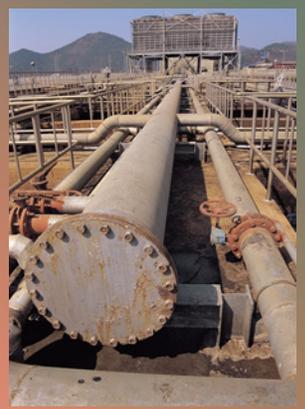


# U.S. International Trade Commission

*Audit of ITCNet's Windows Operating System Software Management*



**OIG-AR-20-08**

**December 12, 2019**



Office of Inspector General

*The U.S. International Trade Commission is an independent, nonpartisan, quasi-judicial federal agency that provides trade expertise to both the legislative and executive branches of government, determines the impact of imports on U.S. industries, and directs actions against certain unfair trade practices, such as patent, trademark, and copyright infringement. USITC analysts and economists investigate and publish reports on U.S. industries and the global trends that affect them. The agency also maintains and publishes the Harmonized Tariff Schedule of the United States.*

*Commissioners*

*David S. Johanson, Chairman*

*Rhonda K. Schmidlein*

*Jason E. Kearns*

*Randolph J. Stayin*

*Amy Karpel*



# UNITED STATES INTERNATIONAL TRADE COMMISSION

## OFFICE OF INSPECTOR GENERAL

WASHINGTON, DC 20436

December 12, 2019

IG-RR-037

Chairman Johanson:

This memorandum transmits the final report for the Audit of ITCNet's Windows Operating System Software Management, OIG-AR-20-08. In finalizing this report, we analyzed management's comments to our draft report and have included those comments in their entirety as Appendix A.

The objective of the audit was to determine whether the Commission had effectively managed its Windows operating system software on the network. The audit determined that the Commission had effectively managed its Windows operating system software on the network.

This report contains two recommendations to improve managing Windows operating system software on ITCNet. In the next 30 days, please provide me with your management decisions describing the specific actions that you will take to implement each recommendation.

Thank you for the courtesies extended to my staff during this audit.

Philip M. Heneghan  
Inspector General

**U.S. International Trade Commission**

**Draft Audit Report**

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## Audit Report

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### Results of Audit

The purpose of this audit was to answer the question:

- Does the Commission effectively manage all its Windows operating system software on the network?

Yes, the Commission effectively manages all its Windows operating system software on the network.

The Windows environment supports the day-to-day operations of the Commission by running software on devices such as laptops, desktops, and servers. Because these devices are constantly running software on the Commission's network, it is important for the Commission to effectively manage all its Windows software to reduce security risks.

Effective software management requires the Commission to be able to:

1. Maintain a list of approved software
2. Identify unmanaged or unauthorized software
3. Manage approved software through regular scanning and patching

We found that the Commission maintains a list of approved Windows software and identifies unmanaged or unauthorized software using an application whitelisting tool called AppLocker. AppLocker provides the Commission with the ability to control which software applications can run on its Windows operating system.

AppLocker operates by maintaining a list of applications that are approved to be used by the Commission. Whenever an administrator attempts to install Windows software on ITCNet, AppLocker checks the approved list to verify the software is authorized. If the application is on the approved list, the system administrator can install the software for the user. If the software is not on the approved list, the software is blocked from being installed onto ITCNet. This significantly reduces the risk of installing unauthorized Windows software on the Commission's network.

In order to ensure users have access to all software necessary to carry out the Commission's mission, the Chief Information Officer has established a process for users to request needed software be added to the approved software list. When a request is made, the Chief Information Officer conducts a risk assessment to identify interoperability and security issues. If the Chief Information Officer determines that the benefits outweigh the risks, the software is added to the approved list and then it is allowed to run on ITCNet.

# U.S. International Trade Commission

## Audit Report

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The Commission's inventory of Windows software provided by the Chief Information Officer identified 2,311 software packages on the approved list. We used the Commission's scanning and software patching tools to examine all the software running on ITCNet. We did not identify any unauthorized software running on the network. In addition, we attempted to install software that was not on the approved list and AppLocker prevented us from installing it.

While we found the Commission is effectively managing its Windows software on ITCNet, we identified two areas for improvement: 1) Web browser extensions should be managed as software and 2) periodic review for unsupported Windows software should be conducted.

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### Areas for Improvement

#### Area for Improvement 1:

#### ***Web Browser Extensions Should be Managed as Software***

Web browser extensions are a type of software program designed to enhance a user's web experience. Downloading a web browser extension carries the same risks and vulnerabilities as installing other Windows software applications. These extensions should be managed along with the rest of the Commission's software and only authorized web browser extensions should be allowed to run on ITCNet.

