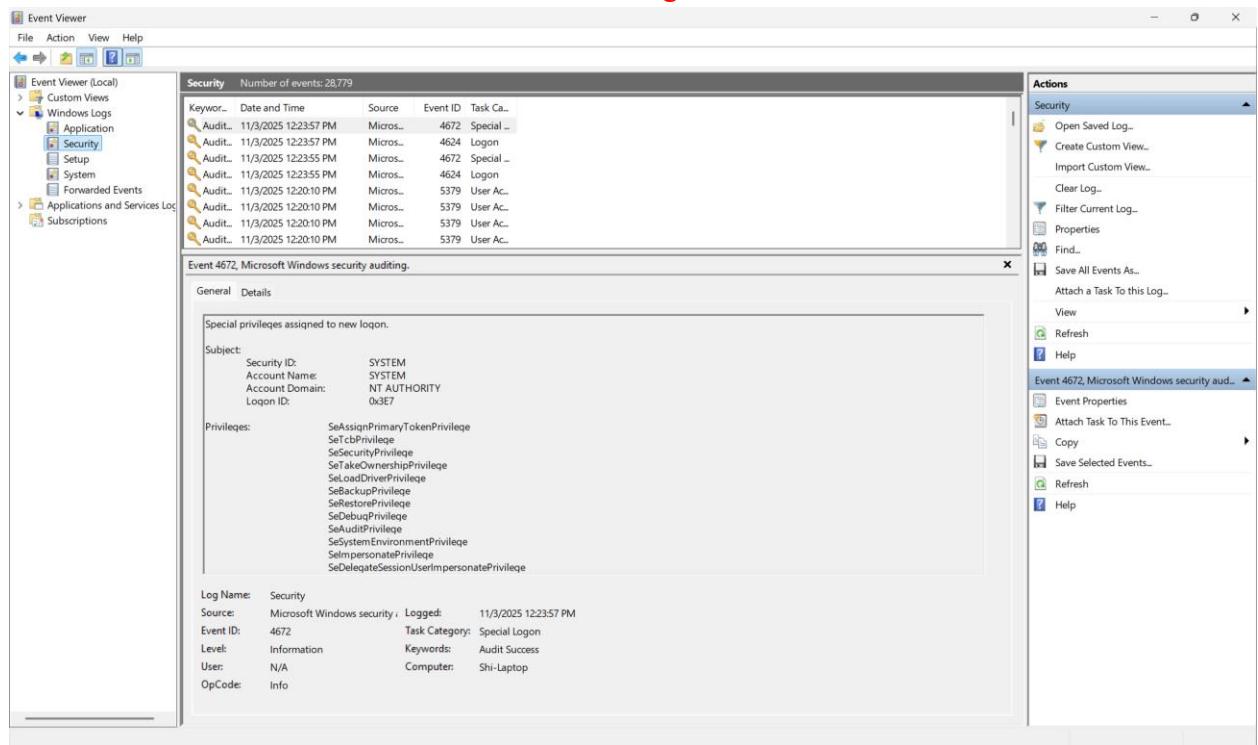


1. Which built-in Windows utility/tool is used to view the log files? (1 point)

The Windows Event Viewer tool is used to view log files.



