

Behavior Prevention on Endpoint, Mitigation M1040 - Enterprise

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Enterprise [T1059 Command and Scripting Interpreter](#)

On Windows 10, enable Attack Surface Reduction (ASR) rules to prevent [Visual Basic](#) and [JavaScript](#) scripts from executing potentially malicious downloaded content [\[1\]](#).

[.005 Visual Basic](#)

On Windows 10, enable Attack Surface Reduction (ASR) rules to prevent [Visual Basic](#) scripts from executing potentially malicious downloaded content [\[1\]](#).

[.007 JavaScript](#)

On Windows 10, enable Attack Surface Reduction (ASR) rules to prevent [JavaScript](#) scripts from executing potentially malicious downloaded content [\[1\]](#).

Enterprise [T1543 Create or Modify System Process](#)

On Windows 10, enable Attack Surface Reduction (ASR) rules to prevent an application from writing a signed vulnerable driver to the system. [\[2\]](#) On Windows 10 and 11, enable Microsoft Vulnerable Driver Blocklist to assist in hardening against third party-developed drivers. [\[3\]](#)

[.003 Windows Service](#)

On Windows 10, enable Attack Surface Reduction (ASR) rules to prevent an application from writing a signed vulnerable driver to the system. [\[2\]](#) On Windows 10 and 11, enable Microsoft Vulnerable Driver Blocklist to assist in hardening against third party-developed service drivers. [\[3\]](#)

Enterprise [T1486 Data Encrypted for Impact](#)

On Windows 10, enable cloud-delivered protection and Attack Surface Reduction (ASR) rules to block the execution of files that resemble ransomware. [\[1\]](#) In AWS environments, create an IAM policy to restrict or block the use of SSE-C on S3 buckets. [\[4\]](#)

Enterprise [T1006 Direct Volume Access](#)

Some endpoint security solutions can be configured to block some types of behaviors related to efforts by an adversary to create backups, such as command execution or preventing API calls to backup related services.

Enterprise [T1546 .003 Event Triggered Execution: Windows Management Instrumentation Event Subscription](#)

On Windows 10, enable Attack Surface Reduction (ASR) rules to prevent malware from abusing WMI to attain persistence. [\[1\]](#)

Enterprise [T1564](#) [.014 Hide Artifacts: Extended Attributes](#)

During artifact review, packaging, or deployment stages, scan extended attributes alongside file contents to detect hidden payloads, obfuscated data, or suspicious attribute keys that may indicate malicious behavior.

Enterprise [T1574 Hijack Execution Flow](#)

Some endpoint security solutions can be configured to block some types of behaviors related to process injection/memory tampering based on common sequences of indicators (ex: execution of specific API functions).

[.013 KernelCallbackTable](#)

Some endpoint security solutions can be configured to block some types of behaviors related to process injection/memory tampering based on common sequences of indicators (ex: execution of specific API functions).

Enterprise [T1559 Inter-Process Communication](#)

On Windows 10, enable Attack Surface Reduction (ASR) rules to prevent DDE attacks and spawning of child processes from Office programs. [\[5\]](#)[\[6\]](#)

[.002 Dynamic Data Exchange](#)

On Windows 10, enable Attack Surface Reduction (ASR) rules to prevent DDE attacks and spawning of child processes from Office programs. [\[5\]](#)[\[6\]](#)

Enterprise [T1036 Masquerading](#)

Implement security controls on the endpoint, such as a Host Intrusion Prevention System (HIPS), to identify and prevent execution of potentially malicious files (such as those with mismatching file signatures).

[.008 Masquerade File Type](#)

Implement security controls on the endpoint, such as a Host Intrusion Prevention System (HIPS), to identify and prevent execution of files with mismatching file signatures.

Enterprise [T1106 Native API](#)

On Windows 10, enable Attack Surface Reduction (ASR) rules to prevent Office VBA macros from calling Win32 APIs. [\[1\]](#)

Enterprise [T1027 Obfuscated Files or Information](#)

On Windows 10+, enable Attack Surface Reduction (ASR) rules to prevent execution of potentially obfuscated payloads. [\[1\]](#)

[.009 Embedded Payloads](#)

On Windows 10, enable Attack Surface Reduction (ASR) rules to prevent execution of potentially obfuscated scripts. [\[1\]](#)

[.010 Command Obfuscation](#)

On Windows 10+, enable Attack Surface Reduction (ASR) rules to block execution of potentially obfuscated scripts. [\[7\]](#)

[.012 LNK Icon Smuggling](#)

On Windows 10, enable Attack Surface Reduction (ASR) rules to prevent execution of potentially obfuscated scripts or payloads.

[.013 Encrypted/Encoded File](#)

On Windows 10+, enable Attack Surface Reduction (ASR) rules to block execution of potentially obfuscated scripts. [\[8\]](#)

Security tools should be configured to analyze the encoding properties of files and detect anomalies that deviate from standard encoding practices.

