

## Challenges

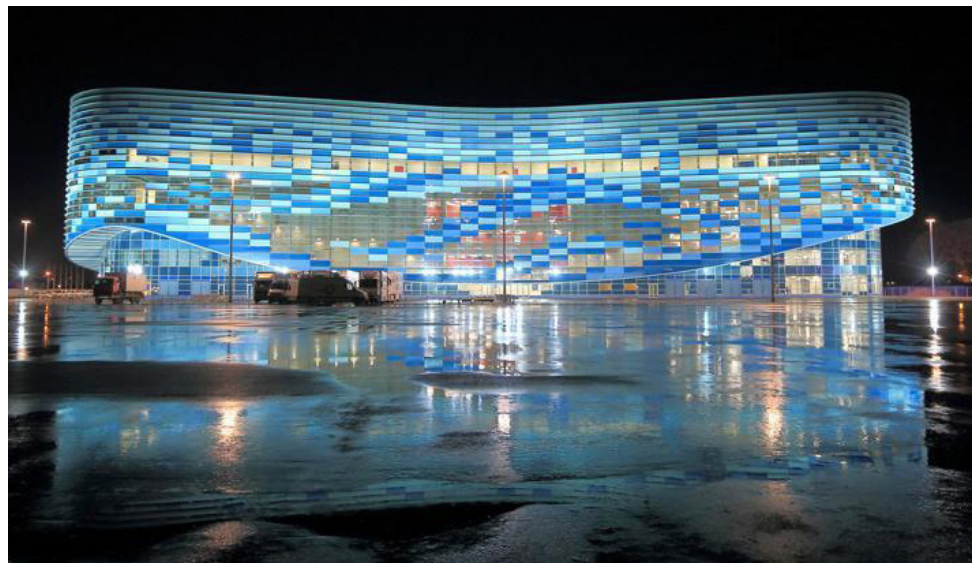
- Design and provide a secure, robust, simplified network
- Ensure the network can cope with pervasive video, massive scale and huge peaks in traffic volumes
- Enable secure BYOD for athletes, media, Olympic family, and IOC members

## Value Created

- Simplified fabric-enabled network; for easier deployment, management and troubleshooting
- Ability to turn up new services and adjust services on the fly with fewer IT resources
- Delivering a truly connected Games experience through anytime, anywhere access to content from any device without compromising security
- Ability to build on previous experience at the Olympic Games

## Sochi 2014 Olympic Winter Games

Avaya has been named by the Sochi 2014 Organising Committee as the Official Supplier of Network Equipment for the Sochi 2014 Winter Games.



As the Official Supplier of Network Equipment to the Sochi 2014 Winter Games, Avaya is providing network, collaboration and communications equipment. Avaya's network will provide a full communications experience to athletes, dignitaries, sponsors and fans worldwide; raising the benchmark set by previous Games by delivering the first "Fabric Enabled" network that will enable anytime, anywhere access to content from any device.

Organisers expect more than 75,000 visitors each day to the Olympic Park and more than three billion television audiences around the globe.

The Sochi 2014 Winter Game events will take place in two 'clusters': mountain cluster and coastal cluster. A host of new venues are being built to

support the Games : 'Bolshoy' Ice Dome, 'Fisht' Olympic Stadium, 'Ice Cube' Curling Center, Sliding Center 'Sanki', 'Laura' Cross-country Ski and Biathlon complex and many others.

In addition, specially created 'Live Sites' are being built in cities across Russia, transmitting live feeds of events as they unfold to Olympic fans.

### Massive data demands require expertise

The organisers expect the use of video streaming on mobile and tablet to make a breakthrough at Sochi 2014. IPTV, tablets and smartphones will place unprecedented demands on the network.

Critical to the success of the Games will be a secure, robust network. It will need to be capable of carrying vast amounts

of data while identifying (and granting access to) a huge range of different user groups.

The network will need to provide seamless connectivity across all venues. It must provision additional capacity quickly and simply, handling huge peaks in data traffic as audience figures spike with the flagship events.

Media, athletes and coaches will be able to tap into 30 IPTV channels across the Avaya network infrastructure. This means a sports journalist watching the figure skating live in the Bolshoy dome can also watch the downhill skiing on HD TV. Press photographers will have instant upload access to thousands of photos from wireless enabled cameras, from the moment an athlete crosses the finish line.

