

EGA e-Government Agency Electronic Government Agency (Public Organization) สำนักงานรัฐบาลอิเล็กทรอนิกส์ (องค์การมหาชน)



# การปิดจุดอ่อนวินโดวส์

# (Windows Hardening)



### วัตถุประสงค์การปิดจุดอ่อน

(Harden Objectives)

เพื่อเป็นแนวทางในการกำหนดค่าความปลอดภัยให้กับระบบที่ กำลังจะติดตั้งใช้งานจริง หรือการปรับปรุงแก้ไขเครื่องให้บริการที่เกิดมี จุดอ่อนให้มีการป้องกันที่เข้มแข็งขึ้น



## ทำไมต้องปิดช่องโหว่





## Hardening

#### Systems (MS Windows, Linux, Network Devices)

#### Application (Mysql, SQL Server, Web Application ...)



### Microsoft Windows Server 2012 Hardening

- Account Policies
- Audit Policy
- Security Options
- Windows Components
- Web Server
- Microsoft Baseline Security Analyzer







#### **Microsoft Corporation**



#### National Institute of Standards and Technology U.S. Department of Commerce

The National Institute of Standards and Technology (NIST)

Center for Internet Security (CIS)



http://www.cisecurity.org/





### **Member Server**

- AD Certificate Services
- DHCP Server
- DNS Server
- File Server
- Hyper-V
- Network Policy and Access Services
- Print Server
- Remote Access Services
- Remote Desktop Services
- Web Server



















## Windows Update

Control Panel Home	Windows Update		
Check for updates			
Change settings	Checking for u	pdates	
Restore hidden updates			
	Most recent check for updates:	Today at 6:31 PM	
	Updates were installed:	5/20/2015 at 11:51 AM.	
	You receive updates:	Managed by your system administrator Check online for updates from Windows Update	





### Windows Update







#### Download updates but let me choose whether to install them

<ul> <li>(€) (○) (○) (○) (○) (○) (○) (○) (○) (○) (○</li></ul>	
Choose your Windows Update settings  Some settings are managed by your system administrator. More information.  When your PC is online, Windows can automatically check for important updates and install them using these settings. When new updates are available, you can also choose to install them when you shut down your PC.  Important updates  Download updates but let me choose whether to install them Install updates automatically (recommended) Download updates but let me choose whether to install them A metered Check for updates but let me choose whether to download and install them	Q
Some settings are managed by your system administrator. More information.          When your PC is online, Windows can automatically check for important updates and install them using these settings. When new updates are available, you can also choose to install them when you shut down your PC.         Important updates         Download updates but let me choose whether to install them         Install updates automatically (recommended)         Download updates but let me choose whether to install them         Check for updates but let me choose whether to download and install them	^
When your PC is online, Windows can automatically check for important updates and install them using these settings. When new updates are available, you can also choose to install them when you shut down your PC. Important updates Download updates but let me choose whether to install them Install updates automatically (recommended) Download updates but let me choose whether to install them Install updates but let me choose whether to install them Install updates but let me choose whether to install them Install updates but let me choose whether to install them Install updates but let me choose whether to install them Install updates but let me choose whether to install them Install updates but let me choose whether to download and install them Install updates but let me choose whether to download and install them Install updates but let me choose whether to download and install them Install updates but let me choose whether to download and install them Install updates but let me choose whether to download and install them Install updates but let me choose whether to download and install them Install updates but let me choose whether to download and install them Install updates but let me choose whether to download and install them Install updates but let me choose whether to download and install them Install updates but let me choose whether to download and install them Install updates but let me choose whether to download and install them Install updates but let me choose whether to download and install them Install updates but let me choose whether to download and install them Install updates but let me choose whether to download and install them Install updates but let me choose whether to download and install them Install updates but let me choose whether to download and install them Install updates but let me choose whether to download and install them Install updates but let me choose whether to download and install them Install updates but let me choose whether to download and install them Install update	
Important updates Download updates but let me choose whether to install them Install updates automatically (recommended) Download updates but let me choose whether to install them Check for updates but let me choose whether to download and install them	
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Download updates but let me choose whether to install them a metered Check for updates but let me choose whether to download and install them	≡
Recommended updates	
Microsoft Update	
Give me updates for other Microsoft products when I update Windows	
Note: Windows Update might update itself automatically first when checking for other updates. Read our	~











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🔆 Favorites	Name	Date modified	Туре	Size	^
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〕 Downloads	Component Services	8/21/2013 11:57 PM	Shortcut	2 KB	
🖳 Recent places	🛃 Computer Management	8/21/2013 11:54 PM	Shortcut	2 KB	
	📸 Defragment and Optimize Drives	8/21/2013 11:47 PM	Shortcut	2 KB	
👰 This PC	🔝 Event Viewer	8/21/2013 11:55 PM	Shortcut	2 KB	=
	💦 iSCSI Initiator	8/21/2013 11:57 PM	Shortcut	2 KB	
📬 Network	🛃 Local Security Policy	8/21/2013 11:54 PM	Shortcut	2 KB	
	Microsoft Azure Services	7/23/2014 9:02 PM	Shortcut	2 KB	
	📷 ODBC Data Sources (32-bit)	8/21/2013 4:56 PM	Shortcut	2 KB	
	📷 ODBC Data Sources (64-bit)	8/21/2013 11:59 PM	Shortcut	2 KB	
	Performance Monitor	8/21/2013 11:52 PM	Shortcut	2 KB	
	Resource Monitor	8/21/2013 11:52 PM	Shortcut	2 KB	
	🛃 Security Configuration Wizard	8/21/2013 11:45 PM	Shortcut	2 KB	
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24 items					i

#### Local Security Policy



Local Security Policy							
File Action View Help							
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<ul> <li>Security Settings</li> <li>Account Policies</li> <li>Local Policies</li> <li>Windows Firewall with Advanced Security Network List Manager Policies</li> <li>Public Key Policies</li> <li>Software Restriction Policies</li> <li>Software Restriction Policies</li> <li>Application Control Policies</li> <li>IP Security Policies on Local Compute</li> <li>Advanced Audit Policy Configuration</li> </ul>	Name Account Policies Local Policies Windows Firewall with Advanced Security Network List Manager Policies Public Key Policies Software Restriction Policies Application Control Policies IP Security Policies on Local Computer Advanced Audit Policy Configuration	Description Password and account lockout policies Auditing, user rights and security options polici Windows Firewall with Advanced Security Network name, icon and location group policies. Application Control Policies Internet Protocol Security (IPsec) Administratio Advanced Audit Policy Configuration					
< III >		Account Policy					



3	Local Security Policy	_ <b>D</b> X
File Action View Help		
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<ul> <li>Security Settings</li> <li>Account Policies</li> <li>Password Policy</li> <li>Account Lockout Policy</li> <li>Local Policies</li> <li>Windows Firewall with Advanced Security</li> <li>Network List Manager Policies</li> <li>Public Key Policies</li> <li>Software Restriction Policies</li> <li>Software Restriction Policies</li> <li>Application Control Policies</li> <li>IP Security Policies on Local Compute</li> <li>Advanced Audit Policy Configuration</li> </ul>	Policy Enforce password history Maximum password age Minimum password length Password must meet complexity requirements Store passwords using reversible encryption Password	Security Setting 0 passwords remembered 42 days 0 days 0 characters Enabled Disabled Policy





## **Account Policies**

## **Password Policies**

Set 'Minimum password length' to '14 or more character(s)'

Set 'Enforce password history' to '24 or more password(s)'

Set 'Password must meet complexity requirements' to 'Enabled'

Set 'Store passwords using reversible encryption' to 'Disabled'

Set 'Minimum password age' to '1 or more day(s)'

Set 'Maximum password age' to '60 or fewer days'







### Set 'Enforce password history' to '24 or more password(s)'

3	Local Security Policy	_ <b>D</b> X
File Action View Help   File Action View Help	Policy Enforce password history	Security Setting 0 passwords remembered
<ul> <li>Password Policy</li> <li>Account Lockout Policy</li> <li>Local Policies</li> <li>Windows Firewall with Advanced Secure</li> <li>Network List Manager Policies</li> <li>Public Key Policies</li> <li>Software Restriction Policies</li> <li>Software Restriction Policies</li> <li>Application Control Policies</li> <li>IP Security Policies on Local Compute</li> <li>Advanced Audit Policy Configuration</li> </ul>	<ul> <li>Maximum password age</li> <li>Minimum password age</li> <li>Minimum password length</li> <li>Password must meet complexity requirements</li> <li>Store passwords using reversible encryption</li> </ul>	42 days 0 days 0 characters Enabled Disabled





Set 'Enforce password history' to '24 or more password(s)'

#### zaq12wsxcde34rfv

zaq12wsxcde34rfv

1zaq1wsxcde34rfv 2qwerty!@#\$1234 3.loik,mjuy093455 4sdlkjoijdcpwokpo 5lkjsdcijijpowek[[;

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### Set 'Enforce password history' to '24 or more password(s)'

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<ul> <li>Security Settings         <ul> <li>Account Policies</li> <li>Password Policy</li> <li>Account Lockout Policy</li> <li>Coal Policies</li> <li>Windows Firewall with Advanced Security Network List Manager Policies</li> <li>Public Key Policies</li> <li>Software Restriction Policies</li> <li>Application Control Policies</li> <li>IP Security Policies on Local Compute</li> <li>Advanced Audit Policy Configuration</li> </ul> </li> </ul>	Policy         Image: Enforce password history         Image: Minimum password age         Image: Minimum password length         Image: Password must meet complexity requirements         Image: Store passwords using reversible encryption	Security Setting 0 passwords rer 42 days 0 days 0 characters Enabled Disabled		bered al Sec Kee 24	Enfor	vord	ools prce password histor Explain assword history history for: passwords remembered	bry Proper	rties	x ?	×
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## **Password Policies**

#### Set 'Maximum password age' to '60 or fewer days'

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<ul> <li>Security Settings</li> <li>Account Policies</li> <li>Password Policy</li> <li>Account Lockout Policy</li> <li>Local Policies</li> <li>Windows Firewall with Advanced Security</li> <li>Network List Manager Policies</li> <li>Public Key Policies</li> <li>Software Restriction Policies</li> <li>Application Control Policies</li> <li>IP Security Policies on Local Compute</li> <li>Advanced Audit Policy Configuration</li> </ul>	Policy       •         Enforce possword history       •         Maximum password age       •         Minimum password age       •         Minimum password length       •         Password must meet complexity requirements       •         Store passwords using reversible encryption       •	Security Setting 24 parswords n 42 days 0 days 0 characters Enabled Disabled	g emember Local Security S Max Password 60	Ools         Maximum password ag         Setting Explain         cimum password age         I will expire in:         I will expire in:         I will expire in:         I will expire in:	ge Properties ? X
				ОК	Cancel Apply



## **Password Policies**

#### Set 'Minimum password age' to '1 or more day(s)'

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<ul> <li>Security Settings</li> <li>Account Policies</li> <li>Password Policy</li> <li>Account Lockout Policy</li> <li>Local Policies</li> <li>Windows Firewall with Advanced Seco</li> <li>Network List Manager Policies</li> <li>Public Key Policies</li> <li>Software Restriction Policies</li> <li>Application Control Policies</li> <li>IP Security Policies on Local Compute</li> <li>Advanced Audit Policy Configuration</li> </ul>	Policy A Conforce password history Maximum password age Minimum password length Password must meet complexity requirements Store passwords using reversible encryption	Security Setting 24 passwords re 00 days 0 days 0 characters Enabled Disabled	emember Local Sec	Nurity Set	Ools         Ainimum password age Pro         ting       Explain         um password age         an be changed after:         days	operties	x ? x
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					ОК	Cancel	Apply



## **Password Policies**

#### Set 'Minimum password length' to '14 or more character(s)'

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File Action View Help					
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<ul> <li>Security Settings</li> <li>Account Policies</li> <li>Password Policy</li> <li>Account Lockout Policy</li> <li>Local Policies</li> <li>Windows Firewall with Advanced Security</li> <li>Network List Manager Policies</li> <li>Public Key Policies</li> <li>Software Restriction Policies</li> <li>Software Restriction Policies</li> <li>Application Control Policies</li> <li>IP Security Policies on Local Compute</li> <li>Advanced Audit Policy Configuration</li> </ul>	Policy         Image: State of the second s	Security Setting 24 passwords re 60 days 1 days 0 characters Enabled Disabled	emember	Mi surity Sett Minimu sword mu	ing Explain m password length Properties ? X ting Explain m password length ust be at least: characters
					OK Cancel Apply