2. What is the date/time for: (2 points):

First log in Win10SecurityLogs.evtx: 9/15/2021 12:03:02 AM

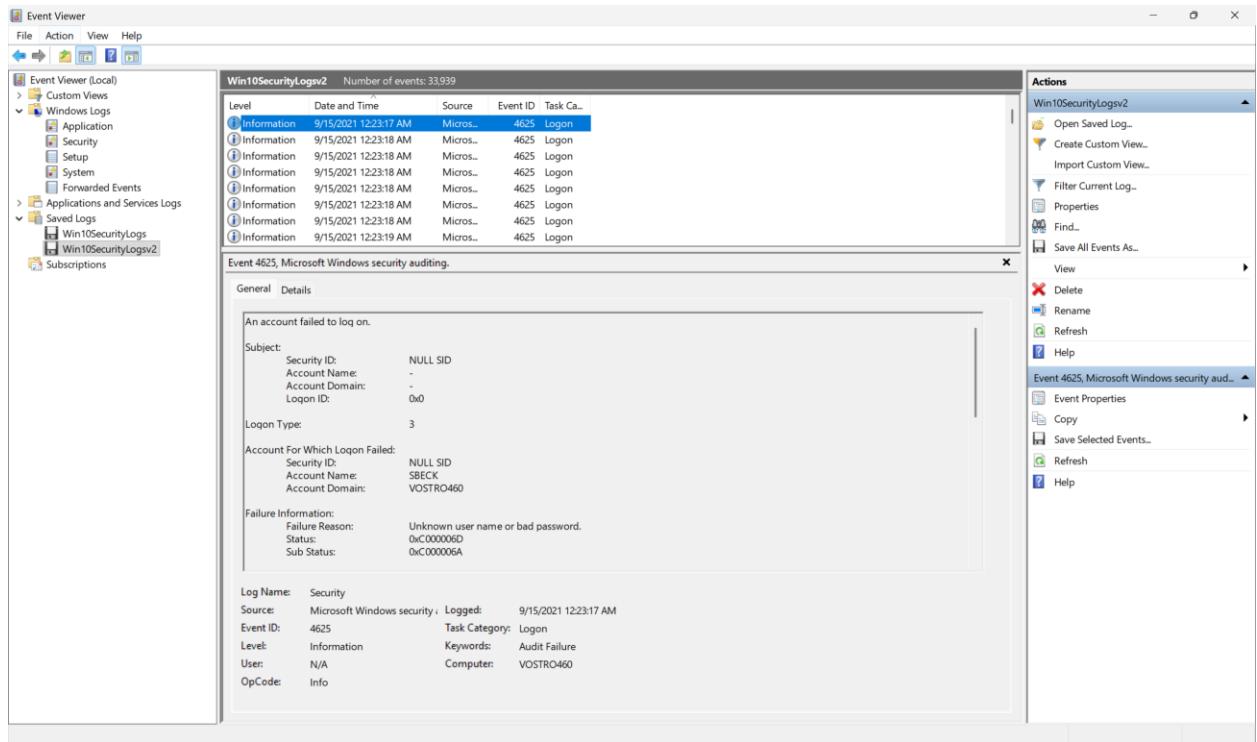
Last log in Win10SecurityLogs.evtx: 9/15/2021 12:14:26 AM

The screenshot shows the Windows Event Viewer interface. The left pane displays a tree view of logs: Event Viewer (Local), Custom Views, Windows Logs (Application, Security, Setup, System, Forwarded Events), Applications and Services Logs, Saved Logs, Win10SecurityLogs (selected), Win10SecurityLogsv2, and Subscriptions. The right pane shows the details of the last event in the Win10SecurityLogs log, titled "Event 4625, Microsoft Windows security auditing." The event details indicate an account failed to log on, with the subject being a user with a NULL SID. The failure reason was an unknown user name or bad password. The event was logged by Microsoft Windows security at 9/15/2021 12:03:02 AM with Event ID 4625.

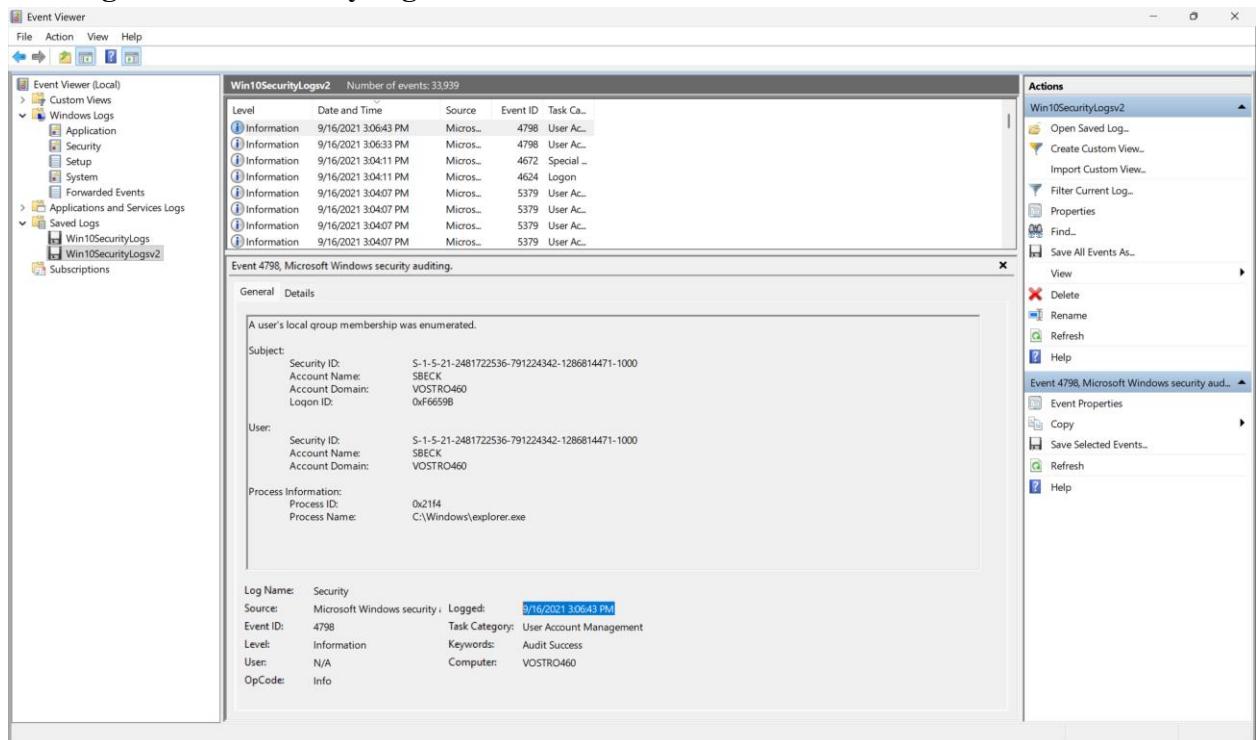
Last log in Win10SecurityLogs.evtx: 9/15/2021 12:14:26 AM

