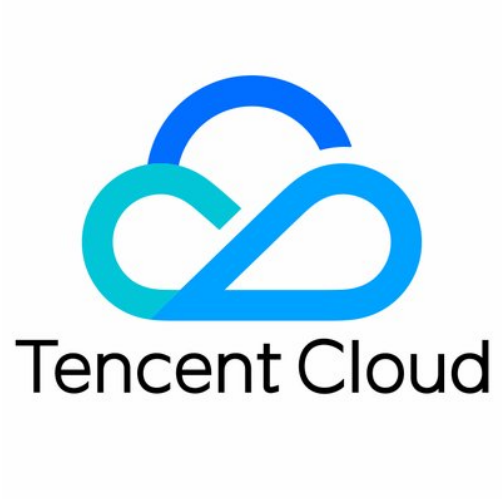
Auto Scaling

Customer Cases

Product Documentation



Contents

Customer Cases
iCarbonX

Last updated：2019-12-17 17:16:41

Overview

With cloud computing, high performance computing (HPC) can use applications with higher bandwidth and higher computing capacity to address complex scientific, engineering and business issues.

However, the problems solved by HPC are usually based on projects, placing huge demands on the high scalability of the cloud platform. This document describes how Tencent Cloud helps enterprises carry out their HPC business by using ultra-high computing capacity (CVMs), high scalability (AS), high capacity disks (CBS) and Cloud Object Storage (COS).

Customers: iCarbonX (Shenzhen) Company Limited

One of the Fast Company's 2017 Top 10 Most Innovative Companies in China. Other Chinese companies listed include Alibaba, Tencent, Xiaomi, BBK Electronics, Huawei, and Wanda Group.

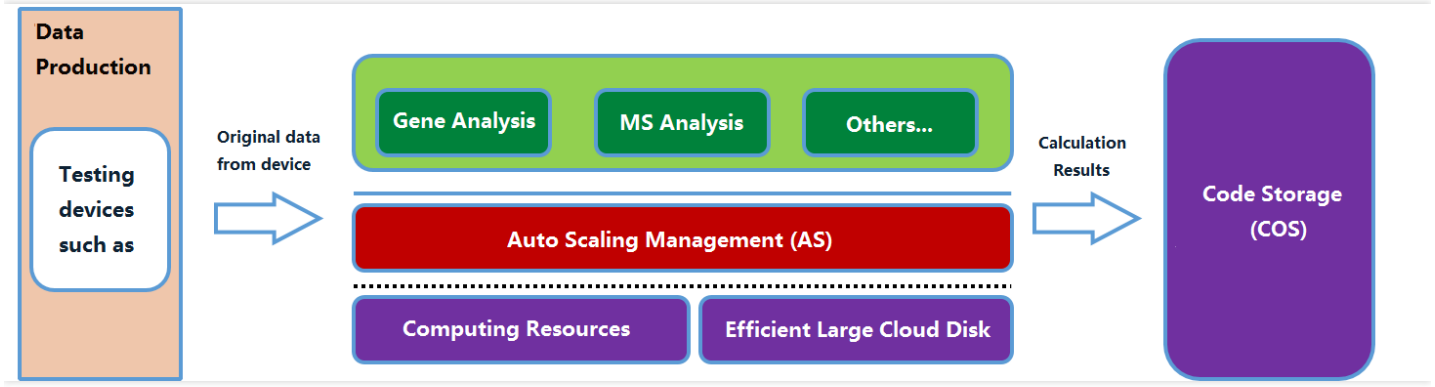
iCarbonX allows customers to integrate the advantages of artificial intelligence into the abundant analyses and applications of big data through data mining and machine learning, providing personalized products and services for the management of digital life.

(Ma Huateng speaking with Wang Jun, CEO of iCarbonX.)

