



**SIMPLY
SECURE**

RELIABLE PROTECTION EVERYWHERE.

IT SECURITY FOR MOBILITY

CUSTOMER

- Ducati Corse
- Country: Italy
- Environment to be protected: IT Systems deployed on race tracks

CHALLENGE

- Ensure proactive protection against oth internal and external threats to the integrity of the data collected during the races

OUR SOLUTION

- Excellent prevention and proactive malware recognition
- Remote management
- Simple configuration of security policies

BENEFITS

- Reduction of unauthorized accesses
- Real time information



In terms of IT security, the needs of Ducati are manifold. First of all: granting the integrity and confidentiality of the 20 GByte of data which are generated by the sensors on the bikes every weekend.

In 1926, the Ducati family and other Bolognese investors founded the Società Radio Brevetti in Bologna. Their objective was the industrialized production of components for the growing market of radio transmitters, based on Adriano Ducati's patents. The first product, the Manens capacitor for radio devices, allowed the company to rapidly expand and gain the respect of the international industrial community. In September 1946 Ducati changed its production with the introduction of the Cucciolo, a small auxiliary motor for bicycles which was to become the most famous in the world. Within a short time, the Cucciolo became a real miniature motorcycle. Thanks to the success achieved by the Cucciolo and its descendants, Ducati became an affirmed trademark in the mechanical sector.

The MotoGP adventure of Ducati began in 2003 with Troy Bayliss and Loris Capirossi on the Desmosedici. Today Ducati Corse is a Ducati Holding Company, with about 200 employees, including 60 "nomads" for 250 days a year.

As such, Ducati Corse is a small-medium enterprise. Being in a position to compete against manufacturers whose racing departments outnumber Ducati's by three up to eight times in staff is a source of pride for Ducati Corse but extremely challenging nonetheless. Behind those few minutes of race, there are 30,000 hours of simulation, 25,000 hours of engine and vehicle design, countless aerodynamic tests and numerous other activities to ensure the success of the Ducati team.

The IT core of the Ducati Team participating in the MotoGP races is on the road for 300 days a year. It is a real data center, complete with servers, firewalls, routers and all the necessary equipment to enable the team following the pilots to focus only on the parameters provided by the motorbikes, on the respective configuration and data analysis during the four days of each race. The systems deployed on the circuits come back to Borgo Panigale only for short periods of time for system updates, which are carried out in addition to those conducted remotely or for reconfigurations.

“THE G DATA SOLUTION IS PROVING TO BE VERY EFFECTIVE ON AN EXTREME TESTING GROUND LIKE MOTOGP”

Stefano Rendina, IT Manager, Ducati Corse

In all, it is an infrastructure confronted with different and sometimes difficult local conditions in terms of type and reliability of Internet connectivity and level of protection assured by the provider.

In a championship like MotoGP, where specific regulations dictate the use of identical electronics for all motorcycles, it is the adopted strategies and the settings of the bikes which make a real difference in the race. Furthermore, the

For this and various other reasons, information security plays a vital role for the Ducati Team. However, as in many small to medium enterprises, IT security faces budget constraints as well as the need to strike a balance between performance and protection. The systems' performance must not be compromised and the flexibility of the race technicians in this high-profile, high-stress infrastructure

sensors which provide information about the reaction of the bikes to the set parameters, such as acceleration, throttle opening, ABS management, reaction of the tires, and more. This data is essential for the Ducati Corse team to create custom strategies for a motorcycle and a motor. The strategies are a direct result of the added value provided by the Ducati Team in support of the individual talents of the pilots. Any flaw exploited remotely or any malware infection represents a serious risk of loss, damage or theft of what can be considered a primary business asset: the figures at the base of race strategies.

Although many assume that the primary threat to the Ducati Team is a potential hacker attack, this is in fact a secondary matter: attackers from outside who intend to steal information must know the type of data they intend to gain access to in advance. They also need to know to whom they may sell the data, which results in a relatively narrow niche. The low impact of the attacks from the outside, which primarily target the “guest” wifi network of the Paddock rather than the race data, is inversely proportional to the level of risk of threats from the inside: In a market sector with a high staff fluctuation it often happens that a colleague suddenly becomes an opponent. The pilots prefer to collaborate with ‘their’ engineers, mechanics and technicians, both out of superstition and out of habit. Equipping the systems with an effective proactive and comprehensive protection against



management of any IT problems from infections by viruses or malware, to unauthorized access or hacking attempts to addressing inefficiencies of the systems is entrusted to the specialists from the headquarters at Borgo Panigale in Bologna. They are working remotely, except in national competitions or in races taking place in neighboring countries. The technicians on site must take care of the preparation of the race.

cannot be affected. After all, the team has to ensure maximum performance and speed in the transmission of information.

