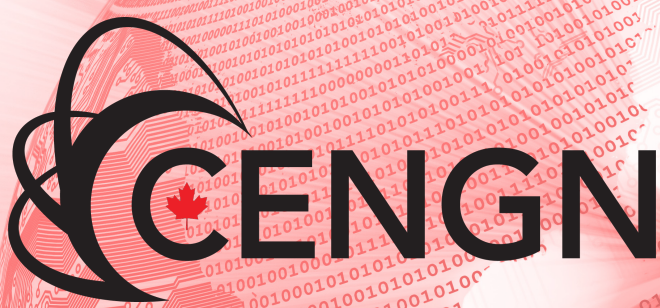




GIMME360 PREPARES FOR ENTERPRISE LEVEL DEPLOYMENTS THROUGH A CENG PROJECT

GIMME360 is a Toronto based firm involved in the development of AR and VR solutions for a variety of industries, with special focus on the pharmaceutical market. In this data center and cloud CENG project, GIMME360 scale tested their SaaS GIMME360 ARC solution to find out proper resource requirements for large customer deployments.

Founded in 2016, GIMME360 created the ARC (Augmented Reality Cloud) web platform, originally designing it as a marketplace for 3D model illustrators to buy and sell their creations. Recently, GIMME360 has brought a new focus to ARC, aiming to produce augmented reality (AR) and virtual reality (VR) tools to allow Fortune 500 companies to reduce the required hardware and specialized knowledge needed to introduce AR and VR solutions to enhance their customers' experience.

THE EVOLUTION OF THE SHOPPING EXPERIENCE

Today's tech world is rapidly evolving, with most shoppers carrying mobile devices and relying on them to provide real-time information when making purchasing decisions. As mobile phones have advanced, so have the capabilities to leverage these devices to bring better customer service to the owners. One major advancement has come in the form of AR, the ability to have your phone interact with and provide information on the real world through video analysis. Unfortunately, the expertise and resources required to deliver AR services are very steep, making it difficult for traditional companies to break into the technology.

With GIMME360, enterprises can provide shoppers with an AR experience that provides an enhanced and informative user experience while they browse shelves of products. The real-time tools included in this platform like price checking capabilities, product comparisons, product information, and review, have been scientifically proven by retail market data to increase the odds of a consumer making a purchase.

ENHANCING COMMUNICATION BETWEEN ENTERPRISE AND CONSUMER

The GIMME360 ARC web platform allows enterprises to design custom objects, user interfaces and 3D animations to help enhance their consumers' shopping experience. With simple drag and drop options for building custom objects or by selecting from a library of pre-built objects, companies can create an augmented reality experience around their products, where customers can see video displays of information on products they view through their phone. As customers browse a store with GIMME360, they can build a "digital shelf" to view videos, compare products, price check, and check other information on the products in the store.



Figure 1: GIMME360's AR and VR Solutions

PREPARING ARC FOR ENTERPRISE LAUNCH

To successfully prepare for large scale deployment at an enterprise level, GIMME360 needed to scale test their solution to validate that their ARC server can support many concurrent sessions from both enterprise and consumer users. Through the scale testing, GIMME360 also hoped to gain an understanding of the system resource requirements needed as the amount of concurrent sessions increased. GIMME360 decided to leverage CENG's infrastructure and technical services to carry out this scale testing in a CENG project.