#### Set 'Minimum password length' to '14 or more character(s)'

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HANGE PASSWORD	
Old password	••••
New password	Password should have less than 15 characters
Repeat new password	••••••
	SUBMIT 오





EX : Set 'Minimum password length' to '14 or more character(s)'

https://howsecureismypassword.net/

# HOW SECURE IS MY PASSWORD?



SHOW SETTINGS

It would take a desktop PC about 6 million years to crack your password

[Tweet Result]

SHOW DETAILS



## **Password Policies**

#### Set 'Password must meet complexity requirements' to 'Enabled'

3	Local Security Policy		_ 🗆 X		
File Action View Help					
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<ul> <li>Security Settings</li> <li>Account Policies</li> <li>Password Policy</li> <li>Account Lockout Policy</li> <li>Local Policies</li> <li>Windows Firewall with Advanced Security Public Key Policies</li> <li>Public Key Policies</li> <li>Software Restriction Policies</li> <li>Application Control Policies</li> <li>Advanced Audit Policy Configuration</li> </ul>	Policy         Image: Enforce password history         Image: Maximum password age         Image: Minimum password length         Image: Password must meet complexity requirements         Image: Store passwords using reversible encryption	Security Settin 24 passwords r 60 days 1 days 14 characters Enabled Disabled	g remember Local Security Se Passw © Enabled O Disabled	t meet complexity require	ements Pro ? ×
					Caract
				ОК	Cancel Apply





Set 'Password must meet complexity requirements' to 'Enabled'

English uppercase characters (A through Z) English lowercase characters (a through z) Base 10 digits (0 through 9) Non-alphabetic characters (for example, !, \$, #, %)



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#### Set 'Store passwords using reversible encryption' to 'Disabled'

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File Action View Help									
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<ul> <li>Security Settings</li> <li>Account Policies</li> <li>Password Policy</li> <li>Account Lockout Policy</li> <li>Local Policies</li> <li>Windows Firewall with Advanced Security Network List Manager Policies</li> <li>Public Key Policies</li> <li>Software Restriction Policies</li> <li>Application Control Policies</li> <li>IP Security Policies on Local Compute</li> <li>Advanced Audit Policy Configuration</li> </ul>	Policy         Image: End procession of age         Image: Minimum password age         Image: Minimum password length         Image: Password must meet complexity requirements         Image: Store passwords using reversible encryption	Security Setting 24 passwords re 60 days 1 days 14 characters Enabled Disabled	semem Stor	e pas cal Sec	Store p inabled	Image: Ools         Is using reversible encryption         Image: Display in the second	tion Pro	□ x 	
						ОК	Cancel	P	pply





Set 'Store passwords using reversible encryption' to 'Disabled'







## **Account Lockout Policy**

Set 'Account lockout threshold' to '5 invalid logon attempt(s)' Set 'Account lockout duration' to '15 or more minute(s)' Set 'Reset account lockout counter after' to '15 minute(s)'










Set 'Account lockout threshold' to '5 invalid logon attempt(s)'







Set 'Account lockout threshold' to '5 invalid logon attempt(s)'

11212				99999999999999999999999999999999999999
1	Local Security Policy	_ [		
File Action View Help				Account lock at the shall be set in 2 X
🗢 🔿 🙋 📰 💥 🗒 🛃 🗊				Account lockout threshold Properties
<ul> <li>Security Settings</li> <li>Account Policies</li> <li>Password Policy</li> <li>Account Lockout Policy</li> <li>Local Policies</li> <li>Windows Firewall with Advanced Security Network List Manager Policies</li> <li>Public Key Policies</li> <li>Software Restriction Policies</li> <li>Software Restriction Policies</li> <li>Mplication Control Policies</li> <li>M Paplication Control Policies</li> <li>Advanced Audit Policy Configuration</li> </ul>	Policy Account lockout duration Account lockout threshold Reset account lockout counter after	Security Setting Not Applicable 0 invalid logon attempts Not Applicable	Local Ser	Account lockout threshold Properties
< III >				OK Cancel Apply





Set 'Account lockout duration' to '15 or more minute(s)'



\* 'O' Administrator unlock manually http://www.cisecurity.org/





#### Set 'Account lockout duration' to '15 or more minute(s)'

1	Local Security Policy	_ [	
File Action View Help			Account lockout duration Properties ? X
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<ul> <li>Security Settings</li> <li>Account Policies</li> <li>Password Policy</li> <li>Account Lockout Policy</li> <li>Local Policies</li> <li>Windows Firewall with Advanced Security</li> <li>Network List Manager Policies</li> <li>Public Key Policies</li> <li>Software Restriction Policies</li> <li>Software Restriction Policies</li> <li>Mplication Control Policies</li> <li>IP Security Policies on Local Compute</li> <li>Advanced Audit Policy Configuration</li> </ul>	Account lockout duration Account lockout threshold Reset account lockout counter after	Security Setting 30 minutes 5 invalid logon attempts 30 minutes	Local Security Setting Explain          Account lockout duration         Account is locked out for:         15         Image: minutes
	L		

#### \* '0' Administrator unlock manually





#### Set 'Reset account lockout counter after' to '15 minute(s)'





### **Advanced Audit Policy Configuration**

File Action View Help			
Image: Security Settings         Security Settings         Account Policies         Password Policy         Account Lockout Policy         Account Lockout Policy         Account Policies         Account Policies         Account Policies         Account Policies         Addit Policy         Addit Policy         Account Volicies         Security Options         Windows Firewall with Advanced Sect         Network List Manager Policies         Public Key Policies         Software Restriction Policies         Application Control Policies         IP Security Policies on Local Compute         Advanced Audit Policy Configuration	Name Audit Policy User Rights Assignment Security Options	Description Audit Policy User Rights Assignmen Security Options	ιt



## **Advanced Audit Policy Configuration**

Set 'Audit Policy: Account Logon: Credential Validation' to 'Success and Failure' Set 'Audit Policy: Account Logon: Kerberos Authentication Service' to 'No Auditing' Set 'Audit Policy: Account Logon: Kerberos Service Ticket Operations' to 'No Auditing' Set 'Audit Policy: Account Logon: Other Account Logon Events' to 'No Auditing' Set 'Audit Policy: Account Management: Application Group Management' to 'No Auditing'

Configure 'Audit Policy: Account Management: Computer Account Management' Success

Set 'Audit Policy: Account Management: Distribution Group Management' to 'No Auditing'

Set 'Audit Policy: Account Management: Other Account Management Events' to 'Success and Failure'

Set 'Audit Policy: Account Management: Security Group Management' to 'Success and Failure'



## **Advanced Audit Policy Configuration**

Set 'Audit Policy: Account Management: User Account Management' to 'Success and Failure'

Set 'Audit Policy: Detailed Tracking: DPAPI Activity' to 'No Auditing'

Set 'Audit Policy: Detailed Tracking: Process Creation' to 'Success'

Set 'Audit Policy: Detailed Tracking: Process Termination' to 'No Auditing'

Set 'Audit Policy: Detailed Tracking: RPC Events' to 'No Auditing'

Set 'Audit Policy: Logon-Logoff: Account Lockout' to 'No Auditing'

Set 'Audit Policy: Logon-Logoff: IPsec Extended Mode' to 'No Auditing'

Set 'Audit Policy: Logon-Logoff: IPsec Main Mode' to 'No Auditing'

Set 'Audit Policy: Logon-Logoff: IPsec Quick Mode' to 'No Auditing'



## **Advanced Audit Policy Configuration**

Set 'Audit Policy: Logon-Logoff: Logoff' to 'Success'

Set 'Audit Policy: Logon-Logoff: Logon' to 'Success and Failure '

Set 'Audit Policy: Logon-Logoff: Network Policy Server' to 'No Auditing'

Set 'Audit Policy: Account Logon: Other Account Logon Events' to 'No Auditing'

Set 'Audit Policy: Logon-Logoff: Other Logon/Logoff Events' to 'No Auditing'

Set 'Audit Policy: Logon-Logoff: Special Logon' to 'Success'

Set 'Audit Policy: Object Access: Application Generated' to 'No Auditing'

Set 'Audit Policy: Object Access: Central Access Policy Staging' to 'No Auditing'

Set 'Audit Policy: Object Access: Certification Services' to 'No Auditing'



## **Advanced Audit Policy Configuration**

Set 'Audit Policy: Privilege Use: Other Privilege Use Events' to 'No Auditing' Set 'Audit Policy: Privilege Use: Sensitive Privilege Use' to 'Success and Failure' Set 'Audit Policy: Policy Change: Audit Policy Change' to 'Success and Failure' Set 'Audit Policy: System: IPsec Driver' to 'Success and Failure' Set 'Audit Policy: System: Other System Events' to 'No Auditing' Set 'Audit Policy: System: Security State Change' to 'Success and Failure' Set 'Audit Policy: System: Security System Extension' to 'Success and Failure' Set 'Audit Policy: System: System Integrity' to 'Success and Failure'



## **Advanced Audit Policy Configuration**

Control Panel\System and Security\Administrative Tools\Local Security Policy





### Event Log (Event Viewer)

### **Control Panel\System and Security\Administrative Tools**

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☆ Favorites	Name	Date modified	Туре	Size	^
Desktop	길 Terminal Services	8/22/2013 8:39 AM	File folder		
🐌 Downloads	🔊 Component Services	8/21/2013 11:57 PM	Shortcut	2 KB	
🗐 Recent places	🛃 Computer Management	8/21/2013 11:54 PM	Shortcut	2 KB	
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	💦 ISCSI Initiator	8/21/2013 11:57 PM	Shortcut	2 KB	
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	🔊 Microsoft Azure Services	7/23/2014 9:02 PM	Shortcut	2 KB	
	📷 ODBC Data Sources (32-bit)	8/21/2013 4:56 PM	Shortcut	2 KB	
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	Performance Monitor	8/21/2013 11:52 PM	Shortcut	2 KB	
	Resource Monitor	8/21/2013 11:52 PM	Shortcut	2 KB	
	👼 Security Configuration Wizard	8/21/2013 11:45 PM	Shortcut	2 KB	
	🛃 Server Manager	8/21/2013 11:55 PM	Shortcut	2 KB	
	😹 Services	8/21/2013 11:54 PM	Shortcut	2 KB	
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24 items   1 item selected	1.14 KB				:==



### Event Log (Event Viewer)

Set Maximum Log Size (KB)







### Event Log (Event Viewer)

#### Set 'Security: Maximum Log Size (KB)' to 'Enabled: <u>196608</u> or greater' (Scored)

	Log Properties - Security (Type: Administrative)	
General		
Full Name:	Security	
Log path:	%SystemRoot%\System32\Winevt\Logs\Security.evtx	
Log size:	20.00 MB(20,975,616 bytes)	
Created:	Wednesday, May 20, 2015 3:41:47 PM	
Modified:	Wednesday, June 3, 2015 10:34:05 PM	
Accessed:	Wednesday, May 20, 2015 3:41:47 PM	
Enable logging		
Maximum log size (	KB ): 196608	
O Overwrite eve	ents as needed (oldest events first)	
<ul> <li>Archive the log</li> </ul>	og when full, do not overwrite events	
<ul> <li>Do not overw</li> </ul>	rite events ( Clear logs manually )	
	Clear Log	
	OK Cancel Apply	





### Event Log (Event Viewer)

#### Set 'System: Maximum Log Size (KB)' to 'Enabled: 32768 or greater' (Scored)

	Log Properties - System (Type: Administrative)	
General Subscriptions	1	
Full Name:	System	The second s
Log path:	%SystemRoot%\System32\Winevt\Logs\System.evtx	
Log size:	1.07 MB(1,118,208 bytes)	
Created:	Wednesday, May 20, 2015 3:41:47 PM	
Modified:	Tuesday, June 2, 2015 8:08:59 PM	
Accessed:	Wednesday, May 20, 2015 3:41:47 PM	
✓ Enable logging		
Maximum log size (	KB ): 32768 -	
When maximum eve	ent log size is reached:	10 A.
Archive the lo	ng when full, do not overwrite events	
O Do not overw	rite events ( Clear logs manually )	
	Classies	
	Clear Log	
	OK Cancel Apply	





