

**Change Passwords** (good idea to write what you change the password to down)

**net user**

**net user** username newpassword

**Configure Firewall** (cmd as admin)

**netsh advfirewall set allprofiles firewallpolicy blockinbound,allowoutbound**

**netsh advfirewall show allprofiles**

Example of allowing incoming based on port

**netsh advfirewall firewall add rule name="Allow RDP" dir=in action=allow  
protocol=TCP localport=3389**

And to verify the example

**netsh advfirewall firewall show rule name="Allow RDP"**

Check for and remove or uninstall any services and programs that are not needed to minimize attack surface.

View what is listening, stop things that do not need to be there

**netstat -ano**

**sc query state=active**

**net stop sshd**

- **Password Policy**
  - **Enforce password history: 24**

- Maximum password age: *60*
- Minimum password age: *1*
- Minimum password length: *10*
- Password must meet complexity requirements: *Enabled*
- Store password using reversible encryption: *Disabled*
- **Lockout Policy**
  - Account lockout duration: *30 Minutes*
  - Account lockout threshold: *10*
  - Reset account lockout counter after: *30*
- **Check user settings**
  - All users should have 'User must change password at next logon' checked
  - All unauthorized users should have 'Account is disabled'
- **Check ALL the groups**
  - 'Administrators' group should ONLY have AUTHORIZED admins.
  - 'Guests' group should ONLY have 'Guest' in it
  - If the README wants only certain users to use RDP then add ONLY those users to the 'Remote Desktop Users' group
- **Use SmartScreen online services(Security and Maintenance)=ON**
- **Wi-Fi Sense (Network & Internet)**
  - Automatically connect to suggested open hotspots=OFF
  - Automatically connect to hotspots temporarily to see if paid network services are available=OFF
- **Turn UAC to max(Change User Account Control Settings)**
- **Change Adapter settings(Disabling IPv6 and other services)=Uncheck these**
  - Client for MS Networks
  - File and Printer Sharing for Microsoft Networks
  - QoS
  - Microsoft Network Adapter Multiplexor Protocol
  - Microsoft LLDP Protocol Driver
  - Link Layer Topology Discovery Mapper IO Driver
  - Link Layer Topology Discovery Responder
  - Internet protocol version 6
  - 'Internet Protocol version 4 (TCP IPv4), click Properties, click Advanced,
  - 'DNS' tab, uncheck mark 'register this connections address in DNS'
  - 'WINS' tab, select 'Disable NETBIOS over TCP/IP'
- **Disable port 1900 UPnP**

- Regedit path:  
HKLM\Software\Microsoft\DirectplayNATHelp\DPNHUPnP
- Right click on right pane, new dword:32 bit, named UPnPMode
- Double click on that and set it to 2
- **Windows Services**
  - UPnP Device Host: Stopped – Disabled
  - RDP: Depends on README
  - Telnet: Stopped – Disabled
  - SNMP Trap: Stopped – Disabled
  - Windows Event Collector: Running – Automatic
  - Remote Registry: Stopped - Disabled
  - **##ADD OTHER SERVICES**
- **Check windows features**
  - Control Panel>Programs> Turn Windows features on or off
  - Things to never have on
    - Telnet client\server
    - SNMP
    - RIP Listener
    - Client for NFS
    - Internet Information Services (IIS)
    - World Wide Web Services
  - If FTP sever then turn on TFTP otherwise make sure that it is not checked
  - Disable SMB v1
    - Turn Windows features on or off=Uncheck SMB 1.0/CIFS File Sharing Support
- **Shares**
  - Only 3 shares should be shared unless README says otherwise
    - ADMIN\$
    - C\$
    - IPC\$
- **Firewall rules:**
  - Inbound=disable MS Edge
  - Inbound=disable Search
  - Inbound=disable MSN Money
  - Inbound=disable MSN Sports
  - Inbound=disable MSN News
  - Inbound=disable MSN Weather
  - Inbound=disable Microsoft Photos
  - Inbound=disable Xbox

