

Managing Group Policy within the Microsoft Windows Environment (3e)

Security Strategies in Windows Platforms and Applications, Third Edition - Lab 05

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Time on Task:

11 hours, 48 minutes

Progress:

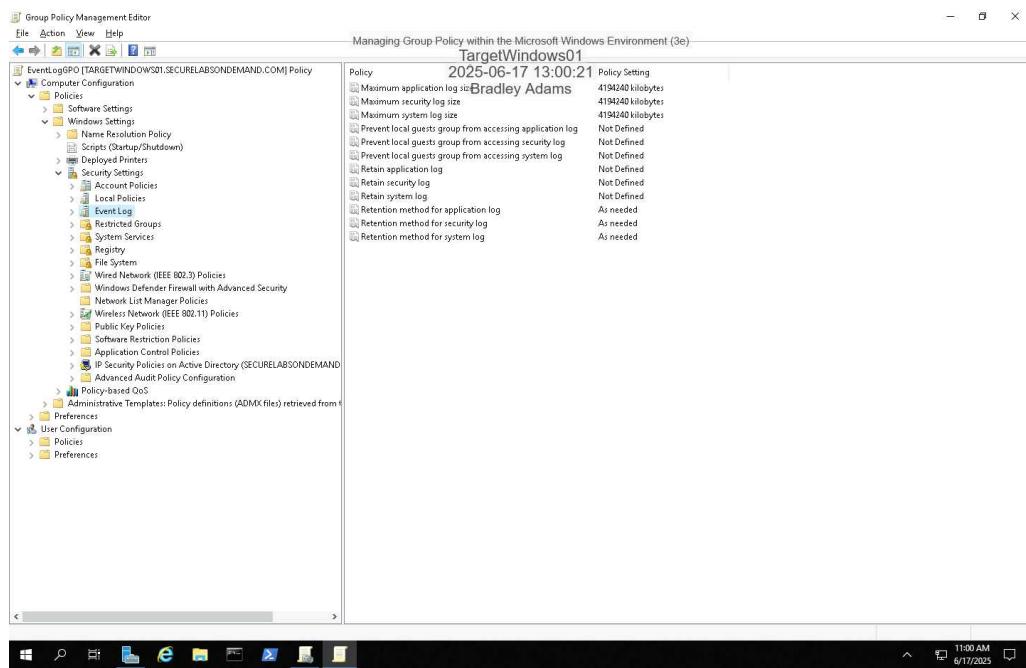
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Report Generated: Wednesday, June 18, 2025 at 9:42 AM

Section 1: Hands-On Demonstration

Part 1: Create and Link a New Domain-Level Group Policy Object

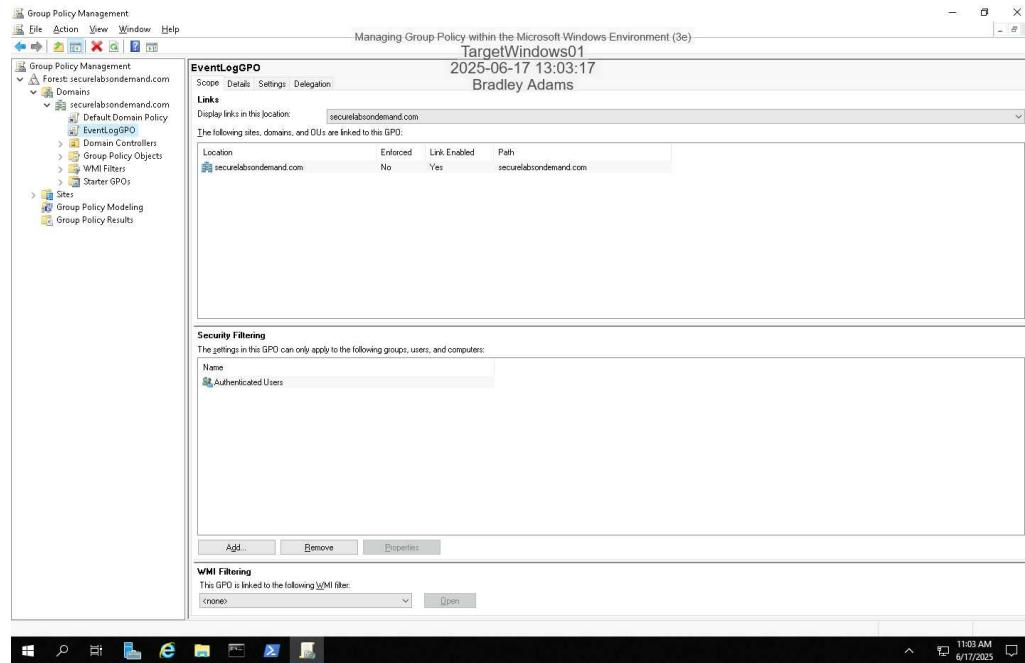
20. Make a screen capture showing the updated policy settings for the new EventLogGPO.



