore from](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=0&mode=live&start=14.35228571428571) [Compute Engine VMs, as well as from the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=0&mode=live&start=17.561) [App Engine flexible environment. You](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=0&mode=live&start=20.0801111111111) [should be aware that it's not possible to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=0&mode=live&start=23.044875) [access Memorystore from App Engine](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=0&mode=live&start=24.727666666666668) [standard or from Cloud Functions](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=0&mode=live&start=26.286) [currently. We then move on to accessing](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=0&mode=live&start=29.294333333333334) [Memorystore from within a Kubernetes](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=0&mode=live&start=32.120285714285714) [cluster. This is an extremely important](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=0&mode=live&start=34.481399999999994) [use case because Redis is really one of](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=0&mode=live&start=36.63614285714287) [the most popular container-based](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=0&mode=live&start=38.93699999999998) [technologies. Surveys have shown that](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=0&mode=live&start=41.49366666666666) [Docker containers reference Redis more](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=0&mode=live&start=44.18166666666668)[often than any other technology except](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=0&mode=live&start=46.28342857142857) [Nginx. So clearly just like Nginx, Redis](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=0&mode=live&start=49.72866666666667) [has been a big winner from the rise in Docker containers and Kubernetes usage.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=0&mode=live&start=52.32325000000001)

[Memorystore from GCP Compute](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=1&mode=live)

[Next, let's turn to a discussion of](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=1&mode=live&start=2.173) [Memorystore and the GCP compute options.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=1&mode=live&start=3.938) [Recall that on the GCP, we have four](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=1&mode=live&start=7.438) [distinct flavors. These are cloud virtual](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=1&mode=live&start=9.519) [machine instances using Compute Engine,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=1&mode=live&start=12.405) [Docker container clusters on Kubernetes](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=1&mode=live&start=14.857) [Engine, App Engine as a platform for](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=1&mode=live&start=17.44) [web-hosted applications, and, finally,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=1&mode=live&start=20.07) [Cloud Functions for lightweight](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=1&mode=live&start=22.521) [trigger-driven compute. The first](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=1&mode=live&start=24.46) [important point to be aware of is that it](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=1&mode=live&start=27.333222222222222) [is not currently possible to use](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=1&mode=live&start=29.451999999999998) [Memorystore from Cloud Functions or from](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=1&mode=live&start=30.955) [the App Engine standard environment. It](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=1&mode=live&start=34.115) [is, however, possible to use Memorystore](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=1&mode=live&start=37.08828571428572)[from the other three compute options,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=1&mode=live&start=39.232) [namely the App Engine flexible](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=1&mode=live&start=41.363) [environment, the Compute Engine VM](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=1&mode=live&start=44.06216666666667) [instances, and clusters of Docker](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=1&mode=live&start=46.8092)[containers running on the Kubernetes](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=1&mode=live&start=49.19033333333332) [Engine. The restrictions around App Engine](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=1&mode=live&start=52.01899999999999) [standard and Cloud Functions have to do](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=1&mode=live&start=54.34783333333333) [with the tightly sandboxed environments](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=1&mode=live&start=55.918250000000015) [which those compute options rely on. Redis](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=1&mode=live&start=57.8572) [does not fit nicely into those tight](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=1&mode=live&start=61.482) [sandboxes, and that's why we've got to go](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=1&mode=live&start=63.771) [more towards the Infra a Service offering](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=1&mode=live&start=66.101) [if we'd like to use Memorystore. There are](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=1&mode=live&start=69.268) [also some additional restrictions that we](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=1&mode=live&start=72.3255) [need to be aware of whichever one of these](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=1&mode=live&start=73.682) [options we wish to go with. Whether it's](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=1&mode=live&start=76.48774999999999) [App Engine flexible or Compute Engine or](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=1&mode=live&start=78.745) [the Kubernetes Engine, our client needs to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=1&mode=live&start=81.11566666666666) [be on the same network, that's the same](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=1&mode=live&start=83.87471428571432) [VPC network, and within the same region as](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=1&mode=live&start=86.43249999999996) [our Memorystore instance. It is, however,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=1&mode=live&start=89.27237500000003)[completely fine for the clients to be](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=1&mode=live&start=93.27757142857142) [within the same region and within](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=1&mode=live&start=95.58200000000001) [different subnets on the same VPC network.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=1&mode=live&start=98.104) [Even so, this is quite significant. It's](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=1&mode=live&start=101.373) [really worth paying attention to. This is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=1&mode=live&start=103.76283333333333) [a pretty strong restriction, and if you](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=1&mode=live&start=105.9895) [are going to use Memorystore, you'll have](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=1&mode=live&start=107.705) [to plan your GCP projects and networks](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=1&mode=live&start=109.67575000000001) [carefully around this. In general, you](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=1&mode=live&start=112.703) [need to use Memorystore from within the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=1&mode=live&start=115.571) [same project in which you instantiate it.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=1&mode=live&start=117.41999999999999)[You can, however, use Shared VPC provided](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=1&mode=live&start=119.8734) [the Redis instance is in the host project.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=1&mode=live&start=123.20100000000001) [You cannot use a Redis instance if it is in a service project.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=1&mode=live&start=126.719)

[Using Memorystore from a Web Application Hosted on GCE](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live)