The screenshot shows the Windows Event Viewer interface. The left pane displays a tree view of logs: Event Viewer (Local), Custom Views, Windows Logs (Application, Security, Setup, System, Forwarded Events), Applications and Services Logs, Saved Logs, Win10SecurityLogs (selected), Win10SecurityLogsv2 (selected), and Subscriptions. The right pane shows the details of the first event in the Win10SecurityLogsv2 log, titled "Event 4798, Microsoft Windows security auditing." The event details indicate a user's local group membership was enumerated, with the user being a member of the S-1-5-21-2481722536-791224342-1286814471-1000 group. The process involved was explorer.exe.

First log in Win10SecurityLogsv2.evtx: 9/15/2021 12:23:17 AM



Last log in Win10SecurityLogs2.evtx: 9/16/2021 3:06:43 PM



3. Total number of events captured (1 point):

Win10SecurityLogs.evtx: 34,679 events captured

The screenshot shows the Windows Event Viewer interface. The left pane displays a tree view of logs: Event Viewer (Local), Custom Views, Windows Logs (Application, Security, Setup, System, Forwarded Events), Applications and Services Logs, Saved Logs (Win10SecurityLogs, Win10SecurityLogs2), and Subscriptions. The right pane shows a list of events for 'Win10SecurityLogs' with a total of 34,679 events. One specific event is selected, event ID 4798, titled 'Microsoft Windows security auditing'. The details pane shows the following information:

Subject	Security ID	S-1-5-21-2481722536-791224342-1286814471-1000
User:	Account Name	SBECK
	Account Domain:	VOSTRO460
	Logon ID:	0xF6659B
User:	Security ID	S-1-5-21-2481722536-791224342-1286814471-1000
	Account Name	SBECK
	Account Domain:	VOSTRO460
Process Information:	Process ID	0x21f4
	Process Name:	C:\Windows\explorer.exe

Log Name: Security
Source: Microsoft Windows security audit... Logged: 9/15/2021 2:14:26 AM
Event ID: 4798 Task Category: User Account Management
Level: Information Keywords: Audit Success
User: N/A Computer: VOSTRO460
OpCode: Info

