|  |  |  |  |
| --- | --- | --- | --- |
| ***Invasive Cardiology Security Website***  ***Interventional - Invasive Cardiology*** | | | |
|  |  |  |  |
| **Product Group:** | Interventional Invasive Products |  |  |
| **Products:** | Mac-Lab IT/XT/XTi, CardioLab IT/XT/XTi, SpecialsLab and ComboLab IT/XT/XTi Recording Systems, Centricity Cardiology Data Management Systems |  |  |
| **Version** | 6.9.6 Release 1 |  |  |
| **Subject:** | Security Information |  |  |
| **Date:** | 5 June 2019 |  |  |

**Summary**

The following information is provided to GE Healthcare Technologies customers in regards to known technical security vulnerabilities associated with Mac-Lab® Hemodynamic, CardioLab® Electrophysiology, SpecialsLab and ComboLab IT Recording Systems for Cath Lab, EP Lab and other interventional labs as well as the Centricity® Cardiology Data Management Systems.

**Security Patch Base Configuration**

The security patch base configuration of the Mac-Lab IT/XT/XTi and CardioLab IT/XT/XTi product at release is listed within the MLCL Base Configuration under the Hemodynamic, Electrophysiology and Cardiovascular Information Technologies section of the <http://www3.gehealthcare.com/en/Support/Invasive_Cardiology_Product_Security> website.

**Process**

The following actions are taken whenever Microsoft/OEMs releases new security patches:

* The Invasive Cardiology Engineering Team performs a security analysis process for supported Mac-Lab IT/XT/XTi, CardioLab IT/XT/XTi, GE Client Review and INW Server hardware/software.
* If a vulnerability meets Mac-Lab IT/XT/XTi and CardioLab IT/XT/XTi validation criteria, the vulnerability is communicated through the GEHC Product Security Database and Invasive Cardiology Security Website within Three weeks of the patch release.
* Upon validation of the Mac-Lab IT/XT/XTi and CardioLab IT/XT/XTi vulnerability, the GEHC Product Security Database and Invasive Cardiology Security Website and affected Mac-Lab IT/XT/XTi and CardioLab IT/XT/XTi Security Patch Installation Instructions are updated.

The Mac-Lab IT/XT/XTi and CardioLab IT/XT/XTi vulnerability validation criteria are as follows: Any vulnerability that allows malware to alter or deny Mac-Lab IT/XT/XTi and CardioLab IT/XT/XTi functionality and/or infect and propagate through normal system use.

Customers are responsible to stay informed with Microsoft vulnerability notifications and to visit the Invasive Cardiology websites to understand the Mac-Lab IT/XT/XTi and CardioLab IT/XT/XTi impact. Once a security patch is validated, customers are responsible for the installation of security patches. All Mac-Lab IT/XT/XTi and CardioLab IT/XT/XTi Security Patch Installation Instructions are available on the Invasive Cardiology Security Website below the Validated Patches table.

Vulnerabilities exposed after the Mac-Lab IT/XT/XTi and CardioLab IT/XT/XTi product release which do not meet the criteria to be validated are not listed within the GEHC Product Security Database and Invasive Cardiology Security Website. These vulnerabilities are deemed to be non-critical and/or outside normal clinical workflow of the Mac-Lab IT/XT/XTi, CardioLab IT/XT/XTi and Centricity INW systems and will not be validated. Unlisted patches should not be installed on the products in order to eliminate malfunction and breakdown risks.