- Turning off Tiles:
  - Right click on the Tile and choose turn off
- Turn off AutoPlay
  - Settings..Devices....AutoPlay=off
- Run the command “netplwiz”
- Disable OneDrive on Startup
  - Use Task Manager or msconfig.exe
- Screen Saver
  - Settings...Personalize....Lock Screen...Screen Saver settings=wait 10 min and checkmark “On resume display Logon screen”
- Auditing
  - Change all to Success/Failure
- Windows defender
  - Turn on Windows defender
    - If disabled go into gpedit.msc and find the ‘windows defender’ option and change to enable
- User Rights Assignment

<i>Policy</i>	<i>Default</i>	<i>Secure Setting</i>
<i>Access Credential Manger as a trusted caller</i>	No one	No one
<i>Access the computer from the network</i>	Everyone, Administrators, Users, Backup Operators	Administrators
<i>Act as park of the operating system</i>	No one	No one
<i>Adjust memory quotas for a process</i>	Administrators, LOCAL SERVICE, NETWORK SERVICE	Administrators, LOCAL SERVICE, NETWORK SERVICE

<b><i>Allow log on locally</i></b>	<b>Guest, Administrators, Users, Backup Operators</b>	<b>Administrators, Users</b>
<b><i>Allow log on through Remote Desktop Services</i></b>	<b>Administrators, Remote Desktop Users</b>	<b>Administrators, Remote Desktop Users</b>
<b><i>Back up files and directories</i></b>	<b>Administrators, Backup Operators</b>	<b>Administrators</b>
<b><i>Change system time</i></b>	<b>Administrators, LOCAL SERVICE</b>	<b>Administrators, LOCAL SERVICE</b>
<b><i>Change the time zone</i></b>	<b>Administrators, LOCAL SERVICE, Users</b>	<b>Administrators, LOCAL SERVICE, Users</b>
<b><i>Create a pagefile</i></b>	<b>Administrators</b>	<b>Administrators</b>
<b><i>Create a token object</i></b>	<b>No one</b>	<b>No one</b>
<b><i>Create global objects</i></b>	<b>Administrators, LOCAL SERVICE, NETWORK SERVICE, SERVICE</b>	<b>Administrators, LOCAL SERVICE, NETWORK SERVICE, SERVICE</b>
<b><i>Create permanent shared objects</i></b>	<b>No one</b>	<b>No one</b>
<b><i>Create symbolic links</i></b>	<b>Administrators</b>	<b>Administrators</b>
<b><i>Debug programs</i></b>	<b>Administrators</b>	<b>Administrators</b>

<b><i>Deny access to this computer from the network</i></b>	Guest	Guest, Local account
<b><i>Deny log on as a batch job</i></b>	No one	Guest
<b><i>Deny log on as a service</i></b>	No one	Guest
<b><i>Deny log on locally</i></b>	Guest	Guest
<b><i>Deny log on through Remote Desktop Services</i></b>	No one	Guest, Local account
<b><i>Enable computer and user accounts to be trusted for delegation</i></b>	No one	No one
<b><i>Force shutdown from a remote system</i></b>	Administrators	Administrators
<b><i>Generate security audits</i></b>	LOCAL SERVICE, NETWORK SERVICE	LOCAL SERVICE, NETWORK SERVICE
<b><i>Impersonate a client after authentication</i></b>	Administrators, LOCAL SERVICE, NETWORK SERVICE, SERVICE	Administrators, LOCAL SERVICE, NETWORK SERVICE, SERVICE