### Event Log (Event Viewer)

Set 'Application: Maximum Log Size (KB)' to 'Enabled: <u>32768</u> or greater' (Scored)

	Log Properties - Application (Type: Administrative)	×
General Subscript	tions	
Full Name:	Application	11111
Log path:	%SystemRoot%\System32\Winevt\Logs\Application.evtx	
Log size:	1.07 MB(1,118,208 bytes)	
Created:	Wednesday, May 20, 2015 3:41:47 PM	
Modified:	Tuesday, June 2, 2015 8:08:59 PM	
Accessed:	Wednesday, May 20, 2015 3:41:47 PM	
🗹 Enable loggir	ng	
Maximum log s	ize ( KB ): 32768 🔨	
When maximur	n event log size is reached:	
<ul> <li>Overwrit</li> </ul>	e events as needed (oldest events first)	
Archive t	the log when full, do not overwrite events	
O Do not o	verwrite events ( Clear logs manually )	
	ClearLoc	
		9
	OK Cancel App	ply



### Event Log (Event Viewer)

### Summery

114 ALE 1 1 1	
Event	Log Size (KB)
Security Log	196,608
System Log	32,768
Application Log	32,768
Minimum log file size 1 MB	

Maximum log file size 2 TB (2147483647 KB)

# MS Windows Server 2012 Security Options



#### Control Panel\System and Security\Administrative Tools\Local Security Policy

<b>a</b>	Local Security Policy	
File Action View Help		
🗢 🔿 📶 🗙 🗟 🚺 🖬		
🚡 Security Settings	Policy	Security Setting
Account Policies	🛞 Accounts: Administrator account status	Enabled
⊿ 📴 Local Policies	Accounts: Block Microsoft accounts	Not Defined
Audit Policy	📖 Accounts: Guest account status	Disabled
User Rights Assignment	📖 Accounts: Limit local account use of blank passwords to co	Enabled
Security Options	Accounts: Rename administrator account	Admin_Cloud
Windows Firewall with Advanced Security	Counts: Rename guest account	Guest Cloud
Network List Manager Policies	Audit: Audit the access of global system objects	Disabled



### Security Options

#### Configure 'Accounts: Rename administrator account'

Administrator 9 Password Switch User



### Security Options

#### Configure 'Accounts: Rename administrator account'

1	Local Security Policy		
File Action View Help			
🗢 🔿 🙍 📰 💥 🗎 🛃 🚺			Accounts: Rename administrator account Properti
<ul> <li>Security Settings</li> <li>Account Policies         <ul> <li>Password Policy</li> <li>Account Lockout Policy</li> <li>Local Policies</li> <li>Audit Policy</li> <li>User Rights Assignment</li> <li>Security Options</li> <li>Windows Firewall with Advanced Security Opticies</li> <li>Public Key Policies</li> <li>Software Restriction Policies</li> <li>Software Restriction Policies</li> <li>IP Security Policies on Local Compute</li> <li>Advanced Audit Policy Configuration</li> </ul> </li> </ul>	Policy Policy Accounts: Administrator account status Accounts: Block Microsoft accounts Accounts: Block Microsoft accounts Accounts: Guest account status Accounts: Rename administrator account Accounts: Rename guest account Devices: Allow undock without having Devices: Restrict CD-ROM access to local Domain controller: Allow server operat Domain controller: LDAP server signing Domain controller: Digitally encrypt or si Domain member: Digitally encrypt or si	Security Setting Enabled Not Defined Disabled Enabled admin_cloud Guest Disabled Not Defined Disabled Not Defined Enabled Not Defined Enabled Not Defined Not Defined Enabled Enabled Enabled	Local Security Setting Explain Accounts: Rename administrator account  admin_cloud
< III >	Domain member: Digitally sign secure	Enabled	OK Cancel Apply



### Security Options

#### Configure 'Accounts: Rename Guest account'

Ā	Local Security Policy		- 0	
File Action View Help				Accounts Rename quest account Properties ? X
🗢 🏟 🞽 📰 💥 🖼 🗟 🔽 🗊				
<ul> <li>Security Settings</li> <li>Account Policies</li> <li>Password Policy</li> <li>Account Lockout Policy</li> <li>Local Policies</li> <li>Audit Policy</li> <li>User Rights Assignment</li> <li>Security Option</li> <li>Windows Firewart with Advanced Security Network List Manager Policies</li> <li>Public Key Policies</li> <li>Software Restriction Policies</li> <li>Software Restriction Policies</li> <li>IP Security Policies on Local Compute</li> <li>Advanced Audit Policy Configuration</li> </ul>	Policy         Image: Accounts: Administrator account status         Accounts: Block Microsoft accounts         Accounts: Guest account status         Accounts: Limit local account use of bl         Accounts: Rename administrator accou         Accounts: Rename guest account         Audit: Audit the use of Backup and Res         Audit: Shut down system immediately i         DCOM: Machine Access Restrictions in         DCOM: Machine Launch Restrictions in         Devices: Allow undock without having         Devices: Allow undock without having         Devices: Restrict CD-ROM access to loc         Devices: Restrict floppy access to locall         Domain controller: Allow server operat         Domain controller: Refuse machine acc         Domain controller: Refuse machine acc	Security Setting Enabled Not Defined Disabled Enabled admin_cloud Guest Disabled Disabled Not Defined Not Defined Enabled Not Defined Enabled Not Defined Not Defined Enabled Enabled Enabled		Local Security Setting Explain Accounts: Rename guest account Guest_cloud
	Domain member: Digitally sign secure	Enabled		OK Gancel Apply



### Security Options

Set 'Accounts: Limit local account use of blank passwords to console logon only' to 'Enabled'

1	Local Security Policy		_	x						
File Action View Help				A					2	X
🗢 া 🖄 📰 💥 🗐 🔒				Account	s: Limit io		ount use of	biank pas	swo	
<ul> <li>Security Settings</li> <li>Account Policies</li> <li>Password Policy</li> <li>Account Lockout Policy</li> <li>Local Policies</li> <li>Audit Policy</li> <li>User Rights Assignment</li> <li>Security Options</li> <li>Windows Firewall with Advanced Security Network List Manager Policies</li> <li>Public Key Policies</li> <li>Software Restriction Policies</li> <li>Software Restriction Policies</li> <li>IP Security Policies on Local Compute</li> <li>Advanced Audit Policy Configuration</li> </ul>	<ul> <li>Policy</li> <li>Accounts: Administrator account status</li> <li>Accounts: Block Microsoft accounts</li> <li>Accounts: Guest account status</li> <li>Accounts: Limit local account use of bl</li> <li>Accounts: Rename administrator accou</li> <li>Accounts: Rename guest account</li> <li>Accounts: Rename guest account</li> <li>Accounts: Rename guest account</li> <li>Audit: Audit the access of global syste</li> <li>Audit: Audit the use of Backup and Res</li> <li>Audit: Force audit policy subcategory s</li> <li>DCOM: Machine Access Restrictions in</li> <li>DCOM: Machine Launch Restrictions in</li> <li>DCOM: Machine Launch Restrictions in</li> <li>Devices: Allowed to format and eject re</li> <li>Devices: Restrict CD-ROM access to locall</li> <li>Devices: Restrict floppy access to locall</li> <li>Domain controller: Allow server operat</li> <li>Domain controller: Refuse machine acc</li> <li>Domain member: Digitally encrypt or si</li> </ul>	Security Setting Enabled Not Defined Disabled Enabled admin_cloud Guest_cloud Disabled Disabled Not Defined Not Defined Enabled Not Defined Enabled Not Defined Not Defined Not Defined Not Defined Not Defined Not Defined Not Defined Not Defined Not Defined Not Defined Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled Enabled		Local Se	Curity Setting Accounts: logon only Enabled Disabled	Explain Limit local a	iccount use of	blank passwo	rds to consol	le
	📓 Domain member: Digitally sign secure	Enabled					OK	Cance	A	pply



### Security Options

#### Shut down system immediately if unable to log security audits

1	Local Security Policy		
File Action View Help			Audit: Shut down system immediately if yeable to ? X
🗢 🏟 🖄 🖬 💥 🖬 🗟 🚺 🖬			
<ul> <li>Security Settings</li> <li>Account Policies</li> <li>Password Policy</li> <li>Account Lockout Policy</li> <li>Local Policies</li> <li>Audit Policy</li> <li>User Rights Assignment</li> <li>Security Options</li> <li>Windows Firewall with Advanced Sect</li> <li>Network List Manager Policies</li> <li>Public Key Policies</li> </ul>	Policy         Accounts: Administrator account status         Accounts: Block Microsoft accounts         Accounts: Guest account status         Accounts: Limit local account use of blank passwords to co         Accounts: Rename administrator account         Accounts: Rename guest account         Audit: Audit the access of global system objects         Audit: Audit the use of Backup and Restore privilege         Audit: Force audit policy subsetegory settings (Windows Vis)	Security Setting Enabled Not Defined Disabled Enabled admin_cloud Guest_cloud Disabled Disabled Not Defined	Local Security Setting Explain  Audit: Shut down system immediately if unable to log security audits  C Enabled  Disabled  Modifying this setting may affect compatibility with clients, services, and applications. For more information, see Audit: Shut down system immediately if unable to log security audits
<ul> <li>Software Restriction Policies</li> <li>Application Control Policies</li> <li>Rescurity Policies on Local Compute</li> <li>Advanced Audit Policy Configuration</li> </ul>	Audit: Shut down system immediately if unable to log secur     DCOM: Machine Access Restrictions in Security Descriptor D     DCOM: Machine Launch Restrictions in Security Descriptor     Devices: Allow undock without having to log on     Devices: Allow undock without having to log on     Devices: Allow do format and eject removable media     Devices: Prevent users from installing printer drivers     Devices: Restrict CD-ROM access to locally logged-on user     Devices: Restrict floppy access to locally logged-on user only     Domain controller: Allow server operators to schedule tasks     Domain controller: Refuse machine account password chan     Domain member: Digitally encrypt or sign secure channel d	Enabled Not Defined Enabled Not Defined Enabled Not Defined Not Defined Not Defined Not Defined Not Defined Enabled Enabled Enabled	
< III >	Domain member: Digitally sign secure channel data (when	Enabled	OK Cancel Apply



### Security Options

Shut down system immediately if unable to log security audits

- 1. Trusted Computer System Evaluation Criteria (TCSEC)-C2
  - https://en.wikipedia.org/wiki/Trusted Computer System Ev aluation Criteria
- 2. Common Criteria certification
  - https://www.commoncriteriaportal.org/





### Security Options

Set 'Interactive logon: Display user information when the session is locked

1	Local Security Policy	_ [	
File Action View Help			Interactive logon: Display user information when ? ×
🔶 🌒 📶 💥 🗒 🗟 🔢 🖬			
<ul> <li>Security Settings</li> <li>Account Policies</li> <li>Password Policy</li> <li>Account Lockout Policy</li> <li>Local Policies</li> <li>Audit Policy</li> <li>Local Policies</li> <li>Audit Policy</li> <li>User Right: Assignment</li> <li>Security Options</li> <li>Windows Eisewell with Advanced Security Network List Manager Policies</li> <li>Public Key Policies</li> <li>Software Restriction Policies</li> <li>Software Restriction Policies</li> <li>Application Control Policies</li> <li>Software Audit Policy Configuration</li> </ul>	Policy         Devices: Restrict floppy access to locally logged-on user only         Domain controller: Allow server operators to schedule tasks         Domain controller: LDAP server signing requirements         Domain controller: Refuse machine account password chan         Domain member: Digitally encrypt or sign secure channel data (wh         Domain member: Digitally encrypt secure channel data (whe         Domain member: Digitally sign secure channel data (whe         Domain member: Digitally user information when the session         Interactive logon: Do not display last user name         Interactive logon: Do not require CTRL+ALT+DEL         Interactive logon: Machine account lockout threshold	Security Setting Not Defined Not Defined Not Defined Enabled Enabled Disabled 30 days Enabled Disabled Disabled Disabled Disabled Disabled Not Defined	Local Security Setting Interactive logon: Display user information when the session is locked Do not display user information OK Caecel Apply
< III >	<ul> <li>Interactive logon: Machine inactivity limit</li> <li>Interactive logon: Message text for users attempting to log on</li> <li>Interactive logon: Message title for users attempting to log on</li> <li>Interactive logon: Number of previous logons to cache (in c</li> <li>Interactive logon: Prompt user to change password before e</li> <li>Interactive logon: Require Domain Controller authentication</li> <li>Interactive logon: Require smart card</li> <li>Interactive logon: Smart card removal behavior</li> <li>Microsoft network client: Digitally sign communications (al</li> </ul>	Not Defined 10 logons 5 days Disabled Disabled No Action Disabled	



