Using Chained Caching to Secure Daily Delivery of Large Files

Mindwalk Studios is a pioneer in integrated development, creating digital art within the gaming industry. Modern games have evolved to incorporate as much realism as possible in the game, from the characters as well as the scenery and the fluid motion that forms the interaction between them. The digital art created for the games therefore, is complex and uses their customer's technology as well as workflow. The result is a beautiful game that has realistic characters and scenery. But this realism also means that the digital art that form the customer's competitive assets can have pretty large file sizes; frequently, file sizes are dozens or hundreds of megabytes per file or more for each customer. Further, as a competitive asset, each customer wants its digital asset managed within Mindwalk Studios in a secure environment separated from any other customer's. Established in the last decade, Mindwalk Studios' ability to generate stunning visual art within the customer's game has resulted in continued revenue growth as their customer base has increased. But the happy problem of revenue growth has also meant that Mindwalk Studios is now dealing with more files, and larger files, for each of its customers. This in turn also means that each customer wants a secure environment in which it can ensure that the digital assets created by Mindwalk Studios are kept confidential.

Due to the demands from high-profile customers on access security to their development networks, Mindwalk Studios was using multiple VPNs and secure proxy servers to manage all customer security demands. These stringent demands however led to difficult data transfer environment, remembers a senior executive in Mindwalk Studios. "Before meeting UMBRA Technologies, we had growing concerns about the sheer size of the data files we had to transfer on a daily basis. As graphics rendering gets more and more detailed and complex, we are seeing an exponential growth in file sizes that need to be delivered to the customers on a daily basis. Luckily, with UMBRA Technologies' Secure Network Optimization Service, data transfers are accelerated and security is seamlessly handled, so we no longer have to worry about getting the latest updates to our customers in a timely manner."

Three key features of UMBRA's Secure Network Optimization Service ("SNO Service") were of interest to Mindwalk Studios from an outsourcing perspective: Advanced Smart Routing, Geodestination™ and Chained Caching.

UMBRA Technologies LTD., Suite 2006, 20th Floor, Hua Qin International Building, 340 Queen's Road Central, Hong Kong SAR
Tel: +852 5371 2392

Advanced Smart Routing is a key technology that optimized the data delivery, regardless of file size quickly around the world, at the lowest possible latency and highest bandwidth throughput. The Advanced Smart-Routing feature is a key feature of the SNO Service, and is a core part of UMBRA's Global Virtual Network ("GVN"). Advanced Smart-Routing is deployed throughout UMBRA's GVN grid, ensuring the optimal routing for any destination around the world. Advanced Smart Routing reduces latency and enables routing around congestion points and other network anomalies that would otherwise impact the efficient delivery of software updates to Mindwalk Studios' customers.

The Geodestination™ feature that is part of UMBRA's SNO Service automatically assigns a localized IP to all connection points, even at the browser level, making it seem to recipient servers as if the data traffic is coming from a local server, without having to resort to using VPNs or unsecure proxy servers to do so. These localized IP addresses can be both dynamic and static, but are in most cases static to allow UMBRA's customers an unprecedented enhancement of their own deployed security.

As a result, after deploying UMBRA's SNO Service, Mindwalk Studios was able to simultaneously connect to many different servers in different countries with each connection being interpreted as coming from a local server close to the destination server, but all actually originating in the same central location. Since UMBRA's SNO Service also is protocol neutral, the service allows Mindwalk Studios to run multiple IPSec tunnels over the GVN's Static Egress Point IPs, securely connecting to their customers' infrastructures.

"Not having to worry about our IPs not being seen as secure because they are not local IPs have made a huge difference in our efficiency" says Mindwalk Studios' CTO. "Had it not been for UMBRA's SNO Service, delivering data to our world-wide customers would have been a technical nightmare".

Lastly, Chained Caching is a key feature of the SNO service, and a core part of UMBRA's GVN. When moving large data volumes around the world, the transport needs to be as efficient as possible, and UMBRA's GVN makes that possible by taking advantage of the interconnected states of datacenters. Third party experiments have shown significant speed increases and reduced file delivery time by a factor of 10 using the GVN, significantly improving on the delivery of data and ensuring that the Mindwalk Studios' customers receive the data in a timely manner.

UMBRA's GVN grid already ensures optimal routing for any destination around the world. This routing avoids congestion points, and further reduces latency and other network anomalies that would otherwise impact the bandwidth availability. In combination with lossless compression, Mindwalk Studios gets maximum throughput on their connections without having to go overboard in terms of connectivity investments.

UMBRA Technologies LTD., Suite 2006, 20th Floor, Hua Qin International Building, 340 Queen's Road Central, Hong Kong SAR
Tel: +852 5371 2392