<b><i>Increase scheduling priority</i></b>	<b>Administrators</b>	<b>Administrators</b>
<b><i>Load and unload device drivers</i></b>	<b>Administrators</b>	<b>Administrators</b>
<b><i>Lock pages in memory</i></b>	<b>No one</b>	<b>No one</b>
<b><i>Log on as a batch job</i></b>	<b>Administrators, Backup Operators, Performance Log Users</b>	<b>Administrators</b>
<b><i>Log on as a service</i></b>	<b>NT SERVICE\ALL SERVICES</b>	<b>No one</b>
<b><i>Manage auditing and security log</i></b>	<b>Administrators</b>	<b>Administrators</b>
<b><i>Modify an object label</i></b>	<b>No one</b>	<b>No one</b>
<b><i>Modify firmware environment values</i></b>	<b>Administrators</b>	<b>Administrators</b>
<b><i>Perform volume maintenance tasks</i></b>	<b>Administrators</b>	<b>Administrators</b>
<b><i>Profile single process</i></b>	<b>Administrators</b>	<b>Administrators</b>

<b><i>Profile system performance</i></b>	<b>Administrators, NT SERVICE\WdiServiceHost</b>	<b>Administrators, NT SERVICE\WdiServiceHost</b>
<b><i>Replace a process level token</i></b>	<b>LOCAL SERVICE, NETWORK SERVICE</b>	<b>LOCAL SERVICE, NETWORK SERVICE</b>
<b><i>Restore files and directories</i></b>	<b>Administrators, Backup Operators</b>	<b>Administrators</b>
<b><i>Shutdown the system</i></b>	<b>Administrators, Backup Operators, Users</b>	<b>Administrators, Users</b>
<b><i>Take ownership of file or other objects</i></b>	<b>Administrators</b>	<b>Administrators</b>

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- **Local Security policies**

- **THESE ARE FOR MOST SECURE SETTINGS MAKE SURE TO CHECK THESE AS A TEAM!!!!**
- **Accounts: Administrator account status: *disabled***
- **Accounts: Block Microsoft accounts: *Users can't add or log on with Microsoft accounts***
- **Accounts: Guest account status: disabled \*\***
- **Accounts: Limit local account use of blank passwords to console logon only: *enabled***
- **Audit: Audit access of global system objects: *disabled***
- **Audit: Audit the use of Backup and Restore privilege: *disabled***
- **Audit: Force audit policy subcategory settings (Windows Vista of later) to override audit policy category settings: *enabled***
- **Audit: Shutdown system immediately if unable to log security audits: *enable?***
- **DCOM: Machine access restrictions: *no remote access for all accounts***
- **DCOM; Machine launch restrictions: *no remote launch and remote activation for all accounts***
- **Devices: Allow undock without having to log on: *disabled***



- **Devices: Allowed to format and eject removable media:**  
*administrators and interactive users*
- **Devices: Prevent users from installing printer drivers:** *enabled*
- **Domain member: Digitally encrypt or sign secure channel data (always):** *enabled*
- **Domain member: Digitally encrypt secure channel data (when possible):** *enabled*
- **Domain member: Digitally sign secure channel data (when possible);**  
*enabled*
- **Domain member: Disable machine account password changes:**  
*disabled*
- **Domain member: Maximum machine account password age:** *30 days*
- **Domain member: Require strong (Windows 2000 or later) session key:** *enabled*
- **Domain member: Display user information when session is locked:**  
*do not display user information*
- **Interactive logon: Do not display last user name:** *enabled*
- **Interactive logon: Do not require CTRL+ALT+DEL:** *disabled*
- **Interactive logon; Machine account lockout threshold:** *10 invalid logon attempts*
- **Interactive logon: Machine inactivity limit:** *900 seconds*
- **Interactive logon: Number of previous logons to cache (in case domain controller is not available):** *4 logons*
- **Interactive logon: Prompt user to change password before expiration:** *14 days*
- **Interactive logon; Require Domain Controller authentication to unlock workstation;** *Disabled*
- **Interactive logon: Require smart card:** *disabled..*
- **Interactive logon: Smart card removal behavior:** *Lock workstation*
- **MS network client: Digitally sign communications (always):** *enabled*
- **MS network client: Digitally sign communications (if server agrees):**  
*enabled*
- **MS network client: Send unencrypted password to third-party SMB servers:** *disabled*
- **MS network server; Amount of idle time required before suspending session:** *15 minutes*
- **MS network server: Digitally sign communications (always):** *enabled*
- **MS network server; Digitally sign communications (if client agrees);**  
*enabled*