### Security Options

#### Interactive logon: Do not display last user name

File Action View Help     Interactive logon: Do not display last user name     Security Settings     Account Policies   Policy   Domain controller: Allow server operators to schedule tasks   Not Defined   Domain controller: LDAP server signing requirements   Not Defined   Domain controller: Refuse machine account password chan   Not Defined   Domain controller: Refuse machine account password chan   Not Defined   Domain controller: Refuse machine account password chan   Not Defined   Domain member: Digitally encrypt or sign secure channel data (when   Enabled   Domain member: Digitally sign secure channel data (when   Enabled   Domain member: Digitally sign secure channel data (when	
<ul> <li></li></ul>	ama D ? X
<ul> <li>Security Settings</li> <li>Account Policies</li> <li>Password Policy</li> <li>Account Lockout Policies</li> <li>Domain controller: Allow server operators to schedule tasks</li> <li>Domain controller: LDAP server signing requirements</li> <li>Audit Policy</li> <li>Audit Policy</li> <li>Domain controller: Refuse machine account password chan</li> <li>Not Defined</li> <li>Domain controller: Refuse machine account password chan</li> <li>Not Defined</li> <li>Domain member: Digitally encrypt or sign secure channel data (when</li> <li>Enabled</li> <li>Domain member: Digitally sign secure channel data (when</li> <li>Enabled</li> </ul>	
<ul> <li>Windows Fixewall with Advanced Seci</li> <li>Network List Manager Policies</li> <li>Public Key Policies</li> <li>Software Restriction Policies</li> <li>Application Control Policies</li> <li>Interactive logon: Display user information when the session Do not display developed the interactive logon: Machine account lockout threshold Not Defined</li> <li>Interactive logon: Machine inactivity limit Not Defined</li> <li>Interactive logon: Number of previous logons to cache (in c 10 logons&lt;</li></ul>	
Implementative logon: Require sinar card     Disabled       Implementative logon: Smart card removal behavior     No Action       Implementation     Implementation       Implementative logon: Smart card removal behavior     No Action	ncel Apply







### Security Options

#### Set 'Interactive logon: Do not require CTRL+ALT+DEL' to 'Disabled'

1	Local Security Policy		
File Action View Help			Interactive logen: Do not require CTPL (ALT) DEL ? X
🗢 🏟 🞽 🖬 🗶 🗐 😹 🛛 🖬			
<ul> <li>Security Settings</li> <li>Account Policies</li> <li>Password Policy</li> <li>Account Lockout Policy</li> <li>Account Lockout Policy</li> <li>Local Policies</li> <li>Audit Policy</li> <li>Local Policies</li> <li>Audit Policy</li> <li>Iter Right: Assignment</li> <li>Security Options</li> <li>Windows Firewall with Advanced Security Network List Manager Policies</li> <li>Public Key Policies</li> <li>Software Restriction Policies</li> <li>Software Restriction Policies</li> <li>Mplication Control Policies</li> <li>Madvanced Audit Policy Configuration</li> </ul>	Policy          Image: Devices: Restrict floppy access to locally logged-on user only       Domain controller: Allow server operators to schedule tasks         Image: Domain controller: LDAP server signing requirements       Domain controller: Refuse machine account password chan         Image: Domain controller: Refuse machine account password chan       Domain member: Digitally encrypt or sign secure channel dat         Image: Domain member: Digitally encrypt secure channel data (when       Domain member: Digitally sign secure channel data (when         Image: Domain member: Digitally sign secure channel data (when       Domain member: Digitally sign secure channel data (when         Image: Domain member: Digitally sign secure channel data (when       Domain member: Digitally sign secure channel data (when         Image: Domain member: Digitally sign secure channel data (when       Domain member: Digitally sign secure channel data (when         Image: Domain member: Maximum machine account password chan       Domain member: Maximum machine account password age         Image: Domain member: Require strong (Windows 2000 or later) se       Interactive logon: Do not require CTRL+ALT+DEL         Image: Interactive logon: Machine inactivity limit       Interactive logon: Machine inactivity limit         Image: Interactive logon: Machine inactivity limit       Interactive logon: Message text for users attempting to log on         Image: Interactive logon: Number of previous logons to cache (in c       Image: Interacti	Security Setting Not Defined Not Defined Not Defined Enabled Enabled Disabled 30 days Enabled Do not display user info Enabled Disabled Not Defined Not Defined Not Defined	Local Security Setting Explain Interactive logon: Do not require CTRL+ALT+DEL C Enabled O Disabled
	Interactive logon: Prompt user to change password before e Interactive logon: Popular Domain Controller auto-ati-ati-ati-ati-ati-ati-ati-ati-ati-ati	5 days Disabled	
	Interactive logon: Require Domain Controller authentication     Imain Controller authentication	Disabled	
	📖 Interactive logon: Smart card removal behavior	No Action	
< III >	A Microsoft network client: Digitally sign communications (al	Disabled	OK Cancel Apply



### Security Options

#### Set 'Interactive logon: Machine inactivity limit' to '900 or fewer seconds'

Local Security Policy		Interactive logon: Machine inactivity limit Properti ? 🗙	
File Action View Help		Local Security Setting Fxnlain	
🗢 🄿 🔁 🔜 🗶 🖬 🔂			Interactive logon: Machine inactivity limit
<ul> <li>Security Settings</li> <li>Account Policies</li> <li>Password Policy</li> <li>Account Lockout Policy</li> <li>Local Policies</li> <li>Audit Policy</li> <li>Local Policies</li> <li>Audit Policy</li> <li>User Rights Assignment</li> <li>Security Options</li> <li>Windows Firewall with Advanced Security Network List Manager Policies</li> <li>Public Key Policies</li> <li>Software Restriction Policies</li> <li>Software Restriction Policies</li> <li>Software Restriction Policies</li> <li>Application Control Policies</li> <li>Advanced Audit Policy Configuration</li> </ul>	Policy         Image: Second	Security Setting 30 days Enabled Do not display u Enabled Disabled Not Defined Not Defined Not Defined 10 logons 5 days Disabled Disabled Enabled Disabled Disabled 15 minutes Not Defined	Interactive logon: Machine inactivity limit
	Microsoft network server: Digitally sign communications (al Microsoft network server: Digitally sign communications (if Microsoft network server: Digitally sign communications (if)	Disabled Disabled	OK Cancel Apply



### **Security Options**

1	Local Security Policy		Interactive logon: Number of previous logons to c ? 🗙
File Action View Help			Local Security Setting Evolain
🗢 🏟 🖄 📰 🗙 🗐 🔒 👔 🖬			Interactive logon: Number of previous logons to cache (in case
<ul> <li>Security Settings</li> <li>Account Policies</li> <li>Password Policy</li> <li>Account Lockout Policy</li> <li>Account Lockout Policy</li> <li>Local Policies</li> <li>Audit Policy</li> <li>Local Policies</li> <li>Audit Policy</li> <li>Security Options</li> <li>Windows Fixewalt with Advanced Security Options</li> <li>Windows Fixewalt with Advanced Security Public Key Policies</li> <li>Software Restriction Policies</li> <li>Software Restriction Policies</li> <li>Software Audit Policy Policies</li> <li>Application Control Policies</li> <li>Advanced Audit Policy Configuration</li> </ul>	Policy         Domain member: Maximum machine account password age         Domain member: Require strong (Windows 2000 or later) se         Interactive logon: Display user information when the session         Interactive logon: Do not display last user name         Interactive logon: Do not require CTRL+ALT+DEL         Interactive logon: Machine account lockout threshold         Interactive logon: Machine inactivity limit         Interactive logon: Message text for users attempting to log on         Interactive logon: Number of previous logons to cache (in c         Interactive logon: Require Domain Controller authentication         Interactive logon: Smart card         Interactive logon: Smart card removal behavior         Microsoft network client: Digitally sign communications (if         Microsoft network server: Amount of idle time required bef         Microsoft network server: Attempt S4U2Self to obtain claim         Microsoft network server: Digitally sign communications (al         Microsoft network server: Attempt S4U2Self to obtain claim         Microsoft network server: Digitally sign communications (al         Microsoft network server: Digitally sign communications (al         Microsoft network server: Attempt S4U2Self to obtain claim         Microsoft network server: Digitally sign communications (al         Microsoft network server: Digitally sign communications	Security Setting 30 days Enabled Do not display u Enabled Disabled Not Defined 900 seconds 10 logons 9 days Disabled Disabled Enabled Disabled 15 minutes Not Defined Disabled Disabled	Interactive logon: Number of previous logons to cache (in case domain controller is not available)
	Microsoft network server: Disconnect clients when logon ho	Fnabled	



### **Security Options**





### **Security Options**





### Security Options





### **Security Options**

Set 'Interactive logon: Prompt user to change password before expiration' to '14 or more day(s)'

1	Local Security Policy	L	Interactive logon: Prompt user to change passwor ? 🗙
File Action View Help			Local Security Setting Evolain
🗢 🔿 🙍 📰 🗙 🖾 🛃 🖬			Interactive logon: Prompt user to change password before
<ul> <li>Security Settings</li> <li>Account Policies</li> <li>Password Policy</li> <li>Account Lockout Policy</li> <li>Local Policies</li> <li>Audit Policy</li> <li>Local Policies</li> <li>Audit Policy</li> <li>User Rights Assignment</li> <li>Security Options</li> <li>Windows Firewall with Advanced Security Network List Manager Policies</li> <li>Public Key Policies</li> <li>Software Restriction Policies</li> <li>Software Restriction Policies</li> <li>IP Security Policies on Local Compute</li> <li>Advanced Audit Policy Configuration</li> </ul>	Policy         Image: Domain member: Maximum machine account password age         Domain member: Require strong (Windows 2000 or later) se         Interactive logon: Display user information when the session         Interactive logon: Do not display last user name         Interactive logon: Do not display last user name         Interactive logon: Do not require CTRL+ALT+DEL         Interactive logon: Machine account lockout threshold         Interactive logon: Machine inactivity limit         Interactive logon: Message text for users attempting to log on         Interactive logon: Number of previous logons to cache (in c         Interactive logon: Require Domain Controller authentication         Interactive logon: Require smart card         Interactive logon: Smart card removal behavior         Microsoft network client: Digitally sign communications (if         Microsoft network client: Send unencrypted password to thi         Microsoft network server: Attempt S4U2Self to obtain claim         Microsoft network server: Digitally sign communications (al         Microsoft network server: Digitally sign communications (al)         Microsoft network server: Attempt S4U2Self to obtain claim         Microsoft network server: Digitally sign communications (al)         Microsoft network server: Digitally sign communications (al)	Security Setting 30 days Enabled Do not display us Enabled Disabled Not Defined 900 seconds 4 logons 5 days Disabled Disabled Disabled Enabled Disabled 15 minutes Not Defined Disabled	Interactive logon: Prompt user to change password before expiration         Begin prompting this many days before password expires:         14       Image: Compare the expiration         0K       Cancel
	Microsoft network server. Digitally sign communications (in	Enabled	