[.014 Polymorphic Code](#)

On Windows 10+, enable Attack Surface Reduction (ASR) rules to prevent execution of potentially obfuscated payloads

Enterprise [T1137 Office Application Startup](#)

On Windows 10, enable Attack Surface Reduction (ASR) rules to prevent Office applications from creating child processes and from writing potentially malicious executable content to disk. [\[1\]](#)

[.001 Office Template Macros](#)

On Windows 10, enable Attack Surface Reduction (ASR) rules to prevent Office applications from creating child processes and from writing potentially malicious executable content to disk. [\[1\]](#)

[.002 Office Test](#)

On Windows 10, enable Attack Surface Reduction (ASR) rules to prevent Office applications from creating child processes and from writing potentially malicious executable content to disk. [\[1\]](#)

[.003 Outlook Forms](#)

On Windows 10, enable Attack Surface Reduction (ASR) rules to prevent Office applications from creating child processes and from writing potentially malicious executable content to disk. [\[1\]](#)

[.004 Outlook Home Page](#)

On Windows 10, enable Attack Surface Reduction (ASR) rules to prevent Office applications from creating child processes and from writing potentially malicious executable content to disk. [1]

[.005 Outlook Rules](#)

On Windows 10, enable Attack Surface Reduction (ASR) rules to prevent Office applications from creating child processes and from writing potentially malicious executable content to disk. [1]

[.006 Add-ins](#)

On Windows 10, enable Attack Surface Reduction (ASR) rules to prevent Office applications from creating child processes and from writing potentially malicious executable content to disk. [1]

Enterprise [T1003 OS Credential Dumping](#)

On Windows 10, enable Attack Surface Reduction (ASR) rules to secure LSASS and prevent credential stealing. [1]

[.001 LSASS Memory](#)

On Windows 10, enable Attack Surface Reduction (ASR) rules to secure LSASS and prevent credential stealing. [1]

Enterprise [T1055 Process Injection](#)

Some endpoint security solutions can be configured to block some types of process injection based on common sequences of behavior that occur during the injection process. For example, on Windows 10, Attack Surface Reduction (ASR) rules may prevent Office applications from code injection. [1]

[.001 Dynamic-link Library Injection](#)

Some endpoint security solutions can be configured to block some types of process injection based on common sequences of behavior that occur during the injection process.

[.002 Portable Executable Injection](#)

Some endpoint security solutions can be configured to block some types of process injection based on common sequences of behavior that occur during the injection process.

[.003 Thread Execution Hijacking](#)

Some endpoint security solutions can be configured to block some types of process injection based on common sequences of behavior that occur during the injection process.

[.004 Asynchronous Procedure Call](#)

Some endpoint security solutions can be configured to block some types of process injection based on common sequences of behavior that occur during the injection process.

[.005 Thread Local Storage](#)

Some endpoint security solutions can be configured to block some types of process injection based on common sequences of behavior that occur during the injection process.

[.008 Ptrace System Calls](#)

Some endpoint security solutions can be configured to block some types of process injection based on common sequences of behavior that occur during the injection process.

[.009 Proc Memory](#)

Some endpoint security solutions can be configured to block some types of process injection based on common sequences of behavior that occur during the injection process.

[.011 Extra Window Memory Injection](#)

Some endpoint security solutions can be configured to block some types of process injection based on common sequences of behavior that occur during the injection process.

[.012 Process Hollowing](#)

Some endpoint security solutions can be configured to block some types of process injection based on common sequences of behavior that occur during the injection process.

[.013 Process Doppelgänger](#)

Some endpoint security solutions can be configured to block some types of process injection based on common sequences of behavior that occur during the injection process.

[.014 VDSO Hijacking](#)

Some endpoint security solutions can be configured to block some types of process injection based on common sequences of behavior that occur during the injection process.

[.015 ListPlanting](#)

Some endpoint security solutions can be configured to block some types of process injection based on common sequences of behavior that occur during the injection process.

Enterprise [T1091 Replication Through Removable Media](#)

On Windows 10, enable Attack Surface Reduction (ASR) rules to block unsigned/untrusted executable files (such as .exe, .dll, or .scr) from running from USB removable drives. ^[1]

Enterprise [T1216 .001 System Script Proxy Execution: PubPrn](#)

On Windows 10, update Windows Defender Application Control policies to include rules that block the older, vulnerable versions of PubPrn. ^[9]

Enterprise [T1569 System Services](#)

On Windows 10, enable Attack Surface Reduction (ASR) rules to block processes created by [PsExec](#) from running. [\[1\]](#)

[.002 Service Execution](#)

On Windows 10, enable Attack Surface Reduction (ASR) rules to block processes created by [PsExec](#) from running. [\[1\]](#)

Enterprise [T1204 User Execution](#)

On Windows 10, enable Attack Surface Reduction (ASR) rules to prevent executable files from running unless they meet a prevalence, age, or trusted list criteria and to prevent Office applications from creating potentially malicious executable content by blocking malicious code from being written to disk. Note: cloud-delivered protection must be enabled to use certain rules. [\[1\]](#)

[.002 Malicious File](#)

On Windows 10, various Attack Surface Reduction (ASR) rules can be enabled to prevent the execution of potentially malicious executable files (such as those that have been downloaded and executed by Office applications/scripting interpreters/email clients or that do not meet specific prevalence, age, or trusted list criteria). Note: cloud-delivered protection must be enabled for certain rules. [\[1\]](#)

Enterprise [T1047 Windows Management Instrumentation](#)

On Windows 10, enable Attack Surface Reduction (ASR) rules to block processes created by WMI commands from running. Note: many legitimate tools and applications utilize WMI for command execution. [\[1\]](#)

Source: <https://attack.mitre.org/mitigations/M1040>