[In this example, we will build a simple](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=2.352) [HTTP web server. This is going to make use](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=4.526) [of a Redis instance. The server is going](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=7.977) [to be hosted on a Compute Engine VM](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=10.717) [instance. Remember that our VM instance](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=13.635222222222227) [has to be in the same region and the same](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=15.08944444444444) [VPC network as our Redis instance. We](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=17.885666666666665)[start from a Cloud Shell terminal where we](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=22.178874999999998) [make use of the gcloud command line](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=24.215375) [utility to create a new VM instance.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=25.982) [Notice that we are running the gcloud](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=29.71) [compute instances create command followed](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=31.422) [by the hostname and the various](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=34.414) [configuration properties. A couple of](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=36.544) [points worth noting. Our Redis instance](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=39.57350000000001) [has IP address 10.0 .0 .12 and has Redis](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=41.7952857142857) [port 6379. And that's why these are two](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=47.994666666666674) [values which we have passed in as metadata](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=51.49400000000002) [in our gcloud instantiation command. We](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=53.63888888888891) [run this command, and our VM instance](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=57.630375) [comes into existence. It's called](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=59.95) [spikey-app-host, and it has both an](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=62.644000000000005) [internal and an external IP. Notice that](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=64.96342857142857) [while instantiating this IP, we had](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=68.06833333333333) [specified a tag of http-server. We're](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=70.78471428571429) [going to make use of that in the very next](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=73.0993) [step where we create a firewall rule. This](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=74.940875) [firewall rule is going to allow port 8080](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=78.38875) [access to all VM instances which are](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=81.246625) [tagged as http-server. Notice how the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=84.555) [source-ranges consists of all 0s. This](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=88.49799999999999) [allows incoming traffic from any IP](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=90.66271428571427) [address. This might actually be not very](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=93.169)[safe to do in a production environment. In](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=96.001125) [any case, the command runs through to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=98.83525) [completion, and we now have a VPC network](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=100.44) [with the correctly configured firewall](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=103.765) [rule. We can verify this by using the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=105.908) [Navigation menu, and there we find that](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=108.53300000000004) [our firewall rule called](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=110.93275) [allow-http-server-8080 is, indeed, set up](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=114.0145) [exactly as we wished it to. Let's now](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=117.54133333333331) [switch into the Compute Engine, VM](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=120.45542857142857) [instances tab. There we will find our](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=122.311375) [spikey-app-host. We click on the SSH](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=124.708) [button over on the extreme right and use](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=127.98) [it to open an SSH session in our browser.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=130.29111111111112) [Inside this SSH session, we are now going](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=134.556) [to go ahead and create our simple](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=136.932) [http-server app. Let's start by creating a](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=138.546) [directory for it and cd-ing into it. It's](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=142.026) [called spikey\_counter\_app. Next, let's go](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=145.66133333333335) [ahead and use nano, which is a free text](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=148.35066666666663) [editor available on all VM instances in](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=151.00962499999997) [Cloud Shell sessions, in order to create a](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=153.71757142857143) [requirements.txt file. This file is going](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=157.6102) [to contain all of the Python packages,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=159.6343333333333) [which are dependencies for our](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=161.61266666666668) [application. We have just the two](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=163.9954285714286) [dependencies, Flask and redis. Flask is a](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=166.452) [simple web server program, and redis is,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=169.93828571428574) [of course, required for our Redis client.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=172.08275) [We can save the contents of this file by](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=174.06249999999997) [hitting Ctrl+X. That takes us back to our](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=177.9496) [SSH terminal prompt, and we will now use](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=180.83800000000005) [nano to open up the main Python file of](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=183.06799999999996) [this application. Now we are going to go](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=186.60171428571434) [through this code in a lot of detail, and](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=188.612) [I feel Sublime Text is a more intuitive](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=190.71350000000004) [editor to go with. So let's switch over to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=193.37199999999999) [the same code in a Sublime Text window. We](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=196.102) [start out the file with various imports.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=198.864) [These include the logging, OS, and Redis](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=202.658) [packages, as well as the Flask module from](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=204.772) [the eponymous package. We then instantiate](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=207.942) [an instance of our Flask class. Notice how](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=211.1854285714286) [we've got to pass in the argument which](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=213.93500000000003)[corresponds to the modular package name.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=217.0514285714286) [Here we are making use of the special](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=220.259) [built-in attribute called \_\_name\_\_, which](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=222.583) [always has the module name. We also have](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=225.76033333333334) [variables for the redis\_host and the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=228.91328571428573) [redis\_port, and we finally instantiate the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=230.74333333333334) [redis\_client. In case you're wondering](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=233.63733333333332)[what that redis.StrictRedis is all about,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=235.51866666666666) [that's because there are two client](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=238.747) [classes. One of them is called](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=241.30985714285714) [StrictRedis, which adheres to the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=243.42116666666672) [standard. The other is just Redis. That's](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=245.20440000000005) [what you use if you need backward](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=247.64388888888888) [compatibility. Next, we have a couple of](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=250.6181111111111) [functions which respectively increment and](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=252.68249999999995) [decrement the value of a counter in our](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=254.5022) [Redis server. Notice how each one of these](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=258.08924999999994) [functions is decorated using the @](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=260.3489999999999) [app.route decoration. This is a way of](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=263.4326666666666) [telling Flask what URL is going to trigger](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=266.222) [the execution of the corresponding](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=268.438) [function. So, for instance, if someone](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=270.453) [hits our web server with the URL /decr,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=272.6459999999999) [that is going to call this decrement](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=275.89577777777777) [function. The return values from these](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=280.23125000000005) [functions are going to go into the HTTP](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=282.2191428571428)[response. Next, we have a server error](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=285.61714285714294) [function. This is going to serve to log](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=288.43857142857155) [any exceptions, as well as to return a](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=290.7451249999998) [message saying that an internal error has](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=293.8889999999998) [occurred. Notice that this function also](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=296.76928571428584) [has a decorator, that's the @](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=298.48099999999994) [app.errorhandler decorator, as well as the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=300.9377999999999) [error code of 500. And, finally, we have](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=303.910888888889) [the main section of this Python file. Here](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=306.93199999999996) [we simply invoke the run method on our app](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=309.35400000000004) [class. There's one important bit here. The](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=313.248857142857)[hostname has got to be set to all 0s. This](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=315.81) [is so that we can hit this particular web](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=319.0647777777778) [server on the external IP address. If](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=321.3361428571429) [instead of the host of all 0s, we had gone](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=324.147) [with localhost, that's 127.0 .0 .1, we](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=327.25257142857146) [would not have been able to hit this](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=332.1198888888889) [particular web server using its external](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=334.311) [IP address in a browser. We are done with](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=336.2352857142858) [the code, so let's copy/paste all of this](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=339.71699999999987) [code into our main.py. As always, we can](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=342.8795) [hit Ctrl+X to save the code. And now we](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=346.64920000000006) [can go ahead and run it. Now remember that](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=349.722) [we are doing all of this from an SSH](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=352.18066666666675) [window on our VM instance. We are not](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=354.47512499999993) [making use of an IDE like Jupyter or](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=357.1973333333334) [Datalab, so let's also go ahead and](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=359.49175) [install pip. So we run sudo apt install](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=361.97862499999997) [python-pip. This runs through. It prompts](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=365.453) [us for the amount of disk space, which we](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=368.6187777777778) [are fine with. And once it's all done, we](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=371.2698) [can go ahead and install our requirements.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=373.5834) [We simply run sudo pip install followed by](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=377.612) [the -r switch and our requirements.txt.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=380.582) [The command does its thing, and we now](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=384.502) [have both redis and Flask successfully](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=386.261111111111) [installed on this VM instance. We'll now](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=388.4826666666666) [go ahead and run our Python code. This is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=391.34300000000013) [simply sudo python main.py. Our server is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=395.7726666666667) [now up and running in debug mode. We can](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=399.19429999999994) [connect to it using the external IP](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=402.3207777777778) [address of our VM instance. We switch back](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=404.196) [to the web console. There under the VM](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=407.56585714285706) [instances list, we get the external IP](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=409.649) [address, copy it, paste it into our](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=411.9833750000001) [browser window. We also include the port,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=414.98449999999997) [which is 8080, that's optional, followed](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=417.6900000000001) [by the actual URL endpoint, which is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=419.7604285714285) [/incr. That bit is not optional. And when](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=423.622) [we hit this URL, we can see that our](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=427.4862) [counter has been incremented. This value](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=429.7502) [is currently 1 because the key counter did](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=432.537) [not previously exist in our Redis](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=435.41328571428573) [instance. That's why when we call the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=437.83057142857143) [increment command, it's initialized to 1.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=440.8984285714286) [If we now go ahead and refresh a bunch of](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=443.769) [times, it's incremented further. Note that](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=445.739) [each of these is making a call to the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=449.202) [Redis server in the back end. Next, let's](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=451.149) [also hit the decrement URL, and this time,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=454.26214285714286) [we can see that the counter value gets](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=457.23366666666675) [decremented and goes back down. We have](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=460.0507142857143) [successfully connected to our Memorystore Redis instance from a GCE VM instance.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=2&mode=live&start=463.2076666666667)