Win10SecurityLogs2.evtx: 33,939 events captured

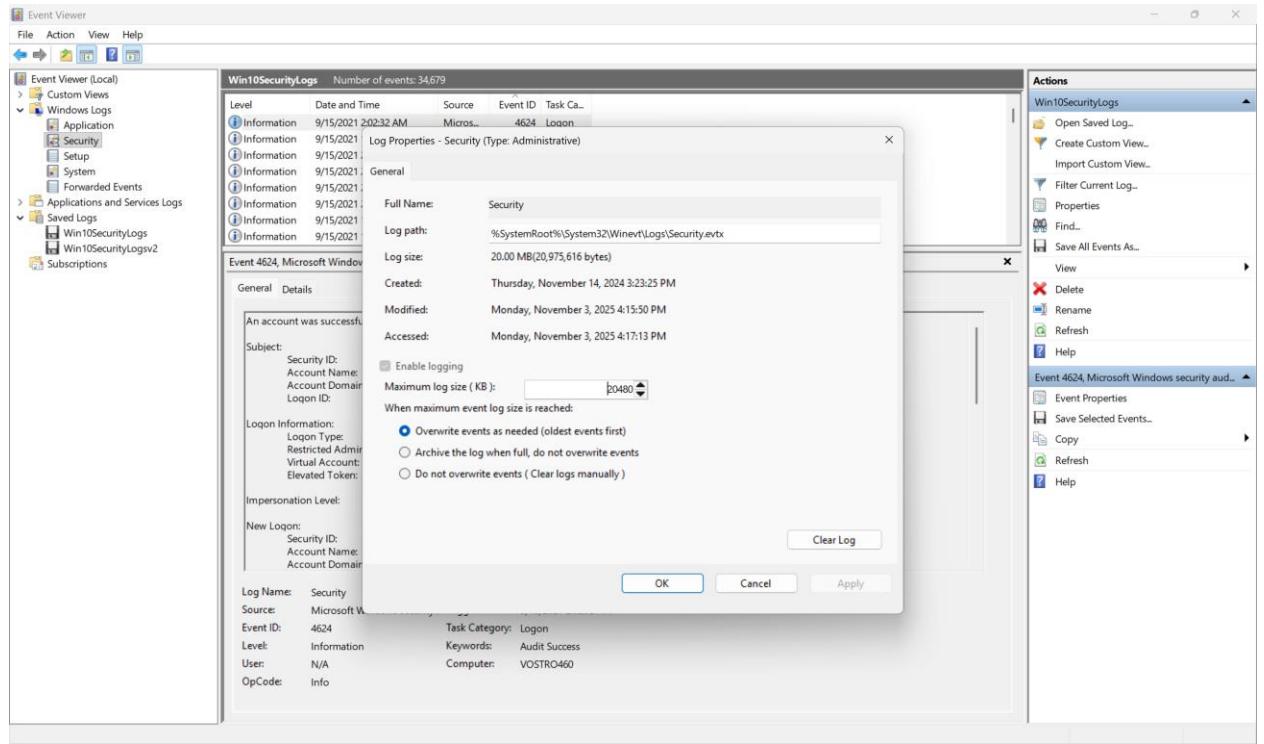
The screenshot shows the Windows Event Viewer interface, identical to the previous one but with a different log file selected. The left pane shows the same tree structure. The right pane shows a list of events for 'Win10SecurityLogs2' with a total of 33,939 events. One specific event is selected, event ID 4798, titled 'Microsoft Windows security auditing'. The details pane shows the following information:

Subject	Security ID	S-1-5-21-2481722536-791224342-1286814471-1000
User:	Account Name	SBECK
	Account Domain:	VOSTRO460
	Logon ID:	0xF6659B
User:	Security ID	S-1-5-21-2481722536-791224342-1286814471-1000
	Account Name	SBECK
	Account Domain:	VOSTRO460
Process Information:	Process ID	0x21f4
	Process Name:	C:\Windows\explorer.exe

Log Name: Security
Source: Microsoft Windows security audit... Logged: 9/16/2021 3:06:43 PM
Event ID: 4798 Task Category: User Account Management
Level: Information Keywords: Audit Success
User: N/A Computer: VOSTRO460
OpCode: Info

4. Why are both log dumps approximately 20 MB in size? (5 points)

This is because the event logs have a maximum log file size configuration setting, and in this case, it's 20MB for Security logs by default. When the file size exceeds the limit, older events are overwritten by new ones.



5. Analyzing the events within Win10SecurityLogs.evtx, which user(s) attempted to log on at 9/15/2021 12:24:17 AM (Hint: 4625)? (3 points)

The users are lucas, SBECK, administrator, and denise.

The screenshot shows the Windows Event Viewer interface. The left navigation pane lists categories like Event Viewer (Local), Custom Views, Windows Logs (Application, Security, Setup, System), Forwarded Events, Applications and Services Logs, Saved Logs (Win10SecurityLogs, Win10SecurityLogsV2), and Subscriptions. The main pane displays the 'Win10SecurityLogs' log with 34,679 events. A specific event (Event ID 4625) is selected, showing details about a failed logon attempt. The event details pane includes sections for General, Details, and Failure Information, along with a Log tab at the bottom. The right pane contains an 'Actions' menu with options like Open Saved Log..., Create Custom View..., Import Custom View..., Filter Current Log..., Clear Filter, Find..., Save Filtered Log File As..., Save Filter to Custom View..., View, Delete, Rename, Refresh, Help, Event Properties, Save Selected Events..., Copy, Refresh, and Help.

Event 4625, Microsoft Windows security auditing.

General Details

An account failed to log on.