Business challenges

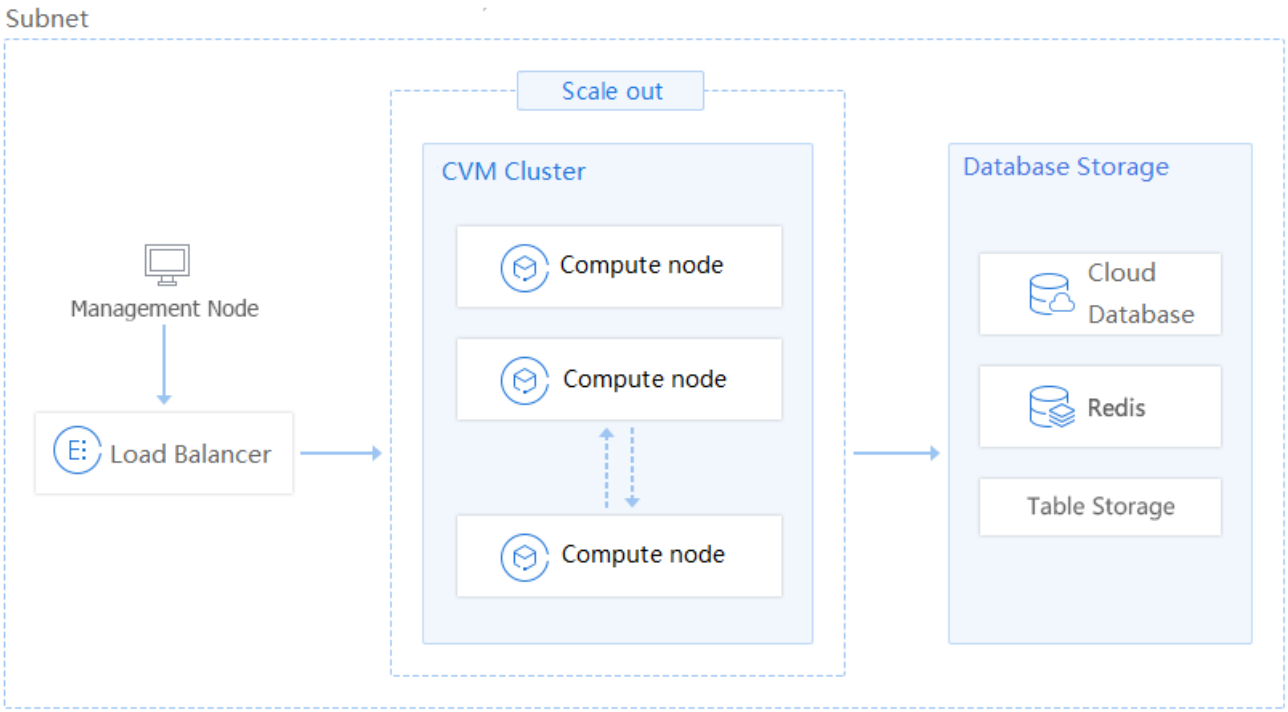
- A computing cluster for multi-omics detection may be scaled up to 1,000+ cores and 100+ TB.
- The preparation for the environment of the compute nodes in the detection workflow is cumbersome and labor-intensive.

Conducting business with Tencent Cloud



1. Original data output: Initial processing of multi-omics data using detection devices.
2. Multi-omics data analysis: It is mainly performed on Tencent Cloud, relying on three core infrastructures.
   - A cluster of multiple high-performance servers with 30+ or even 60+ cores.
   - A data server composed of large and efficient cloud disks.
   - The complete HPC workflow management with Tencent Cloud auto scaling service.

The computing cluster to be urgently scaled up is deployed as follows:



Here, you can see that by placing the Compute Node which urgently requires massive scalability into AS, iCarbonX can create HPC clusters with 1,000+ cores and 100+ TB in minutes, greatly improving the stability and real-time nature of the computing cluster while reducing human input, thus greatly reducing costs.

> Note:
> Tencent Cloud has completed the deployment of cloud disks with 60,000+ cores and 10,000+ TB for HPC customers, all of which are delivered within minutes.

Benefits to the Customer

- Ultra-high computing capability and high scalability of Tencent Cloud enables customers to run high-performance computing on the cloud to improve research speed. With AS, iCarbonX has easily achieved the scale-out deployment of 1,000+ cores and 100+ TB.
- By combining the flexible cloud platform with Tencent Cloud pay-as-you-go mode (in seconds), customers can receive quality computing services with low investment, reducing costs.