इलेक्ट्रॉनिकी एवं सूचना प्रौद्योगिकी मंत्रालय
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CYBER SWACHHTA KENDRA
Botnet Cleaning and Malware Analysis Centre

CYBER SECURITY HANDBOOK

FOR DIGITAL NAGRIKS AND DIGITAL ENTERPRISES

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Enhancing Cyber Security in India

NATIONAL CYBER SECURITY AWARENESS MONTH (NCSAM)

"Secure Our World"

THEME: CYBER SURAKSHIT BHARAT

#SatarkNagrik

1st - 31st October 2024

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ABOUT CERT-In

The Indian Computer Emergency Response Team (CERT-In)

is a Government Organization under Ministry of Electronics and Information Technology (MeitY), Government of India established with the objective of securing Indian cyber space. CERT-In provides Incident Prevention and Response services as well as Security Quality Management Services. CERT-In has been designated to serve as national agency for incident response under Section 70B of the Information Technology Act, 2000 (Amendment 2008). As part of services of CERT-In, for creation of awareness in the area of cyber security as well as training/ upgrading the technical knowhow of various stakeholders.

CERT-In is observing the National Cyber Security Awareness Month (NCSAM) during October 2024 by organizing various events and activities for citizens as well as the technical cyber community in India with the theme of "Secure Our World" and "Cyber Surakshit Bharat" and hashtag #SatarkNagrik.

This Cyber Security Handbook for Digital Nagriks and Digital Enterprises is released as a part of CERT-In's awareness initiatives to educate the users on the best practices that needs to be followed to protect them from different cyber security attacks and cyber threats.

DESKTOP SECURITY

Best Practices

- Use genuine Operating System and Software.
- Keep your Operating System updated.
- Install anti-virus and anti-malware solutions and keep them updated.
- Use strong login password and change them periodically.
- Regularly take backups of your important files and data.
- In-case of incidents such as hardware failure, or cyberattacks, having backups can help you restore important information.
- Maintain multiple copies of critical data in different locations to prevent loss in case of disasters.
- Periodically test and verify your backups to ensure they can be used for restoration when needed.

BROWSER SECURITY

Best Practices

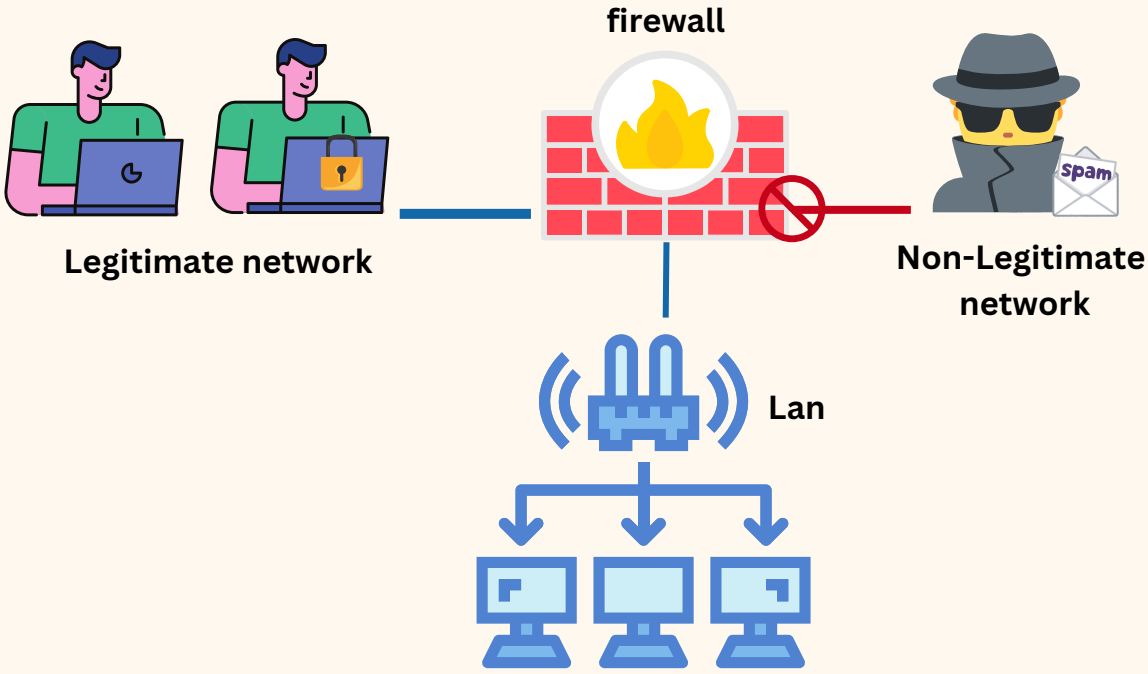
- Update your web browser with the latest patches.
- Disable pop-up windows in your browser.
- Delete browser cookies and cache regularly.
- Have "Safe Search" ON in Search Engines.
- Enable private browsing or incognito mode.
- Be careful with the websites you visit.
- Check the URL of a website to make sure that it has the "https://" or a padlock icon.