Subject:

Security ID:	NULL SID
Account Name:	-
Account Domain:	-
Logon ID:	0x0

Logon Type:

3

Account For Which Logon Failed:

Security ID:	NULL SID
Account Name:	lucas
Account Domain:	-

Failure Information:

Failure Reason:	Unknown user name or bad password.
-----------------	------------------------------------

Log Name: Security

Source:	Microsoft Windows security	Logged:	9/15/2021 12:24:17 AM
Event ID:	4625	Task Category:	Login
Level:	Information	Keywords:	Audit Failure
User:	N/A	Computer:	VOSTRO460
OpCode:	Info		

The screenshot shows the Windows Event Viewer interface. The left pane displays a tree view of logs: Event Viewer (Local), Custom Views, Windows Logs (Application, Security, Setup, System, Forwarded Events), Applications and Services Logs (Saved Logs, Win10SecurityLogs, Win10SecurityLogsV2), and Subscriptions. The right pane shows the content of the Win10SecurityLogs log. A specific event (Event ID 4625) is selected, with its details expanded. The event log entry is as follows:

Level	Date and Time	Source	Event ID	Task Category
Information	9/15/2021 12:24:16 AM	Micros...	4625	Logon
Information	9/15/2021 12:24:16 AM	Micros...	4625	Logon
Information	9/15/2021 12:24:17 AM	Micros...	4625	Logon
Information	9/15/2021 12:24:17 AM	Micros...	4625	Logon
Information	9/15/2021 12:24:17 AM	Micros...	4625	Logon
Information	9/15/2021 12:24:18 AM	Micros...	4625	Logon
Information	9/15/2021 12:24:18 AM	Micros...	4625	Logon
Information	9/15/2021 12:24:18 AM	Micros...	4625	Logon

Event details for Event ID 4625:

An account failed to log on.

Subject:
Security ID: NULL SID
Account Name: -
Account Domain: -
Logon ID: 0x0

Logon Type: 3

Account For Which Logon Failed:
Security ID: NULL SID
Account Name: SBECK
Account Domain: -

Failure Information:
Failure Reason: Unknown user name or bad password.

Log Name: Security
Source: Microsoft Windows security
Event ID: 4625
Level: Information
User: N/A
OpCode: Info
Logged: 9/15/2021 12:24:17 AM
Task Category: Logon
Keywords: Audit Failure
Computer: VOSTRO460

The right pane also shows a context menu with actions like Open Saved Log..., Create Custom View..., Import Custom View..., Filter Current Log..., Clear Filter, Find..., Save Filter to Custom View..., Delete, Rename, Refresh, Help, and a list of recent items.

The screenshots show the Windows Event Viewer interface. The left pane displays a tree view of logs: Event Viewer (Local), Custom Views, Windows Logs (Application, Security, Setup, System, Forwarded Events), Applications and Services Logs, Saved Logs (Win10SecurityLogs, Win10SecurityLogsv2), and Subscriptions. The right pane shows event details for 'Event 4625, Microsoft Windows security auditing.'

Screenshot 1 (Top):

- Event 4625 (Successful Logon):**
 - Subject: Security ID: NULL SID; Account Name: -; Account Domain: -; Logon ID: 0x0
 - Logon Type: 3
 - Account For Which Logon Failed: Security ID: NULL SID; Account Name: denise; Account Domain: -
 - Failure Information: Failure Reason: Unknown user name or bad password.
 - Log Name: Security; Source: Microsoft Windows security; Logged: 9/15/2021 12:24:17 AM; Event ID: 4625; Task Category: Logon; Level: Information; Keywords: Audit Success; User: N/A; Computer: VOSTRO460; OpCode: Info
- Event 4625 (Failed Logon):**
 - Subject: Security ID: NULL SID; Account Name: -; Account Domain: -; Logon ID: 0x0
 - Logon Type: 3
 - Account For Which Logon Failed: Security ID: NULL SID; Account Name: denise; Account Domain: -
 - Failure Information: Failure Reason: Unknown user name or bad password.
 - Log Name: Security; Source: Microsoft Windows security; Logged: 9/15/2021 12:24:17 AM; Event ID: 4625; Task Category: Logon; Level: Information; Keywords: Audit Failure; User: N/A; Computer: VOSTRO460; OpCode: Info

