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GOVERNMENT OF PAKISTAN
CABINET DIVISION, CABINET SECRETARIAT
NATIONAL TELECOM & INFORMATION TECHNOLOGY SECURITY BOARD
(NTISB)
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No. 1-5/2003(NTISB-II)

Islamabad 29 September, 2021

Subject:- **Cyber Security Advisory - Secure Hosting of Govt Websites/ Portals (Advisory No. 64)**

1. Websites / portals of public sector including government ministries and departments provide valuable information for general public. During a recent survey, it has been observed that majority of government ministries / department's websites (few mentioned at **Annexure A**) do not comply basic standard of Cyber Security (use of insecure protocol **HTTP** instead of **HTTPS**) rendering websites vulnerable to Cyber-attacks. Secure website services cost a very little monetary expenditures **(Rs - 2500 / 5000 for 1x domain / year**), therefore, spending a small sum can provide enhanced security features to websites.

2. To further augment the security, a stringent security mechanism (details at **Annexure B**) such as fixing security loopholes before the website is **publically accessible** and **periodic screening of websites** for known vulnerabilities & their patching may also be ensured by concerned ministry / department in collaboration of hosting ISP.

3. Foregoing above in view, it is requested to approach all provincial / federal ministries and departments to protect their websites by ensuring secure hosting. Secure website hosting guidelines are attached at **Annexure B** for compliance by all concerned.

4. Forwarded for information / dissemination to all concerned, please.

Major
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All Secretaries of Ministries / Divisions of Federal Government and Chief Secretaries of Provincial Governments.

Copy to: -

1. Secretary to the Prime Minister, Prime Minister Secretariat, Islamabad
2. Secretary to the President, Aiwan-e-Sadar, Islamabad
3. Cabinet Secretary, Cabinet Division, Islamabad
4. Additional Secretary-III, Cabinet Division, Islamabad
5. Director General (Tech), Dte Gen, ISI Islamabad
6. Director (IT), Cabinet Division, Islamabad

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(7) Regularly update antimalware solutions running on endpoints in enterprise environment as well as standalone systems.

(8) Educate endusers regarding cyber security best practices and antimalware measures.

b. **For End-users**

(1) **Regularly update antiviruses** such as Kaspersky, Avira, Avast etc. and scan system regularly.

(2) **Do not download attachments from emails or websites unless it is received from trusted source.**

(3) Avoid downloading softwares from untrusted websites or torrents.

(4) Use Chrome / Firefox for browsing internet instead of Internet Explorer.

(5) Make sure that web browser is up-to-date and no plugins other than Adblock or Adblock Plus is enabled.

4. **Reporting of Suspicious Files / Emails.** Any malicious activity may be reported to this organization on the following email address for analysis and suggesting mitigation measures: -

asntisb2@cabinet.gov.pk

5. Forwarded for perusal and dissemination of information to all concerned and under command, please.

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Annexure-A

CYBER SECURITY ADVISORY - SECURE HOSTING OF GOVT WEBSITES / PORTALS

Ser	Institute/ Ministry/ Department	Domain	ISP
1.	Pakistan Military Accounts Department	pmad.gov.pk	NTC
2.	National Response Centre for Cyber Crime	nr3c.gov.pk	"
3.	Military Lands & Cantonments	mtc.gov.pk	"
4.	Staff Welfare division (Cabinet Division)	swo.gov.pk	"
5.	Pakistan Science Foundation	psf.gov.pk	"
6.	National Transport Research Centre	ntrc.gov.pk	"
7.	Ministry of Industries & Production	moip	"
8.	Ministry of Energy, Power Division	mowp.gov.pk	"
9.	China Pak Economic Corridor	cpec.gov.pk	"
10.	Sindh Revenue Board	srb.gov.pk	"
11.	KPT IT Board	kpitb.gov.pk	"
12.	Pakistan Atomic Energy Commission	thenucleuspak.org.pk	"
13.	Pakistan Institute of Science & Nuclear Technology	sidnlps.org.pk	"
14.	PDMA	pdma.gov.pk	"
15.	Prime Minister Inspection Commission	pmic.gov.pk	"
16.	File Tracking System	fts.kp.gov.pk	"
17.	Imuedu Kpdata.Goav.	imuedu.kpdata.gov.pk	"
18.	Culture Kpdata.Gaov	culture.kpdata.gov.pk	"
19.	Election commission Report KP/CS / PMRU	ea. kpdata. gov. pk	"

20.	Khyber Paktunkhwa Public Procurement Regulatory Authority	kppra.gov.pk	"
21.	KP Public Procurement Regulatory Authority (KPPRA)	kppra.gov.pk	"
22.	Rescue 1122	rescue1122.kp.gov.pk	"
23.	TB Control Program	ptp.gkp.pk	"
24.	Higher Education	hed.kp.gov.pk	"
25.	Directorate of Civil Defense	civildefence.kp.gov.pk	"
26.	Labor Department	labour.kp.gov.pk	"
27.	Employees Social Security Institution (ESSI)	essi.kp.gov.pk	"
28.	Department of Industries, Commerce & Technical Education	industries.kp.gov.pk	"
29.	Board of Investment and Trade	kpboit.kp.gov.pk	"
30.	Bannu Development Authority	bda.kp.gov.pk	"
31.	Bureau of Statistics	bos.kp.gov.pk	"
32.	Provincial Disaster Management Authority - PDMA	dmis.pdma.gov.pk	"
33.	Science & Technology and Information Technology	stit.kp.gov.pk	"
34.	KP Information Technology Board	kpitb.gov.pk	"
35.	KP Information Technology Board	kpitb.kp.gov.pk	"
36.	Apps Kpitb.Gov.Pak	Apps.kpitb.gov.pk	"
37.	Project Kpitb.Gov	Project.kpitb.gov.pk	
38.	Khyber Pakhtunkhwa Internship Portal	internships.kp.gov.pk	"
39.	KP E-Recruitment Initiative	apply.kp.gov.pk	"
40.	Zakat & Ushr	zakat-ushr.kp.gov.pk	
41.	KP Excise HT Management Information System	excisehr.kpadata.gov.pk	