THE NEEDS

In terms of IT security, the needs of Ducati Corse are manifold. First of all: It is of vital importance to ensure the integrity and confidentiality of the 20 Gigabytes of data produced during every race weekend. This includes data from

“THE LOW IMPACT ON SYSTEM PERFORMANCE AND THE PROVIDED PROTECTION ENSURE HIGH WORKING STANDARDS”

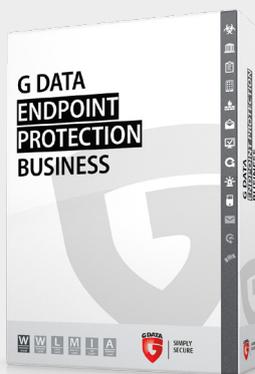
Stefano Rendina, IT Manager Ducati Corse

internal and external threats therefore is particularly challenging. To address this challenge, Ducati Corse has adopted a multi-vendor strategy and, after careful analysis and rigorous testing, have selected G DATA Endpoint Protection for securing the systems against malware infections and ransomware in real time.

THE SOLUTION

G DATA Endpoint Protection protects the integrity of the most sensitive devices of the MotoGP teams and provides real-time protection on servers and systems used to record and host the telemetry data. The choice fell on this particular G DATA product for its flexibility and ease of configuration, both of which were requirements for the application to be deployment in a high performance environment.

G DATA ENDPOINT PROTECTION BUSINESS



With the two antivirus engines to scan for viruses and malware as well as their seamless integration of the patented G DATA CloseGap

technology, G DATA Endpoint Protection delivers a higher level of safety when compared against other solutions which only use one single scanning engine. At the same time the cost in performance on those machines where it is installed, is reduced significantly.

“The G DATA solution is proving to be very effective from this point of view. MotoGP is an extreme testing ground, because the IT infrastructure, which is subject to high stress, must function and be protected anywhere in the world, regardless of local conditions at each race. G DATA Endpoint Protection responds to the challenge with a high rate of malware detection and by proactively neutralizing problems”, says Stefano Rendina, IT manager of Ducati Corse. “The low impact on system performance and the level of protection provided allows us to maintain high working standards without causing slowdowns during the analysis.” With the new release of the software, which is freely available for anyone who has a G DATA license, the German vendor adds to the solution an additional layer of security in the shape of Exploit Protection, which protects against zero-day threats until patches by the manufacturer of a vulnerable application become available.

For managing the software, G DATA Endpoint Protection comprises a dedicated dashboard, with which you can access the overview of client protection and apply policies and access restrictions in a quick and precise manner, even remotely

and in real time. This real-time control was a basic requirement by Ducati Corse. Quick and efficient policy management has proven to be important in these first race sessions. “The definition of access rights to specific folders using custom security policies, reduced the incidence of unwanted access from the inside by 20-30%” adds Rendina. The Ducati IT team is constantly working on further developing the security policies. This process that goes hand in hand with the acquisition of know-how about how to make the most out of the features offered by the G DATA solution and with the experiences collected in the field; after all, every MotoGP has “new surprises” in store.

For the first deployment of the solution on the systems, which at that time were located in Qatar, Rendina was accompanied by technicians of G DATA Italy. “Being able to count on local technical assistance, without having to refer to interlocutors across the world who do not know our needs, was a further deciding factor in choosing G DATA Endpoint Protection”.



“PROTECTING SUCH SENSITIVE SYSTEMS WITH A RELIABLE SOLUTION IS ONLY THE STARTING POINT, NOT THE FINISHING LINE”

Stefano Rendina, IT Manager Ducati Corse

A SECURITY TO SHARE

Like any small-to-medium sized enterprise, also Ducati Corse does not have an infinite budget for investments in IT Security.

Rendina confirms: “It is necessary to involve the senior management during the early stages in the decision process. This early involvement helps them to understand the importance of these investments, and in providing an estimate of potential damages caused by possible data leaks or infections.”

It is easier to advocate security when faced with a loss of money, time and information. It is also important to keep an eye on all available solutions that meet the budget, security and flexibility requirements.

“Protecting such sensitive systems with a reliable solution is not a point of arrival but of departure” Rendina remarks. Once the project is launched, it is just as important to let the users feel relevant in its implementation.



Considering the massive use of mobile terminals by nomadic users and the fact that they are not necessarily computer technicians, it is essential to let them know about the utility of Mobile Device Management solutions or of VPN tunnels for the exchange of information with headquarters or just to read their emails.

Without the right level of shared knowledge, projects may come to an end before they get off the ground, because the users will not perceive their value.

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