### Security Options

Interactive logon: Message text for users attempting to log on

i 🔁	Local Security Policy		Interactive logon: Message text for users attempti
File Action View Help			Local Policy Setting Evolution
🗢 🏟 🙇 🔜 🗶 🗐 😼 👔			Interactive logon: Message text for users attempting to log on
Security Settings	Policy	Security Setting	
Account Lockout Policy	Domain member: Maximum machine account password age     Domain member: Require strong (Windows 2000 or later) se	Enabled	
⊿ 强 Local Policies	Interactive logon: Display user information when the session Interactive logon: Do not display last user name Interactive logon: Do not display last user name Interactive logon: Do not display as the security of the se	Enabled	, You must have explicit permission to access or configure this devic All activities performed on this device may be logged"," and violatio
User Rights Assignment     Security Options	Interactive logon: Do not require CTAC+ALT+DEL     Interactive logon: Machine account lockout threshold     Interactive logon: Machine inactivity limit	Not Defined 900 seconds	of this policy may result in disciplinary action"," and may be reported to law enforcement. There is no right to privacy on this device.
Windows Firewall with Advanced Sect     Metwork List Manager Policies     Public Key Policies	Interactive logon: Message text for users attempting to log on		
<ul> <li>Goftware Restriction Policies</li> <li>Application Control Policies</li> </ul>	Interactive logon: Number of previous logons to cache (in c     Interactive logon: Prompt user to change password before e	4 logons 14 days	
<ul> <li>IP Security Policies on Local Compute</li> <li>Advanced Audit Policy Configuration</li> </ul>	Interactive logon: Require Domain Controller authentication Interactive logon: Require smart card Interactive logon: Smart card semanal hebryier	Disabled Disabled	
	Microsoft network client: Digitally sign communications (al     Microsoft network client: Digitally sign communications (if	Disabled Enabled	
	Microsoft network client: Send unencrypted password to thi     Microsoft network server. Amount of idle time required bef	Disabled	
	Microsoft network server. Attroute of net entre required between the server.  Microsoft network server. Attempt S4U2Self to obtain claim  Microsoft network server. Disitelly size communications (claim)	Not Defined	
	Microsoft network server: Digitally sign communications (al     Microsoft network server: Digitally sign communications (if     Microsoft network server: Disconnect clients when loop ho	Disabled Enabled	OK Cancel Apply


#### Security Options

Interactive logon: Message text for users attempting to log on

===== UNAUTHORIZED ACCESS TO THIS NETWORK DEVICE IS PROHIBITED. ===== ,You must have explicit permission to access or configure this device., "All activities performed on this device may be logged"," and violations, of this policy may result in disciplinary action"," and may be reported, to law enforcement. There is no right to privacy on this device.

===== เข้าถึงอุปกรณ์เครือข่ายนี้เป็นสิ่งต้องห้าม ===== คุณต้องได้รับอนุญาตอย่างชัดเจนในการเข้าถึงหรือการกำหนดค่าของอุปกรณ์นี้. "กิจกรรมที่ดำเนินการทั้งหมดในอุปกรณ์นี้อาจถูกบันทึกไว้"," และการละเมิด นโยบายนี้อาจส่งผลมีการดำเนินการทางวินัย "," และอาจมีการแจ้งความให้มี การดำเนินคดีตามกฎหมาย มีสิทธิที่จะไม่มีความเป็นส่วนตัวบนอุปกรณ์นี้



#### **Security Options**

Interactive logon: Message text for users attempting to log on





#### Security Options

Interactive logon: Message title for users attempting to log on (Warning)

1	Local Security Policy	<b>–</b> 1	Interactive logon: Message title for users attempti ? ×
File Action View Help			Local Security Setting Evolution
🗢 🄿 📶 🗙 🗟 🛛 🖬			Interactive logon: Message title for users attempting to log on
Security Settings	Policy	Security Setting	
⊿ Account Policies	📓 Domain member: Maximum machine account password age	30 days	
Password Policy	📓 Domain member: Require strong (Windows 2000 or later) se	Enabled	
Account Lockout Policy	📓 Interactive logon: Display user information when the session	Do not display user inf	Waming
△ A Local Policies	📓 Interactive logon: Do not display last user name	Enabled	
Audit Policy	顕 Interactive logon: Do not require CTRL+ALT+DEL	Disabled	
User Rights Assignment	💹 Interactive logon: Machine account lockout threshold	Not Defined	
Security Options	🛞 Interactive logon: Machine inactivity limit	900 seconds	
Windows Firewall with Advanced Sect Network List Manager Deliging	B Interactive logon: Message text for users attempting to log on	===== UNAUTHORIZ	
Network List Manager Policies	📓 Interactive logon: Message title for users attempting to log on	$\succ$	
Software Restriction Policies	B Interactive logon. Number of previous logons to cache (in c	4 logons	
Application Control Policies	📓 Interactive logon: Prompt user to change password before e	14 days	
Application control onces	🛞 Interactive logon: Require Domain Controller authentication	Disabled	
Advanced Audit Policy Configuration	📓 Interactive logon: Require smart card	Disabled	
, <u> </u>	📓 Interactive logon: Smart card removal behavior	No Action	
	B Microsoft network client: Digitally sign communications (al	Disabled	
	B Microsoft network client: Digitally sign communications (if	Enabled	
	B Microsoft network client: Send unencrypted password to thi	Disabled	
	Microsoft network server: Amount of idle time required bef	15 minutes	
	Microsoft network server: Attempt S4U2Self to obtain claim	Not Defined	
	Microsoft network server: Digitally sign communications (al	Disabled	
	B Microsoft network server: Digitally sign communications (if	Disabled	OK Cancel Apply
	Microsoft network server: Disconnect clients when logon ho	Fnahled	



#### Security Options

Interactive logon: Message text for users attempting to log on

Interactive logon: Message title for users attempting to log on

#### Warning





#### **Security Options**

1	Local Security Policy		Network access: Do not allow anonymous enumer ? ×
File Action View Help			Local Security Setting Evolain
🗢 🏟 🙇 📰 💥 🗐 🗟 🚺 🖬			Network access: Do not allow anonymous enumeration of SAM
<ul> <li>Security Settings</li> <li>Account Policies</li> <li>Password Policy</li> <li>Account Lockout Policy</li> <li>Local Policies</li> <li>Audit Policy</li> <li>Local Policies</li> <li>Audit Policy</li> <li>User Right Accignment</li> <li>Security Options</li> <li>Windows Firewall with Advanced Sect</li> <li>Network List Manager Policies</li> <li>Public Key Policies</li> <li>Software Restriction Policies</li> <li>Application Control Policies</li> <li>Mavanced Audit Policy Configuration</li> </ul>	Policy       •         Interactive logon: Message title for users attempting to log on       Interactive logon: Number of previous logons to cache (in case domain con         Interactive logon: Prompt user to change password before expiration       Interactive logon: Require Domain Controller authentication to unlock work         Interactive logon: Require smart card       Interactive logon: Smart card removal behavior         Microsoft network client: Digitally sign communications (always)       Microsoft network client: Digitally sign communications (if server agrees)         Microsoft network client: Send unencrypted password to third-party SMB se       Microsoft network server: Attempt S4U2Self to obtain claim information         Microsoft network server: Digitally sign communications (always)       Microsoft network server: Digitally sign communications (if client agrees)         Microsoft network server: Digitally sign communications (always)       Microsoft network server: Digitally sign communications (always)         Microsoft network server: Digitally sign communications (if client agrees)       Microsoft network server: Digitally sign communications (always)         Microsoft network server: Disconnect clients when logon hours expire       Microsoft network server: Server SPN target name validation level         Network access: Allow anonymous siD/Name translation       Network access: Do not allow anonymous enumeration of SAM accounts a         Network access: Do not allow anonymous enumeration of SAM accounts a       Network access: Let Everyone permissions apply to	Securit Warnin 4 logor 14 days Disable Disable Disable Disable Disable Disable Disable Disable Disable Disable Disable Disable Disable Disable	Network access: Do not allow anonymous enumeration of SAM accounts and shares <ul> <li>Enabled</li> <li>Disabled</li> </ul> <ul> <li>Modifying this setting may affect compatibility with clients, services, and applications. For more information, see <u>Network access: Do not allow anonymous enumeration of SAM accounts and shares</u>. Q823659)</li> </ul> OK         Cancel         Apply
	🕅 Natwork accord Domataki accordible maister pathe	Curtom	



#### Security Options





#### **Security Options**





#### **Security Options**









#### **Security Options**





#### **Security Options**





#### **Security Options**

Set 'Network security: Allow Local System to use computer identity for NTLM' to 'Enabled' (Domain Controller)

1	Local Security Policy	_ [	Network security: Allow Local System to use comp ? ×
File Action View Help			Local Security Setting Evolution
🗢 🄿 🞽 🖬 🗶 🗎 🗟	2 🖬		Network security: Allow Local System to use computer identity for
<ul> <li>Security Settings</li> <li>Account Policies</li> <li>Password Policy</li> <li>Account Lockout Policy</li> <li>Local Policies</li> <li>Audit Policy</li> <li>User Rights Assignment</li> <li>Security Options</li> <li>Windows Firewalt with Adv</li> <li>Network List Manager Policies</li> <li>Software Restriction Policiee</li> <li>Software Restriction Policie</li> <li>Software Restriction Policie</li> <li>Application Control Policies</li> <li>Advanced Audit Policy Cor</li> </ul>	Policy       •         Whicrosoft network server: Digitally sign communications (if client agrees)       Microsoft network server: Disconnect clients when logon hours expire         Microsoft network server: Server SPN target name validation level       Microsoft network server: Server SPN target name validation level         Network access: Allow anonymous SID/Name translation       Network access: Do not allow anonymous enumeration of SAM accounts         Network access: Do not allow anonymous enumeration of SAM accounts a       Network access: Do not allow anonymous enumeration of SAM accounts a         Network access: Do not allow anonymous enumeration of SAM accounts a       Network access: Do not allow storage of passwords and credentials for netw         Network access: Let Everyone permissions apply to anonymous users       Network access: Named Pipes that can be accessed anonymously         Network access: Remotely accessible registry paths       Network access: Remotely accessible registry paths         Network access: Restrict anonymous access to Named Pipes and Shares       Network access: Shares that can be accessed anonymously         Network access: Shares that can be accessed anonymously       Network access: Shares that can be accessed anonymously         Network security: Allow Local System to use computer identity for NTLM       Network security: Allow Local System to use computer identity for NTLM         Network security: Configure encryption types allowed for Kerberos       Network security: Configure encryption types allowed for Kerberos <tr< td=""><td>Security Setting Disabled Enabled Not Defined Disabled Enabled Disabled Disabled Disabled Not Defined Not Defined</td><td>NTLM © Enabled Disabled OK Cancel Apply</td></tr<>	Security Setting Disabled Enabled Not Defined Disabled Enabled Disabled Disabled Disabled Not Defined Not Defined	NTLM © Enabled Disabled OK Cancel Apply