## Trusted partnerships

With the eyes of the world watching, and no room to manoeuvre on deadlines, the Sochi Organising Committee held a tender, seeking a partner with previous experience of Winter Games. In addition, it wanted a vendor that could deliver a communications network to deliver increased efficiency, resiliency and sustainability.

Avaya has a long history of partnering with the Olympic Games movement, and has helped evolve and innovate the hosting, operations and fan experience for many years. In 2010 it built the model for the first all IP converged voice, data and video network solution, which is the standard at the Games today.

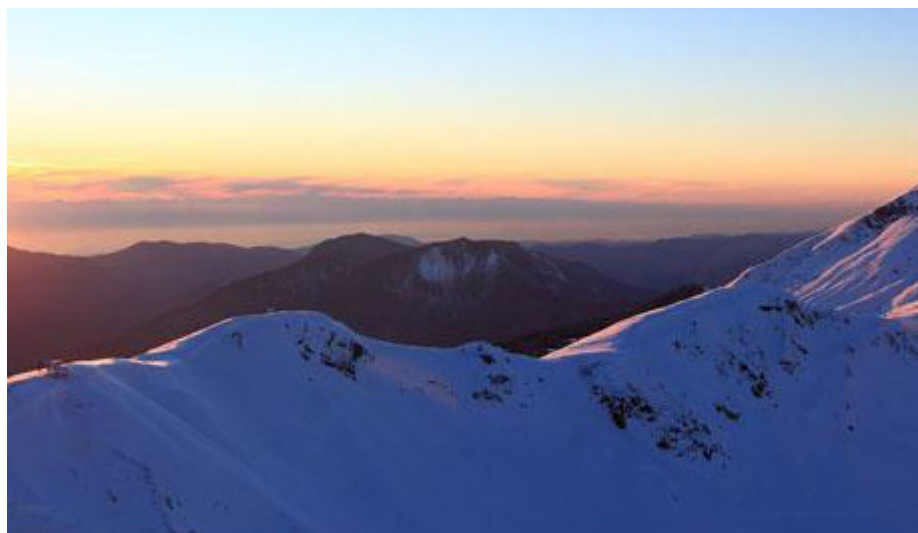
As the Olympics have evolved, Sochi will be much leaner than previous Games. There is a greater reliance on partner organisations, and a need for a network that is simple to deploy and operate. With Sochi a largely Greenfield

site, much of the technology will start from scratch, rather than being overlaid on existing infrastructure.

The solution must strike a balance between using the latest technology and allowing adequate time for testing. The design for the network was finalised in 2010, well ahead of the Games, with testing events already well underway. Every venue will host at least one world championship event prior to the Games. Ninety days before the start of the Games there will be the first of two complete technical dress rehearsals, with faults induced and business continuity plans fully stress tested.

## A virtualised solution

The Sochi 2014 Winter Games are unique in that this will be the first Games where network access will be largely wireless rather than wired. The vast majority of the networks users arrive just as the Games are beginning and are effectively “guests” for 18 days.



With no ability to train users or to control what devices they bring, results in it being the largest guest network of its kind, and a true Bring Your Own Device (BYOD) environment. Guests will expect world class connectivity to match a world class event. Accordingly, Avaya and OCOG are supplying a comprehensive solution delivering

game changing products to meet these key demands.

The Avaya solution uses Avaya Virtual Enterprise Network Architecture at its core. Running off the Avaya Virtual Services Platform 9000 an advanced hardware platform that delivers the highest levels of performance, scalability, and reliability, Sochi 2014 have a solid base to build out the rest of the network.

Additionally, Sochi 2014 will be the first ‘Fabric Enabled’ Games and will leverage Avaya’s leading Fabric Connect technology in order to simplify the design, deployment and management of the end to end network. Avaya VENA Fabric Connect, based on Shortest Path Bridging (SPB) — a protocol based on IEEE and IETF standards that Avaya is pioneering within its Virtual Enterprise Network Architecture — simplifies network complexity by eliminating the need to configure multiple points throughout

no effort and no risk enables the Sochi Organising Committee to be able to switch on new services or adjust network capacity during spikes in network demand, say, the Men's Ice Hockey final or downhill skiing gold medal run.