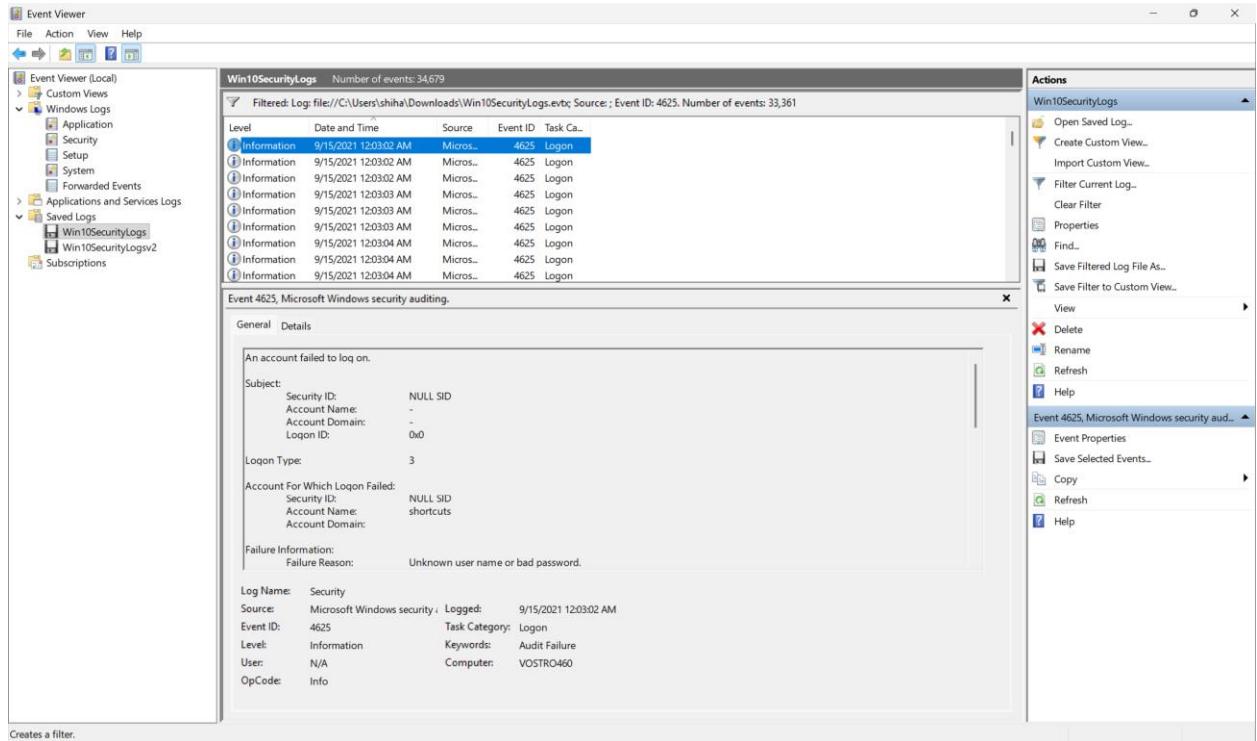
Screenshot 2 (Bottom):

- Event 4625 (Failed Logon):**
 - Subject: Security ID: NULL SID; Account Name: -; Account Domain: -; Logon ID: 0x0
 - Logon Type: 3
 - Account For Which Logon Failed: Security ID: NULL SID; Account Name: denise; Account Domain: -
 - Failure Information: Failure Reason: Unknown user name or bad password.
 - Log Name: Security; Source: Microsoft Windows security; Logged: 9/15/2021 12:24:17 AM; Event ID: 4625; Task Category: Logon; Level: Information; Keywords: Audit Failure; User: N/A; Computer: VOSTRO460; OpCode: Info
- Event 4625 (Failed Logon):**
 - Subject: Security ID: NULL SID; Account Name: -; Account Domain: -; Logon ID: 0x0
 - Logon Type: 3
 - Account For Which Logon Failed: Security ID: NULL SID; Account Name: denise; Account Domain: -
 - Failure Information: Failure Reason: Unknown user name or bad password.
 - Log Name: Security; Source: Microsoft Windows security; Logged: 9/15/2021 12:24:18 AM; Event ID: 4625; Task Category: Logon; Level: Information; Keywords: Audit Failure; User: N/A; Computer: VOSTRO460; OpCode: Info
- Event 4625 (Failed Logon):**
 - Subject: Security ID: NULL SID; Account Name: -; Account Domain: -; Logon ID: 0x0
 - Logon Type: 3
 - Account For Which Logon Failed: Security ID: NULL SID; Account Name: denise; Account Domain: -
 - Failure Information: Failure Reason: Unknown user name or bad password.
 - Log Name: Security; Source: Microsoft Windows security; Logged: 9/15/2021 12:24:18 AM; Event ID: 4625; Task Category: Logon; Level: Information; Keywords: Audit Failure; User: N/A; Computer: VOSTRO460; OpCode: Info
- Event 4625 (Failed Logon):**
 - Subject: Security ID: NULL SID; Account Name: -; Account Domain: -; Logon ID: 0x0
 - Logon Type: 3
 - Account For Which Logon Failed: Security ID: NULL SID; Account Name: denise; Account Domain: -
 - Failure Information: Failure Reason: Unknown user name or bad password.
 - Log Name: Security; Source: Microsoft Windows security; Logged: 9/15/2021 12:24:18 AM; Event ID: 4625; Task Category: Logon; Level: Information; Keywords: Audit Failure; User: N/A; Computer: VOSTRO460; OpCode: Info

