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# technical bulletin

TRIDIUM

## Recent ransomware and malware outbreaks

Recent news reports of ransomware and malware outbreaks serve as a good reminder to bring your systems up-to-date with the latest security software. We've compiled some useful information to help.

### **Goldeneye / Petya**

A recent ransomware outbreak referred to as either "Goldeneye" or "Petya" is utilizing a known vulnerability in SMBv1 to infect targets. This ransomware encrypts the Master File Table (MFT) and forces a reboot, at which point the node will prompt the end user to pay the ransom. Currently it's being reported to be spread via phishing attacks.

Once the ransomware enters a network, it attempts to spread through the use of WMIC and PSEXEC. This allows the ransomware to impact machines that otherwise would not be vulnerable to the SMBv1 exploit vector. It is being reported that the email address used to facilitate unlocking of an infected machine has been shut down. Therefore, paying the ransom will no longer work.

It is recommended that you follow best practices to mitigate threats posed by malware, including installing the latest qualified Windows patches. For more information about this specific ransomware, see the [report](#) issued by the United States Computer Emergency Readiness Team (US-CERT) or the Microsoft article, [Update on Petya malware attacks](#).

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### **WannaCrypt / WannaCry**

In May of 2017, it was widely reported that many businesses were infected by what's referred to as either "WannaCrypt" or "WannaCry" ransomware. For more information, see the [report](#) issued by the United States Computer Emergency Readiness Team (US-CERT) or Tridium's technical bulletin, [Ransomware "WannaCry" Cyberattack Update](#).

The ransomware encrypts data on the compromised system and demands a ransom be paid to restore operations. The impact includes temporary or permanent loss of sensitive/proprietary information, disruption to regular system and business operations, financial losses incurred to restore systems and data, and potential harm to an organization's reputation.

The ransomware spreads easily when it encounters unpatched or outdated software. It exploits a publicly known vulnerability in all Windows operating systems that was identified by Microsoft, and a critical security update subsequently was released on March 14, 2017, to address the vulnerability.

Most of the time, there is no way to reverse a ransomware infection. In many cases, the only resolution is to restore from recent backups. Prevention is key. [Microsoft released a patch](#) for this vulnerability that has been qualified in the SUIIT image in the March ISO. McAfee and Symantec have also released emergency Signature (DAT) files.

Customers should immediately:

- Ensure they have the latest SUIIT patches installed
- Ensure they have the most up-to-date DAT files installed

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#### **ACTION REQUIRED:**

- Ensure backup system and processes are in place, and copies of the most recent backup are stored in an offline/disconnected state as to not be susceptible to infection.
- Immediately install [Microsoft Security Update 4013389](#) on all servers and workstations to prevent infection of this malware.
  - - If you encounter a problem with your Host ID, please refer to this [Tridium knowledge article](#)
- Ensure anti-virus software is up-to-date.
- Take care when opening emails and attachments, as this is a primary infection vector.
- Ensure control system servers and workstations are not being used for email access or general web browsing.

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#### **Malware and antivirus support**

McAfee and Symantec continuously monitor emerging cyber security threats and update their software to address threats.

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## Additional steps for securing Niagara-based systems

For Niagara customers, please use this as an opportunity to review our Niagara security documentation, which contains step-by-step guidance and best practices for securing and configuring Niagara AX- and Niagara 4-based systems:

- [Niagara AX Hardening Guide](#)
- [Niagara 4 Hardening Guide](#)

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### Additional information

Ransomware is a type of malicious software that infects a computer and restricts access until a ransom is paid to unlock it. This can cause prolonged disruption to operations and loss of data. Ransomware generally replicates itself through the network. For example, if a workstation was to become infected, it would attempt to spread across all servers and workstations on the network. Governments discourage organizations and individuals from paying the ransom, as this does not guarantee access will be restored.

- Microsoft Security Bulletin MS17-010 (March 14, 2017, Rating: Critical): <https://technet.microsoft.com/library/security/MS17-010>
- US-Cert Alert on Multiple Ransomware Infections Reports (May 12, 2017): <https://www.us-cert.gov/ncas/current-activity/2017/05/12/Multiple-Ransomware-Infections-Reported>
- US-Cert Alert on Ransomware Variants: <https://www.us-cert.gov/ncas/alerts/TA16-091A>

In addition to the details above, we received the following information directly from Microsoft:

### Summary

The first and most important piece of guidance is to immediately deploy the security update associated with [Microsoft Security Bulletin MS17-010](#), if you have not done so already. Customers who have automatic updates enabled or have deployed this update are already protected from the vulnerability these attacks are trying to exploit.

### Malware detection

Windows Defender, System Center Endpoint Protection and Forefront Endpoint Protection detect this threat family as [Ransom:Win32/WannaCrypt](#).

In addition, the free Microsoft Safety Scanner <http://www.microsoft.com/security/scanner/> is designed to detect this threat, as well as many others.

### Recommendations

Review the Microsoft Security Response Center (MSRC) blog at [Customer Guidance for WannaCrypt Attacks](#) for an overview of the issue, details of the malware, suggested actions and links to additional resources.

Keep systems up-to-date. Specifically, for this issue, ensure [Microsoft Security Bulletin MS17-010 Security Update for Microsoft Windows SMB Server](#) is installed.

Customers who believe they are affected can contact Customer Service and Support by using any method found at this location:

<https://support.microsoft.com/gp/contactus81?Audience=Commercial>.

### Microsoft malware detection and removal tools

Use the following free Microsoft tools to detect and remove this threat:

- Windows Defender: <https://www.microsoft.com/en-us/windows/windows-defender>
- Microsoft Safety Scanner: <http://www.microsoft.com/security/scanner/>

### Additional resources

- Microsoft Security Response Center Blog: <http://blogs.technet.microsoft.com/msrc>
- Microsoft Malware Protection Center Blog: <http://blogs.technet.microsoft.com/mmpc>
- Microsoft Safety and Security Center webpage: <http://www.microsoft.com/security/default.aspx>
- Destructive Malware white paper issued by the National Cybersecurity and Communications Integration Center (NCCIP): [https://ics-cert.us-cert.gov/sites/default/files/documents/Destructive\\_Malware\\_White\\_Paper\\_S508C.pdf](https://ics-cert.us-cert.gov/sites/default/files/documents/Destructive_Malware_White_Paper_S508C.pdf)

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### Regarding information consistency

We strive to provide you with accurate information in static (this mail) and dynamic (web-based) content. Microsoft's security content posted to the web is occasionally updated to reflect late-breaking information. If this results in an inconsistency between the information here and the information in Microsoft's web-based security content, the information in Microsoft's web-based security content is authoritative.

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For more than 15 years, Tridium has led the world in business application frameworks — advancing truly open environments that harness the power of the Internet of Things. Our products allow diverse monitoring, control and automation systems to communicate and collaborate in buildings, data centers, manufacturing systems, smart cities and more. We create smarter, safer and more efficient enterprises and communities — bringing intelligence and connectivity to the network edge and back.

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