



AT&T AND WILLIAMS F1

## SECURITY THAT OUTPACES THE COMPETITION

Technological innovation has revolutionised the way that businesses operate today. The Internet and the increasing number of mobile communication methods have had a profound effect on how companies communicate, and have propelled them toward new and more complex business models.

These evolving business environments, in turn, demand more advanced security solutions as companies look to protect their most valuable asset – information – without hindering business continuity. As a result businesses view security as a priority today.

Security challenges vary within different companies but are particularly prevalent in a business such as Williams F1, the parent company of the racing division, AT&T Williams. As one of the most successful teams in the history of Formula One, the need for tight security is vital, and as a high-profile brand, threats and risks are further increased.

Equally, operating in one of the most technologically advanced sports in the world today, Williams F1 is in a dynamic, global, time-pressured and highly regulated industry in which technological innovation is key to obtaining a competitive edge.

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## Security in unique industries

At the core of Williams F1's headquarters in the UK are the fully managed AT&T Enhanced Virtual Private Network Services (Enhanced EVPN) allowing the Williams F1 team to effectively and efficiently do business every day. Unusually, Williams F1 does not have multiple office locations, but the sport in which the company operates dictates a need for the racing division to change locations, every two weeks for 9 months each year, to accommodate the Formula One season. This involves approximately 20% of the company's 500-strong workforce needing to connect to the company's corporate network from a variety of racing locations around the world. With such a nomadic workforce the number of mobile devices in circulation is growing, so the company needs more secure and reliable networks to be in place. AT&T deployed a secure remote access solution with the AT&T Global Network Client to allow the extensive travelling personnel the opportunity to connect as if in the office, no matter which location or time zone they are in.

Alex Burns, Chief Executive Officer at Williams F1, highlights the challenge the team face. "The implications of the way in which Williams F1 needs to conduct business means that security services are forefront of mind. However these services require ongoing management, continual introduction or updating of security software or hardware, and high costs and extensive hours of skilled IT personnel time. It became clear through consultations with AT&T that the addition of their centrally managed end-to-end approach to security would benefit Williams F1."



AT&T's layered approach to security services is based on maximising the network, and AT&T delivers "A broad portfolio of security services designed to complement and supplement our client's security strategy," according to Kees Vos, Global Portfolio Director – Application Services within AT&T. This preventative approach includes

assessing vulnerabilities, protecting against unauthorized access, proactively identifying attacks and quickly reporting on and responding to suspicious activities.

## Security that delivers

For Chris Taylor, IT Manager at Williams F1, the importance of the reliability and scalability of AT&T's MPLS-based network VPN service is increasing every day. "In Formula One it is possible to monitor every element of performance on the cars through telemetry, and this data is some of the most valuable to our company. Formula One encrypts the data, which is transmitted from the cars to our garage and, relying entirely on the built-in security of the VPN service provided by AT&T, the data is then prioritised according to our needs and reliably transferred to our headquarters in the UK for immediate analysis. In 2009 a change in the FIA Formula One regulation meant that all the teams did less actual running of their cars on the track. This had a profound effect on telemetry – increasing its importance, the quantity of data needed from the cars, and the need to securely transfer it back as quickly as possible."

As with most companies today, Williams F1 also uses email and the Internet as primary methods of communication both internally and externally. So the need to have security at the headquarters perimeter is vital, according to Burns. "In Formula One, component production cycles are very short in comparison to other industries and, during a single season lasting just nine months, the race cars can change by up to 70% with new or modified components introduced every week." This is an extreme operating environment, but within Formula One the companies have to develop at an ever faster rate to be competitive, and any disruption to services can have a very negative impact on production cycles.

For Williams F1, the introduction of AT&T's portfolio of security services was simple, so once the VPN bandwidth was in place, the company seamlessly switched to one of AT&T's primary global security services: AT&T's Network-Based firewall (NBFW).

Vos explains, "The NBFW is a secured Internet gateway service situated within AT&T's private network and not at a Williams F1 location, so we are providing them with a ubiquitous solution that allows them to reach and work on the Internet with a globally consistent Security Policy. The scalability of the AT&T NBFW also means that even when industry changes dictate a need for faster and higher quantities of email and data transfer with vital external partners of the company – such as engine supplier Cosworth and tyre supplier Bridgestone – additional volumes can easily be accommodated."

From an email perspective Taylor adds, "We need to be vigilant at all times, and the trend toward a further focus on electronic data means that security has to be an integral part of any decisions we make, either when implementing new IT services or making changes to existing ones." Having installed



AT&T's Secure E-mail Gateway, Williams F1 has the added security of a network-based email service that scans all incoming and outgoing mail to protect the company from viruses, worms, spam and any other potentially damaging malware whilst also removing email threats before they reach the firewall.

Both today and as Williams F1 grows as a business, AT&T Web Security is another service that will play a vital role in Internet monitoring and protection from viruses. This managed service prevents "unwanted malware" whilst controlling web usage in accordance with company policy. Taylor says, "This managed service is an excellent way to keep up with the requirements for protecting against unwanted malware downloaded through the web, and it's an effective way to report on and control web usage across the company."

Vos adds, "A few years ago, most computer viruses entered companies through attachments in emails. With proper virus filtering in place, that risk was drastically reduced. Since then however, there has been a shift toward tempting employees to download viruses. The emails then only contain a link to some attractive subject, which then turns out to be the virus, Trojan or spyware. This is what the AT&T Web Security service is designed to deal with."