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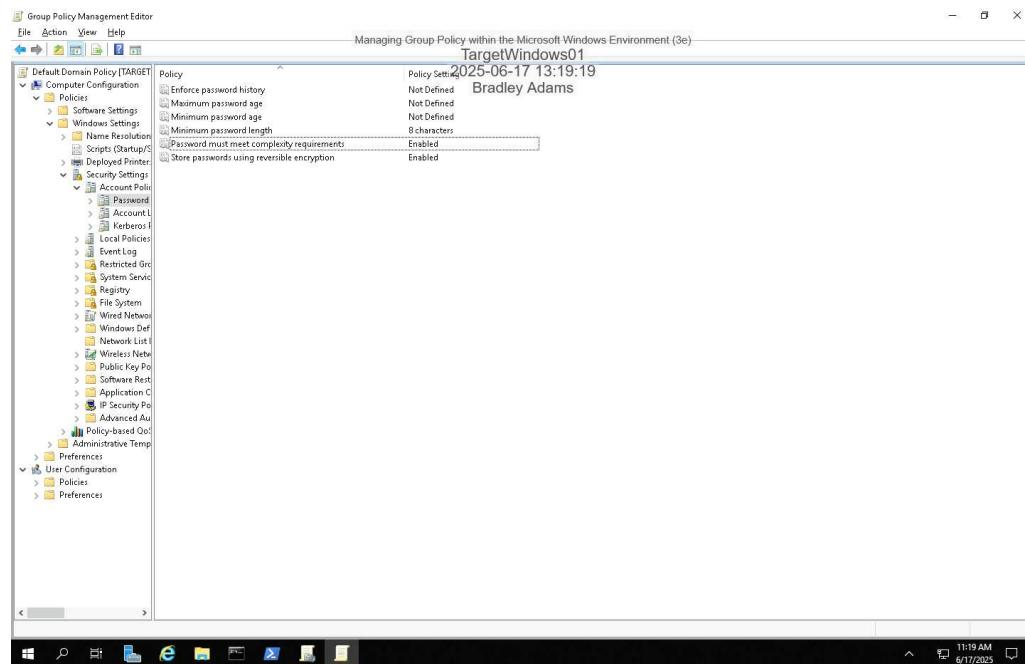
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26. Make a screen capture showing the linked EventLogGPO.



Part 2: Edit the Default Domain Policy

9. Make a screen capture showing the policy changes you made in the Group Policy Management Editor.



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10. Explain why you made the changes you made, make note of any suggested changes that you accepted, and explain why you believe the Group Policy Management Editor recommended those changes.

NIST best practices suggest a minimum password length of 8 characters and storing passwords using encryption. Password complexity may help, but users should also avoid creating guessable patterns. No suggested changes were given for these three settings. Suggested changes are often recommended to help administrators align with best practices, prevent misconfigurations, maintain compatibility, and Microsoft periodically updates recommendations based on known threats, trends, and updates to frameworks.

Part 3: Document and Audit Group Policy

10. Make a screen capture showing the policy changes you made in the RSoP.

The screenshot shows the RSoP report interface. At the top, it displays the URL 'file:///C:/Users/Administrator/Desktop/badams_RSoP.html#SECURELABSONDEMAdmin' and the title 'Managing Group Policy within the Microsoft Windows Environment (3e)'. Below this, the 'Certificates' section shows a certificate issued to 'Administrator' by 'Administrator' on '2025-06-17 13:55:56' for 'Bradley Adams'. The 'Applied GPOs' section lists 'Default Domain Controllers Policy' and 'Default Domain Policy'. The 'EventLogGPO' section shows several events: 5016 (Completed Security processing in 375 milliseconds), 1502 (The Group Policy settings for the computer were processed successfully from 3 Group Policy objects), 8006 (Completed periodic policy processing for computer SECURELABSONDEM\TAR GET/Windows/5016 in 0 seconds), and 5315 (Next policy processing for SECURELABSONDEM\TAR GET/Windows/5016 will be attempted in 5 minutes). The bottom section, 'Denied GPOs', shows 'securelabsondem.com' with 'Security' set to 'No' and 'None'. The status bar at the bottom right indicates the time is '11:55 AM' and the date is '6/17/2025'.