#### Security Options

## Set 'Network security: Allow LocalSystem NULL session fallback' to 'Disabled'

Local Security Policy – I		Network security: Allow LocalSystem NULL session ? ×	
File Action View Help		Local Security Setting Evolution	
🗢 🏟 🞽 🖬 💥 🗟 😖			Network security: Allow LocalSystem NULL session fallback
<ul> <li>Security Settings</li> <li>Account Policies</li> <li>Password Policy</li> <li>Local Policies</li> <li>Local Policies</li> <li>Audit Policy</li> <li>Security Options</li> <li>Windows Firewall with Adv.</li> <li>Network List Manager Policies</li> <li>Software Restriction Policieie</li> <li>Software Restriction Policieie</li> <li>Application Control Policie</li> <li>IP Security Policies on Loca</li> <li>Advanced Audit Policy Cor</li> </ul>	Policy       •         Image: Microsoft network server: Digitally sign communications (if client agrees)       Image: Microsoft network server: Disconnect clients when logon hours expire         Image: Microsoft network server: Server SPN target name validation level       Image: Microsoft network server: Server SPN target name validation level         Image: Microsoft network server: Server SPN target name validation level       Image: Microsoft network server: Server SPN target name validation level         Image: Microsoft network access: Allow anonymous SID/Name translation       Image: Metwork access: Do not allow anonymous enumeration of SAM accounts a         Image: Metwork access: Do not allow anonymous enumeration of SAM accounts a       Image: Metwork access: Do not allow anonymous enumeration of SAM accounts a         Image: Metwork access: Do not allow anonymous enumeration of SAM accounts a       Image: Metwork access: Do not allow anonymous enumeration of SAM accounts a         Image: Metwork access: Do not allow anonymous enumeration of SAM accounts a       Image: Metwork access: Do not allow anonymous enumeration of SAM accounts a         Image: Metwork access: Do not allow storage of passwords and credentials for netw       Image: Metwork access: Do not allow anonymous enumeration of SAM accounts a         Image: Metwork access: Remotely accessible registry paths       Image: Metwork access: Remotely accessible registry paths         Image: Metwork access: Remotely accessible registry paths and sub-paths       Image: Metwork access: Shares that can be accessed anonymously <td>Security Setting Disabled Enabled Not Defined Disabled Enabled Disabled Disabled Disabled System\CurrentC System\CurrentC Enabled Not Defined Classic - local use Enabled Disabled Not Defined Enabled Disabled Not Defined Enabled Disabled Not Defined Not Defined Not Defined Not Defined</td> <td>C Enabled O Disabled OK Cancel Apply</td>	Security Setting Disabled Enabled Not Defined Disabled Enabled Disabled Disabled Disabled System\CurrentC System\CurrentC Enabled Not Defined Classic - local use Enabled Disabled Not Defined Enabled Disabled Not Defined Enabled Disabled Not Defined Not Defined Not Defined Not Defined	C Enabled O Disabled OK Cancel Apply



#### **Security Options**

Set 'Network security: LAN Manager authentication level' to 'Send NTLMv2 response only. Refuse LM & NTLM'

Local Security Policy			Network security: LAN Manager authentication lev ? x
File Action View Help			Local Security Setting Evolain
🗢 🏟 🖄 🖬 🗙 🗎 🗟	? 1		Network security: LAN Manager authentication level
<ul> <li>Security Settings</li> <li>Account Policies</li> <li>Password Policy</li> <li>Account Lockout Policy</li> <li>Audit Policy</li> <li>Audit Policy</li> <li>Security Options</li> <li>Windows Frewall with Adv.</li> <li>Network List Manager Policie</li> <li>Public Key Policies</li> <li>Software Restriction Policie</li> <li>Application Control Policie</li> <li>IP Security Policies on Loca</li> <li>Advanced Audit Policy Cor</li> </ul>	<ul> <li>Policy</li> <li>Network access: Let Everyone permissions apply to anonymous users</li> <li>Network access: Named Pipes that can be accessed anonymously</li> <li>Network access: Remotely accessible registry paths</li> <li>Network access: Remotely accessible registry paths and sub-paths</li> <li>Network access: Shares that can be accessed anonymously</li> <li>Network access: Shares that can be accessed anonymously</li> <li>Network security: Allow Local System to use computer identity for NTLM</li> <li>Network security: Allow Local System to use computer identity for NTLM</li> <li>Network security: Allow Local System NULL session fallback</li> <li>Network security: Configure encryption types allowed for Kerberos</li> <li>Network security: Do not store LAN Manager hash value on next password c</li> <li>Network security: LDAP client signing requirements</li> <li>Network security: Minimum session security for NTLM SSP based (including</li> <li>Network security: Restrict NTLM: Add remote server exceptions for NTLM a</li> <li>Network security: Restrict NTLM: Add server exceptions in this domain</li> <li>Network security: Restrict NTLM: Audit Incoming NTLM Traffic</li> </ul>	Security Setting Disabled System\CurrentCo System\CurrentCo Enabled Not Defined Classic - local use Enabled Disabled Not Defined Not Defined Disabled Not Defined Disabled Not Defined Not Defined	Image: Wetwork security: LAN Manager authentication level         Send NTLMv2 response only. Refuse LM & NTLM         Image: Nodifying this setting may affect compatibility with clients, services, and applications.         For more information, see Network security: LAN Manager authentication level. (Q823659)
	Network security: Restrict NTLM: Audit NTLM authentication in this domain  Network security: Restrict NTLM: Incoming NTLM traffic	Not Defined	OK Cancel Apply



#### **Security Options**

Set 'Network security: Minimum session security for NTLM SSP based (including secure RPC) clients' to 'Require NTLMv2 session security, Require 128-bit encryption

Local Security Policy		Network security: Minimum session security for NT ? ×	
File Action View Help			Local Security Setting Evolution
🗢 🄿 🞽 🖬 💥 🗎 🗟	2 5		Network security: Minimum session security for NTLM SSP based
<ul> <li>Security Settings</li> <li>Account Policies</li> <li>Password Policy</li> <li>Account Lockout Policy</li> <li>Local Policies</li> <li>Audit Policy</li> <li>Security Options</li> <li>Windows newall with Adv.</li> <li>Network List Manager Policies</li> <li>Public KeyPolicies</li> <li>Software Restriction Policie</li> <li>Application Control Policie</li> <li>IP Security Policies on Loca</li> <li>Advanced Audit Policy Cor</li> </ul>	Policy         Image: Second	Security Setting Disabled System\CurrentC System\CurrentC Enabled Not Defined Classic - local use Enabled Disabled Not Defined Enabled Disabled Send NTLMv2 res Negotiate signing Require 128-bit en Not Defined Not Defined Not Defined Not Defined Not Defined Not Defined	Network security: Minimum session security for NTLM SSP based (including secure RPC) clients Require NTLMv2 session security Require 128-bit encryption
	Retwork security: Restrict NTI M: Incoming NTI M traffic	Not Defined	



#### **Security Options**

Set 'Network security: Minimum session security for NTLM SSP based (including secure RPC) servers' to 'Require NTLMv2 session security,Require 128-bit encryption'

1	Local Security Policy		Network security: Minimum session security for NT ? ×
File Action View Help			Local Security Setting Evolution
🗢 া 🖄 🖬 🗱 🛛			Network security: Minimum session security for NTLM SSP based
<ul> <li>Security Settings</li> <li>Account Policies</li> <li>Password Policy</li> <li>Account Lockout Policy</li> <li>Local Policies</li> <li>Audit Policy</li> <li>Local Policies</li> <li>Audit Policy</li> <li>Security Options</li> <li>Windows newall with Adv.</li> <li>Network List Manager Policie</li> <li>Public Key Policies</li> <li>Software Rastriction Policie</li> <li>Software Rastriction Policie</li> <li>IP Security Policies on Loca</li> <li>Advanced Audit Policy Cor</li> </ul>	Policy     A     Network access: Let Everyone permissions apply to anonymous users     Network access: Named Pipes that can be accessed anonymously     Network access: Remotely accessible registry paths     Network access: Remotely accessible registry paths and sub-paths     Network access: Restrict anonymous access to Named Pipes and Shares     Network access: Shares that can be accessed anonymously     Network access: Sharing and security model for local accounts     Network security: Allow Local System to use computer identity for NTLM     Network security: Allow Local System NULL session fallback     Network security: Configure encryption types allowed for Kerberos     Network security: Do not store LAN Manager hash value on next password c     Network security: LAN Manager authentication level     Network security: LAN Manager authentication level     Network security: Minimum session security for NTLM SSP based (including     Network security: Restrict NTLM: Add remote server exceptions for NTLM a     Network security: Restrict NTLM: Add remote server exceptions in this domain     Network security: Restrict NTLM: Audit Incoming NTLM Traffic     Network security: Restrict NTLM: Audit NTLM authentication in this domain	Security Setting Disabled System\CurrentC System\CurrentC Enabled Not Defined Classic - local use Enabled Disabled Not Defined Not Defined Send NTLMv2 res Negotiate signing Require 128-bit en Not Defined Not Defined Not Defined Not Defined Not Defined Not Defined Not Defined	(including secure RPC) clients          Require NTLMv2 session security         Require 128-bit encryption         Image: Control of the security         Image: Contrely <t< td=""></t<>



#### **Security Options**

Set 'System cryptography: Use FIPS compliant algorithms for encryption, hashing, and signing' to 'Enabled'

3	Local Security Policy	_	System cryptography: Use FIPS compliant algorith ? 🗙
File Action View Help			Local Security Setting Fynlain
🗢 🏟 🖄 📰 💥 🗟			System cryptography: Use FIPS compliant algorithms for
<ul> <li>Security Settings</li> <li>Account Policies</li> <li>Password Policy</li> <li>Account Lockout Policy</li> <li>Account Lockout Policy</li> <li>Account Lockout Policy</li> <li>Local Policies</li> <li>Audit Policy</li> <li>Local Policies</li> <li>Audit Policy</li> <li>User Rights Assignment</li> <li>Security Options</li> <li>Windows firewall with Adv</li> <li>Network List Manager Policies</li> <li>Software Restriction Policies</li> <li>Software Restriction Policie</li> <li>Application Control Policie</li> <li>Advanced Audit Policy Cor</li> </ul>	<ul> <li>Policy</li> <li>Network security: Force logoff when logon hours expire</li> <li>Network security: LAN Manager authentication level</li> <li>Network security: LDAP client signing requirements</li> <li>Network security: Minimum session security for NTLM SSP based (including</li> <li>Network security: Minimum session security for NTLM SSP based (including</li> <li>Network security: Restrict NTLM: Add remote server exceptions for NTLM a</li> <li>Network security: Restrict NTLM: Add remote server exceptions for NTLM a</li> <li>Network security: Restrict NTLM: Add server exceptions in this domain</li> <li>Network security: Restrict NTLM: Audit Incoming NTLM Traffic</li> <li>Network security: Restrict NTLM: Audit NTLM authentication in this domain</li> <li>Network security: Restrict NTLM: Incoming NTLM traffic</li> <li>Network security: Restrict NTLM: Outgoing NTLM traffic</li> <li>Network security: Restrict NTLM: Outgoing NTLM traffic to remote servers</li> <li>Recovery console: Allow automatic administrative logon</li> <li>Recovery console: Allow floppy copy and access to all drives and all folders</li> <li>Shutdown: Allow system to be shut down without having to log on</li> <li>Shutdown: Clear virtual memory pagefile</li> <li>System cryptography: Force strong key protection for user keys stored on th</li> </ul>	Security Setting Disabled Send NTLMv2 res Negotiate signing Require NTLMv2 Require NTLMv2 Not Defined Not Defined Not Defined Not Defined Not Defined Not Defined Disabled Disabled Disabled Disabled Not Defined	System cryptography: Use FIPS compliant algorithms for encryption, hashing, and signing
	System objects: Require case insensitivity for non-windows subsystems System objects: Strengthen default permissions of internal system objects (e System settings: Optional subsystems System settings: Use Certificate Rules on Windows Executables for Software	Enabled Enabled Disabled	OK Cancel Apply