E-MAIL SECURITY

Best Practices

- Verify the sender before clicking on any link/ attachment.
- Check the domain name in the email address of the sender. Look for misspelled or typo errors.
- Don't click any link/attachment from suspicious emails received from strangers.
- Do not use official email accounts for online shopping or ticket booking.
- Do not click on shortened URLs received in emails/ chats/ messages without verifying them by expanding the URL.
- Use strong passwords.
- Enable Multi-Factor Authentication (MFA).
- Do not store Username and passwords in public systems.

FIREWALL SECURITY



Best Practices

- Always make sure the firewall is hardened and configured properly.
- Keep the software updated with the latest updates.
- Regularly update firewall protocols.
- Review and update access controls on a regular basis.
- Implement a comprehensive logging and alert mechanism.
- Set up procedures for backup and restoration.
- Perform regular audits of firewalls.

BROADBAND SECURITY

Best Practices

- Always download broadband drivers from the legitimate websites recommended by the manufacturer.
- Change the default administrator or admin password of broadband router modem given by manufacturer .
- Install broadband Internet bandwidth usage monitoring tool.
- Enable SSH (secure channel) for remote administration.
- Power-off the modem router after completing the Internet access.
- Do not enable auto-connect to open Wi-Fi networks.
- Don’t use USB broadband modem with insecure computers / Laptops.
- Use effective end point security solution (with anti virus, anti spyware, desktop firewall etc) to protect PC / Laptop from broadband Internet threats.

DATA SECURITY

Best Practices

- Encrypt sensitive data to protect it from unauthorized access.
- Enable Multi Factor Authentication (MFA) to add an extra layer of security to your accounts.
- Be cautious when working with sensitive information in public places or on shared devices.
- Avoid using easily guessed or common passwords.
- Use different passwords for different accounts.
- Avoid using public Wi-Fi to do secured transactions.
- Use strong passwords to lock your devices.

VPN SECURITY

Best Practices

A Virtual Private Network (VPN) is a service used for establishing a secure connection over the Internet.

- Keep your VPN software upto date with the latest security patches.
- Monitor and enable logs of VPN activity to identify and address suspicious activity.
- Select VPNs that follow standard security protocols.
- Configure VPN with all web application security settings enabled.
- Use strong passwords for VPN accounts.

BENEFITS OF USING ANTI-VIRUS SOFTWARE

1

An essential step in preventing and identifying malware infection is installing antivirus software from a trustworthy vendor

2

Realtime protection by system scanning and blocks malicious pop-ups and ads

3

Alerts malicious files present in internal and external devices

4

Alerts when visiting infected or malicious websites

5

Keeping them updated helps to improve protection against latest threats

PASSWORD MANAGEMENT BEST PRACTICES

1

Use Strong and long passwords

Always prefer to create lengthy passwords.
Short length passwords are easy to crack.

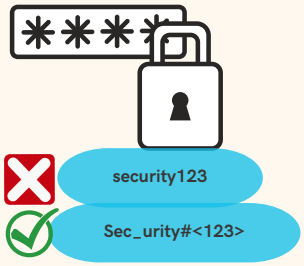
2

Don't use dictionary words as passwords

Such passwords are too easy to crack.

Dictionary words are vulnerable to brute-force attack by hackers.

3



Create passwords using special characters

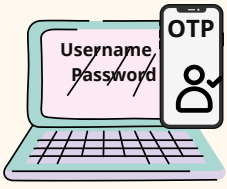
Passwords mixed with uppercase, lowercase, numerals and special characters are difficult to crack

4

Change passwords periodically

Avoid using guessable patterns of password.

5



Enable Multi Factor Authentication

MFA adds another layer of security to your accounts.

BACKUP-BEST PRACTICES

Best Practices

- Backups of the system, application and data should be performed on a regular basis.
- Ensure that a valid, virus-free backup exists and is available for use at any time
- Up-to-date backups of all critical items should be maintained to ensure the continued provision of the minimum essential level of service.
- Back-up procedures should be documented, scheduled and monitored.
- The backups must be kept in an area physically separate from the server.
- Offline backups with encryption for critical systems should be maintained.
- Online backup systems should be properly hardened and access to its network should be strictly restricted.

REPORT CYBER SECURITY INCIDENT TO CERT-IN

For reporting Cyber Security Incidents to CERT-In:

Visit website: ***https://www.cert-in.org.in***

Email: ***incident@cert-in.org.in***

Toll Free Phone: ***+91-1800-11-4949***

Toll Free Fax: ***+91-1800-11-6969***

Information Desk

Phone: ***+91-11-24368551***

Fax: ***+91-11-24368546***

For Reporting Cyber Fraud & Crime to I4C:

Visit website: ***https://www.cybercrime.gov.in***

Call : ***1930***

For reporting Vulnerabilities & Collaboration with CERT-In in the area of Cyber Security:

Visit website: ***https://www.cert-in.org.in***

Email: ***vdisclose@cert-in.org.in***

collaboration@cert-in.org.in

Phone: ***+11-22902600*** *Ext:* ***1012, +91-11-24368572***

For Trainings/ Awareness programmes:

Email: ***training@cert-in.org.in***

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