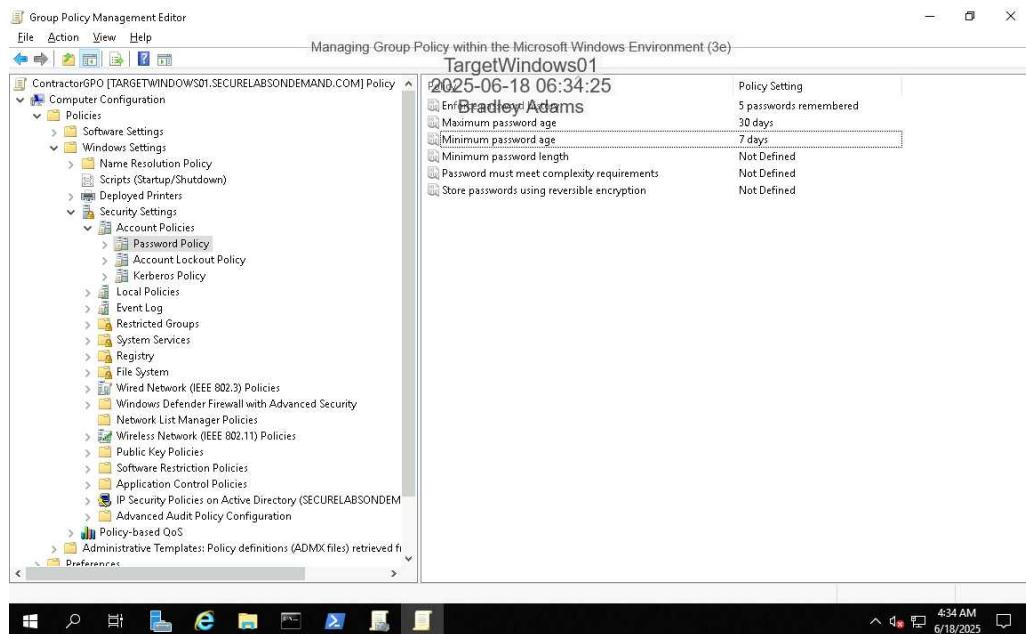
13. Compare the GPO Report and the RSoP Report.

The GPO report shows the configured settings within the group policy object. The GPO shows setting details about what has been defined such as enabled, disabled, or not configured. The RSoP report shows the actual settings applied to a user or computer. This report includes all GPOs and assists in troubleshooting conflicts.