[Using Memorystore from an App Engine Application](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live)

[In this example, we will build a simple](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=2.312) [App Engine flex web server, and from that](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=4.389333333333335) [web server, we will connect to a Redis](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=7.154125) [instance. Recall that we cannot connect](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=10.494) [Redis from App Engine standard, and we've](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=12.542142857142856) [got to have our app in the same region,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=14.754125000000004) [the same network, and the same project as](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=17.531)[our Redis instance. Let's get started by](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=20.796) [activating Cloud Shell as usual. This time](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=23.77914285714286) [we will do something a little different.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=26.093111111111106) [We will launch the code editor. This](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=28.26) [requires us to click on the little pencil](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=30.947) [icon. That in turn brings up a really](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=32.810125) [handy way to navigate our file system.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=36.332125000000005) [This is our home directory on the Google](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=39.322) [Cloud Platform. We'll go ahead and use the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=41.156) [File menu to create a new folder, which is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=43.861) [going to house our App Engine flex](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=46.277)[application. Let's call this](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=49.511000000000024) [redis\_appengine. And within this folder,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=51.93499999999999) [we'll set about creating all of the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=53.65185714285715) [standard files. The first one is the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=56.391666666666666)[requirements.txt. This time we have Flask](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=59.723000000000006) [and redis just as we did in the previous](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=61.83111111111113) [example, but there's also a new one in](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=64.70875) [there. This is gunicorn. Gunicorn is a](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=67.30083333333336) [package which is used as a WSGI server.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=69.80128571428571) [That's an acronym for Web Server Gateway](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=73.255) [Interface. WSGI is a standard interface](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=76.30000000000001) [used to implement Python web apps. More on](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=78.5235714285714) [that in a moment. Let's go ahead and](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=82.835) [create a new file. This is the app.yaml](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=84.80750000000002) [file. Because we are running App Engine,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=87.89840000000001) [we need to define all of the configuration](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=89.64900000000003) [parameters for our App Engine application](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=92.136) [in this app.yaml. We need to specify the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=94.576) [IP address and the port number of our](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=97.929) [Memorystore Redis instance in that](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=100.228) [app.yaml, so let's go ahead and copy](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=103.178) [those. And we switch back and reference](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=106.05325000000005) [them in our app.yaml file. Notice that we](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=108.02025000000003) [pass in the two environment variables,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=111.319875) [REDISHOST and REDISPORT. Let's also go](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=113.0735) [ahead and understand all of the other line](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=116.12975) [items in this app.yaml. The runtime is the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=118.65714285714286) [software stack, which is going to install](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=121.616) [and run our app. The environment is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=123.97757142857144) [flexible, which means that this runtime is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=126.80600000000001) [going to be built using Docker. The](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=128.929) [default version of Python is actually 2.7](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=131.0795) [.9, but here we have explicitly specified](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=134.01822222222222) [that we'd like to use Python version 3.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=136.76014285714285) [The entrypoint section specified in this](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=139.868) [YAML is going to be used by that runtime](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=142.22166666666666) [to start up our application. This](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=145.107125) [entrypoint is to start a process, which](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=147.65185714285715) [will respond to HTTP requests. It's](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=149.98983333333334) [recommended that will make use of gunicorn](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=152.96214285714285) [or a similar WSGI server, and this line](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=154.8275) [here is the standard syntax which we would](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=159.036) [use for gunicorn as the entrypoint into a](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=161.67514285714287) [Flask application. So we specify our](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=165.6965) [entrypoint as gunicorn. We also include](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=169.11814285714286) [the port environment variable, which is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=171.68500000000003) [where the HTTP requests are going to come](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=173.94157142857145) [in, and then the main module inside the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=176.4436666666667) [application package. We are now ready to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=179.99220000000003) [go ahead and code up the actual main.py.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=182.589) [That's the file which we referenced in](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=184.95928571428567) [that app.yaml. Main.py looks very much](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=188.52200000000002) [like the little code we wrote a moment](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=191.09200000000004) [ago. The only difference is that this time](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=194.2183333333334) [we have just the one route. That is the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=195.96500000000006) [default route. And here we increment the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=199.82159999999996) [counter by a value of 10. So unlike the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=202.118125) [previous example where we had separate](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=205.31414285714285) [increment and decrement functions, here we](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=207.12271428571427) [have just the one index function. That](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=208.9612857142857) [does it for all of the code in our little](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=212.04949999999997) [App Engine app. We can now switch back](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=216.0043333333333) [into Cloud Shell, cd into the correct](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=218.42337499999996) [directory, and deploy the app using gcloud](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=221.02042857142857) [app deploy. This is the standard syntax.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=224.3263333333333)[It's going to pick up on the app.yaml and](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=227.965) [the requirements.txt files within the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=230.145) [current directory and push our app out](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=232.225) [onto the target URL, https://spikey-](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=235.07924999999994) [redis.appspot .com. We are prompted for a](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=239.18700000000004) [confirmation. We provide this](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=242.72199999999995) [confirmation, and very quickly our app is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=244.039) [up and running. As an aside, notice how](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=246.57899999999995) [it's Docker that's being used to package](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=248.84524999999994) [up the app. Once it's done, let's copy the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=250.77614285714282) [target URL into our web browser. Once we](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=253.79499999999996) [do this, we are greeted with the initial](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=257.57649999999995) [value of 10. If we now hit Refresh, this](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=260.4820000000001) [is going to increment the counter value by](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=262.99766666666665) [10 more, and that in turn quickly causes the counter count to increase to 50.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=3&mode=live&start=265.9087142857144)

[Packaging a Web Application into a Container](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live)