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# Revision History

|  |  |  |
| --- | --- | --- |
| **Revision** | **Date** | **Comments** |
| 1.0 | 25 September 2017 | * 6.9.6 document separation (old and new procedures sections for patches update) * Qualified KB4034664 August Monthly Rollup * Added 6.9.6 Installation paths for simplifying patches installation * September Unqualified Patches |
| 2.0 | 27 October 2017 | * Updated document with October Unqualified Patches |
| 3.0 | 20 November 2017 | * Updated document with October qualified Patches |
| 4.0 | 11 December 2017 | * November Unqualified Patches |
| 5.0 | 20 December 2017 | * Updated document for Patch installation paths and statement included to uninstall previous monthly patches prior to installation of October monthly patch on the server |
| 6.0 | 31 January 2018 | * Qualified November and December monthly rollups with other patches. Also added January Unqualified patches |
| 7.0 | 9 March 2018 | * Added Unqualified February Patch * Added missing qualified patches * Qualified minimum password length changes * Changed verbiage from “Patch Refresh” to “Patch Updates” * Further MLCL System Security Recommendation |
| 8.0 | 20 April 2018 | * Added January, February, March and April Qualified Patches * Updated “Further MLCL Systems Security Recommendations” section and moved the section Optional Security Updates |
| 9.0 | 30 April 2018 | • Added “Optionally Remove Abode Reader on INW Server” section to the optional section  • Added Unqualified April Patch |
| 10.0 | 17 May 2018 | * Added May Qualified Patches * Added .NET patches for versions 3.5 SP1, 4.5.2 * Added Microsoft Office Patches |
| 11.0 | 29 June 2018 | * Added Unqualified June Patch |
| 12.0 | 5 September 2018 | * Added Unqualified August Patch |
| 13.0 | 12 September 2018 | * Qualified June, July, August and September Patches * Qualified .Net Framework Patches * Qualified Microsoft Office 2010 Patches * Qualified Z600 BIOS update * Qualified ML350p Gen8 BIOS update * Qualified DL370 Gen6 BIOS update |
| 14.0 | 5 December 2018 | * Added Unqualified October Patch |
| 15.0 | 5 March 2019 | * Added Unqualified November 2018, December 2018, January 2019 and February 2019 Patches * Added .NET unqualified patches |
| 16.0 | 26 March 2019 | * Added Unqualified March 2019 Patches |
| 17.0 | 16 May 2019 | * Added instructions to disable Remote Desktop Services per CVE-2019-0708 |
| 18.0 | 5 June 2019 | * Added Unqualified May 2019 Patches |

# 

# Installation of the Security Patches on MLCL systems

Requirements:

* Updates may be applied at any time other than while the Mac-Lab IT/XT/XTi, CardioLab IT/XT/XTi or SpecialsLab application is open.
* Updates must be re-applied if the system is re-imaged.
* Updates apply to both networked and standalone systems.
* Best practice is to update all applicable MLCL systems at the site.

**This document applies to 6.9.6R1 only. Please verify that you are running 6.9.6 using the following procedure before proceeding:**

1. Launch the Mac-Lab CardioLab application.
2. Select ***Help > About Mac-Lab*** (or ***CardioLab***, as applicable).
3. Verify the version number is **6.9.6 Release 1**.
4. Click ***Close***.
5. Close the application.

**Recommendation:** **Use Internet Explorer (IE) for Catalog download. If you are using the cart feature to download patches, to see the cart it requires opening another tab or new window for** <http://catalog.update.microsoft.com>

Refer to [6.9.6 R1 Patch Installation Paths](#PatchInstallationPaths) section for instructions on how to apply the necessary patches according to your system. The following Instructions are a how to and are optional up to the patch installation section.

How to Log On to Acquisition and Review Systems

When starting up an Mac-Lab, CardioLab or SpecialsLab Acquisition or Review system, an auto-logon sequence starts and automatically logs on to the operating system. To install a security patch, the user must be logged on as **mlcltechuser**.

**NOTE:** Password information is contained within the Security Guide Manual. Otherwise, contact the system administrator or GE Technical Support for current password information.

1. Power on the Acquisition system.
2. The system boots up to the Custom Shell screen.
3. Press **Ctrl + Action + Del**.
4. Click Logoff. On Windows XP, click Logoff again.
5. Click OK.
6. Immediately hold down the **Shift** key until the login window is displayed.
7. Log on to the operating system locally as **mlcltechuser**.
8. Log on to the Custom Shell locally as **mlcltechuser**.

How to Log On to the Centricity Cardiology INW Server

Password information is contained within the Security Guide Manual. Otherwise, contact the system administrator or GE Technical Support for current password information. Logon to the INW Server as **administrator**

How to Log On to MLCL Software Only Systems

Since Software Only systems are supported by the customer, the system needs to be logged into with an **administrator** account.