CENG MEMBERS



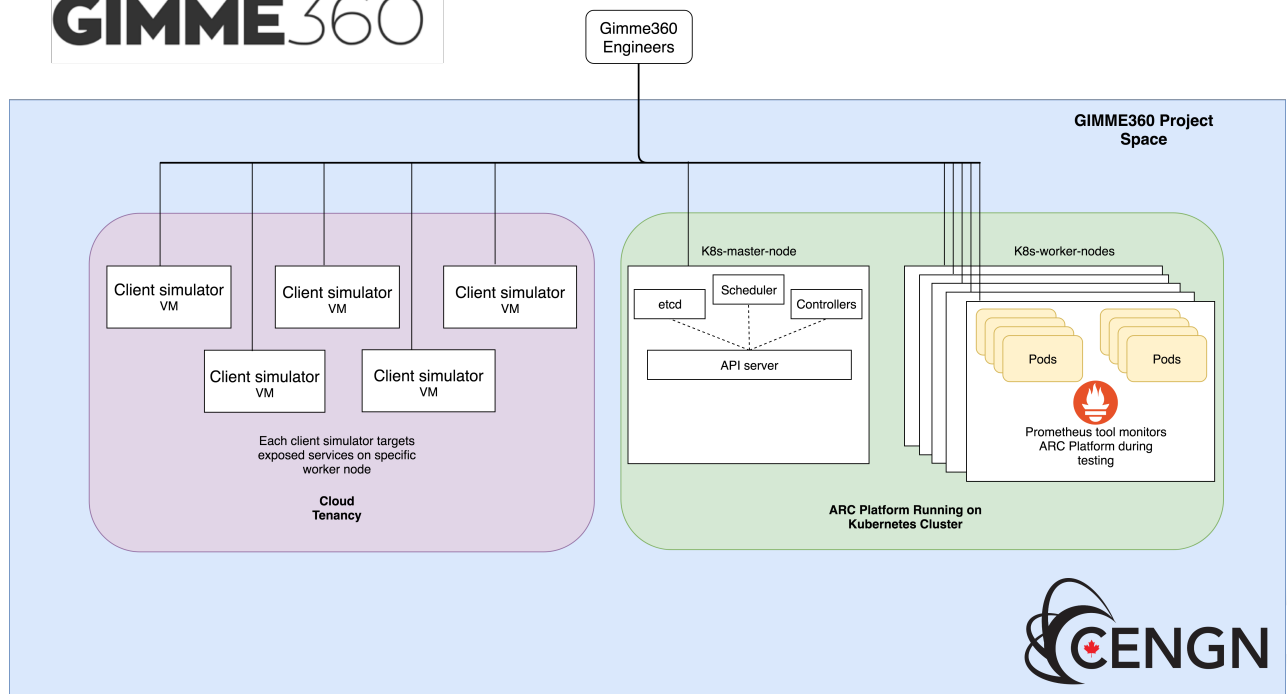


Figure 2: GIMME360 platform setup at CENG

To carry out the CENG project, GIMME360 was provided five virtual machines (VMs) deployed in the cloud tenancy. These five VMs simulated the users, sending incrementally increasing traffic to replicate the same stress that would occur from increasing the number of customers using the solution. In order to monitor the GIMME360's solution, their ARC platform was deployed and configured through a Kubernetes cluster on six bare metal servers. Using Kubernetes allowed Gimme360 to have more control over their solution and monitor each part of ARC individually as a microservices to gain a more accurate understanding of the resource requirements and bottlenecks. The open source tool Prometheus was used to monitor ARC during the testing.

READY FOR LARGE-SCALE DEPLOYMENT

During their CENG project, GIMME 360 received access to a commercial-grade infrastructure, as well as valuable resources and expertise. With this advantage, the growing company was able to see how their platform performed when scaling to 4000 simultaneous users. Various scale and stress testing scenarios occurred on the CENG infrastructure that gave GIMME360 insights on the ARC platform's usage behaviour and resource requirements, as well as knowledge into the boundaries needed to control the critical design parameters for future large-scale deployments. These developments will enable the company to offer their services to larger clients with an accurate prediction on their solution's performance and cost.

Additionally, GIMME360 had the opportunity to test ARC in a Kubernetes environment, validating compatibility and taking advantage of deploying the platform with microservices. This project has provided GIMME360 with a high degree of confidence for upcoming large-scale commercial engagement, pushing the ARC web platform one step closer to brand-new market customers around the globe.