[Let's go ahead and put together an example](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=2.908) [of working with a Redis instance from](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=4.619) [within a GKE cluster. Here we are going to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=7.796) [package up the same web server application](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=10.711222222222226) [which we previously deployed from App](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=12.524500000000002) [Engine flexible except that we will now](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=15.094) [host it in a Kubernetes cluster. We start](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=18.733599999999996) [from a Cloud Shell terminal in which we](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=22.43125) [begin by setting a property. This is the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=24.584142857142854) [compute/zone property, which we set to be](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=27.87542857142857) [us-east1-b. We are going to use it in a](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=31.65075) [moment when we instantiate our GKE](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=33.502090909090924) [cluster. Next up, we use the gcloud](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=36.590999999999994) [container clusters create command followed](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=39.22242857142858) [by the name of our cluster, which here is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=41.333999999999996) [called spikey-counter-cluster, then the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=45.113999999999976) [number of nodes, which is 3, and, finally,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=47.2346) [the --enable-ip-alias flag. The advantage](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=50.556) [of setting the --enable-IP-alias flag is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=54.376000000000005) [that our cluster and ports will now be](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=56.3385) [mapped to internal IP addresses on this](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=59.14066666666668) [VPC network. Notice that we did not have](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=62.18300000000001) [to specify the zone because we had already](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=65.01633333333334) [set the compute/zone property. Our](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=67.44714285714282) [Kubernetes cluster comes into existence.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=71.1845) [We can confirm that this is the case by](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=73.512) [switching to the web console, navigating](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=74.999) [into Kubernetes Engine, and clicking on](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=77.898) [Clusters. We can see that our cluster, the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=81.62625) [spikey-counter-cluster, has come into](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=84.05839999999999) [existence there. Let's now switch back to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=85.972) [our Cloud Shell code, open a window, and](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=89.01975) [create a new folder this time for our](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=90.98174999999999) [Redis GKE application. A quick word about](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=94.4158) [the steps up ahead. A lot of what we are](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=97.75499999999997) [about to do is going to seem quite similar](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=99.9857272727273) [to the App Engine flexible example, and](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=101.83299999999997) [there's a reason for that. App Engine](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=104.32524999999998) [flexible relies on Docker containers to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=107.33800000000001) [package up our application, and so does](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=109.37800000000001) [Kubernetes. But this example is a lot more](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=113.13799999999999) [involved because App Engine flex abstracts](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=115.53375000000003) [us from a lot of the actual Kubernetes](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=117.23937500000002) [interfacing. In any case, we start by](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=120.92083333333332) [putting together a requirements.txt. This](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=122.72533333333337) [has the exact same dependencies as the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=124.46833333333332) [previous example. Next, let's go ahead and](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=128.6682) [create our main.py. Once again, this code](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=132.60425000000004) [looks virtually identical to the previous](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=135.27566666666667) [example. So it's got a Flask web server.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=138.22839999999997) [It reads in the redis\_host and the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=140.798) [redis\_port from the environment and goes](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=142.486) [ahead and instantiates a redis\_client.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=145.029) [We've only tweaked it ever so slightly](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=149.312) [from the previous example because now in](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=150.98325000000008) [the index method, we only increment our](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=153.29114285714283) [counter by 1. In the App Engine flex](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=156.66800000000003)[example, we were incrementing it by 10](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=159.41900000000004) [each time around. So far this is virtually](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=162.15771428571432) [identical to App Engine flex, but now it](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=165.21349999999998) [gets very different. We've got to create a](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=168.38487499999997) [Docker file, and in here, we have all of](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=170.89811111111115) [the exact steps which were being performed](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=173.5922222222222) [for us by App Engine flex under the hood.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=175.85674999999998)[There we simply specified that the runtime](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=178.82114285714283) [was Python and the version was 3. Here we](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=181.4458571428571) [actually pull the Python container from](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=184.82449999999997) [the Google Container Registry and then run](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=187.3133333333334) [the VIRTUAL\_ENV with Python 3.4. Next, we](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=190.0048333333333) [defined several environment variables such](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=194.9852) [as the VIRTUAL\_ENV, the PATH, the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=196.9964) [REDISHOST and REDISPORT. And then we go](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=199.7755) [ahead and explicitly add our](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=202.6098888888889) [requirements.txt. Finally, we run pip](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=204.371) [install in order to ensure that all of](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=207.702) [those packages are actually installed.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=210.11) [Finally, we add the current directory into](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=213.166) [our app, and then run gunicorn so that it](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=215.312) [accepts HTTP requests on the external IP](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=219.134) [address and redirects them into our main](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=222.634) [app. In the case of App Engine flex, the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=226.38250000000008) [port 8080 was not explicitly mentioned in](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=228.85222222222217) [the app.yaml because it was set by the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=231.5351428571429) [environment. Here we actually have to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=234.66500000000008) [invoke it in the gunicorn command. Let's](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=236.2495555555555) [close out of the code editor and cd into](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=238.6665714285714) [our redis\_gke directory. Once we are](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=242.8681666666666) [there, we will need to actually run the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=245.8773333333333) [Docker build command. This is going to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=248.071625)[package up the contents of the current](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=250.33249999999998) [directory into an image and apply a tag.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=252.56028571428573) [We see that the image is successfully](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=256.158) [built, and we then go ahead and push it](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=257.502) [into the Google Container Registry using](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=260.126) [the gcloud docker push command. Note that](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=262.662) [we push it using the same format, that is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=266.50022222222225) [gcr.io /(the project ID)/(the container](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=270.3413333333333) [image name and the version), which here is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=273.6678333333333) [just v1. We can now verify that this is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=277.017) [available in the Google Container Registry](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=279.958888888889) [by switching to the web console. In the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=282.1337142857143) [Navigation menu, we find the Images](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=285.13599999999997) [section of the Container Registry. There](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=286.696) [we have a repository for our](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=289.5634285714286) [spikey-counter app, and within it is the actual image which we just pushed.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=4&mode=live&start=292.056)

[Using Memorystore from a Kubernetes Cluster](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live)

