Be a cyber cop

As per the National Association of Software and Services Companies (NASSCOM), there is a requirement of over 77,000 hacking professionals in India. NASSCOM also iterated that the digital security scenario in India is threatened at $8 billion annually. Hence the need for ethical hackers in on an upward spiral, says RAJU VANAPALA

To catch a criminal, you have to think like one — in today's world, criminal activities have gone to a new level of information technology. These cyber criminals hack into unsuspecting systems with malicious intentions of stealing information. But there is another dimension to hacking, i.e. ethical hacking. Ethical hacking involves breaking into systems and servers with an objective of making them more secure and uncovering vulnerabilities to shield them from cyberattacks. Apart from just protection from criminal cyber activities, the ethical hacker also plays a pivotal role in other aspects of enterprise security such as encryptions, security protocols and firewalls.

There are several categories within hacking that need to be understood as a first step. The first is Trojan programs that share files via instant messenger. The latest instant messengers come with huge capabilities like file sharing and computer sharing. The Hackers in the current day are using this mode to deliver the Trojan and hack into your computer.

The most commonly used method is eavesdropping on unsuspecting users to retrieve user accounts, passwords and other user-related information. Denial of Service (DoS) is another category through which a hacker can launch an attack on an instant messenger user. A Partial DoS attack will cause the user end to hang or will use up a large portion of CPU resources causing the system to become unstable. Phishing Techniques that are common today

include Link Manipulation, Filter Evasion, Website forgery and Phone phishing. In order to become an Ethical Hacker, one needs a solid grounding in Computer Sciences. This is imperative if one has to outthink sharp, aggressive and dedicatedly malevolent criminal hackers. It therefore goes without saying that if you land a post-graduate level, after pursuing a BTech or BSc course from a reputed organisation.

Ethical Hacking involves subjects like Computer Networks, C++ or Java, UNIX Knowledge Cyber, System and Data Security. Apart from this, knowhow of assembly language is crucial for those who want to analyse disassembled binaries. Also, a profound familiarity with a variety of operating systems (Microsoft Windows, various versions of Linux, etc) is of paramount importance. An ethical hacker ought to have a basic understanding of TCP/IP protocols like SMTP, ICMP and HTTP.

Becoming a successful ethical hacker also requires several soft skills such as creativity, great inter-personal skills and an eye for detail. Analytical thinking, logical thinking and a positive outlook are a must. The scope for Ethical Hackers is immense, in both India and abroad. The information security industry is undergoing a current worldwide growth rate of 21%. The need for information security for security compliance in India is mandatory for all companies with an IT backbone. The requirement for such personnel is especially high with organisations in the IT/ITES space. However, internet security is no longer a grave concern for IT
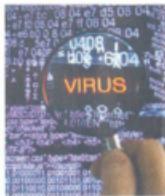
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companies alone. Today every business has some form of online presence and therefore cyber security has become a key focus area across sectors.

Ethical hacking provides enormous career opportunities. Renowned companies like Wipro, IBM, Infosys, are always looking for efficient hacking professionals.

Designations that can be attained by ethical hacking aspirants are Network Security System Administrator/Manager, Network Security Engineer, Systems/Applications Security Executive, Ethical Hacker, Data security specialist, Computer Forensics Investigator, IT Security Administrator/Consultant/Manager , Security Certified Programmer etc.

Ethical hacking emerged as a US$3.8 billion industry in the US alone, last year. As per National Association of Software and Services Companies (NASSCOM), there is a requirement of over 77,000 hacking professionals in India. Despite the escalating demand, ethical hacking has still not been able to grab the interest of students to take it up as a full-time profession. Hence India has only 22,000 professional hackers as of now. NASSCOM also iterated that the digital security scenario in India is threatened at $8 billion annually.

India possesses a vast potential for e-commerce and online financial transactions. Online payments come with the risk of sharing sensitive data which might be misused. Hence it is pivotal for denizens to embrace universities and institutions that provide training in eth-

ical hacking.

In India, there are several institutes where one can study to become a professional legal hacker. Some of these are Ethical Hacking Training Institute, New Delhi, School of Vocational Education and Training, Indira Gandhi National Open University (IGNOU) and Indian School of Ethical Hacking, Kolkata. NIIT and the International Council of Electronic Commerce Consultants (EC-Council) also recently came up with a programme to train 15,000 aspirants in professional hacking.

A recent Gartner report shows that worldwide spending on information security is estimated to reach $71.1 billion by the end of 2014 and $76.9 billion by 2015. These figures are a perfect demonstration of the kind of potential jobs in internet and cyber security hold in the near future. Many ethical hackers are now also venturing into their own consulting businesses rather than being empanelled full-time with any organisation as they find this more lucrative financially.

Typically, sectors such as Government Websites, Multi-National Companies, ecommerce websites, Social Networking Platforms, Mobile apps, banking sites are highly vulnerable and have been hacked by criminal hackers several times. Therefore, these sectors are actively employing ethical hackers as information security specialists with salaries ranging from ₹4 lakh to ₹30 lakh per annum.

The writer is Raju Vanapala, CEO and founder of LearnSocial.com