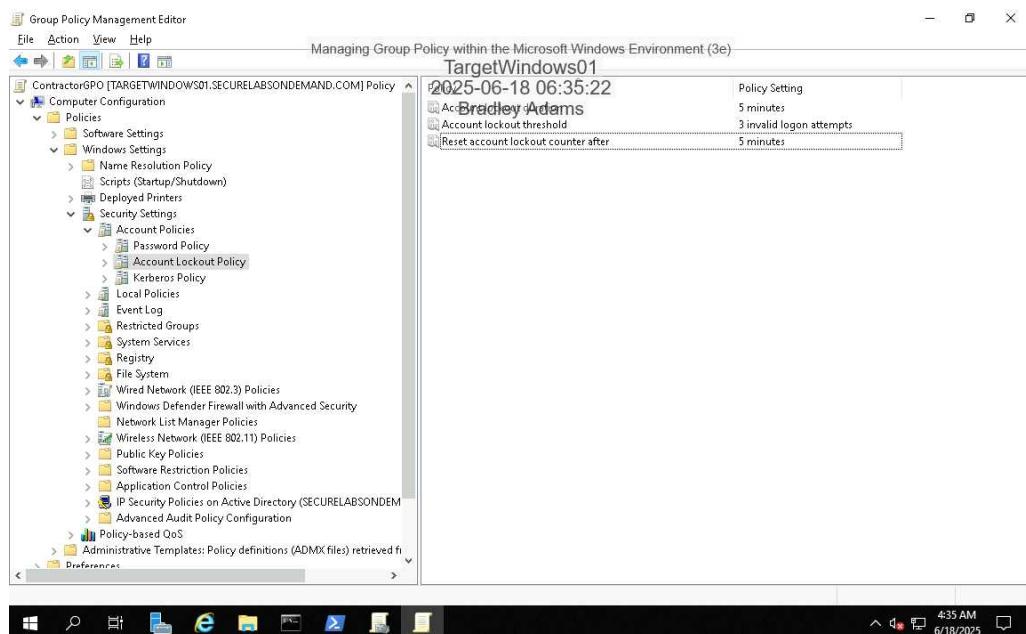
Section 2: Applied Learning

Part 1: Create and Link a New Domain-Level Group Policy Object

4. Make a screen capture showing the new Password Policy for the ContractorsGPO.



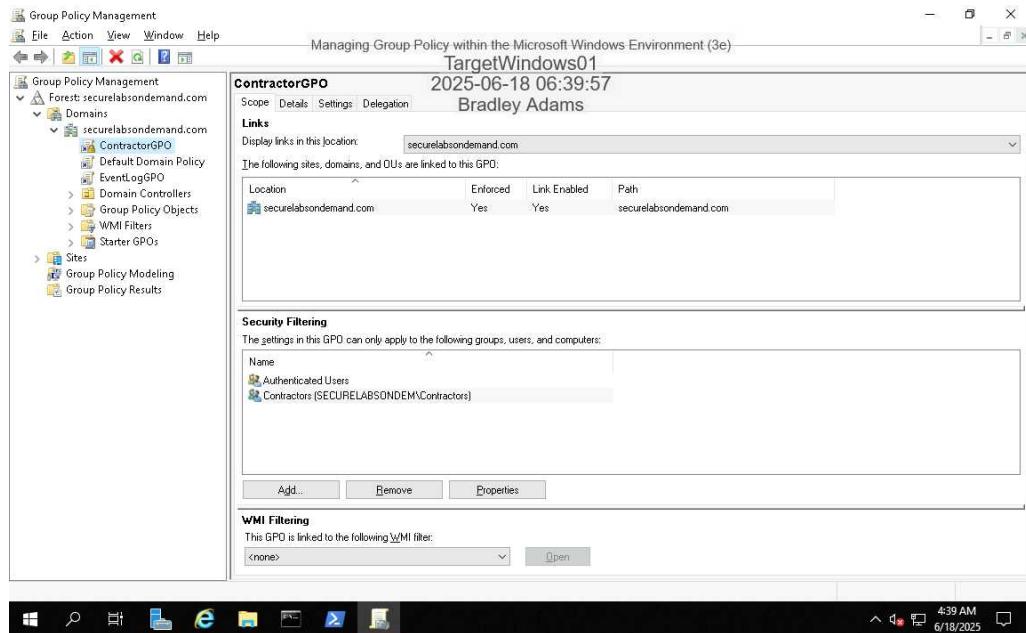
6. Make a screen capture showing the new Account Lockout Policy for the ContractorsGPO.



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16. Make a screen capture showing the Contractors group in the ContractorsGPO.