[Now that we've packaged up our app into a](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=2.216) [Docker container and pushed it to the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=4.076) [Google Container Registry, the next step](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=6.199) [is for us to actually use this container](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=8.427571428571428) [in a Kubernetes cluster. In order to do](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=10.758222222222225) [this, we will make use of the kubectl](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=14.849) [command line utility. We are going to use](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=17.311) [this to configure our cluster. And the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=20.684499999999996) [first command that we run is to create a](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=22.58577777777778) [configmap. This is a Kubernetes](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=24.764999999999997) [abstraction, which is used to pass](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=26.925)[information into our apps. Here we use it](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=28.453) [to avoid hardcoding the redishost IP](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=32.6665) [address. Note how this command does not](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=35.67933333333333) [actually include the cluster name. Now in](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=38.00242857142859) [this example, because we have a clean](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=40.943000000000005) [project and just one cluster in it,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=42.784) [kubectl automatically picks up that all of](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=45.213) [our commands need to apply to that](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=48.173) [cluster. If you are performing these steps](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=50.61774999999999) [from a project which has several clusters,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=52.28250000000001) [you should configure kubectl to point](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=54.953) [explicitly to your cluster using the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=56.769) [command onscreen now, gcloud container](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=58.833) [clusters get-credentials followed by the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=62.396) [name of your cluster and the zone. In any](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=65.24) [case, we have now created a configmap](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=69.16099999999999) [which contains the redishost IP address.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=71.11014285714285) [Let's verify that this has happened](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=75.011)[successfully using the kubectl get](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=76.551) [configmaps command. We follow this by the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=78.828) [name of the configmap, which is redishost.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=81.919) [We've asked for the output in YAML, and](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=85.923) [that's what we get. The data is a](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=88.244) [key-value pair, which has key REDISHOST,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=90.99733333333336) [and the value is the IP address of our](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=93.25387500000001)[Memorystore instance. Now we need to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=97.047) [configure a YAML specification for our](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=99.86528571428569) [pod. This is a Kubernetes abstraction, so](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=102.74025) [we switch back into the code editor](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=104.9) [window. And inside the redis\_gke](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=107.7282857142857) [directory, we create a new file. This is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=109.86439999999997) [our spikey- counter.yaml, and it's going](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=113.82671428571427) [to contain the specification of our app.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=116.870125) [We define two Kubernetes abstractions. The](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=120.574) [first of these up top is a Deployment. And](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=123.38622222222223) [then down below is a Service. The](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=126.17685714285714)[Deployment is named spikey-counter, and it](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=128.9432) [defines the number of replicas, which is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=131.92714285714288) [equal to 1, as well as the container which](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=134.54233333333335) [defines our app. Here we have just the one](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=137.22719999999998) [container. It's called spikey-counter, and](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=140.12314285714285) [the image is pulled from the Google](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=141.78666666666663) [Container Registry. This refers to the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=145.05985714285714) [exact same container that we just pushed](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=147.32899999999995) [there. This Deployment specification also](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=149.8264) [has an explicit configMapKeyRef. The name](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=151.94399999999996) [that it's referring to is redishost. Down](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=156.95250000000001) [below is the Service object. This is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=160.33866666666668) [effectively a load balancer, which is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=163.00199999999998) [going to accept incoming requests on port](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=164.97314285714285) [80 and direct them into our Deployment up](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=167.26050000000004) [above. Having defined the specification](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=170.92033333333336) [for these Kubernetes objects, we can](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=172.9606666666666) [switch back into the Cloud Shell and](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=175.02014285714287)[simply apply these declaratively. This is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=178.4895) [done using the kubectl apply -f command](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=181.63600000000002) [followed by the YAML file that we've just](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=184.40714285714284) [defined. Kubernetes will parse that YAML](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=187.76433333333333) [file, make sense of its contents, and](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=190.87775000000002) [create the required objects. And, indeed,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=193.9424) [it comes back and tells us that it has](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=196.34475) [created one deployment and one service](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=198.41024999999996) [object. Now remember that our service](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=200.4235) [object was of type load-balancer, which](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=203.144) [means that it's going to provide a stable](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=205.581125) [front end for us to access the app. Let's](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=207.32177777777778) [look this up. So we switch back to the web](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=210.44922222222223) [console, and in the Navigation menu under](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=213.0065) [Kubernetes Engine, we click on the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=215.2237142857143) [Services tab. There, sure enough, we find](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=217.232) [our spikey-counter load balancer service](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=221.019) [object defined. Notice that there are also](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=223.56) [endpoints listed, specifically an external](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=226.056) [IP address and a port. Like any load](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=229.101) [balancer, this front end requires a back](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=232.93242857142857) [end, and we can examine that in the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=235.79325000000003) [Workloads tab over on the left. If we](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=238.61599999999999) [click there, we see the spikey-counter](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=241.8174285714286) [deployment object that we had defined in](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=243.2744) [our YAML file. And remember that the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=246.43600000000004) [deployment object encapsulates within it a](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=249.09866666666662) [port specification and the number of](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=251.58866666666668) [replicas, and the port specification in](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=253.81599999999997) [turn pointed to the Docker container,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=255.87057142857145) [which we had pushed into the Google](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=258.14285714285717) [Container Registry. Let's switch back to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=260.71133333333336) [Cloud Shell and run some commands there.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=263.37133333333327) [We can also list the service object](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=266.026) [information using kubectl get the service](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=267.81) [followed by the name of our service](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=271.068) [object. This displays a bunch of](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=274.24075000000016) [information including both the cluster IP,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=276.47483333333344) [the external IP, and the port. The cluster](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=278.69599999999997) [IP can be thought of as the internal IP](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=281.7026666666666)[address. This service will be accessible](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=285.40699999999987) [within our VPC network on the cluster IP,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=287.7560000000001) [and it will be accessible from outside our](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=290.2893333333334) [VPC network on the external IP address.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=293.3448571428571) [Because we'd like to access our app from a](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=296.835) [browser, we need the external IP address.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=298.7) [The cluster IP will not work from the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=301.425)[browser. We paste it into our browser bar,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=303.98055555555567) [and we do indeed see our application. Each](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=305.8224999999999) [time we hit Refresh, we are successfully](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=309.37485714285714) [able to increment the value of the counter](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=311.2388571428571) [in the Redis instance. That gets us to the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=315.6766666666667) [end of this module, which was devoted to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=320.8685555555556) [the configuration of a Redis Memorystore](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=322.82050000000004) [instance. We saw how there are only a](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=325.7826666666666) [couple of Redis properties which we are](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=328.01419999999985) [allowed to tweak from within Memorystore,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=329.74885714285716) [but these are sufficient for many](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=331.70399999999995) [interesting use cases. We then moved into](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=334.30300000000005) [an exploration of Redis as accessed from](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=337.01000000000005) [Compute Engine VMs, from an App Engine](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=339.7749999999999) [flexible environment, as well as from](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=343.11999999999995) [container applications which have been](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=345.558) [packaged up using Docker and are now](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=347.1857142857143) [running on a Kubernetes cluster. Do also](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=349.746) [remember that as of right now, that is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=352.71475) [December 2018, it's not possible to access](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=355.26450000000006) [Memorystore for Redis from within App Engine standard or Cloud Functions.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=3a74386f-8c4c-4487-8fa0-c4e8d0922038&clip=5&mode=live&start=357.95816666666667)

[Scaling and Monitoring Cloud Memorystore](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=0&mode=live)

[Module Overview](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=0&mode=live)

[Hello, and welcome to this module on](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=0&mode=live&start=0) [Scaling and Monitoring Cloud Memorystore](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=0&mode=live&start=3.97) [instances. As the name of the module would](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=0&mode=live&start=7.055833333333334) [suggest, this one is all about scaling](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=0&mode=live&start=8.906285714285715) [behavior on Memorystore. As we've seen,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=0&mode=live&start=11.408999999999999) [Memorystore offers instances in two tiers.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=0&mode=live&start=14.304999999999998) [These instances have pretty different](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=0&mode=live&start=16.40685714285714)[behaviors during scaling. It's also](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=0&mode=live&start=18.391) [possible to achieve high availability](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=0&mode=live&start=20.564) [using the standard tier instances. This](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=0&mode=live&start=21.98) [high availability is not achieved using](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=0&mode=live&start=24.958499999999997)[Sentinel, which is the open-source Redis](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=0&mode=live&start=27.307166666666667) [route to high availability. Rather,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=0&mode=live&start=30.1334) [standard peer instances just make use of](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=0&mode=live&start=32.702999999999996) [cross-zone replication along with a](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=0&mode=live&start=35.48414285714286) [replication mechanism between the master and the replica.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=0&mode=live&start=37.587)