Because web browser extensions were not being managed, all Commission users had the ability to install unauthorized web browser extensions. In fact, during the audit, we were able to successfully install two web browser extensions without prior approval. The lack of processes and procedures to manage web browser extensions increases the risk of vulnerabilities being introduced to ITCNET and could negatively impact the Commission's business operation.

**Recommendation 1:** Establish a process for Windows web browser extensions to be authorized to be installed on ITCNet.

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# U.S. International Trade Commission

## Audit Report

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### Area for Improvement 2:

#### Periodic Reviews for Unsupported Windows Software

The Commission should periodically review software and identify those applications that are no longer supported by the developer.

We found that the Chief Information Officer had an effective process for authorizing Windows software but did not have a process to determine if software on the authorized list had reached its end-of-life.

During this audit, we identified 11 instances where software installed on ITCNet was no longer supported by the developer. When software is unsupported, product enhancements, security patches, and technical support will no longer be available. This increases the risk of vulnerabilities being introduced to ITCNet, which could impact the operability and security of the network.

**Recommendation 2:** Develop a process to detect and mitigate unsupported Windows software on the network.

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### Management Comments and Our Analysis

On December 2, 2019, Chairman David S. Johanson provided management comments on the draft report. He agreed with the findings in the audit and that the Commission should establish a process for Windows web browser extensions to be authorized to be installed on ITCNet and develop a formalized process to detect and mitigate unsupported Windows software on the network. He also stated that the Commission will make management decisions to address the two recommendations in the report.

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# U.S. International Trade Commission

## Audit Report

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### Objective, Scope, and Methodology

#### Objective:

Does the Commission effectively manage all its software used on the Windows operating systems?

#### Scope:

This audit assessed all Windows operating system software on ITCNet in the July 2019 and August 2019 timeframe.

#### Methodology:

Collected and analyzed Chief Information Officer data.

Interviewed staff to gain an understanding of the Windows software environment and security practices.

Assessed the Windows operating system software inventory from the Chief Information Officer.

Assessed the whitelisting data from the Chief Information Officer.

Assessed the whitelist process to the approved software process.

Determined if all managed systems Windows operating system software have been approved.

Determined if the Chief Information Officer is effectively managing its Windows operating system software on the network.

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#### GAGAS Statement:

We conducted this performance audit in accordance with Generally Accepted Government Auditing Standards (GAGAS) during the period of June 2019 through December 2019. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

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# U.S. International Trade Commission

## Audit Report

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### Appendix A: Management Comments



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UNITED STATES INTERNATIONAL TRADE COMMISSION

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WASHINGTON, DC 20436

CO83-RR-013

December 2, 2019

#### MEMORANDUM

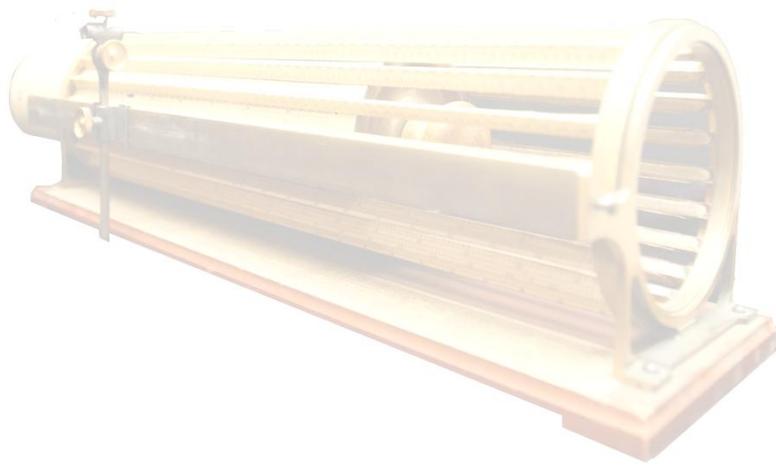
TO: Philip M. Heneghan, Inspector General

FROM: David S. Johanson, Chairman *D SJ 2 Dec. 2019*

SUBJECT: Response to Draft Report – Audit of ITCNet’s Windows Operating System Software Management

Thank you for the opportunity to review and provide comments to the draft report -- Audit of ITCNet’s Windows Operating System Software Management.

We agree with your findings in this audit that the Commission effectively manages all its Windows operating system software on the network. The Commission also agrees that it should establish a process for Windows web browser extensions to be authorized to be installed on ITCNet and develop a formalized process to detect and mitigate unsupported Windows software on the network. The Commission will develop management decisions to address the two recommendations in the report.



*“Thacher’s Calculating Instrument” developed by Edwin Thacher in the late 1870s. It is a cylindrical, rotating slide rule able to quickly perform complex mathematical calculations involving roots and powers quickly. The instrument was used by architects, engineers, and actuaries as a measuring device.*

# To Promote and Preserve the Efficiency, Effectiveness, and Integrity of the U.S. International Trade Commission



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