

Security Indicators Quick Reference Card (v1.1.1)

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This Quick Reference Card summarizes Information Security Indicator components to support users. The document stems from the ETSI GS ISI 001 standard. For comments or suggestions please contact the editors via r2gs-germany@fokus.fraunhofer.de.

1. Security Incidents (Ixx)

CLASS	FAMILY	COMPONENT AND IDENTIFIER	PARAMETERS	F	S	D
IEX intrusions and external attacks	FGY Website forgery	1 Forged domain or brand names	#ev[30d], #addresses.legitimate, Ømonth[90d]	+	1	3
		2 Forged websites	#ev[30d], #org.websites, Ømonth[90d]	+	2-3	2
	PHI Phishing	1 Targeting customers' workstations	#ev[30d], #series.unique[30d], const(exposure.media)	+	3	2
		2 Targeting organisation's users	#ev[30d], #messages[30d]	+	3	3
	INT Intrusion	1 Attempt on externally accessible servers	#ev.day.unique[30d], #servers	+++	1-2	2
		2 Success on externally accessible servers	#ev.unique[30d], #servers, Ømonth[90d]	+	3-4	1
	DFC Website defacement	1 Obvious and visible website defacements	#ev[30d], #org.websites, Ømonth[90d]	+	3	3
	MIS Misappropriation of resources	1 Servers resources misappropriation (by external attackers)	#ev[30d], Ømonth[90d]	sig	2	1
	SPM Spam	1 Messages targeting org. users	#ev[30d], #messages[30d], Ømonth[90d]	++	3	3
	DOS Denial of Service	1 DoS and DDoS attacks on websites	#ev[30d], #org.websites	+	4	3
MLW Malware	1 Attempts to install malware on workstations	#ev[30d], #attempt.mw.unique(#types.mw)	+++	1	3	
	2 Attempts to install malware on servers	#ev[30d], #attempt.mw.unique(#types.mw)	++	1	3	
	3 Installations on workstations	#ev[30d], Ømonth[90d]	++	1-4	1-3	
	4 Installations on internal servers	#ev[30d], Ømonth[90d]	+	2-4	1-3	
PHY Physical intrusion or action	1 Human intrusion into organizations perimeter	#ev[30d], Ømonth[90d]	+	3	1	
IMF mal-functions	BRE Accidental breakdowns or malfunctions	1 Workstations breakdowns or malfunctions	#ev[30d], Ømonth[90d]	++	~	3
		2 Servers breakdowns or malfunctions	#ev[30d], Ømonth[90d]	+	~	3
		3 Mainframes breakdowns or malfunctions	#ev[30d], Ømonth[90d]	+	~	3
		4 Networks breakdowns or malfunctions	#ev[30d], Ømonth[90d]	++	~	3
	LOM Loss or theft of mobile devices	1 Mobile devices belonging to org.	#ev[30d], #org.devices, Ømonth[90d]	+	3	3
	TRF Trace malfunction	1 Downtime or malfunction of trace production	#ev[30d], #org.systems, Ømonth[90d]	++	3-4	3
2 Absence of possible tracking of involved person		#ev[30d], #org.systems, Ømonth[90d]	+	1-2	2	
3 Downtime/malfunction of trace production for recordings with evidential value		#ev[30d], #org.systems.value, Ømonth[90d]	+	3-4	3	
IDB Internal deviant behaviour	UID Identity usurpation	1 User impersonation	#ev[30d], Ømonth[90d]	+	2-4	1
		1 Privilege escalation by exploitation of software or config vul.	#ev[30d], Ømonth[90d]	+	4	2
		2 Privilege escalation by social engineering	#ev[30d], Ømonth[90d]	sig	3	2
		3 Use of admin rights illicitly granted by admin	#ev[30d], Ømonth[90d]	sig	3	3
		4 Use of time-limited rights after period	#ev[30d], Ømonth[90d]	sig	3	2
		5 Abuse of privileges by admin	#ev[30d], #admins.mis[30d], Ømonth[90d]	sig	3-4	2
		6 Abuse of privileges by operator or user	#ev[30d], #applications, Ømonth[90d]	sig	2-3	3
	7 Illicit use of rights not removed (after departure or position change)	#users.mis[30d], Ømonth[90d]	sig	3	2	
	IDB Other incidents (reg. unauthorised access)	1 Unauthorized access to servers through remote access points	#users.mis(remote)[30d], #access.unauth(rem/local), Ømonth[90d]	sig	3	1
	MIS Misappropriation of resources	1 Server resources misappropriation by an internal source	#users.mis(remote)[30d], Ømonth[90d]	sig	1	1
IAC Illicit access to Internet	1 Access to hacking website (from internal workstation)	#inc[30d], Ømonth[90d]	+	4	1	
LOG Deactivating of logs recording	1 Deactivating of logs recording by an admin	#admins.performing.detected[30d], Ømonth[90d]	sig	2-3	3	
IWH whole incident class	VNP Non-patched or poorly patched vul. exploitation	1 Exploitation of sw vul. w/o available patch	#ev[30d], #inc.categorized.detected, Ømonth[60d]	key	3	3
		2 Exploitation of non-patched sw vul.	#ev[30d], #inc.categorized.detected, Ømonth[60d]	key	3	3
		3 Exploitation of poorly-patched sw vul.	#ev[30d], #inc.categorized.detected, Ømonth[60d]	key	3	3
	VCN Conf. vul. exploitation	1 Exploitation of config flaw	#ev[30d], #inc.categorized.detected, Ømonth[60d]	key	3	2
	UKN Unknown incidents	1 Not categorized sec incidents	#ev[30d], #inc.categorized.detected, Ømonth[90d]	key	3-4	2
UNA Incidents on not addressed assets	1 Sec. inc. on non-inventoried/not-managed assets	#ev[30d], #inc.categorized.detected, Ømonth[90d]	key	3-4	3	

