



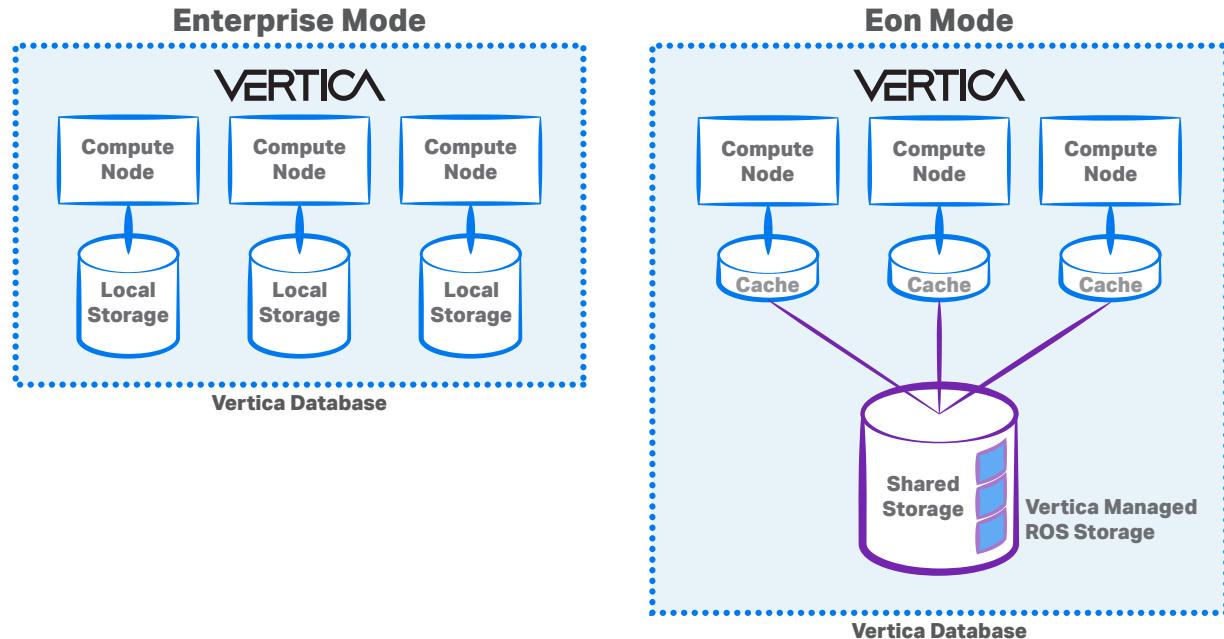
Introducing the Eon Mode Concept

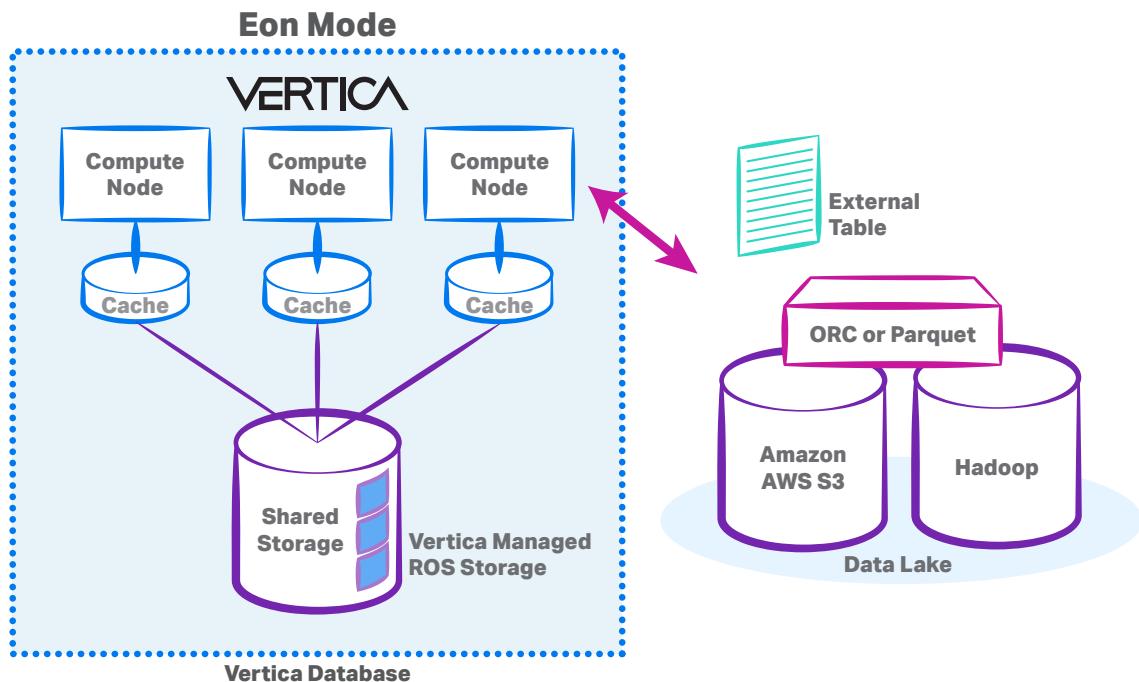
Vertica was born at a tipping point in the world of Enterprise Data Warehouses. It was designed from the first line of code to address new levels of data volumes and analytical performance. But it was also designed to break the tightly integrated hardware and software appliances offered by industry leaders at the time including Teradata, Oracle and IBM. Vertica was and continues to be a software only analytics platform that will always support a variety of deployment options on a variety of commodity hardware, whether that hardware is in an organization's own data-center or in one of many cloud platforms.

