

A person wearing a black hoodie and glasses is sitting on a stool, typing on a laptop. The person's face and the laptop are glowing with a bright blue light. To the right of the person, a large, glowing blue key is surrounded by blue lightning bolts. The background is a dark, industrial-looking space with vertical light streaks.

IPN joins the Mexico CiberSeguro Alliance

The initiative aims to consolidate a national digital security ecosystem and protect critical infrastructure through technological development and cross-sector collaboration.



Eleazar Aguirre Anaya, scientist at the Cybersecurity Laboratory of the Centro de Investigación en Computación (Computer Science Research Center)

ENRIQUE SOTO

The Instituto Politécnico Nacional has officially joined the México CyberSecure Alliance (AMCS), a national initiative that brings together government institutions, industry, academia, and civil society organizations. Its goal is to establish a strategic roadmap for creating a secure digital ecosystem, enhancing the protection of critical infrastructure, and advancing digital resilience throughout Mexico.

Humberto Sossa Azuela, Director of the IPN's Center for Computing Research (CIC), representing the institution, carried out the formal signing of the membership document. However, according to Dr. Eleazar Aguirre Anaya, head of the CIC's cybersecurity laboratory and incident response team, the IPN has been involved with the Alliance since its inception.

Destacó que esta iniciativa ha despertado el interés de diversos gobiernos municipales y estatales, además de organismos públicos y privados, por adherirse e incrementar sus capacidades en seguridad digital.

The Politécnico is a pioneer, academic benchmark, and developer of technology and research in cybersecurity.

He explained that the invitation to participate in the AMCS arose because the Politecnico is a precursor, academic reference, and developer of technology and research in cybersecurity. "The IPN participates in the alliance's steering committee," he stressed.

The CIC Incident Response Team leader acknowledged that there is a large capability gap in the cybersecurity ecosystem between the current state and what is required.

“There are many aspects that must be improved or strengthened—for example, the training of human capital. According to confidential global estimates, there are only about four million cybersecurity specialists worldwide. The demand is considerable, and more universities must offer academic programs focused on cybersecurity. In Mexico, there are currently only 25 cybersecurity incident response teams,” he pointed out.

NEED FOR A REGULATORY FRAMEWORK

Dr. Aguirre stated that while many countries have implemented cybersecurity legislation, Mexico still lacks a comprehensive law in this area. The IPN has participated in multiple consultation sessions in both the Chamber of Deputies and the Senate, but political consensus has yet to be reached to move proposed measures forward.

“It is very important for Mexico to develop its technology in cyber security for critical infrastructure: energy, water, transportation and economy, among others. This would prevent intrusions.

We must consider having the capacity to generate our cybersecurity technology to protect the infrastructure that moves the entire country,” he said.

He stressed that the Politécnico is an essential part of the training of profiles that develop technology in digital security, such as Antivirus and Firewalls (programs used to protect websites and computer applications).

Dr. Eleazar Aguirre stated that it is required that a greater number of scientific projects in cybersecurity, which are generated in universities, reach a higher level of maturity, in order to become products that impact society and do not remain in a thesis at the graduate or postgraduate level.

For the IPN,” he said, “it is a mark of pride that its cybersecurity specialists trained at the CIC are working in countries such as Japan, Germany, the United States, and Spain, among many other nations. “With the AMCS, as a Politécnico, we want to have academic and scientific projects in the consortium modality, because this allows the development of technology with the support offered by the institution,” he said.

Mexican Academic Cybersecurity Network Established

He made special mention of the work being developed in the IPN’s Computing Research Network, where

the academic units are represented by researchers and the topic of cybersecurity receives special attention.

The doctor in Communications and Electronics -with Level I of the National System of Researchers (SNII), of the Secretariat of Science, Humanities, Technology and Innovation (Secihti)-, highlighted that the Mexican Academic Network of Cybersecurity was also recently created, which is integrated by 16 groups of scientists from public and private institutions. “The IPN, the Universidad Nacional Autónoma de México (UNAM), and the Instituto Nacional de Astrofísica, Óptica y Electrónica (INAOE) are the institutions that headed the creation of this new network,” he emphasized.

In cybersecurity,” he pointed out, “you cannot have perfect security, it does not exist. “That is why, he said, we must move towards a resilience that allows us to have a defensible scheme to be better prepared for any incident or vulnerability”.

The IPN scientist concluded: “The main objective of the CyberSafe Mexico Alliance is to strengthen what is needed at a national level so that in the face of the vertiginous advance of technology we do not lag behind or at a slower speed that leads us to be users instead of solution designers. That is why the academy needs to provide knowledge on frontier technology.”

INTERESTING FACT

According to confidential global estimates, the total number of cybersecurity specialists worldwide is only around four million.