Part 2: Edit the Default Domain Policy

4. Make a screen capture showing the current default domain password policy.

```
Administrator: Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

PS C:\Users\Administrator> gcm -Name *password*
    CommandType     Name
    ----
    Function        Set-ADFineGrainedPasswordPolicy
    Cmdlet          Add-ADDefaultDomainPasswordPolicy
    Cmdlet          Get-ADDefaultDomainPasswordPolicySubject
    Cmdlet          Get-ADDefaultDomainPasswordReplicationPolicy
    Cmdlet          Get-ADDefaultDomainControllerPasswordReplicationPolicy...
    Cmdlet          Get-ADDefaultDomainControllerPasswordReplicationPolicy...
    Cmdlet          Get-ADFineGrainedPasswordPolicy
    Cmdlet          Get-ADFineGrainedPasswordPolicySubject
    Cmdlet          Get-ADUserResultantPasswordPolicy
    Cmdlet          Remove-ADDefaultDomainPasswordPolicy
    Cmdlet          Remove-ADDefaultDomainControllerPasswordReplicationPolicy
    Cmdlet          Remove-ADFineGrainedPasswordPolicy
    Cmdlet          Remove-ADFineGrainedPasswordPolicySubject
    Cmdlet          Reset-ADServiceAccountPassword
    Cmdlet          Set-ComputerMachinePassword
    Cmdlet          Set-ADDefaultDomainPasswordPolicy
    Cmdlet          Set-ADDefaultDomainControllerPasswordReplicationPolicy
    Cmdlet          Set-ADFineGrainedPasswordPolicy

PS C:\Users\Administrator> Get-ADDefaultDomainPasswordPolicy

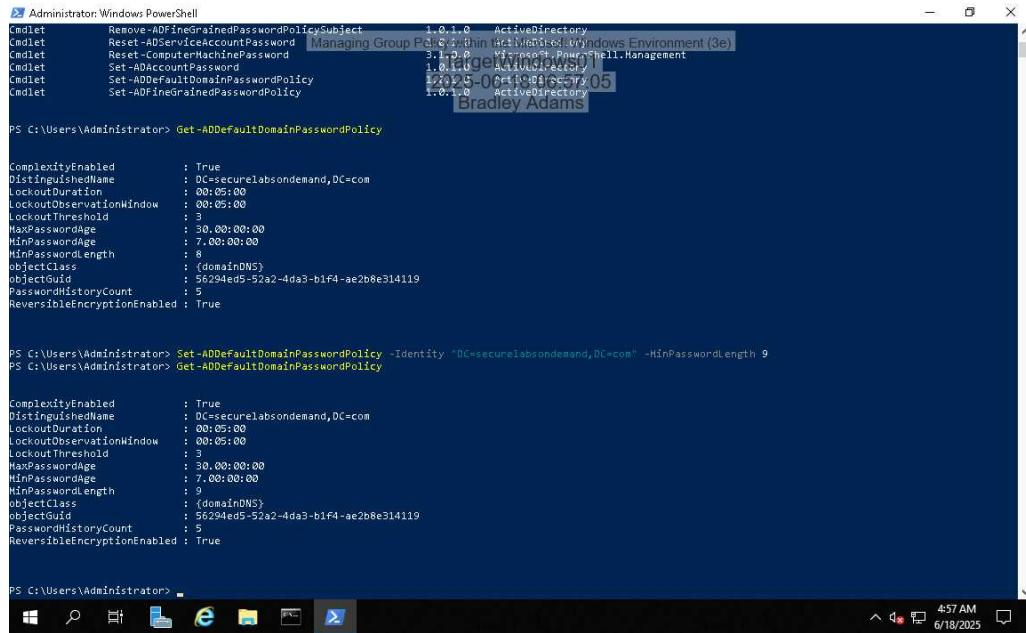
ComplexityEnabled      : True
DistinguishedName       : DC=securelabsondemand,DC=com
LockoutDuration         : 00:05:00
LockoutObservationWindow : 00:05:00
LockoutThreshold        : 5
MaxPasswordAge          : 30.00:00:00
MinPasswordAge          : 7.00:00:00
MinPasswordLength       : 8
objectClass             : (domainDNS)
objectGuid              : 56294ed5-52a2-4da3-b1f4-ac2b8e314119
PasswordHistoryCount    : 5
ReversibleEncryptionEnabled : True

PS C:\Users\Administrator>
```

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7. Make a screen capture showing the modified default domain password policy.



The screenshot shows a Windows PowerShell window titled "Administrator: Windows PowerShell". The command "Get-ADDefaultDomainPasswordPolicy" is run, displaying the current password policy settings. The policy includes complexity requirements, lockout durations, and password history counts. The command "Set-ADDefaultDomainPasswordPolicy -Identity 'DC=securelabsondemand,DC=com' -MinPasswordLength 9" is then run to modify the policy, changing the minimum password length to 9 characters. The modified policy is shown at the bottom of the output.

```
PS C:\Users\Administrator> Get-ADDefaultDomainPasswordPolicy

ComplexityEnabled      : True
DistinguishedName     : DC=securelabsondemand,DC=com
LockoutDuration        : 00:05:00
LockoutObservationWindow : 00:05:00
LockoutThreshold       : 3
MaxPasswordAge         : 30.00:00:00
MinPasswordAge         : 7.00:00:00
MinPasswordLength      : 8
objectClass            : (domainDNS)
objectGuid              : 56294ed5-52a2-4da3-b1f4-ac2b8e314119
PasswordHistoryCount   : 5
ReversibleEncryptionEnabled : True

PS C:\Users\Administrator> Set-ADDefaultDomainPasswordPolicy -Identity "DC=securelabsondemand,DC=com" -MinPasswordLength 9
PS C:\Users\Administrator> Get-ADDefaultDomainPasswordPolicy

ComplexityEnabled      : True
DistinguishedName     : DC=securelabsondemand,DC=com
LockoutDuration        : 00:05:00
LockoutObservationWindow : 00:05:00
LockoutThreshold       : 3
MaxPasswordAge         : 30.00:00:00
MinPasswordAge         : 7.00:00:00
MinPasswordLength      : 9
objectClass            : (domainDNS)
objectGuid              : 56294ed5-52a2-4da3-b1f4-ac2b8e314119
PasswordHistoryCount   : 5
ReversibleEncryptionEnabled : True

PS C:\Users\Administrator>
```