[Two Tiers of Redis Instances](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live)

[In this video, we will understand in](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=1.957) [detail the scaling, replication, and](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=3.9170000000000016) [failover characteristics of the two](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=6.653800000000001) [classes of Redis instances. Recall that](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=9.2535) [basic instances have no replication at](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=11.961666666666666) [all. On the other hand, standard instances](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=14.090142857142858) [have built-in cross-zone replication, so](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=16.9344) [there is a master-replica pair. The master](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=19.702714285714283) [and the replica are in different zones.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=23.188) [From this, it follows logically that there](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=26.079) [is no possibility of failover for basic](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=27.865) [instances. Standard instances can, indeed,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=31.215375000000005) [failover from the master to the replica.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=33.372) [This is only possible for high](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=36.337) [availability, not as a read replica. This](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=37.977) [also implies that the scaling of basic](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=41.953) [instances requires blocking, and the cache](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=43.913) [needs to be flushed. Standard tier](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=47.152) [instances, on the other hand, can scale](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=49.265571428571434) [without taking down the other instance.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=51.50025) [And, as a result, their downtime on](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=54.075) [scaling is far smaller. And the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=56.10149999999998) [implication of all of these differences is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=58.17912499999999) [that the basic tier is best used for pure](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=60.467499999999994) [caching use cases. If you'd like to use](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=63.77612499999999) [Redis as a database or as a storage layer,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=66.128) [then the standard tier is much better.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=68.48550000000002) [Let's now go ahead and understand how](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=70.85249999999999) [basic tier instances scale. As we've](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=73.851) [already discussed, there's no replica, and](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=76.636) [so there's no alternative but to block](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=78.36514285714284) [reads and writes during the instance](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=80.98814285714285) [resizing. Because the instances before and](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=83.198) [after scaling have no link, all data from](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=86.18828571428571) [the cache is going to be lost. So it](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=89.0583) [obviously makes sense to scale a basic](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=91.597) [tier instance during a period of really](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=93.51614285714285) [low activity. Because standard instances](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=96.32833333333333) [have a master-replica pair, scaling also](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=98.69900000000001) [becomes a lot cleaner. The replica is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=101.30366666666667) [first resized. After that replica has been](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=105.66799999999999) [resized, it is synced with the master. And](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=108.46275000000001) [only after the replica and the master have](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=111.532875) [both been brought up to speed with each](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=113.851) [other, only then is the master going to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=116.08425)[fail. The master then simply fails over to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=118.590625) [the replica, and the replica and the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=121.331) [master now switch roles. At this point in](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=123.431) [the process, the old master is going to be](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=126.9475) [resized as well. So once the entire](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=129.64799999999997) [scaling process is done, both the master](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=132.0105) [and the replica are going to have the new](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=134.07374999999996) [resized capacity. There is going to be a](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=137.78600000000003) [very brief period during which all](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=140.4433333333333) [connections to the Redis instance are](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=142.0831428571429) [going to be terminated. But this is only](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=144.02266666666668) [the failover period, so it's really a very](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=146.67371428571428) [brief downtime. In contrast with basic](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=149.70228571428567) [instances, the connection termination](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=152.46359999999999) [period happens all through the resizing of](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=153.99360000000001)[the instance, which is much longer. It's](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=156.4225714285714) [also important to note that no](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=159.69385714285713) [applications need to change their](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=161.013) [connection strings or IP addresses, and so](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=163.193)[the applications simply need to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=166.054) [incorporate retry logic. There's nothing](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=168.29900000000004) [else that they need to do. We definitely](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=170.13466666666665) [don't need to recode our applications to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=172.38049999999996) [deal with scaling. Some more factors to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=175.34675000000004) [keep in mind, while scaling, even if we](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=177.93771428571424) [are scaling a standard tier instance, we](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=180.10337499999994) [should try and keep the instance write](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=181.92142857142855) [load to a minimum. Otherwise, the time](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=184.33100000000005) [taken for scaling can increase](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=186.87428571428572) [significantly, and it can even cause the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=188.46133333333333) [scaling operation to fail. To see why this](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=191.37733333333333) [is the case, just remember that there is a](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=194.17022222222226) [brief interval when the replica is being](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=196.0775) [scaled, so there's only one copy of the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=198.26985714285718) [data. And what's more, after being scaled,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=201.5614) [the replica has to catch up with the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=204.02) [master. That's the re-sinking process.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=205.69200000000004) [During this re-sinking process, expired](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=208.486) [keys are not going to be transferred over.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=210.3212857142857) [As a result of this, if we had a large](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=212.76614285714282) [number of expired keys, after the instance](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=216.47399999999993) [has been scaled, the size of the memory](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=218.96700000000004) [consumed can dip significantly. Remember](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=222.24599999999995) [that Memorystore instances are charged for](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=224.4972) [what you allocate, so it's important for](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=227.01914285714284) [us to be able to reduce the size of the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=229.32311111111113) [instance, as well as to increase it. And,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=231.83162500000003) [therefore, it's good that scaling is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=234.15499999999997) [possible in both directions. While scaling](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=237.00785714285715) [down the capacity of our instance, we must](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=239.861) [choose a size greater than the amount of](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=242.37614285714284) [data currently stored in the instance, else the downscaling operation will fail.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=1&mode=live&start=244.9985)

[Scaling Basic Tier Instances](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live)