- MS network server: Disconnect clients when logon hours expire: *enabled*
- MS network server: Server SPN target name validation level: *Accept if provided by client*
- Network access: Allow anonymous SID/Name translation: *disabled*
- Network access: Do not allow anonymous enumeration of SAM accounts: *enabled*
- Network access: Do not allow anonymous enumeration of SAM accounts and shares: *enabled*
- Network access: Do not allow storage of passwords and credentials for network authentication: *enabled*
- Network access: Let Everyone permissions apply to anonymous users: *disabled*
- Network access: Named Pipes that can be accessed anonymously: *blank*
- Network access: Remotely accessible registry paths: *blank*
- Network access; Remotely accessible registry paths and sub-paths: *blank*
- Network access: Restrict anonymous access to Named Pipes and Shares: *enabled*
- Network access: Shares that can be accessed anonymously: *blank*
- Network access: Sharing and security model for local accounts: *Classic - local users authenticate as themselves*
- Network security: Allow Local System to use computer identity for NTLM: *enabled*
- Network security: Allow LocalSystem NULL session fallback: *disabled*
- Network security: Allow PKU2U authentication requests to this computer to use online identifies: *disabled*
- Network security: Configure encryption types allowed for Kerberos: *RC4\_HMAC\_MD5, AES128\_HMAC\_SHA1, AES256\_HMAC\_SHA1, Future encryption types*
- Network security: Do not store LAN Manager hash value on next password change: *enabled*
- Network security: Force logoff when logon hours expire: *enabled*
- Network security; LAN Manager authentication level: *Send NTLMv2 response only, Refuse LM & NTLM*
- Network security: LDAP client signing requirements: *Negotiate signing*

- Network security: Minimum session security for NTLM SSP based (including secure RPC) clients: *Require NTLMv2 session security, Require 128 bit encryption*
- Network security: Minimum session security for NTLM SSP based (including secure RPC) server: *Require NTLMv2 session security, Require 128 bit encryption*
- Network security: Restrict NTLM: Incoming NTLM traffic: *Deny all accounts*
- Network security: Restrict NTLM: NTLM authentication in this domain: *Deny all*
- Network security: Restrict NTLM: Outgoing NTLM traffic to remote servers: *Deny all*
- Recovery console: Allow automatic administrative logon: *disabled*
- Recovery console: Allow floppy copy and access to all drives and all folders: *disabled*
- Shutdown: Allow system to be shut down without having to logon: *disabled*
- Shutdown: Clear virtual memory page-file: *disabled*
- System cryptography: Use FIPS compliant algorithms for encryption, hashing and signing: *disabled*
- System objects: Require case insensitivity for non-Windows subsystems: *enabled*
- System objects: Strengthen default permissions of internal system objects (e.g. Symbolic links) : *enabled*
- System settings: Optional subsystems: *blank*
- System settings: Use Certificate Rules on Windows Executables for Software Restriction Policies: *disabled*
- UAC: Admin Approval Mode for Built-in Administrator account: *enabled*
- UAC: Allow UIAccess applications to prompt for elevation without using the secure desktop: *disabled*
- UAC: Behavior of elevation prompt for administrators in Admin Approval Mode: *Prompt for consent on the secure desktop*
- UAC: Behavior of the elevation prompt for standard users: *Automatically deny elevation requests*
- UAC: Detect application installations and prompt for elevation: *enabled*
- UAC: Only elevate executables that are signed and validated: *disabled*

- **UAC; Only elevate UIAccess applications that are installed in secure locations: *enabled***
- **UAC: Run all administrators in Admin Approval Mode: *enabled***
- **UAC: Switch to the secure desktop when prompting for elevation: *enabled***
- **UAC: Virtualize file and registry write failures to per-user locations: *enabled***