CVE-2019-0708 | Remote Desktop Services Remote Code Execution Vulnerability

We are in the process of qualifying the patch that addresses this vulnerability however, we recommend as a mitigation, that the RDS/Terminal Service is disabled on all ML/CL systems. Refer to the instructions below on disabling the service.

**Disable Remote Desktop Services on Windows 7**

On Windows 7, do the following to disable Remote Desktop Services:

1. Right-click on ***Computer*** and select ***Properties***
2. On the ***System*** window, click ***Remote settings***
3. Uncheck the following option if it is checked:  
   ***Allow Remote Assistance connections to this computer***
4. Select the following option if it is not already selected:  
   ***Don’t allow connections to this computer***
5. Click ***OK*** to close the ***System Properties*** window
6. Click ***Start*** > ***Control Panel*** > ***Administrative Tools*** > ***Services***
7. Double-click on the entry for **Remote Desktop Services**
8. Set the ***Startup type*** to ***Disabled***
9. Click ***OK*** to close the ***Remote Desktop Services Properties*** window
10. Reboot the system

**Disable Remote Desktop Services on Windows 2008 R2**

On Windows Server 2008 R2, do the following to disable Remote Desktop Services:

1. Right-click on ***Computer*** and select ***Properties***
2. On the ***System*** window, click ***Remote settings***
3. Uncheck the following option if it is checked:  
   ***Allow Remote Assistance connections to this computer***
4. Select the following option if it is not already selected:  
   ***Don’t allow connections to this computer***
5. Click ***OK*** to close the ***System Properties*** window
6. Click ***Start*** > ***Administrative Tools*** > ***Services***
7. Double-click on the entry for **Remote Desktop Services**
8. Set the ***Startup type*** to ***Disabled***
9. Click ***OK*** to close the ***Remote Desktop Services Properties*** window
10. Reboot the system

How to Install Printer Firmware

The system which will apply the firmware to the printer should be provided by the customer.

**NOTE:**  Mac-Lab CardioLab system should not be used to download and/or apply the Printer Firmware.

* Follow the download link in the table
* Select the appropriate printer
* Select English and the applicable MLCL operating system
* Select English and under the Firmware category select the applicable Firmware Update Utility and Click Download
* Launch the firmware installer and follow the instructions to complete the firmware update

How to Install HP NIC Driver on the INW Server (HP ProLiant ML350 G8)

1. Using a non-MLCL system, visit the URL and download **cp025039.exe.**
2. Place **cp025039.exe** on removable media.
3. Ensure the INW Server is the HP ProLiant ML350 G8, log on to the server as **administrator**.
4. Insert the removable media and launch the **cp025039.exe** application.
5. Follow the installation instructions to complete the installation.

How to Install HP NIC Driver on the INW Server (HP ProLiant DL370 G6)

1. Using a non-MLCL system, visit the URL and download **cp024564.exe.**
2. Place **cp024564.exe** on removable media.
3. Ensure the INW Server is the HP ProLiant DL370 G6, log on to the server as **administrator**.
4. Insert the removable media and launch the **cp024564.exe** application.
5. Follow the installation instructions to complete the installation.

ML350p Gen8 (P72) BIOS Update to v 2015.07.01 (B) Instructions:

1. Go to the HP Customer Support - Software and Driver Downloads website:

<https://support.hpe.com/hpsc/swd/public/detail?swItemId=MTX_13ce4f3fc79b4433873342345b>

1. Select ***Download*** for HP ML350p Gen8 Server BIOS 2015.07.01 (B)
2. Log on to the ML350p Gen8 Server as ***administrator***.
3. Run the downloaded ***cp031045.exe*** file.
4. Click on ***Run***
5. Click on ***Install***
6. Follow the onscreen instructions, select ***close*** after installation is complete.
7. Select ***Yes*** to reboot.
8. The BIOS update will take a few minutes, do not remove power during update.
9. After the update, on boot screen before Windows launches, verify the ***ProLiant System BIOS – P72 (01/07/2015)*** on the top of the screen appears.