13. Document the PowerShell command you used to make the changes.

Set-ADDefaultDomainPasswordPolicy -Identity "DC=securelabsondemand,DC=com"
-MinPasswordLength 7 -LockoutDuration (New-TimeSpan -Minutes 20) -LockoutObservationWindow
(New-TimeSpan -Minutes 20) -LockoutThreshold 3

15. Make a screen capture showing the final default domain password policy.

```
Administrator: Windows PowerShell
PS C:\Users\Administrator> Get-ADDefaultDomainPasswordPolicy -Identity "DC=securelabsondemand,DC=com" -LockoutObservationWindow (New-TimeSpan -Hours 1) -LockoutDuration (New-TimeSpan -Hours 1)
PS C:\Users\Administrator> Get-ADDefaultDomainPasswordPolicy

ComplexityEnabled      : True
DistinguishedName     : DC=securelabsondemand,DC=com
LockoutDuration        : 01:00:00
LockoutObservationWindow : 01:00:00
LockoutThreshold       : 3
MaxPasswordAge         : 30.00:00:00
MinPasswordAge         : 1.00:00:00
MinPasswordLength      : 9
objectClass            : (domainDNS)
objectGuid             : 56294ed5-52a2-4da3-b1f4-ac2b8e314119
PasswordHistoryCount   : 5
ReversibleEncryptionEnabled : True

PS C:\Users\Administrator> Set-ADDefaultDomainPasswordPolicy -Identity "DC=securelabsondemand,DC=com" -MinPasswordLength 7 -LockoutDuration (New-TimeSpan -Minutes 20) -LockoutObservationWindow (New-TimeSpan -Minutes 20) -LockoutThreshold 3
PS C:\Users\Administrator> Get-ADDefaultDomainPasswordPolicy

ComplexityEnabled      : True
DistinguishedName     : DC=securelabsondemand,DC=com
LockoutDuration        : 08:20:00
LockoutObservationWindow : 08:20:00
LockoutThreshold       : 3
MaxPasswordAge         : 30.00:00:00
MinPasswordAge         : 7.00:00:00
MinPasswordLength      : 7
objectClass            : (domainDNS)
objectGuid             : 56294ed5-52a2-4da3-b1f4-ac2b8e314119
PasswordHistoryCount   : 5
ReversibleEncryptionEnabled : True

PS C:\Users\Administrator>
```

18. Make a screen capture showing the successful gpupdate command.

```
Administrator: Windows PowerShell - powershell
PS C:\Users\Administrator> Set-ADDefaultDomainPasswordPolicy -Identity "DC=securelabsondemand,DC=com" -MinPasswordLength 7 -LockoutDuration (New-TimeSpan -Minutes 20) -LockoutObservationWindow (New-TimeSpan -Minutes 20) -LockoutThreshold 3
PS C:\Users\Administrator> Get-ADDefaultDomainPasswordPolicy

ComplexityEnabled      : True
DistinguishedName     : DC=securelabsondemand,DC=com
LockoutDuration        : 08:20:00
LockoutObservationWindow : 08:20:00
LockoutThreshold       : 3
MaxPasswordAge         : 30.00:00:00
MinPasswordAge         : 7.00:00:00
MinPasswordLength      : 7
objectClass            : (domainDNS)
objectGuid             : 56294ed5-52a2-4da3-b1f4-ac2b8e314119
PasswordHistoryCount   : 5
ReversibleEncryptionEnabled : True

PS C:\Users\Administrator> cmd
Microsoft Windows [Version 10.0.17763.107]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\Administrator>ps
'ps' is not recognized as an internal or external command,
operable program or batch file.

C:\Users\Administrator>powershell
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

PS C:\Users\Administrator>cmd
Microsoft Windows [Version 10.0.17763.107]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\Administrator>gpupdate /force
Updating policy...
Computer Policy update has completed successfully.
User Policy update has completed successfully.

C:\Users\Administrator>
```