42.	Directorate of Local Fund Audit	directorate_of_local_ fund_audit. kp.gov.pk	"
43.	Directorate of Treasury and Accounts	directorate of_treasury	"
44.	Food	food.kp.gov.pk	"
45.	Directorate of Food	directorate_of_food.k p.gov.pk	"
46.	KP Food Safety and Halal Food Authority	dgfood.kp.gov.pk	"
47.	KP Health	kphealth.pk	"
48.	Health	cres.pk	"
49.	KP Health Information System	kphis.cres.pk	"
50.	District Health Information System	dhis.cres.pk	"
51.	Aewan-e-Sadar	presidentofpakistan. gov.pk	CYBERNET-AP Cyber Internet Services Pvt Ltd
52.	Senate of Pakistan	senate.gov.pk	"
53.	National Assembly of Pakistan	na.gov.pk	"
54.	Ministry of Finance	finance.gov.pk	Commission For Science And Technology (COMSATS)
55.	Ministry of Water Resources	mowr.gov.pk	"
56.	Ministry of Climate Change	mocc.gov.pk	CYBERNET-AP Cyber Internet Services Pvt Ltd
57.	Ministry of Defense Production	modp.gov.pk	CYBERNET-AP Cyber Internet Services Pvt Ltd
58.	Ministry of Federal Education and Professional Training	mofept.go.pk Services Pvt Ltd	AS9541 CYBERNET-AP Cyber Internet Services Pvt Ltd

59.	Ministry of Housing& Works	mohw.gov.pk	CYBERNET-AP Cyber Internet Services Pvt Ltd
60.	Ministry of Parliamentary Affairs	mopa.gov.pk	CYBERNET-AP Cyber Internet Services Pvt Ltd
61.	Ministry of National Health Services Regulations & Coordination	nhsrc.gov.pk	CYBERNET-AP Cyber Internet Services Pvt Ltd
62.	Ministry of Kashmir Affairs & GB	kana.gov.pk	CYBERNET-AP Cyber Internet Services Pvt Ltd
63.	National Savings	savings.gov.pk	CYBERNET-AP Cyber Internet Services Pvt Ltd
64.	Survey of Pakistan	surveyofpakistan.gov.pk	CYBERNET-AP Cyber Internet Services Pvt Ltd
65.	Inter Provincial Coordination	ipc.gov.pk	CYBERNET-AP Cyber Internet Services Pvt Ltd
66.	Pakistan Railways	railways.gov.pk	CYBERNET-AP Cyber Internet Services Pvt Ltd
67.	Ministry of Information & Broadcasting	moib.gov.pk	CYBERNET-AP Cyber Internet Services Pvt Ltd
68.	Ministry of Human Rights	mohr.gov.pk	CYBERNET-AP Cyber Internet Services Pvt Ltd
69.	Ministry of National Food Security & Research	mnfsr.gov.pk	CYBERNET-AP Cyber Internet Services Pvt Ltd

70.	Ministry of Narcotics Control	narcon.gov.pk	CYBERNET-AP Cyber Internet Services Pvt Ltd
71.	Ministry of Law& Justice	molaw.gov.pk	CYBERNET-AP Cyber Internet Services Pvt Ltd
72.	Ministry of Religious Affairs & Interfaith Harmony	mora.gov.pk	CYBERNET-AP Cyber Internet Services Pvt Ltd., PK.
73.	Ministry of Overseas Pakistanis & Human Resource Development	ophrd.gov.pk	CYBERNET-AP Cyber Internet Services Pvt Ltd., PK.
74.	Privatization Commission	privatisation.gov.pk	CYBERNET-AP Cyber Internet Services Pvt Ltd.,PK
75.	Ministry of States& Frontiers Regions	safron.gov.pk	CYBERNET-AP Cyber Internet Services Pvt Ltd., PK

Important note:- The above mentioned websites are only given as examples. Scope of securing website is not limited to this table and equally applies to all website stakeholders weather mentioned or not.

Annexure-B

CYBER SECURITY BEST PRACTICES FOR WEBSITES

1. **Upgrade OS** and **webserver** to latest version.
2. Website **admin panel** should only be accessible via **white-listed IPs.**
3. Vulnerability Assessment and penetration testing of application be carried out to identify potential threats on routine basis.
4. Complete website be **deployed on inland servers** including **database** and web infrastructure.
5. **HTTPS** protocol be used for communication between client and web server.
6. Application and database be installed on different machines with proper security hardening.
7. Sensitive data be stored in **encrypted** form with **no direct public access.**
8. Proper **security hardening of endpoints** and servers be performed and no **unnecessary ports** and applications be used.
9. Updated **Antivirus tools/ Firewalls** be used on both endpoints and servers to safeguard from potential threats.
10. Enforce a strong password usage policy.
11. Remote management services like **RDP and SSH must be disabled** in production environment.
12. Deploy **web application firewalls** for protection against web attacks.
13. Employ **secure coding practices** such as parameterized queries, proper input sanitization and validation to remove malicious scripts.
14. Keep system and network devices up to date.
15. **Log retention policy** must be devised for at least 3 x months on separate device, for attacker's reconnaissance.
16. **Reporting of Cyber Security Issues / Queries.** For reporting malware or any other query or issues regarding Cyber Security, details may please be forwarded to the following email addresses:-

"ntisb@cabinet.gov.pk "