Conventions: F (frequency rate: +/++/+++; sig=significant; key to know; ?=undefined), S (severity level: 1[low]-4[highest]; ~[depend on sensitivity]), D (detection rate: 1[very difficult]-3[easy]), "#" number (quantitative amount); "[30d]" time interval (e.g. 30 days); "Ø" average; "Σ" sum over all incidents; "Ømonth" average value of this indicator in last month; "org.xx" xx in the organization

Abbreviations: AP (access point), ev (event), FW (firewall), inc (incident), mis (misbehaving), mw (malware), org (company or organisation), OS (oper.sys.), sec (security), sw (software), vul (vulnerability)

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2. Indicators with vulnerabilities (Vxx)

CLASS	FAMILY	COMPONENT AND IDENTIFIER	PARAMETERS	F	S	D	
VBH Behaviour vulnerabilities	PRC Dangerous protocols used	1 Server accessed by an admin with unsecure protocols	#ev[30d], #admins.system[30d], Ømonth[90d]	sig	2-3	1	
		2 P2P client in a workstation	#users.installing[30d], Ømonth[90d]	++	3	2	
		3 VoIP client in a workstation	#users.installing[30d], Ømonth[90d]	++	1	2	
		4 Outbound connection dangerously set up	#users.installing[30d], Ømonth[90d]	++	2	2	
		5 Not compliant lap top computer used to establish a connection	#users.connecting[30d], #laptops, Ømonth[90d]	++	3	2	
		6 Other unsecure protocols used	#ev[30d], Ømonth[90d]	+	2-3	1-2	
	IAC Internet illicit access	1 Outbound controls bypassed	#users.performing[30d], Ømonth[90d]	sig	2-4	1	
		2 Anonymisation site used	#users.performing[30d], Ømonth[90d]	sig	3	3	
	FTR File illicit transfer with outside	1 File recklessly downloaded	#ev[30d], Ømonth[90d]	++	2-3	2	
		2 Personal public instant messaging account used (for business file exchanges)	#users.performing[30d], Ømonth[90d]	+	3	2	
		3 Personal public messaging account used (for business file exchanges)	#users.performing[30d], Ømonth[90d]	sig	2	2	
	WTI Workstation used w/o relevant usual security	1 Workstation with a disabled or not updated AV and/or FW	#users.performing[30d], #org.workstations, Ømonth[60d]	+	4	3	
		2 Workstations accessed in admin mode	#users.performing[30d], Ømonth[60d]	+	2-3	2	
		3 Personal storage devices used	#ev[30d], Ømonth[90d]	++	3	1	
		4 Personal devices used w/o compartmentalization (BYOD)	#users.performing[30d], #devices.personal, Ømonth[90d]	++	2	1	
		5 Not ciphered sensitive files exported	#ev[30d], Ømonth[90d]	++	4	1	
		6 Personal software used	#users.performing[30d], Ømonth[60d]	+	2-3	3	
	PSW Passwords illicitly handled or managed	1 Weak passwords used	#ev[30d], #accounts.users, Ømonth[90d]	sig	3	2	
2 Passwords not changed		#ev[30d], #accounts.users, Ømonth[90d]	sig	2	2		
3 Admin passwords not changed		#ev[30d], #accounts.admins, Ømonth[90d]	sig	3	2		
RGH Access rights illicitly granted	1 No compliant user rights granted by admin	#admins.performing[30d], #admins, Ømonth[90d]	?	3	2		
HUW Human weakness	1 Exploited by spear phishing message (links/attachments)	#users.performing[month], #users, Ømonth[90d]	+	3	2		
	2 By exchanges secrets (phone/f2f)	#users.performing[month], #users, Ømonth[90d]	+	1	1-2		
VSW Software vul.	WSR Webserver sw. vul.	1 Web applications sw vul.	#ev[30d], #applications.web, Ømonth[90d]	+	3-4	3	
	OSW OS sw. vul.	1 OS sw vul. regarding servers	#ev[30d], #server.ext.visible, Ømonth[90d]	+	2-3	3	