Part 3: Document and Audit Group Policy

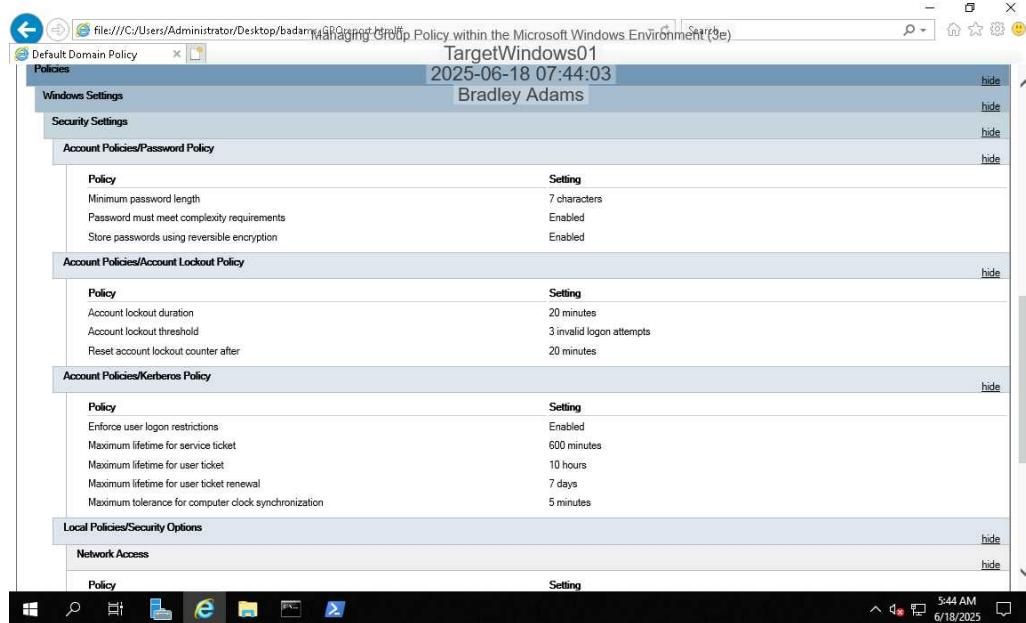
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3. Document the PowerShell command you used to generate the GPO report.

```
Get-GPOReport -Name "Default Domain Policy" -ReportType Html -Path  
"C:\Users\Administrator\Desktop\badams_GPOreport.html"
```

5. Make a screen capture showing the final password policy changes.



Section 3: Challenge and Analysis

Part 1: Analysis and Discussion

What are some of the benefits of using Group Policy in an enterprise environment? Use the Internet to research additional applications of Group Policy not discussed in this lab.

Group policy in an enterprise has several benefits, including Centralized Management, which allows administrators to configure and enforce settings across all domain workstations from a central location. It also improves security through password policies, software restrictions, and firewall rules. Group policy can deploy and update software packages, making software rollout centrally managed. Group policy can lock down critical settings and minimize user misconfiguration, which reduces help desk calls.

Sources:

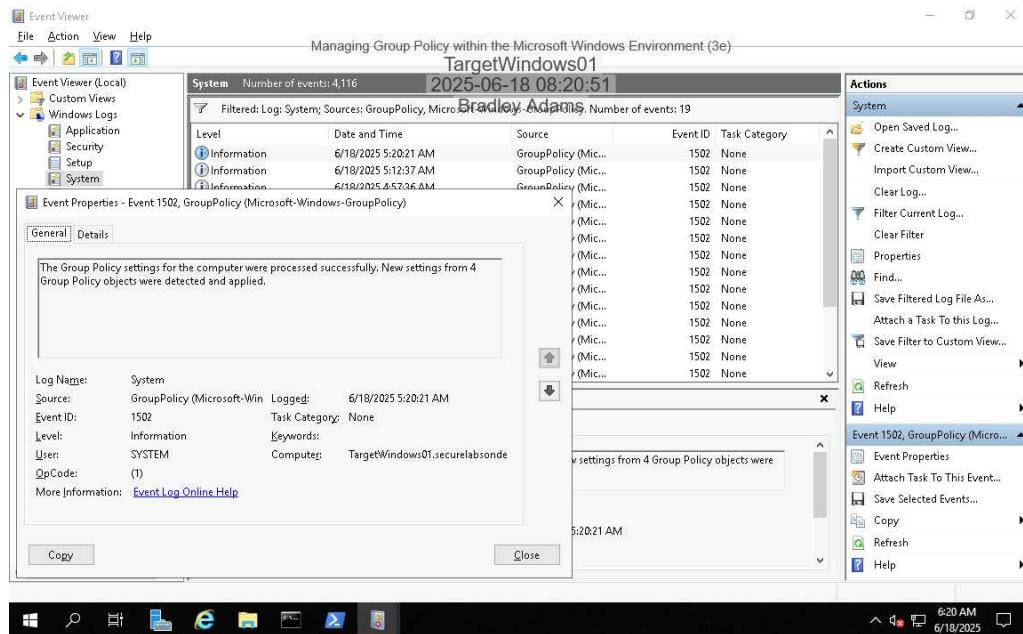
<https://www.demandtalk.com/insights/it-infra/why-group-policy-management-is-necessary-for-every-enterprise/>

<https://www.techtarget.com/searchwindowsserver/definition/Group-Policy-Object>

<https://www.ninjaone.com/blog/what-is-group-policy-in-active-directory/>

Part 2: Tools and Commands

Make a screen capture showing the **filtered System Logs** and the log entry associated with your changes.