6. Analyzing more log events, what type of attack happened (5 points)?

It looks like a brute-force privilege escalation attack has happened. There are multiple failed logons of attempts to guess passwords for the accounts. The reason for all failure is

stated as “Unknown user name or bad password,” which is Event ID 4625, and it just means the wrong password entered for a specific account in this case.

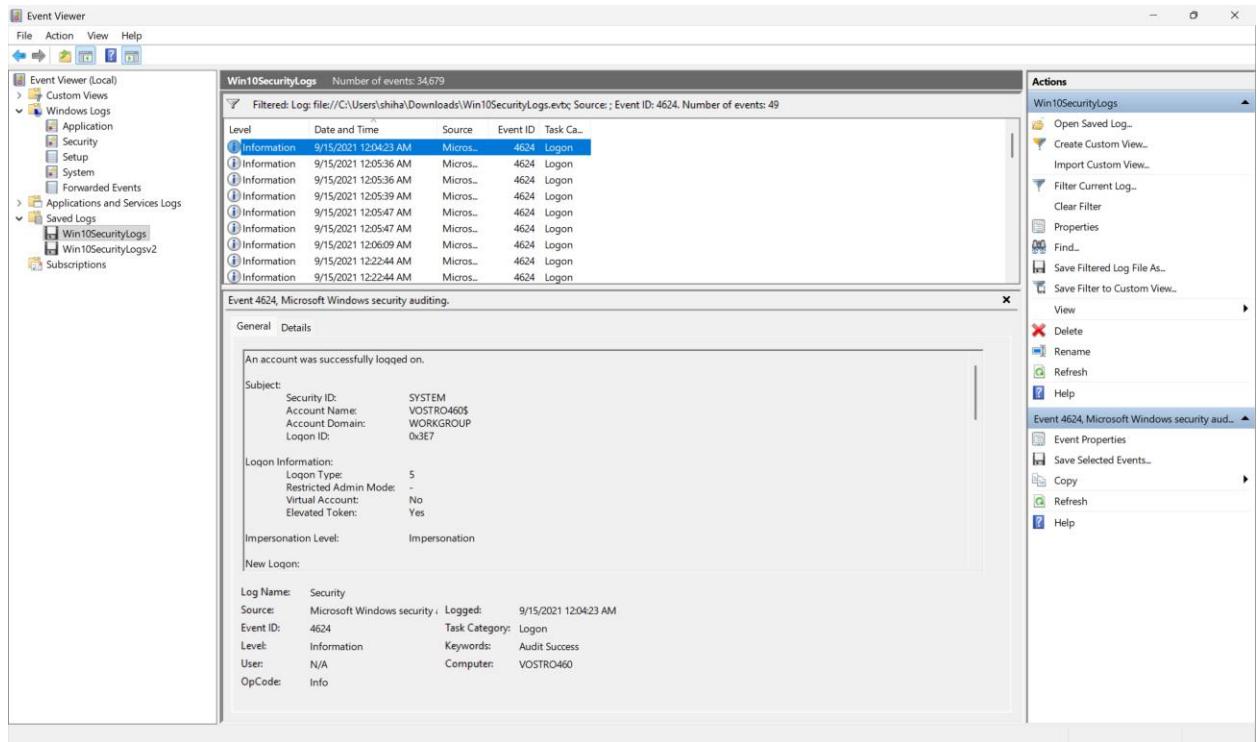


7. What is the vulnerability(ies)? (5 points)

The vulnerabilities are likely to be weak passwords, didn't set up account lockout policy, and RDP is probably open to the public. If so, the RDP was also not set up for limited failed login attempts, which can literally have infinite login attempts for treating actors to keep trying to guess passwords.

8. Was the attack successful? (5 points)

No, the attack was not successful because the only successful login is the authorized user.



9. What was most likely the motivation for the attack? (3 points)

The attacker's motivation was likely to gain unauthorized access to the system or network. By doing so, the attacker can gain remote access for further exploitation, such as information theft or using the system as a botnet.