ML350p Gen8 (P72) BIOS Update to v2018.01.22 Instructions:

1. Go to the HP Customer Support - Software and Driver Downloads website:

<https://support.hpe.com/hpsc/swd/public/detail?sp4ts.oid=5195931&swItemId=MTX_58f2f298203c4664a6e5c9402d&swEnvOid=4184#tab1>

1. Click on ***Download*** for System ROMPaq Firmware Upgrade for HP ProLiant ML350p Gen8 (P72) Servers (For USB Key-Media)
2. Obtain a formatted USB Key media
3. Download the SoftPaq to a directory on a system running Microsoft Windows 2000, Microsoft Windows XP, Microsoft Windows Vista, Microsoft Windows 7, Microsoft Windows Server 2003, Microsoft Windows Server 2008, or Microsoft Windows Server 2008 R2 and change to that directory
4. From that drive and directory, execute the downloaded SoftPaq file: Simply double click on the SP99236.exe file and follow the installation wizard to complete the SoftPaq installation process. At the end of a successful installation of the SoftPaq a **web page** will automatically appear to provide you with the different methods for restoring and/or upgrading the firmware on the system
5. Click on ***Create a bootable USB Key***
6. Click on ***Launch HPE USB key Setup Creation Utility***
7. Click on ***Run***
8. Click on ***Start***
9. Click on **OK** when complete
10. Insert this USB Key into the USB Key port of the system to be updated and power the system on
11. Using your keyboard use ***F11*** to select ***Boot Menu***
12. Using your keyboard select ***#3******One Time Boot to USB DriveKey***
13. ***Ready To Flash*** window will appear
14. Click on ***Continue*** or Use the Keyboard ***Enter*** Key to Continue
15. After successful installation another window will appear
16. Click on ***Exit*** or use the keyboard ***Esc*** key to exit
17. Use the Power button to restart the system.
18. After the update, on boot screen before Windows launches, verify the ***ProLiant System BIOS – P72 (01/22/2018)*** on the Top of the screen appears.

ML350p Gen8 BIOS Update to 5/21/2018 Instructions:

1. Go to the HP Customer Support - Software and Driver Downloads website:

<https://support.hpe.com/hpsc/swd/public/detail?sp4ts.oid=5195931&swItemId=MTX_3a5fbdd653f94fac9e2a12e8dc&swEnvOid=4184>

1. Select ***Download*** for HP ML350p Gen8 Server BIOS 5/21/2018
2. Log on to the ML350p Gen8 Server as ***administrator***.
3. Run the downloaded ***cp036431.exe*** file.
4. Click on ***Run***
5. Click on ***Install***
6. Follow the onscreen instructions, select ***close*** after installation is complete.
7. Select ***Yes*** to reboot.
8. The BIOS update will take a few minutes, do not remove power during update.
9. After the update, on boot screen before Windows launches, verify the BIOS version 5/21/2018 on the top of the screen appears.

DL370 Gen6 (P63) BIOS Update to v2018.02.22 Instructions:

1. Go to the HP Customer Support - Software and Driver Downloads website:

<https://support.hpe.com/hpsc/swd/public/detail?swItemId=MTX_df78827f61164b6f952314da7c>

1. Select ***Download*** for HP DL370p Gen6 Server BIOS 2018.02.22
2. Log on to the DL370p Gen6 Server as ***administrator***.
3. Run the downloaded ***cp035397.exe*** file.
4. Click on ***Run***
5. Click on ***Install***
6. Follow the onscreen instructions, select ***close*** after installation is complete.
7. Select ***Yes*** to reboot.
8. The BIOS update will take a few minutes, do not remove power during update.

After the update, on boot screen before Windows launches, verify the ***ProLiant System BIOS – P63 (02/22/2018)*** on the top of the screen appears

DL370 Gen6 BIOS Update to 5/21/2018 Instructions:

1. Go to the HP Customer Support - Software and Driver Downloads website:

<https://support.hpe.com/hpsc/swd/public/detail?sp4ts.oid=3890183&swItemId=MTX_37660617800b4f3db17cb11599&swEnvOid=4184>