#### **Security Options**

#### Set 'User Account Control: Admin Approval Mode for the Built-in Administrator account' to 'Enabled'

File Action View Help			
			Local Security Setting Evolution
🗢 🏟 🙇 📰 🗙 🗒 🗟 🖬			User Account Control: Admin Approval Mode for the Built-in
<ul> <li>Security Settings</li> <li>Account Policies</li> <li>Password Policy</li> <li>Account Lockout Policy</li> <li>Account Lockout Policy</li> <li>Account Lockout Policy</li> <li>Audit Policy</li> <li>Audit Policy</li> <li>Audit Policy</li> <li>Security Options</li> <li>Windowe Eirewell with Adv</li> <li>System</li> <li>Software Restriction Policie</li> <li>Software Restriction Policie</li> <li>Software Audit Policy System</li> <li>System</li> <li>Software Restriction Policie</li> <li>Application Control Policie</li> <li>System</li> <li< th=""><th>ork security: Restrict NTLM: NTLM authentication in this domain ork security: Restrict NTLM: Outgoing NTLM traffic to remote servers very console: Allow automatic administrative logon very console: Allow floppy copy and access to all drives and all folders down: Allow system to be shut down without having to log on down: Clear virtual memory pagefile m cryptography: Force strong key protection for user keys stored on th m cryptography: Vise FIPS compliant algorithms for encryption, hashin m objects: Require case insensitivity for non-Windows subsystems m objects: Strengthen default permissions of internal system objects (e m settings: Optional subsystems m settings: Use Certificate Roles on Windows Executables for Software Account Control: Admin Approval Mode for the Built-in Administrator Account Control: Behavior of the elevation prompt for elevation Account Control: Behavior of the elevation prompt for standard users Account Control: Detect application installations and prompt for elevat Account Control: Only elevate executables that are signed and validated Account Control: Only elevate UlAccess applications that are installed i Account Control: Nun all administrators in Admin Approval Mode Account Control: Switch to the secure desktop when prompting for ele</th><th>Security Setting Not Defined Not Defined Disabled Disabled Disabled Disabled Not Defined Disabled Enabled Disabled Disabled Prompt for conse Prompt for creder Enabled Disabled Enabled Enabled Enabled Enabled Enabled Enabled</th><th>User Account Control: Admin Approval Mode for the Built-in Administrator account Enabled Disafiled OK Cancel Apply</th></li<></ul>	ork security: Restrict NTLM: NTLM authentication in this domain ork security: Restrict NTLM: Outgoing NTLM traffic to remote servers very console: Allow automatic administrative logon very console: Allow floppy copy and access to all drives and all folders down: Allow system to be shut down without having to log on down: Clear virtual memory pagefile m cryptography: Force strong key protection for user keys stored on th m cryptography: Vise FIPS compliant algorithms for encryption, hashin m objects: Require case insensitivity for non-Windows subsystems m objects: Strengthen default permissions of internal system objects (e m settings: Optional subsystems m settings: Use Certificate Roles on Windows Executables for Software Account Control: Admin Approval Mode for the Built-in Administrator Account Control: Behavior of the elevation prompt for elevation Account Control: Behavior of the elevation prompt for standard users Account Control: Detect application installations and prompt for elevat Account Control: Only elevate executables that are signed and validated Account Control: Only elevate UlAccess applications that are installed i Account Control: Nun all administrators in Admin Approval Mode Account Control: Switch to the secure desktop when prompting for ele	Security Setting Not Defined Not Defined Disabled Disabled Disabled Disabled Not Defined Disabled Enabled Disabled Disabled Prompt for conse Prompt for creder Enabled Disabled Enabled Enabled Enabled Enabled Enabled Enabled	User Account Control: Admin Approval Mode for the Built-in Administrator account Enabled Disafiled OK Cancel Apply

## MS Windows Server 2012 Windows Components

**AutoPlay Policies** 

Set 'Turn off Autoplay on:' to 'Enabled:All drives'







### **Microsoft Baseline Security Analyzer**





https://www.microsoft.com/en-us/download/confirmation.aspx?id=7558





Baseline Security

Analyze

## **Microsoft Baseline Security Analyzer**

Microsoft Baseline Security Analyzer 2.3 Microsoft Microsoft Baseline Security Analyzer Check computers for common security misconfigurations. Tasks Scan a computer The Microsoft Baseline Security Analyzer can check computers running Microsoft Windows Server 2012 R2, Windows 8.1, Windows Server 2012, Windows 8, Windows Server 2008 R2, Scan multiple computers Windows 7, Windows® Server 2003, Windows Server 2008, Windows Vista, or Windows XP. Scanning computers for security updates utilizes Windows Server Update Services. You must have View security reports administrator privileges for each computer you want to scan. About Microsoft Baseline Security Analyzer Scan a computer Check a computer using its name or IP Address. Scan multiple computers Check multiple computers using a domain name or a range of IP addresses. View existing security scan reports View, print and copy the results from the previous scans. Scan a computer Check a computer using its name or IP Address. Scan multiple computers Check multiple computers using a domain name or a range of IP addresses. View existing security scan reports

View, print and copy the results from the previous scans.

See Also

Microsoft Baseline Security Analyzer Help Microsoft Security Web site



Baseline Security

Analvzei

## **Microsoft Baseline Security Analyzer**

#### Baseline Security Analyzer

#### Which computer do you want to scan?

Enter the name of the computer or	its IP address.		
Computer name:	HQ\[TOS-PONGRAPEE2		
IP address:			
Security report name:	%D% - %C% (%T%)		
Options:	%D% = domain, %C% = computer, %T% = date and time, %IP% = IP address		
Check for Windows admin	istrative vulnerabilities		
Check for weak password	ls		
Check for IIS administrative vulnerabilities			
Check for SQL administra	tive vulnerabilities		
Check for security update	25		
Configure computers	for Microsoft Update and scanning prerequisites		
Advanced Update Ser	rvices options:		
O Scan using assign	ed Windows Server Update Services(WSUS) servers only		
O Scan using Micros	oft Update only		

Scan using offline catalog only

Learn more about Scanning Options



Baseline Security

Analyzer

Microsoft

### **Microsoft Baseline Security Analyzer**

Baseline Security Analyzer

#### Currently scanning HQ\ITOS-PONGRAPEE2

Done downloading security update information.

Cancel



Baseline Security

Analyzei

## **Microsoft Baseline Security Analyzer**

Microsoft Baseline Security Analyzer 2.3



#### Report Details for HQ - ITOS-PONGRAPEE2 (2015-08-06 14:19:00)

Security assessment: Potential Risk (One

Potential Risk (One or more non-critical checks failed.)

Computer name:	HQ\TTOS-PONGRAPEE2
IP address:	172.17.12.111
Security report name:	HQ - ITOS-PONGRAPEE2 (8-6-2015 2-19 PM)
Scan date:	8/6/2015 2:19 PM
Scanned with MBSA version:	2.3.2211.0
Catalog synchronization date:	
Security update catalog:	Microsoft Update

Sort Order: Score (worst first)

#### Security Update Scan Results

Score	Issue	Result		
٢	Developer Tools, Runtimes, and Redistributables Security Updates	No security updates are missing. What was scanned Result details		
۷	Office Security Updates	No security updates are missing. What was scanned Result details		
Ø	SQL Server Security Updates	No security updates are missing. What was scanned Result details		
0	Silverlight Security	No security updates are missing. What was scanned — Result details		
t this repor	t	Copy to dipboard	Previous security report	Next security report



- install OS โดยไม่เชื่อมต่อ network
- Update Patch
- Set 'Minimum password length' to '14 or more character(s)'
- Set 'Enforce password history' to '24 or more password(s)'
- Set 'Password must meet complexity requirements' to 'Enabled'
- Set 'Store passwords using reversible encryption' to 'Disabled'
- Set 'Minimum password age' to '1 or more day(s)'
- Set 'Maximum password age' to '60 or fewer days'
- Set 'Account lockout threshold' to '5 invalid logon attempt(s)'
- Set 'Account lockout duration' to '15 or more minute(s)'
- Set 'Reset account lockout counter after' to '15 minute(s)'
- Set 'Audit Policy' to 'Success and Failure'



- Security Log 196,608
- System Log 32,768
- Application Log 32,768
- Configure 'Accounts: Rename administrator account'
- Configure 'Accounts: Rename Guest account'
- Set 'Accounts: Limit local account use of blank passwords to console logon only' to 'Enabled'
- Set Shut down system immediately if unable to log security audits to 'Disable'
- Set 'Interactive logon: Display user information when the session is locked 'Enable'
- Interactive logon: Do not display last user name 'Enable'
- Set 'Interactive logon: Do not require CTRL+ALT+DEL' to 'Disabled'
- Set 'Interactive logon: Machine inactivity limit' to '900 or fewer seconds'



• Set 'Interactive logon: Number of previous logons to cache (in case domain controller is not available)' to '4 or fewer logon(s)'

- Set 'Interactive logon: Prompt user to change password before expiration' to '14 or more day(s)'
- Interactive logon: Message text for users attempting to log on
   ===== UNAUTHORIZED ACCESS TO THIS NETWORK DEVICE IS PROHIBITED. =====
   ,You must have explicit permission to access or configure this device.,
   "All activities performed on this device may be logged"," and violations, of this policy may result in disciplinary action"," and may be reported, to law enforcement. There is no right to privacy on this device.

•Interactive logon: Message title for users attempting to log on (Warning)



- Set 'Network security: Allow Local System to use computer identity for NTLM' to 'Enabled' (Domain Controller)
- Set 'Network security: Allow LocalSystem NULL session fallback' to 'Disabled'
- Set 'Network security: LAN Manager authentication level' to 'Send NTLMv2 response only. Refuse LM & NTLM'
- Set 'Network security: Minimum session security for NTLM SSP based (including secure RPC) clients' to 'Require NTLMv2 session security, Require 128-bit encryption



 Set 'Network security: Minimum session security for NTLM SSP based (including secure RPC) servers' to 'Require NTLMv2 session security, Require 128-bit encryption'

- Set 'System cryptography: Use FIPS compliant algorithms for encryption, hashing, and signing' to 'Enabled'
- Set 'User Account Control: Admin Approval Mode for the Built-in Administrator account' to 'Enabled'
- Set 'Turn off Autoplay on:' to 'Enabled:All drives'
- Microsoft Baseline Security Analyzer (Scan System)



# Secure FTP Server on Windows Using IIS





Installing Secure FTP Server on Windows Using IIS IIS Server





#### Installing Secure FTP Server on Windows Using IIS

#### Add Roles and Features

<b>a</b>	Add Roles and Features Wizard
Before you beg	DESTINATION SERVER W2K12STD
Before You Begin Installation Type	This wizard helps you install roles, role services, or features. You determine which roles, role services, or features to install based on the computing needs of your organization, such as sharing documents, or hosting a website.
Server Selection Server Roles	To remove roles, role services, or features: Start the Remove Roles and Features Wizard
Features Confirmation Results	<ul> <li>Before you continue, verify that the following tasks have been completed:</li> <li>The Administrator account has a strong password</li> <li>Network settings, such as static IP addresses, are configured</li> <li>The most current security updates from Windows Update are installed</li> <li>If you must verify that any of the preceding prerequisites have been completed, close the wizard, complete the steps, and then run the wizard again.</li> </ul>
	To continue, click Next.
	Skip this page by default
	< Previous Next > Install Cancel



#### Installing Secure FTP Server on Windows Using IIS

#### **Installation Type**





#### Installing Secure FTP Server on Windows Using IIS

#### **Installation Type**

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#### Installing Secure FTP Server on Windows Using IIS

#### **Installation Type**





#### Installing Secure FTP Server on Windows Using IIS

#### **Installation Type**

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Installing Secure FTP Server on Windows Using IIS

#### **IIS Start Services**



#### Installing Secure FTP Server on Windows Using IIS

#### **Server Certificates**



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#### 8 Internet Information Services (IIS) Manager W2K12STD + File View Help Connections Actions W2K12STD Home 🔍 - 🔚 🖄 😥 **Open Feature** 💐 Start Page Filter: 👻 🐨 🐨 🐨 Show All | Group by: Area -Manage Server ⊿ 🛀 W2K12STD (W2K12STD\admit Restart FTP Application Pools Start . ⊿ ... Sites FTP (TRI) FTP Stop FTP FTP FTP Default Web Site FTP FTP FTP Directory FTP Firewall FTP IP FTP Logging FTP Logon FTP FTP Request **View Application Pools** Support Authentic... Authorizat. Browsing Address a... Attempt R... Messages Filtering View Sites FTP Change .NET Framework Version FTP Get New Web Platform Components FTP SSL FTP Use Settings Isolation Help 115 ¢, = 404 12 HTTP Default Directory Error Pages Handler MIME Types Authentic... Compression Logging Document Browsing Mappings Respon... <u>0</u> ٥ 404 Worker Modules Output Server Request Caching Filtering Certificates Processes Default Directory Error Pages Management Document Browsing Configurat... Feature Shared Editor Delegation Configurat... 0 Request Worker Server Filtering Certificates Processes

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#### Installing Secure FTP Server on Windows Using IIS

#### **Create Certificates**



Internet Information Services (IIS) Manager C) ♥I > W2K12STD → Help File View Connections Actions Server Certificates 🔍 - 🔚 🖄 🔗 Import... Create Certificate Request... Use this feature to request and manage certificates that the Web server can use with websites configured for SSL. W2K12STD (W2K12STD\admit Complete Certificate Request... Application Pools Filter: 👻 🐨 🗸 🖓 Show All 🛛 Group by: No Grouping Create Domain Certificate... ⊿ . 👩 Sites Issued To Issued By Expiration Date Certificate Name Default Web Site Create Self-Signed Certificate... Enable Automatic Rebind of Renewed Help Actions Import... Create Certificate Request... Complete Certificate Request... Create Domain Certificate... Create Self-Signed Certificate... Enable Automatic Rebind of Renewed Certificate



