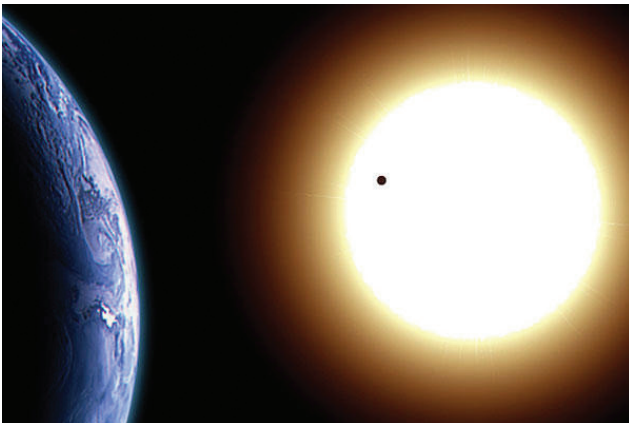


NASA, The Coca-Cola Space Science Center, and Columbus State University leverage SHI's Infrastructure as a Service to support their Transit of Venus webcast to over one million viewers.

The Coca-Cola Space Science Center (CCSSC) in Columbus, Georgia is a division of Columbus State University (CSU). The Center opened in 1996 for the purpose of public education in space science, physics and astronomy.

Summary

A Transit of Venus across the Sun occurs when the planet Venus passes directly between the Sun and Earth, becoming visible against the solar disk. During a transit, Venus can be seen from Earth as a small black disk moving across the face of the Sun. The 2012 Transit of Venus occurred over a seven hour period on June 5th and 6th and will not occur again until December 2117.



The CCSSC wanted to broadcast this event on their website to observers around the world and selected SHI to provide cloud Infrastructure as a Service (IaaS) to help power the webcast. Sponsored by NASA and CSU, the webcast presented an opportunity for observers around the world to witness a once-in-a-lifetime celestial event.

The Challenge

When the CCSSC made the decision to launch multi-continent expeditions to cover the 2012 Transit of Venus, they collaborated with their parent institution, CSU, on the best ways to accomplish such a feat. CCSSC decided to deploy two U.S. teams - one based at Bryce Canyon, Utah and the other in Columbus, GA. A third team was to be placed in the Gobi Desert, Mongolia and a fourth in Alice Springs, Australia. The four teams were tasked with photographing and taking video of the transit with the intent of all that data being streamed live back to CCSSC's servers for the world to watch.

CUSTOMER PROFILE

Space Science Center

CHALLENGE

Broadcast the Transit of Venus online to viewers around the world.

SHI SOLUTION

Provide Infrastructure as a Service to store images of the Venus transit and relay them to users via web-server access.

BENEFITS/RESULTS

- ▶ Enabled 1.4 million users to watch the Transit of Venus with zero downtime
- ▶ Avoided the purchase of additional hardware
- ▶ Allowed technical resources to focus on more important aspects of the project, rather than supporting infrastructure

"For astronomy fans, this is a once-in-a-lifetime event. SHI's cloud technology will allow the entire world to witness this event for the first time in history." – Henry Fastert, SHI Chief Technologist

As CCSSC and CSU worked through the details along with one of CSU's partners, HP, it became apparent that hosting the event was going to be major concern. Unlike most other astronomical events, the 2012 Transit of Venus had been heavily publicized in the national media along with several print and online publications. This transit was also the "last one in our lifetime," so major public interest was guaranteed. Chris Johnson of CCSSC was concerned with the challenge of broadcasting the event on their website and asked, "How do we get a data stream from the middle of the Gobi Desert?"

The Solution

HP directed CCSSC to SHI for hosting solutions in their multi-tenant environment. SHI's Infrastructure as a Service was the perfect solution because of its on demand computing capability. The Time-Boxed Burst Computing option addresses seasonal or unexpected capacity spikes, which the SHI Cloud Center quickly handles without large capital expenditures for its customers.

"For astronomy fans, this is a once-in-a-lifetime event," said Henry Fastert, SHI Chief Technologist. "SHI's cloud technology will allow the entire world to witness this event for the first time in history. The webcast will aid the scientific community as well as the U.S. general public, which would otherwise see only a portion of the transit before the sun sets in the west. This webcast is a prime example of how our organizations can quickly scale through our Time-Boxed Burst Computing, which can support the high-volume web traffic this event will generate."

CCSSC worked with SHI to virtualize their server and migrate it into the SHI Cloud environment. SHI planned to store the images of the Venus Transit and relay them to users via web-server access. CCSSC was confident that the high bandwidth, secure applications, and dedicated performance of the SHI platform made it an ideal option to help broadcast the event and support its anticipated high-volume web traffic.

The Results

"It was a seamless process and after everything was in place, it worked perfectly. The CCSSC's 2012 Transit of Venus webcast was a huge success! We had over 1.4 million unique users log on and view Venus crossing the face of the Sun. SHI's system held up without breaking a sweat, and we had absolutely zero downtime," said Chris Johnson.

"Andy Rosser (of SHI Labs) kept us informed of SHI's server status throughout the webcast. In everything we had to deal with that evening, the servers holding up to massive web traffic was nothing we had to worry about, and that's something for which I was tremendously grateful. SHI played a crucial role in the success of our 2012 Transit of Venus webcast and for their contribution, we at the Coca-Cola Space Science Center and Columbus State University say thank you!" ■

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