1. Select ***Download*** for HP DL370 Gen6 Server BIOS 5/21/2018
2. Log on to the DL370 Gen6 Server as ***administrator***.
3. Run the downloaded ***SP99324.exe*** file.
4. Click on ***Run***
5. Click on Next
6. Select ***I accept the terms in the license agreement***
7. Click on Next to accept the default path
8. Web page opens
9. Click on ***Create a bootable USB Key***
10. Click on ***Launch HPE USB key Setup Creation Utility***
11. Click on ***Run***
12. Click on ***Start***
13. Click on **OK** when complete
14. Insert this USB Key into the USB Key port of the system to be updated and power the system on
15. Using your keyboard use ***F11*** to select ***Boot Menu***
16. Using your keyboard select ***#3******One Time Boot to USB DriveKey***
17. ***Ready To Flash*** window will appear
18. Click on ***Continue*** or Use the Keyboard ***Enter*** Key to Continue
19. After successful installation another window will appear
20. Click on ***Exit*** or use the keyboard ***Esc*** key to exit
21. Use the Power button to restart the system.
22. After the update, on boot screen before Windows launches, verify the ***ProLiant System BIOS – P72 (05/21/2018)*** on the Top of the screen appears.

Z600 BIOS Update to v3.61 Instructions:

1. Go to the HP Customer Support - Software and Driver Downloads website:
2. <https://support.hp.com/us-en/drivers/selfservice/hp-z600-workstation/3718663>
3. Select ***BIOS***.
4. Select ***Download*** for HP Z600 Windows Workstation System BIOS 3.61 Rev.A
5. Log on to the z600 computer as ***administrator***.
6. Run the downloaded ***sp84160.exe*** file.
7. Select ***Yes*** to allow.
8. Click on Next
9. Select ***I accept the terms in the license agreement***.
10. Click on Next
11. Select ***View Contents of the HPQFlash folder***. This opens folder:

*C:\\swsetup\SP84160\HPQFlash*

1. Run ***HPQFlash.exe***.
2. Select ***Yes*** to allow.
3. Click on Next and Next again
4. Follow the onscreen instructions, select ***Continue*** to restart
5. The BIOS update will take a few minutes, do not remove power during update. The computer will Reboot during this update.
6. After the update, on the first boot screen before Windows launches, verify the BIOS version 3.61 on the bottom left of the screen appears.

OPTIONAL – How to Install INW Server Performance Enhancement

The following patches do not resolve security vulnerabilities and are optional. These patches may improve network performance. The installation procedure below must be followed and all listed patches deployed together. This deployment may take up to 12 hours, the large percentage within the KB2775511 installation.

1. Using a non-MLCL system, visit and download the following patches to removable media.

Visit <http://catalog.update.microsoft.com/> and enter the below KB numbers to access the patches.

KB2775511 - <http://support.microsoft.com/kb/2775511>

KB2732673 - <http://support.microsoft.com/kb/2732673>

KB2728738 – <http://support.microsoft.com/kb/2728738>

KB2878378 – <http://support.microsoft.com/kb/2878378>

The following patches are summarized at KB2473205 - <https://support.microsoft.com/en-us/kb/2473205>

KB2535094 – <http://support.microsoft.com/kb/2535094> Download at - <https://support.microsoft.com/en-us/hotfix/kbhotfix?kbnum=2535094&kbln=en-us>

KB2914677 – <http://support.microsoft.com/kb/2914677> Download at - <https://support.microsoft.com/en-us/hotfix/kbhotfix?kbnum=2914677&kbln=en-us>

KB2831013 – <http://support.microsoft.com/kb/2831013> Download at - <https://support.microsoft.com/en-us/hotfix/kbhotfix?kbnum=2831013&kbln=en-us>

KB3000483 – <http://support.microsoft.com/kb/3000483> Download at - <http://catalog.update.microsoft.com/>

KB3080140 – <http://support.microsoft.com/kb/3080140> Download at - <http://catalog.update.microsoft.com/>

KB3044428 – <http://support.microsoft.com/kb/3044428> Download at - <https://support.microsoft.com/en-us/hotfix/kbhotfix?kbnum=3044428&kbln=en-us>

