EVALUATING CYBER SECURITY MEASURES FOR MIX



HWG Sababa

MIX

About the company

MIX is the leading Italian Internet eXchange Point (IXP) company, that interconnects networks of hundreds of Internet operators inside and outside Italy. The connection to IXP allows each operator to use a single geographic flow to interconnect multiple networks, so they can efficiently exchange IP traffic with each other. In addition to economic and managerial benefits, the direct connection between the operators through the IXP decreases the "distance" between the networks and therefore offers a better service to Internet users.

Being one of the leading Internet eXchanges in Europe in terms of traffic exchanged, MIX has several PoPs across the country and is equipped with its own data center. MIX numbers show that the Exchange interconnects around 320 Networks and a strong growth is expected both in members and traffic also for 2020. Such growth figure has partially been introduced by the pandemic and its impact to the way people work.

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Challenges and goals

Traffic redirection boom

The lockdown In Italy was announced during an early March weekend, and the following Monday seemed to be a usual day. However, on the following Tuesday the situation was developing dramatically. The traffic flow increased from 900GB to 1.2Tbps peak in just the early morning time between 8 to 10 AM. The explanation was simple. People spent Monday to configure their VPNs and started their remote work Tuesday morning. 50 million people moved to their home offices at once and therefore increased the traffic and the workload to every single MIX port as if it was a massive generalized DDoS attack.

"We were astonished, as usually we have similar situations during big releases by Microsoft, Apple, or other software or game industry vendors. Nothing like that was scheduled for that day." - comments Mauro Magrassi, CTO at MIX. Since that the workload never got back to normal, as IXPs were massively redirecting the traffic flows for enterprise customers and their smart workers. *"March has traditionally been a month of activity growth, but MIX has never experienced such intense work pace for 20 years".*

Attention we never expected

Later in spring one of the main Italian TV channels presented the MIX's statistics as a part of its research during an evening news block. Among all the dramatic news of those days, it was warming to hear that the internet was pulling through despite the spectacular traffic increase. It attracted attention to what MIX does even among those who has never been interested in telecommunications. It increased the number of attacks targeting the company either.

Stretched at maximum

MIX has a team of just less than 10 technicians, many of whom work in shifts. In normal life people follow their routine procedures and can hardly make critical mistakes. However, after a few weeks of the pandemic people were stressed by the amount of work, anxiety, and uncertainty, so the risk to make a mistake was growing.

"Our goal was to ensure our business processes to be fully operational to keep up with the increasing amount of the customer requests. We also wanted to support and encourage the team" - remembers Mauro. *"Therefore, we decided to conduct a deep scan of our footprint on the network. We made this decision in a matter of days as the pressure was growing, so we had to be fast".*

Solution

"Luckily, we are in the middle of the community, that includes ISPs, network providers, and other IT professionals. It means we can find the right people when we need special services. So, we relied on the word of mouth and our intuition when choosing HWG Sababa Security", - continua Mauro.

Penetration Testing includes a complex diagnostics of a company's digital assets, aimed to identify its individual threat vectors and areas of improvement. HWG Sababa Penetration Testing was conducted to

- **check how robust the email and web systems are**
- **define practical cyber-attack threat vectors**
- **identify active vulnerabilities and provide recommendations on their elimination**

The entire project took about 3-3.5 weeks from the kick-off call to the final report – exactly as it was planned.

"The good first impression and the overall structured approach to the project helped to establish positive relationships and understand HWG Sababa is a good partner for us to accomplish this task. Every document was timely shared, discussed, and approved, with little paperwork and an accurate summary report on the security status of our infrastructure and what needs to be fixed".

Results

MIX turned out to be well prepared for the time of changes. Mostly due to robustness and resilience of their systems, that have always been among their top priorities. All the significant pieces of hardware and software were properly configured, and the infrastructure was strong enough to sustain cyber-attacks. The only vulnerability discovered was fixed straight away, as the team was ready to take a prompt action on the assessment results.

MIX has successfully used the opportunity to grow and did its best to support its clients by providing new internet ports and even upgrading them for free. Mobilizing its full potential, it managed to complete the service development yearly plan by the end April. As a result, it is proud to ensure more efficient service alongside limited costs to support its peers and clients.

"I would recommend Sababa Penetration Testing to companies that are transforming fast, even if it doesn't seem to be among their top priorities". - concludes Mauro Magrassi. – *"Security diagnostics granted us confidence that we are properly protected and can entirely focus on changing and growing demands of our customers. It was also a deserved reward to our team for the work well done before. It has encouraged them to be ready for more".*

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