As with many other businesses today, the teams operating in Formula One are also under pressure to manage costs, and this means that production cycles need to be much more efficient as well. "Through technological advances we are now able to do a lot of design and testing of components in a virtual environment through programs such as computational fluid dynamics. This means we can run component evaluation tests 24x7, we have engineers and designers who can log on remotely to manage the tests any time, and it means we can discard certain component designs before ever making an actual component," says Taylor.

This trend places a further reliance on computers, bandwidth and the mobility of the workforce, and Kees highlights, "With the combination of AT&T Network and Security services, Williams F1 is able to protect individual laptop users regardless of where they are,

### The evolution of viruses vs. innovative security solutions

Ten years ago, a firewall was considered the appropriate security solution to protect a company from cyber attacks, but in the last five years, security threats have evolved rapidly. From viruses hidden in email attachments, to emails with links to come and collect your virus (often disguised as a link to your latest Valentine gift, or even ironically the latest Antivirus and Antispam software), to multi-gigabit-per-second Distributed Denial of Service (DDoS) attacks.

AT&T Labs, Inc. have hundreds of security specialists who ensure that AT&T's services are up-to-date, and the security services are aimed to protect both from the outside (Internet attacks) as well as the inside (infected machines).

AT&T Labs have played a major role in key developments in security. Ed Amoroso, AT&T's Chief Security Officer, and Steve Bellewin were at the cradle of the Stateful inspection Firewall in the '80s and '90s. Between 2000 and 2010, AT&T has continued to invent and create more innovative security services like AT&T Internet Protect® and AT&T DDoS Defense®

For the security of its customers, AT&T in its Global Network Operations Centre monitors over 130,000 ports (TCP and UDP) on a huge Internet backbone. The associated 17.8 petabytes (nearly 18,000 Terrabytes per day) are analysed and trended to provide insights on malicious activity on the Internet. By using this data, AT&T was able to detect malicious activity before they turned into well-known attacks like Sasser, Slammer and Zotob.

However sophisticated the tools deployed, there will always be incidents where some element of risk remains beyond the tools. For this reason AT&T's specialist security team are in place, monitoring network activity, 24 hours a day. Their role is to react to any new threat, to help protect customer systems and to apply additional procedures and tools so that the new threats can be defused before they damage customer systems.

AT&T is the largest telecommunications company in the world and provides Internet-based VPNs to some of the world's biggest companies. Its worldwide network spans more than 932,000 miles of fibre optic cable and reaches 97% of the world economy. AT&T Williams is a primary user of a portfolio of AT&T security solutions.

Viruses, worms and the methods of hackers will continue to evolve but, with AT&T's innovative solutions, their clients will be ahead of the pack.



so they are always under the same security policy and Web security protection. This means that the company can enforce their policies anywhere, the service helps to free up bandwidth, and it significantly reduces the risk of someone getting a virus on their machine whilst working remotely from the office and then bringing that back into the Williams F1 network."

The more complex attacks today can overwhelm web servers and bring entire networks down. These are known as Distributed Denial of Service (DDoS) attacks, and for a company in the finance or travel industry that often relies on its network and Internet site to communicate with clients, the effects can be devastating. For Williams F1, business continuity is primarily linked to use of the network, but Claire Williams, PR manager at Williams F1 highlights, "The website is our primary method of communicating with the team's global fanbase, media and partners, so protecting the site is highly important for the organisation." AT&T offers one of the most advanced services to counteract these kinds of attacks as Vos explains. "AT&T DDoS Defense is an option available to customers of AT&T Internet Protect®, which identifies malicious traffic before it reaches a client's network and then re-directs it to an external location where the malicious content can be removed. The user's experience of the website will be unaffected and valid traffic is rerouted to Williams F1, thereby ensuring no communication is lost."

### Security for the future

AT&T allows businesses like Williams F1 to move onward by employing a strategy built on the premise that security cannot rest in a single layer of defense — security intelligence must be embedded in all layers

to identify threats and mitigate risks. Vos comments, "AT&T delivers some of today's most powerful weapons to combat cyber security attacks thanks to a reliable global IP network, experienced security experts, and innovation. As the scope of cyber attacks becomes more complex, prevention, rather than containment, becomes more attractive to the bottom line."

Taylor summarises from an IT perspective, "Security services need to be maintained and kept up-to-date 24x7, which is part of the solution offered by AT&T. The services offer economies of scale, and for Williams F1 to maintain the same service to the same level would mean hiring specialists in each field along with layers of IT equipment and respective maintenance contracts. This would simply not be possible."

The wider company benefits are outlined by Burns. "Today, AT&T's security services are helping to reduce our costs and allowing us to redirect our IT resources to more productive projects, and in AT&T, we have a team of security experts who have the skills and portfolio of services at the forefront of security in the world today."

Burns is also looking to the future. "As an industry, Formula One is already considered a global sport, but every year we are taking steps to expand into new markets such as Singapore, Abu Dhabi and India. This means our operating environment will continue to change and our workforce will need to be more mobile in future, but just as well connected as they are today. Within Formula One, we are also faced with ongoing regulatory changes to encourage cost-cutting. This is something we welcome as a company, but it is also something that will place more emphasis on the importance of electronic data, and hence our security services need to be robust and advanced enough to accommodate this."

"AT&T already delivers a strong portfolio of services to combat cyber security attacks, but we are always looking to evolve and, as with all our clients, we are using the relationship with Williams F1 to learn as well," Vos concludes.

Security implications should not prohibit business opportunities, and AT&T solutions keep global businesses secure and drive them forward, and for Williams F1 it's allowing them to focus on their core business — racing.

For more information contact your AT&T Representative or visit [www.att.com/attwilliams](http://www.att.com/attwilliams)

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