[Now that we've understood the scaling](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=2.02) [behavior of both types of instances in](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=3.801) [detail, let's turn our attention to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=6.321) [another aspect of Memorystore, which is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=8.734714285714285) [automatic failover. Automatic failover](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=12.145) [clearly is going to be present only with](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=14.149142857142856) [standard tier instances, and that's](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=17.003999999999998) [because it relies on the master-replica](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=18.98457142857143) [pair. Remember that standard tier](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=21.008000000000003) [instances by default have a master-replica](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=23.49566666666666) [pair. So effectively there are two copies](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=26.515399999999996) [of the same data, and these are in](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=28.275000000000002) [different zones. An important note here,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=31.485) [automatic failover is also present in the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=34.292333333333325) [open-source version of Redis. That makes](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=37.09942857142856)[use of a program called Redis Sentinel.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=39.290499999999994) [Redis Sentinel is not used by Memorystore.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=42.743) [Rather, it relies entirely on the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=46.077) [cross-zone replication we just alluded to.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=48.037) [This automatic failover is going to occur](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=51.211) [whenever the zone for the master goes down](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=53.395) [or when the master becomes unresponsive.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=56.459) [In other words, the platform takes](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=59.403) [ownership of automatic failover and](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=60.932) [ensures that it happens on either zone or](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=63.51783333333334) [master outages. This replication mechanism](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=67.493) [which all standard instances come with is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=69.465) [based on something known as the Redis](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=71.91385714285711) [asynchronous replication protocol. It's](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=74.64016666666664) [important to note that these are purely](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=77.33785714285715) [failover replicas, so the replica is never](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=79.09671428571428) [going to be available as a read replica to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=82.18725) [reduce latency. It only exists for](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=85.36)[failovers. The actual mechanics of](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=89.18060000000001) [failover are made pretty smooth by the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=90.98471428571428) [platform. All existing connections to the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=93.7854) [master are dropped. That doesn't matter](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=96.247) [because failover is only going to happen](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=98.13949999999998) [if the master is down, not unresponsive.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=99.96488888888888) [On reconnect, clients are going to be](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=103.299) [redirected to the new master. They'll need](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=105.204) [to reconnect to the new master, and that's](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=107.794) [why it's a good idea for them to have](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=109.64866666666668) [retry logic. But what's crucial is that](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=112.3292) [they can do so using the same connection](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=114.30833333333334) [string and IP. So there's absolutely no](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=117.02185714285712) [need to update the application. If the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=120.22999999999999) [failover is entirely caused by an outage](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=122.97575) [of the master, it ought to take about 30](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=124.965875) [seconds to complete. Of course, if the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=128.3812) [outage is happening because an entire zone](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=130.70642857142857) [is down, then the failover can take](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=132.7285) [longer. During the failover period, there](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=135.6345) [is no replica of the data, so clearly even](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=137.41600000000005) [the standard tier instances are regional.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=140.78999999999996) [If a regional outage occurs, well, then](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=144.012) [our service is simply going to be unavailable.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=2&mode=live&start=146.51800000000003)

[Stackdriver Monitoring for Memorystore](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live)

[In this example, we will demonstrate the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=2.565) [use of Stackdriver Monitoring in order to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=4.581) [keep tabs on our Memorystore Redis](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=7.101) [instance. We start from the Navigation](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=11.684142857142858) [menu and scroll down until we find the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=13.744428571428568) [Stackdriver section, and there we click on](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=16.093857142857146) [Monitoring. This in turn opens up](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=19.155571428571427) [Stackdriver Monitoring where we can set up](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=21.12166666666666) [of alerting policies. So let's go ahead](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=23.536333333333342) [and click on the Create Policy button in](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=25.57788888888889) [the middle there. The alerting policy](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=28.521000000000004)[requires us to first pick a metric which](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=31.025) [we are interested in monitoring. Metrics](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=33.83033333333334) [are organized by resource type. So in the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=36.486333333333334) [drop-down, we've got to scroll down until](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=39.619) [we find our Cloud Memorystore Redis](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=41.730714285714285) [instance. Let's select this, and we then](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=44.168142857142854) [have a set of different metrics which we](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=47.072) [can pick. For now, let's pick the number](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=49.54425) [of calls. This is going to be calculated](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=52.12375) [on a per-second basis. Next, we can](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=54.289) [configure the condition. Here we would](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=58.029999999999994)[like to be notified every time the number](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=59.87624999999999) [of calls is above a certain threshold, and](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=61.79299999999999) [that threshold is 0. This is going to be](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=64.748) [measured over a certain period, and that](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=68.261) [period we set to just the most recent](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=70.15033333333334) [value. So each time calls come into our](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=73.19950000000001) [Redis instance, we are going to be](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=76.582) [notified. Let's go ahead and save this](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=79.36449999999995) [alerting configuration. We now have to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=82.60150000000004) [specify the notification channel. There](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=85.18299999999999) [are several different choices here of](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=87.05914285714286) [which email is the only one which is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=88.506) [available to us for free. So we select](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=90.428) [that and then configure the recipient of](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=93.298) [this email. There is also a button there](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=95.478) [which allows us to add additional](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=97.79524999999997) [notification channels. We can also use](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=100.39233333333334) [Stackdriver to configure the exact form of](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=102.70400000000002) [the email that we wish to send, as well as](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=104.52260000000001) [a policy name. We are fine with the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=107.49928571428572) [default for this, so let's go ahead and](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=109.90624999999999) [save this policy. Next, let's switch into](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=112.41175) [App Engine where we still have our App](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=114.52600000000001) [Engine application published. So we click](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=117.69242857142855) [on the Services tab. This brings up the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=120.19528571428572) [default application, and we can hit that](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=123.199) [in our browser by clicking on the little](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=125.3697777777778) [expand icon. The first time we hit the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=128.62) [URL, the visitor number is incremented to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=130.9706666666667) [67. We then hit Refresh several times.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=133.62100000000004) [This causes a bunch of hits to our Redis](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=136.561) [instance culminating in the visitor count](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=138.848) [being 137. If we now switch back into](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=142.184) [Stackdriver Monitoring and hit Refresh, we](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=145.43971428571422) [can see that there is an open incident](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=147.3265) [there. Stackdriver Monitoring reports that](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=150.398) [there has been a violation of our](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=152.29639999999998) [condition because the number of calls is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=154.92985714285706) [now greater than 0. Notice that it has](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=157.18725000000003) [normalized this on a per-second basis for](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=160.19000000000005) [a value of 0.02. If we now switch into our](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=163.23033333333336)[email inbox, we will see that there is a](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=166.60999999999996) [Stackdriver alert there, and this has the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=168.69537499999996) [same message. We have successfully](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=171.60299999999995) [demonstrated the use of Stackdriver](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=173.392) [Monitoring with Redis. Let's now switch](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=175.37400000000002) [back into Stackdriver Monitoring and acknowledge the incident.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=3&mode=live&start=177.89800000000002)

[Scaling a Memorystore Instance](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live)