1. Log on to the INW Server as **Administrator**.
2. Insert the removable media and install the patches in the order listed above.
3. Follow the Microsoft installation instructions to complete the installation of the patches.
4. Select **Windows Start -> Run** and enter **Regedit** and Enter.
5. In **Regedit** window, navigate to **HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\services\Tcpip**
6. In the dialog Menu, select **File -> Export**. Name the file **MLCLRegSave.reg** and place in the **C:\Temp** directory.
7. In Regedit windows, from **Tcpip** navigate to **Parameters**.
8. In the dialog Menu, select **Edit -> New -> DWORD (32-bit) Value**. A new entry is created and name it **‘MaxUserPort’**.
9. Right click on **‘MaxUserPort’**, select **Modify** and enter the value **65534** with a base of **Decimal**.
10. Follow the same procedure above and create a new entry named **‘TcpTimedWaitDelay’.** Enter the value **60** with a base of **Decimal**.
11. Exit the **Regedit** dialog.
12. Reboot the INW Server.

OPTIONAL – How to Install Plugin 20007 – Disable SSL V2/V3 – KB187498

1. Log on to Windows as **Administrator** or a member of that group.
2. Open a command prompt and enter the following commands:
3. REG ADD "HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Control\SecurityProviders\SCHANNEL\Protocols\SSL 2.0" /f
4. REG ADD "HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Control\SecurityProviders\SCHANNEL\Protocols\SSL 2.0\Client" /v DisabledByDefault /t REG\_DWORD /d 00000001 /f
5. REG ADD "HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Control\SecurityProviders\SCHANNEL\Protocols\SSL 2.0\Server" /v DisabledByDefault /t REG\_DWORD /d 00000001 /f
6. REG ADD "HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Control\SecurityProviders\SCHANNEL\Protocols\SSL 2.0\Server" /v Enabled /t REG\_DWORD /d 00000000 /f
7. REG ADD "HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Control\SecurityProviders\SCHANNEL\Protocols\SSL 3.0" /f
8. REG ADD "HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Control\SecurityProviders\SCHANNEL\Protocols\SSL 3.0\Server" /f
9. REG ADD "HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Control\SecurityProviders\SCHANNEL\Protocols\SSL 3.0\Server" /v DisabledByDefault /t REG\_DWORD /d 00000001 /f
10. REG ADD "HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Control\SecurityProviders\SCHANNEL\Protocols\SSL 3.0\Server" /v Enabled /t REG\_DWORD /d 00000000 /f
11. Close the command prompt.

OPTIONAL – How to Install Plugin 35291 –Weak Hashing

1. Load your security certificate in SQL Server on each ML/CL system in the network (server, acquisitions, reviews and virtual reviews) or the ML/CL standalone acquisition.
2. Disable RDP on each member of the network.
   1. My Computer>Properties>Remote settings>Remote
   2. Check “Don’t allow connections to this computer”.
   3. Click ok and reboot.

OPTIONAL – How to Install Plugin 65821 –SSL RC4 Cipher Suites Supported

1. Log on to Windows as **Administrator** or a member of that group.
2. Open a command prompt and enter the following commands:
3. REG ADD "HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Control\SecurityProviders\SCHANNEL\Ciphers\RC4 128/128" /f
4. REG ADD "HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Control\SecurityProviders\SCHANNEL\Ciphers\RC4 128/128" /v Enabled /t REG\_DWORD /d 00000000 /f
5. REG ADD "HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Control\SecurityProviders\SCHANNEL\Ciphers\RC4 40/128" /f
6. REG ADD "HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Control\SecurityProviders\SCHANNEL\Ciphers\RC4 40/128" /v Enabled /t REG\_DWORD /d 00000000 /f
7. REG ADD "HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Control\SecurityProviders\SCHANNEL\Ciphers\RC4 56/128" /f
8. REG ADD "HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Control\SecurityProviders\SCHANNEL\Ciphers\RC4 56/128" /v Enabled /t REG\_DWORD /d 00000000 /f
9. Close the command prompt.