In 2015, Vertica confirmed its support for Amazon Web Services, followed by support for Microsoft Azure in 2016 and Google Cloud in 2017 while it continued to support on-premise data-center deployments and native deployments utilizing Hadoop nodes. All of these deployments had one thing in common – they were all based on a single unified software engine that did not differ between deployment options. This provided our customers with the flexibility to leverage whatever infrastructure made sense for their business at any time and for any use case.

But we saw that there was even more opportunity to optimize Vertica for cloud economics. As a software company, we don't benefit when our customers use more servers or more compute nodes. That's not true for competitors like Snowflake or Redshift because they make money when customers spend more money on infrastructure. That's why we began the journey toward a new way to setup a Vertica cluster on the cloud – Vertica in Eon Mode. Vertica in Eon Mode is not a new product, it does not have different licensing, and it delivers the full suite of advanced analytics and in-database machine learning because it is the same code. So what's different?

Prior to the release of Eon Mode, customers deployed Vertica on servers with tightly coupled storage. That means servers like Dell, Lenovo or HPE in on-premise data centers. Vertica provides architectural guidance on the recommended CPU, memory and disk required for the amount of data and analytical workloads. On the AWS, Azure and Google Cloud platforms, Vertica also provides guidance for similar server requirements. Customers needed to provision servers (on-premise or in the clouds) based on their expectations of peak workloads which means that even when the Vertica database was not being heavily used for analytical queries, dashboards, and other tasks, all the servers needed to stay on.





Now comes Eon Mode. If a Vertica customer is planning to deploy a Vertica cluster on AWS, they will have the choice to deploy in Enterprise Mode or in Eon Mode as part of their Vertica set up process. Eon Mode allows the customer to load and store all their Vertica ROS data in a dedicated S3 bucket. Eon Mode then allows the customer to spin up the EC2 instances (known as "compute nodes") based on the workload requirements that they have at any point in time. That means that a customer can turn on nodes when they have high demand and they can turn off nodes when they don't have that same level of demand. That's what "separation of compute and storage" means ... Vertica ROS data in cheaper storage and compute nodes that can be powered on or off as needed. Right away, you can see the advantage ... a lower cost for underlying AWS infrastructure! But that's just the beginning. Vertica in Eon Mode also allows our customers to hibernate the database altogether, meaning they can "turn it on" and "turn it off" without any need to reload data, re-balance and restore, or perform other management tasks. This is great for customers who have special projects that don't need resourcing 24/7. Again, a much lower AWS infrastructure bill! Finally, Vertica in Eon Mode allows the administrator to allocate resources to specific departments or teams to ensure that different workloads and projects don't cause problems for other workloads and projects. Everyone knows that marketing analytics is never as important as closing the books or providing the CEO with his or her revenue predictions dashboard!

Vertica is also known for its ability to analyze ORC and Parquet data, a popular set of open source formats which are not the same as Vertica's own ROS data format, in data lakes. When you're talking about data lakes on AWS, you're talking about Amazon S3. Both Enterprise Mode and Eon Mode can use external tables to analyze data in S3 data lakes so if a customer has reasons to keep some data in a centralized data lake for other applications who might need access to that data, that doesn't stop anyone from finding value in that data using the advanced analytics functions that Vertica provides.

Today, Vertica's ability to setup a cluster in Eon Mode is only available on AWS but that's a very short term issue. We are already moving quickly to scope out the work for the Google Cloud, Microsoft Azure and on premise using HDFS as the shared storage. We love the idea that our customers can put more data into Vertica because their lower infrastructure bills will help pay for more Vertica license capacity ... and still deliver savings to their bottom line!