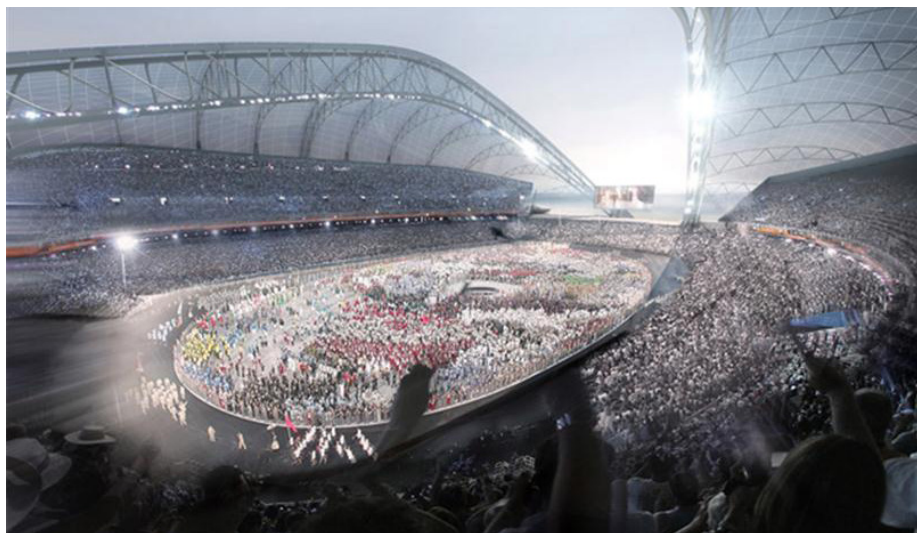
Avaya VENA Fabric Connect provides a single robust protocol for all network services, eliminating the complexity associated with traditional network designs which are based on interactions between multiple Layer 2 and Layer 3 protocols. With support for integrated and scalable multicast, High Definition IPTV video will be distributed to each of the broadcasters and to locations in and around Sochi over the fabric enabled backbone with much greater simplicity than in the past. This streamlined network environment helps the Sochi organising committee increase IT efficiency.

Additionally, within the virtualised network environment, different network zones can easily be created. There will be a secure zones for voice communications, Enterprise or Admin applications, and IPTV, as well as for the highly critical Games network which provides instantaneous event results and tracking for all of the Games competitions.

Avaya Aura® will be deployed for reliable communications. Avaya Aura® provides a common architecture and common management for all kinds of communications — including voice, and video, to enable anytime, anywhere collaboration ensuring that athletes can stay in close connect with their coaches and their families during such a pivotal time in their careers.

With the advent of BYOD the organising committee realised that to guarantee quality of service it is necessary to assign certain devices and certain users to specific service classes. This will

protect bandwidth and prevent security breaches. The Avaya Identity Engines will be used to assign network access rights and permissions based on a user's credentials and role (media, athlete, IOC official), where they connect from (Olympic village, competition venues, etc.), and how they connect (e.g. wireless, wired).



With communications being a critical component of Sochi 2014 Winter Games, the Avaya solution will play a crucial role in ensuring the success of the event. It enables the media, athletes, officials, Olympic and Paralympic family, workforce and volunteers to communicate from anywhere at any time on any device.

Credentials can range from certificates pre-installed in Organising Committee's devices to IOC smartphones to Captive Portal log ons for press and broadcasters. Users will then be placed securely into the proper virtualised network with the predetermined level of service.

To aid connectivity there will be extensive indoor and outdoor WiFi throughout both the Mountain and Coastal clusters. This will be enabled by the introduction of the Wireless LAN 8100 Series a highly scalable, real-time optimised and secure wireless networking solution incorporating the latest 802.11n wireless standard. The WLAN 8100 Series features a unique unified wired/wireless architecture, which will enable Sochi 2014 to achieve high productivity and operational efficiency.

## Learn More

For more information, contact your Avaya Account Manager or a member of the Avaya Connect channel partner program, or access other collaterals by visiting [www.avaya.com](http://www.avaya.com) and [www.avaya.ru/sochi2014](http://www.avaya.ru/sochi2014)

## Solutions:

Avaya Aura®

Avaya Virtual Enterprise Network Architecture

Avaya VENA Fabric Connect capability

Avaya Virtual Services Platform 9000

Ethernet Routing Switch 5000

Ethernet Routing Switch 4000

Avaya Wireless LAN 8100 Series

Avaya Identity Engines

## About Avaya

Avaya is a global provider of business collaboration and communications solutions, providing unified communications, contact centers, networking and related services to companies of all sizes around the world. For more information please visit [www.avaya.com](http://www.avaya.com)

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