	WBR Webbrowser sw. vul.	1 Webbrowser sw. vul.	#ev[30d], #workstations, Ømonth[90d]	++	2-4	3	
VCF Configuration vul.	DIS Dangerous or illicit services	1 Dangerous or illicit services on externally accessible servers	#ev[30d], #server.ext.visible, Ømonth[90d]	+	2-3	2	
		TRF Log production shortcomings	1 Insufficient size of the space allocated for logs	#ev[30d], #org.systems, Ømonth[90d]	sig	1	2
		FWR Weak FW config.	1 Weak FW filtering rules	#ev[30d], #FW, Ømonth[90d]	sig	2	1
	ARN Autorun feature enabled	1 Autorun feature enabled on workstations	#ev[30d], #workstations, Ømonth[60d]	+	2-4	3	
	UAC User accounts wrongly configured	1 Access rights configuration not compliant with security policy	#users.detected[30d], Ømonth[60d]	+	3	3	
2 Not compliant access rights on logs		#ev[30d], #servers, Ømonth[60d]	+	2-3	3		
3 Generic and shared admin account		#ev[30d], #OS+#DB+#applications, Ømonth[60d]	sig	2-3	2		
4 Accounts w/o owners	#ev[30d], #OS+#DB+#applications, Ømonth[60d]	+	3	3			
5 Inactive accounts	#ev[30d], #OS+#DB+#applications, Ømonth[60d]	+	2	2			
VTC General sec. technical vul.	IDS IDS/IPS malfunction	1 Full unavailability of IDS/IPS	#ev[30d], #IDS/IPS, Ømonth[90d]	sig	3	3	
	WFI Illicit Wi-Fi access points	1 Wi-Fi devices installed on the network w/o any official authorisation	#ev[30d], #APs.WiFi, Ømonth[180d]	sig	4	3	
	MOF Poor monitoring	1 Absence or poor quality of monitoring of some outgoing flows	#ev[30d], #zones.perimeter.outb, Ømonth[180d]	sig	3	3	
	RAP Illicit remote access	1 Remote access points used to gain unauthorised access	#ev[30d], #AP.authorized, Ømonth[180d]	?	3	2	
	NRG Illicit network connections	1 Devices or servers connected to org. network w/o being reg./managed	#ev[30d], #equipment.authorized, Ømonth[90d]	sig	3	3	
	PHY Physical access control	1 Not operational phy. access control means	#ev[30d], #areas.protected, Ømonth[90d]	sig	2-3	2	
VOR General sec. org. vul.	VNP Not patched vul.	1 Excessive duration of windows of exposure	duration.risk(>limit.policy.sec), Ømonth[90d]	+	3-4	2	
		2 Rate of not patched systems	#ev[30d], #systems, Ømonth[90d]	sig	2	2	
	VNR Not reconfigured systems	1 Rate of not reconfigured systems	#ev[30d], #systems.reconfigured, Ømonth[90d]	sig	2	3	
	RCT Reaction plans	1 Reactions plans launched w/o experience feedback	#ev[30d], #reactionplans.launched, Ømonth[90d]	sig	2	3	
		2 Reaction plans unsuccessfully launched	#ev[30d], # reactionplans.launched, Ømonth[90d]	sig	4	3	
	PRT Security in IT projects	1 Launch of new IT projects w/o information classification	#ev[30d], #projects.launched, Ømonth[90d]	+	3	3	
2 Launch of new specific IT projects w/o risk analysis		#ev[30d], #projects.launched, Ømonth[90d]	+	3	3		
3 Launch of new IT projects of a standard type w/o identification of vul. and threats		#ev[30d], #projects.launched, Ømonth[90d]	+	3	3		

3. Indicators as regards impact measurement (IMP)

IMP	COS costs	1 Average cost to tackle a critical sec. incident	Σcost.inc[30d], Øcost.inc[30d], Øcost.inc(all)[120d]
		2 Due to whole sec incidents	Σtime.inc[30d], Øtime.inc[30d], Øtime[90d]
	TIM Average time of website downtime	1 Due to successful malicious attacks	Σtime.inc[30d], Øtime.inc[30d], Øtime[90d]
3 Due to malfunctions/unintentional sec. incidents		Σtime.inc[30d], Øtime.inc[30d], Øtime[90d]	