FTP

Installing Secure FTP Server on Windows Using IIS Create Self-signed Certificate

Create Self-Signed Certificate	? X
Specify Friendly Name	
Specify a file name for the certificate request. This information can be sent to a certificate authority for signing:	
Specify a friendly name for the certificate:	
ftprayatai	
Personal V	

#### Installing Secure FTP Server on Windows Using IIS Create Self-signed Certificate



FTP



Installing Secure FTP Server on Windows Using IIS

#### Create FTP site





FTP



FTP

#### Installing Secure FTP Server on Windows Using IIS

#### Create FTP site

****		
	Add FTP Site	? X
Site Information		
FTP site name:		
Content Directory		
Physical path:		
c. (incepab (www.ooc		
		1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -
	Previous Next Finish	Cancel



FTP

Installing Secure FTP Server on Windows Using IIS

#### Create FTP site

	Add FTP Site	? X
Binding and	SSL Settings	
Binding		
IP Address:	Port:	
All Unassigned	✓ 21	
Enable Virtual Host Na	imes:	
Virtual Host (example	: ftp.contoso.com):	
Start FTP site automatic	ally	
SSL		
○ No SSL		
O Allow SSL		
Require SSL		
SSL Certificate:		
Not Selected	▼ Select	View
Not Selected		
ftprayatai		



FTP

Installing Secure FTP Server on Windows Using IIS

Create FTP site

	Add FTP Site	? X
Authentication	and Authorization Information	
Authentication Anonymous Basic		
Authorization Allow access to: Specified users ftp_user Permissions ♥ Read ♥ Write		
	Previous Next Finish	Cancel



Installing Secure FTP Server on Windows Using IIS Login FTP site

164.115.35.246       Username:       ftp_user       Password:       everevent       Port:       Quickconnect         Connecting to 164.115.35.246:27       Connection established, waitin Initializing TLS       Verifying certificate       Image: Connection established, waitin Initializing TLS         Verifying certificate       Unknown certificate       Image: Connection established, waitin Initializing TLS         Verifying certificate       Unknown certificate       Image: Connection established, waitin Initializing TLS         Verifying certificate       Unknown certificate       Image: Connection established, waitin Initializing TLS         Verifying certificate       Unknown certificate       Image: Connection established, waitin Initializing TLS         Verifying certificate       Details       Valid from:       6/4/2015 8:27:04 PM         Valid from:       6/4/2015 8:27:04 PM       Valid to:       6/4/2018 7:00:00 AM         Serial number:       Ge: 99:93:69:49:dd8:ad4:fe:59:8e:f3:3a:bc:94       Public key algorithm::       RSA with 2048 bits         Signature algorithm:       RSA with 2048 bits       Signature algorithm::       RSA with 2048 bits       Signature algorithm::       RSA:92:10:00:01:73:65:f8:aa:72:c1:cd:d1:       cf:84:e9:1b:07:b0:91:f2:26:55:f8:aa:72:c1:cd:d1:       cf:84:e9:1b:07:b0:91:f2:26:55:f8:aa:72:c1:cd:d1:       cf:84:e9:1b:07:b0:91:f2:26:55:f8:aa:72:c1:cd:d1:       Cerificate issue		≣ <i>R</i> <b>3° n</b>	
Connecting to 164.115.35.246:27 Connection established, waitin Initializing TLS Verifying certificate Verifying certificate itie: C:\Users\pongrapee\Downloads	ost: 164.115.35.246 Username: ftp_user	Password:	Port: Quickconnect
Verifying certificate         Verifying certificate         Verifying certificate         iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii	atus: Connecting to 164.115.35.246:21 atus: Connection established, waitin Un atus: Initializing TLS	known certificate	X
Site:       C:\Users\pongrapee\Downloads\         Signature algorithm:       RSA-SHA1         Fingerprint (SHA-256):       C::f5:2c:ea:bc:40:34:3a         Fingerprint (SHA-1):       cf:43:8b:4c:9e:e7:fb:a0:6c:76:47:3b:01:66:9f:78:24:0c:35:06         Subject of certificate       Certificate issuer         Common name:       W2K12STD         Session details       Session details         Host:       164:115.35:246:21         Subject:       Cipher:         Subject:       Cipher: <t< td=""><td>atus: Verifying certificate</td><td>The server's certificate is unknown. Pl to make sure the server can be trusted</td><td>lease carefully examine the certificate d.</td></t<>	atus: Verifying certificate	The server's certificate is unknown. Pl to make sure the server can be trusted	lease carefully examine the certificate d.
Imme       Subject of certificate       Certificate issuer         amai_2       Common name: W2K12STD       Common name: W2K12STD         bud Critical and Severe       Session details       Session details         ecversion1.2       Host:       164.115.35.246:21         Soort_cloud       Frotocol:       TLS1.2         Key exchange:       ECDHE-RSA         Cipher:       AES-256-CBC         MAC:       SHA384	ocal site:       C:\Users\pongrapee\Downloads\         Image: C:\Users\pongrapee\Downloads         Image: C:\Users\pongrapee\Downloads	Valid from: 6/4/2015 8:2 Valid to: 6/4/2016 7:0 Serial number: 6e:99:93:69:4 Public key algorithm: RSA with 204 Signature algorithm: RSA-SHA1 Fingerprint (SHA-256): 17:79:2c:23:c cf:84:e9:1b:0 Fingerprint (SHA-1): cf:43:8b:4c:9	7:04 PM 0:00 AM 19:dd:89:ad:44:fe:59:8e:f3:3a:bc:94 48 bits :6:b0:6b:fe:73:65:f8:aa:72:c1:cd:d1: 17:b0:91:f2:6c:5f:2c:ea:bc:40:34:3a 0e:e7:fb:a0:6c:76:47:3b:01:66:9f:78:24:0c:35:06
Trust this certificate and carry on connecting?	ilename  anamai_2 Cloud Critical and Severe jdecversion1.2 JPEGsnoop_v1_7_3 report_cloud หัวเหมืน 	Subject of certificate Common name: W2K12STD Session details Host: 164.115.35.246:21 Protocol: TLS1.2 Key exchange: ECDHE-RSA Cipher: AES-256-CBC MAC: SHA384 Trust this certificate and carry on con	Certificate issuer Common name: W2K12STD necting?













### **Vulnerability Assessment Software**





## **GFI Lan**Guard<sup>™</sup>

Network security scanner and patch management



## **Rapid7** Nexpose



## Rapid7 Nexpose

#### Nexpose: System Requirements Officially Supported Systems Minimum Hardware

2 GHz+ processor (Dual-core processor recommended)

8 GB RAM (16 GB recommended)

80 GB+ available disk space (10 GB for

Community Edition)

10 GB+ available disk space for Scan engines English operating system with English/United States regional settings

100 Mbps network interface card (1 Gbps NIC recommended)

#### Browsers

Google Chrome (latest) (RECOMMENDED) Mozilla Firefox (latest) Mozilla Firefox ESR (latest) Microsoft Internet Explorer 9\*, 10, 11



## **Rapid7** Nexpose

**Operating Systems** 

64-bit versions of the following platforms are supported.

Ubuntu Linux 12.04 LTS (RECOMMENDED) Ubuntu Linux 14.04 LTS Ubuntu Linux 10.04 LTS\* Microsoft Windows Server 2008 R2 Microsoft Windows Server 2012 R2 Microsoft Windows 8.1 Microsoft Windows 7 SP1+ Red Hat Enterprise Linux Server 6.5 or later Red Hat Enterprise Linux Server 5.10 or later Kali Linux 1.0.x Virtual Machines on VMware ESXi 5.x, VMware vCenter Server 5.x











### NEXPOSE COMMUNITY REGISTRATION

Rapid7's Nexpose® Community edition is a security risk intelligence solution designed for individual use and small organizations (up to 30 people). Nexpose is an award winning vulnerability scanner that allows you to understand the security risk of your entire IT environment, exposes security threats, and prioritizes them so you can remediate the vulnerabilities that matter most on your network.

Register now for a free 1-year license of Nexpose Community!

In order for you to successfully install Nexpose, you must meet system requirements.

Last Name	
Job Title	
Job Level	
Please Select	~
Company Name	
Work Phone	

All fields are mandatory

## **Rapid7** Nexpose

All fields ar	e mandatory

#### Last Name

First Name

narkmanee

pongrapee

#### Job Title

en

#### Job Level

System/Security Admin

#### Company Name

ega

#### Work Phone

6626126000

#### Work Email 🚯

pongrapee@ega.or.th

Change

 $\sim$ 

Country

Thailand

#### State/ Province

Captcha



#### Read the Terms & Conditions

Yes, I accept the terms and conditions of the Rapid7 End User License Agreement

#### SUBMIT & DOWNLOAD

Issues with this page? Please email info@rapid7.com Please see updated Privacy Policy





### **Rapid7** Nexpose

#### Next steps to get started with Nexpose Community

#### STEP 1: Download







pening NeXposeSetup-Windows64.exe	×
You have chosen to open:	
NeXposeSetup-Windows64.exe	
which is: Binary File (487 MB) from: http://download2.rapid7.com	
Would you like to save this file?	
	Save File Cancel

### STEP 2: Install

Once the download is complete, run the installer and follow the step by step instructions.

### **STEP 3: Activate**

An email containing your license key has been sent to the email address provided on the previous registration page. Insert your license key into Nexpose to activate and unlock Nexpose Community.

Note: It may take up to 15 mins to receive your license delivery email. Please check your spam folder, if you do not receive the email or cannot find the license key in the email, contact info@rapid7.com.

## **Rapid7** Nexpose

าก: Swofford, Caitlin < caitlin\_swofford@rapid7.com>

หัวเรื่องจดหมาย : Your Nexpose License Key – Get Started

ถึง : pongrapee narkmanee <pongrapee@ega.or.th>

ตอบกลับ : Swofford, Caitlin <messages.663271.41651790.409e59a784@messages.netsuite.com>



#### Your Nexpose Community License Key

Rapid7

GH8Y-52PC-HM7P-7QNJ Follow the steps below to get started

Thank you for registering for Nexpose Community. Please follow the steps below to activate your free software license.

1. If you have not downloaded our software yet, do so here: Download Nexpose

2. After download is complete, run the installer and enter your product key to activate your license.

Your License Key: GH8Y-52PC-HM7P-7QNJ

Need Help? If you run into any problems, we will get you up and running.

Community: Join the Nexpose Community for Support

Guide: Check out our Nexpose Quickstart Guide for further assistance

Video: Step by Step: Downloading and Activating Nexpose

We hope you enjoy Nexpose.







ทดสอบ Scan ช่องโหว่













#### Please Select Your Operating System

×	Microsoft Windows
Þ	Mac OS X
Þ	Linux
×	FreeBSD
×	GPG Keys





#### Please Select Your Operating System

Microsoft Windows

Windows Server 2008, Server 2008 R2\*, Server 2012, Server 2012 R2, 7, and 8 (64-bit) File: Nessus-6.4.3-x64.msi MD5: b81cfca4c785cab33dab8f164fba1288

Windows Server 7, and 8 (32-bit) File: Nessus-6.4.3-Win32.msi MD5: 71bc7e2152d8621e5413243d1ab4cbae

- Mac OS X
- Linux
- FreeBSD
- GPG Keys



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**Tip** Directory traversal

>cd ~/



http://../../../../windows\systems32\cmd.exe



https://pentestlab.wordpress.com/2012/06/29/directory-traversal-cheat-sheet/



## **QUESTION & ANSWER SESSION**

Name พงศ์ระพี นาคมณี [Information Security Engineer] e-mail : p<u>ongrapee@ega.or.th</u> tel. : 02-612-6000(4303)


## Thank You



website : www.ega.or.th e-mail : helpdesk@ega.or.th Tel. : (+66) 0 2612 6000 Hotline : (+66) 0 2612 6060

