

# 서귀포시 정보보호 지속 서비스 대가 산정 효과 분석 보고서

The Effect of Cost Estimating of Information Protection Sustained Services in Seogwipo city

## □ 정보보호서비스의 정의(Definition of Information Protection Service)

- 정보시스템에 대하여 외부 사이버 보안위협으로부터 안정적으로 보호하고 운영하기 위하여 이루어지는 활동 전반에 대한 서비스를 말함(The service refers to the overall activities performed to reliably protect and operate the information system from external cybersecurity threats.)
- 보안성 지속서비스, 보안관제, 컨설팅서비스 등으로 분류(Categorized as Security Dependent Service, Security System, Consulting Service, etc.)

## □ 정보보호서비스의 유형별 분류(Categorization by type of information protection service)[1][4]

Level1	Level2	Classification standard
Information security consulting	Vulnerability analysis assessment	Diagnose and assess infrastructure vulnerabilities, simulate hacking
	Information security management system	ISMS, ISO/IEC27001
	Personal information protection	Accreditation consulting for ISMS-P, PIA, etc.
	Consulting	Security consulting, security audit, system development security consulting, etc.
Security continuity service	Security update	Patches for pattern updates (rules pattern and signature), IT environment changes(new OS/systems and terminals/standard, etc.)
	Security policy management	Establishing/changing security policies according to the user experience
	Threat/accident analysis	Accident response (pre/post), threat analysis report by product line, etc.
	Maintain security authentication	Maintaining various security certifications, such as CC certification, security compliance verification, and KCMVP
	Security Technical Advisory	Simulated training response, information protection education, remote response, security audit support, etc.
Security control service	Basic service	Remote control, dispatch control, hybrid control, etc
	Additional service	Additional services for security system such as planning, diagnosis, analysis, operation, and individual services
	Training service	Simulated training response

※ 한국인터넷진흥원의 정보보호서비스 대가 산정 가이드(2015)(Korea Internet & Security Agency's information protection service cost calculation guide, 2015)

## □ 정보보호서비스 대가 산정방법(Method for calculating the cost of information protection services)[2][4]

- 정보보호솔루션에 대한 보안성 지속 서비스 요율 책정 기준을 서비스 활동주기를 기준으로 보안 서비스 포인트(SSP, Security Services Point) 측정방식으로 산정
- 보안 서비스 포인트(SSP, Security Services Point)

Div.	Measurement criteria	Score
Security update	more than once a month	30
	more than once a quarter	25
	more than once a half year	20
Security policy management	more than once a month	20
	more than once a quarter	15
	more than once a half year	10
Threat/accident analysis	more than once a month	20
	more than once a quarter	15
	more than once a half year	10
Maintain security authentication	Maintaining CC certification or KCMVP (cipher module) certification	20
	Keep other security certifications	10
Security technical advisory	Technical advice over 20 hours a year or simulated training more than twice a year	10
	Technical advice over 10 hours a year or simulated training more than once a year	5
		SSP

※ 한국소프트웨어산업협회의 SW사업대가 산정 가이드(2018)(Software Industry Association of Korea, SW Business Cost Estimating Guide, 2018)

서귀포시의 서비스 수준 협약기준(Criteria for Service Level Agreements in Seogwipo)[3][4]

○ Criteria for Service Level Agreements

Div.		Rate(%)	SLA	
			TL	Min.
Security update (SU)	Update pattern	0.5	99	95
	Security patch update	0.5	99	95
Risk analysis report by product (RA)	Asset identification and importance evaluation	0.2	99	95
	Check and take action for security weakness	0.8	99	95
	Risk analysis evaluation	0.5	99	95
	Establishing information protection measures and implementation plans	0.5	99	95
Intrusion accident response by product (IR)	Real-time security threat monitoring and detection and initial analysis	0.3	99	95
	Real-time response and reporting of cyber threat symptoms	0.5	99	95
	Monitor key IT infrastructure and check availability	0.2	99	95
	Collects and analyzes detailed data of security equipment based on initial analysis results	0.5	99	95
	Identify the extent of damage, such as data leakage, deviations of administrator authority, etc.	0.5	99	95
	Recovery Support and Countermeasures and Strategies for Different Types	0.5	99	95
	Backup equipment events and logs	0.3	99	95
Simulated training response (ST)	Malicious code analysis and distribution prevention service	0.2	99	95
	Hacking mail simulation training	0.5	99	95
Security audit support (SA)	Disaster recovery test	0.5	99	95
	Support for security audit of higher institutions	0.2	97	92
Technical advice (TA)	Support for ISMS certification review	0.3	97	92
	Information security training	0.2	97	92
	Quality control and improvement of work by security service area	0.1	95	90
	Security trend analysis	0.2	95	90

○ Criteria for performance by service

Div.	Criteria for implementation				
	Week	Month	Quarter	Half	Year
Security update		●			
Risk analysis report by product			●		
Intrusion accident response by product	●				
Simulated training response				●	
Security audit support				●	
Technical advice	Information security training			●	
	Quality control and improvement of work by security service area				●
	Security trend analysis	●			

□ 정보보호서비스 대가 도입 전후 효과 분석 결과(Results of the pre- and post-Information Protection Service Cost Analysis)[3][4]

- 2016~2018년도 유지관리 완료보고서를 참고하여 연간 보안업데이트, 보안 리스크 분석, 침해대응 처리, 모의훈련, 기술자문 건수 등을 기준으로 분석한 결과(Annual security updates, security risk analysis, breach response handling, simulation training, and technical advisory counts were analyzed based on the 2016-2018 Annual Maintenance Completion Report.)

DIV.	Process count		
	2016	2017	2018
Security update	1	3.7	11
Risk analysis report by product	0.3	12	25.7
Intrusion accident response by product	1	12	81.33
Simulated training response	0	2	4
Security audit support	0	2	2
Technical advice	0.5	4	8
Visit support count	0.5	4	7

<참고>

1. 한국인터넷진흥원, 정보보호서비스 대가 산정 가이드, 2015
2. 한국소프트웨어산업협회, SW사업대가 산정 가이드, 2018
3. 서귀포시, 2016~2018년도 유지관리 완료보고서, 2016~2018
4. 오상익, 박남제, “공공기관 정보보호서비스 대가 모델의 개선방안”, 한국정보기술학회논문지 17:7, pp.123-131, 2019.7

<Reference>

1. Korea Internet & Security Agency, information protection service cost calculation guide, 2015
2. Software Industry Association of Korea, SW Business Cost Estimating Guide, 2018

3. Seogwipo City, 2016-2018 Maintenance Completion Report, 2016-2018
4. Sangik Oh;Namje Park, "The Improvement of Information Protection Service Cost Model in Public Institution", The Journal of Korean Institute of Information Technology 17·7, pp.123-131, 2019.7