[In this example, we will demonstrate](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=2.854) [scaling Memorystore instances on the fly.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=4.299) [Let's start out in the Navigation menu and](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=9.131) [check out the logs related to our](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=11.849) [Memorystore instance. So we click on the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=13.598) [Logs, and that takes us into Stackdriver](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=17.073500000000006) [Logging. There we can use the drop-down to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=19.81533333333333) [pick the kind of resource we would like to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=22.187555555555555) [audit. This is organized according to the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=25.305999999999994) [RESTful API endpoints of the Google Cloud](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=27.28714285714286) [services, so we've got to pick the service](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=30.223000000000003) [first, which here is redis.googleapis](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=32.490624999999994) [.com, and then the method, which here is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=35.30219999999999) [CreateInstance. And in this way, we can](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=39.993) [drill down into specific kinds of](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=41.78266666666667) [operations. We can also pick a time and](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=44.67925) [date range. Let's pick the last six hours,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=47.56633333333334) [and we can see that there are four](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=49.413666666666686)[CreateInstance operations corresponding to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=52.13400000000001) [different experiments as I was playing](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=54.18900000000001) [around with the service. We can tell from](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=56.455428571428556) [the instance IDs that two of these had to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=58.964999999999996) [do with the spikey-test-cache in](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=61.274400000000014) [us-central1, and the last two had to do](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=63.487199999999994) [with the spikey-prod-cache in us-east1.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=66.90842857142857) [Recall that along the way, we had also](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=70.658) [deleted the spikey-test-cache instance,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=72.298) [but here because we filtered on only](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=75.096) [Create operations, those log entries don't](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=76.94049999999996)[show up. Now let's switch back into the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=79.74542857142859) [Memorystore portion, and let's scale up](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=82.79771428571425) [our spikey-prod-cache instance. This is a](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=84.76616666666668) [standard tier instance. We click through](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=88.82199999999999) [and click on the little pencil icon to](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=90.651375) [edit this instance. That now brings up all](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=93.73199999999999) [of the editable properties of the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=96.50825000000003) [instance. Let's go ahead and change the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=98.65400000000001) [instance capacity from 1 to 2 GB. Doing](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=100.39828571428568) [this has a significant impact on the cost.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=104.1075) [Before the increase, the estimated cost is](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=106.795) [$ 46.72 per month. After we confirm that](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=108.966) [we would like to, indeed, scale this](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=112.66377777777778) [instance, the new estimated cost is $](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=115.3725714285714) [93.44. We can also see from this warning](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=120.44757142857144) [message that when we scale a standard tier](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=122.91187500000004) [instance, unreplicated data is going to be](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=125.038) [lost, and the instance will briefly be](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=127.835) [unavailable. We are fine with this, so we](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=131.85824999999997) [go ahead and scale the instance, and we](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=133.50959999999992) [can immediately see that the maxmemory in](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=135.61957142857145) [our graph has gone up from 1 GB to 2 GB.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=138.23899999999998) [There's also a small fall in the memory](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=142.807) [usage quite possibly attributable to that](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=144.883) [loss of unreplicated data we were just](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=147.943) [referring to. In any case, the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=149.96) [spikey-prod-cache instance has now been](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=151.987) [updated. Let's see if this is reflected in](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=155.32033333333328) [Stackdriver Monitoring. So we switch back](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=157.912) [over into the tab that we have open with](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=161.4596666666667) [Stackdriver Monitoring. This time we are](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=164.55244444444443) [not looking to create an alerting policy.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=166.03066666666672) [Rather, we are looking to build a](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=167.6817142857143)[dashboard. So we give it a name. Let's](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=170.14899999999997) [call it to the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=172.79260000000002) [redis-instance-monitoring-dashboard, and](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=173.595) [then go ahead and add a few widgets into](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=175.76122222222222) [it. So we click on the Add Chart button in](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=177.5048888888889) [the top right, and that in turn allows us](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=180.52688888888886) [to go ahead and add different charts. We](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=183.46344444444446) [are going to add the resource type, which](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=186.535) [is Cloud Memorystore Redis Instance, and](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=188.586) [then the metrics. Let's go with the calls](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=191.225) [once again. A difference between the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=194.12699999999998) [alerting and the charting is that we now](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=195.7864285714286) [can specify an aggregation operator. So](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=197.85675000000003) [this time, let's go ahead and sum up the](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=200.6068) [number of calls per minute. This gives us](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=202.765) [a fairly nice widget in which we can see](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=205.81899999999996) [that there was a period of some activity](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=207.4593) [when we hit the server multiple times.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=208.878) [Let's now go ahead and add yet another](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=212.042) [chart, this one with the maximum memory of](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=213.802) [our instance. Let's go ahead and add this](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=216.832) [in there. And immediately we can see that](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=219.783)[the scaling operation that we just](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=222.458) [performed shows up. The maximum memory](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=224.153) [increased from 1 GB two 2 GB. We've](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=227.114) [successfully scaled our Redis instance and](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=230.4204) [captured that scaling in the Stackdriver Monitoring.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=4&mode=live&start=232.97114285714284)

[Summary and Further Study](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=5&mode=live)

[That gets us to the end of this module and](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=5&mode=live&start=2.23) [to the end of this course. This module was](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=5&mode=live&start=3.894) [devoted to the behavior of Memorystore](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=5&mode=live&start=6.929499999999999) [instances during scaling. We studied both](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=5&mode=live&start=9.276) [the concepts, as well as the theory behind](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=5&mode=live&start=12.018) [scaling, the high-availability](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=5&mode=live&start=14.638) [configuration made available on standard](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=5&mode=live&start=16.0925) [tier instances, and the mechanics of](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=5&mode=live&start=18.456600000000005) [replication and failover. The whole appeal](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=5&mode=live&start=21.494142857142858) [of Redis lies in its ease of use and](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=5&mode=live&start=23.90533333333333) [simplicity, and that clearly came through](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=5&mode=live&start=26.48542857142857) [in the simple nature of the demos here.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=5&mode=live&start=28.39) [Replication and scaling are simple and](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=5&mode=live&start=31.479) [easy to use because they just work. We've](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=5&mode=live&start=34.73188888888888) [almost come to the end of this course.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=5&mode=live&start=38.394666666666666) [Before that, I'd like to leave you with a](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=5&mode=live&start=40.064) [reminder to delete any resources that you](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=5&mode=live&start=41.621) [provisioned during the course examples.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=5&mode=live&start=44.278)[This includes all of our Memorystore for](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=5&mode=live&start=47.275) [Redis instances, the VM instances, and](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=5&mode=live&start=49.575) [Google Kubernetes Engine cluster, as well](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=5&mode=live&start=53.050000000000004) [as the App Engine deployment. And,](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=5&mode=live&start=55.79828571428572) [finally, here are a couple of excellent](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=5&mode=live&start=57.85185714285714) [courses for further study on Pluralsight.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=5&mode=live&start=59.551) [The first of these is called Architecting](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=5&mode=live&start=63.048) [Scalable Web Applications Using Google App](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=5&mode=live&start=64.634) [Engine. And the second is AWS Developer:](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=5&mode=live&start=68.00257142857139) [Getting Started with DynamoDB. DynamoDB](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=5&mode=live&start=70.85085714285717) [often and consistently ranks as the second](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=5&mode=live&start=74.18983333333333) [most technology in the key-value store space with Redis being the first.](https://app.pluralsight.com/player?course=google-cloud-platform-memorystore-redis-leveraging-fully-managed-datastores&author=janani-ravi&name=2cda8f22-111a-45bf-b80d-7c4395fe61f0&clip=5&mode=live&start=77.42057142857144)