Part 3: Challenge Exercise

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Make a screen capture showing the current Audit Policy using either the Group Policy Management Editor or Windows PowerShell.

```
Administrator: Windows PowerShell
PS C:\Users\Administrator> auditpol /get /category:*
Managing Group Policy within the Microsoft Windows Environment (3e)
System audit policy
Category/Subcategory Setting
System
  Security System Extension No Auditing
  System Integrity Success and Failure
  IPsec Driver No Auditing
  Other System Events Success and Failure
  Security State Change Success
Logon/Logoff
  Logon Success and Failure
  Logoff Success
  Account Lockout Success
  IPsec Main Mode No Auditing
  IPsec Quick Mode No Auditing
  IPsec Extended Mode No Auditing
  Special Logon Success
  Other Logon/Logoff Events No Auditing
  Network Policy Server Success and Failure
  User / Device Claims No Auditing
  Group Membership No Auditing
Object Access
  File System No Auditing
  Registry No Auditing
  Kernel Object No Auditing
  SAM No Auditing
  Certification Services No Auditing
  Application Generated No Auditing
  Handle Manipulation No Auditing
  File Share No Auditing
  Filtering Platform Packet Drop No Auditing
  Filtering Platform Connection No Auditing
  Other Object Access Events No Auditing
  Detailed File Share No Auditing
  Removable Storage No Auditing
  Central Policy Staging No Auditing
Privilege Use
  Non Sensitive Privilege Use No Auditing
  Other Privilege Use Events No Auditing
  Sensitive Privilege Use No Auditing
Detailed Tracking
  Process Creation No Auditing
  Process Termination No Auditing
  DPAPI Activity No Auditing
  RPC Events No Auditing
  Plug and Play Events No Auditing
TargetWindows01
2025-06-18 08:32:53
Bradley Adams
6:32 AM 6/18/2025
```

Make a screen capture showing the updated Audit Policy.

```
Administrator: Windows PowerShell
PS C:\Users\Administrator> auditpol /set /subcategory:"File System" /success:enable /failure:enable
The command was successfully executed.
PS C:\Users\Administrator> auditpol /set /subcategory:"Process Creation" /success:enable /failure:enable
The command was successfully executed.
PS C:\Users\Administrator> auditpol /set /subcategory:"Directory Service" /success:enable /failure:enable
The command was successfully executed.
PS C:\Users\Administrator> auditpol /get /category:*
Managing Group Policy within the Microsoft Windows Environment (3e)
System audit policy
Category/Subcategory Setting
System
  Security System Extension No Auditing
  System Integrity Success and Failure
  IPsec Driver No Auditing
  Other System Events Success and Failure
  Security State Change Success
Logon/Logoff
  Logon Success and Failure
  Logoff Success
  Account Lockout Success
  IPsec Main Mode No Auditing
  IPsec Quick Mode No Auditing
  IPsec Extended Mode No Auditing
  Special Logon Success
  Other Logon/Logoff Events No Auditing
  Network Policy Server Success and Failure
  User / Device Claims No Auditing
  Group Membership No Auditing
Object Access
  File System Success and Failure
  Registry No Auditing
  Kernel Object No Auditing
  SAM No Auditing
  Certification Services No Auditing
  Application Generated No Auditing
  Handle Manipulation No Auditing
  File Share No Auditing
  Filtering Platform Packet Drop No Auditing
  Filtering Platform Connection No Auditing
  Other Object Access Events No Auditing
  Detailed File Share No Auditing
  Removable Storage No Auditing
  Central Policy Staging No Auditing
Privilege Use
  Non Sensitive Privilege Use No Auditing
  Other Privilege Use Events No Auditing
  Sensitive Privilege Use No Auditing
Detailed Tracking
  Process Creation No Auditing
  Process Termination No Auditing
  DPAPI Activity No Auditing
  RPC Events No Auditing
  Plug and Play Events No Auditing
TargetWindows01
2025-06-18 08:40:37
Bradley Adams
6:40 AM 6/18/2025
```