10. Who were the attackers (i.e. country, etc...)? (5 points)

I used <https://whois.domaintools.com/> to look up the IP address (91.220.163.90), and it is showing me the attack was from Russia. The IP address range from 91.220.163.0 -

91.220.163.255 and it points to *Russian Federation Sankt-peterburg Media Land LLC*.

Event Properties - Event 4625, Microsoft Windows security auditing.

General Details

Friendly View XML View

Logon type: NtLmSsp

LogonProcessName: NtLmSsp

AuthenticationPackageName: NTLM

WorkstationName: Windows10

TransmittedServices:

LmPackageName:

KeyLength: 0

ProcessId: 0x0

ProcessName: ~

IpAddress: 91.220.163.90

IpPort: 0

Account Name: ~

Account Domain: ~

Logon ID: 0x0

Logon Type: 3

Account For Which Logon Failed:

Security ID: NULL SID

Account Name: shortcuts

Account Domain: ~

Failure Information:

Failure Reason: Unknown user name or bad password.

Log Name: Security

Source: Microsoft Windows security

Event ID: 4625

Task Category: Logon

Level: Information

Keywords: Audit Failure

User: N/A

Computer: VOSTRO460

OpCode: Info

Actions

Win10SecurityLogs

Open Saved Log...

Create Custom View...

Import Custom View...

Filter Current Log...

Clear Filter

Properties

Find...

Save Filtered Log File As...

Save Filter to Custom View...

View

Delete

Rename

Refresh

Help

Event 4625, Microsoft Windows security aud...

Event Properties

Save Selected Events...

Copy

Refresh

Help

Ch. 7 Windows PC Attacked

Windows_PC_Attacked_Guo

91.220.163.90 IP Address Whois

whois.domaintools.com/91.220.163.90

Web Store Google Gmail Google Translate YouTube Pitt Mail UPI Website UPI Resource Center Word UPI Dashboard Canvas Business Calc

Finish update

HOME RESEARCH

DomainTools PROFILE CONNECT MONITOR SUPPORT

Whois Lookup

LOGIN Sign Up

Notice: Possible deprecation of Whois services after January 28, 2025. More Info

Home > Whois Lookup > 91.220.163.90

IP Information for 91.220.163.90

Quick Stats

IP Location: Russian Federation Sankt-peterburg Media Land LLC

ASN: AS206728 MEDIALAND-AS Media Land LLC, RU (registered Nov 17, 2016)

Whois Server: whois.ripe.net

IP Address: 91.220.163.90

% Abuse contact for '91.220.163.0 - 91.220.163.255' is : abuse@sshvps.net .

inetnum: 91.220.163.0 - 91.220.163.255

netname: ML-CLOUD-LLC

country: RU

geofeed: https://ml.cloud/prefix-geo.csv

org: ORG-MLL13-RIPE

admin-c: AV11916-RIPE

tech-c: AV11916-RIPE

status: ASSIGNED PI

mnt-by: mnt-ru-media-land-1

mnt-by: RIPE-NCC-END-MNT

created: 2023-06-09T14:28:12Z

last-modified: 2025-06-20T13:23:58Z

source: RIPE

organisation: ORG-MLL13-RIPE

org-name: Media Land LLC

country: RU

org-type: LTR

address: Zastavskaya st., n. 33, Office 6A300

address: 196084

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11. How should vulnerability be remediated? (10 points)

Vulnerability should be remediated by keeping system and firewall updated, setting up strong password policies, setting up account lockout policies after several failed logon

attempts, and disable RDP access to the public internet or use secure connections such as VPN.

12. Management wants a summary of what additional steps should be taken to ensure there is better logging (i.e. no gaps) and to ensure this vulnerability does not happen again? (15 points)

To improve logging and prevent similar attacks, Management should strengthen its log management system:

1. Increase log retention size from default 20MB to somewhere 200MB+, and schedule automatic log backups to avoid gaps.
2. Enable *Advanced Audit Policy* in the Local Security Policy, so it ensures complete tracking of user activities and possible attack attempts.
3. Set up alerts for repeated failed logon attempts, which in this case, is Event ID 4625.
4. Regularly review logs and automatically report suspicious activity.
5. Set up an account lockout policy so the system will lock itself if the wrong password is entered many times.
6. Enforce strong passwords and have expiration dates for them.
7. Enable MFA for remote access and admin accounts.
8. Renaming the default administrator account or disable it to reduce brute-force targets.
9. Disable RDP access from the internet or use VPN connection.
10. Allow only trusted IP addresses using Firewall rules.
11. Regularly update the OS and firewall.
12. Perform security audits to review logs, firewall, and account activity
13. Train employees to notice phishing emails and not to interact with them and always report suspicious activities.