OPTIONAL – How Remove Vulnerability for Plugin 63155 – Microsoft Windows Unquoted Service Path Enumeration

1. Log on to Windows as Administrator or a member of that group
2. Open Regedit do the following
   1. On Windows 7
      1. Navigate to HKLM\System\CurrentControlset\Services\RtkAudioService
      2. Change the imagepath key value from:

**C:\Program Files\Realtek\Audio\HDA\RtkAudioService.exe**

To:

**“C:\Program Files\Realtek\Audio\HDA\RtkAudioService.exe”**

Note: The leading and trailing Quote marks are part of the key value. The quotes are what removes the vulnerability

* 1. On Windows 2008R2
     1. Navigate to HKLM\System\CurrentControlset\Services\Gems Task Scheduler
     2. Change the imagepath key value from:

**C:\Program Files (x86)\GE Healthcare\MLCL\Bin\ArchiveUtility\GEMS\_TaskSvc.exe**

To:

**“C:\Program Files (x86)\GE Healthcare\MLCL\Bin\ArchiveUtility\GEMS\_TaskSvc.exe”**

Note: The leading and trailing Quote marks are part of the key value. The quotes are what removes the vulnerability

OPTIONAL – How to Disable the SMB1 Protocol

1. Log on to Windows as **Administrator** or a member of that group.
2. Open a command prompt and enter the following commands:
3. REG ADD "HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Services\LanmanServer\Parameters" /f
4. REG ADD "HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Services\LanmanServer\Parameters" /v SMB1 /t REG\_DWORD /d 00000000 /f
5. sc.exe config lanmanworkstation depend= bowser/mrxsmb20/nsi
6. sc.exe config mrxsmb10 start= disabled

Patch Links

The patches displayed below are qualified on an independent basis and can be installed on a one-by-one basis, although it is recommended that all qualified patches are installed. There are dependencies within the qualified patch list. In the table below, it is recommended the patches are installed in order from top to bottom to ensure all pre-requisites are met for all patches. On occasion the patch dependencies require system reboots which are identified in the table below.

**NOTE:** Due to site configurations, system patch set, qualified patches which have been installed previously or patch dependencies, some patches could fail to install due to the functionality is already installed. The Microsoft patch installer will alert you to this issue. It this occurs, please continue with the next patch installation.

**Alternate Patch locations:** In early 2016 Microsoft announced that some patches would no longer be available on the Microsoft Download Center <https://blogs.technet.microsoft.com/msrc/2016/04/29/changes-to-security-update-links/> Therefore, some of the links provided below may not work. Microsoft may move/remove these links at any time without notice. However, if the links do not work, there are two alternate methods for downloading patches. The first is the Microsoft Catalog <http://catalog.update.microsoft.com> . Most fixes not on Microsoft Download Center will be available from the Microsoft Catalog. If a fix is not available from the Microsoft Catalog, Microsoft has monthly ISO files of the security updates available at <https://support.microsoft.com/en-us/kb/913086> To use the ISOs, determine the month of the patch, download the applicable ISO and extract the patch. If after exhausting all three methods, you are still unable to obtain a patch, please contact GE Technical Support for further assistance.

**Recommendation:** **Use Internet Explorer (IE) for Catalog download. If you are using the cart feature to download patches, to see the cart it requires opening another tab or new window for** <http://catalog.update.microsoft.com>

6.9.6 R1 Patch Installation Paths

There are two installation paths

* Old Procedure
* New Procedure

The New procedure was developed to remove patch redundancy and streamline the patch installation for 6.9.6R1. To provide a transition both the Old and the New procedures will be supported for patch releases. Either procedure can be used and the results will be the same. However, it is extremely important that you fully complete one of these procedures to ensure you are at a common baseline to apply any future patch updates. If you have been following the old procedure then most likely will want to continue to follow it for this patch refresh. But if you are applying patches for the first time or are reimaging the system from a disaster recovery, the use of the New Procedure will be your quicker and preferred path.

The following sample scenarios are provided for reference.

* + - 1. New Setup/Reimage a machine for disaster recovery.
         1. Apply the updates from the following sections

MLCL v6.9.6 R1 only (New Procedure)

* + - 1. The machine was setup and patched. Need to patch recently qualified patches.
         1. Apply the updates from the following sections

Verify that all patches from section **MLCL v6.9.6 R1 only (Old Procedure)** have been applied. Install any unapplied patches

MLCL V6.9.6 2017 Patch Updates 1 (if patches from this section were previously not applied)

MLCL V6.9.6 2017 Patch Updates 2 (if patches from this section were previously not applied)

Post installation of patches using the scenarios (old or new procedure) described above patches from following sections should be installed:

MLCL V6.9.6 2017 Patch Updates 3 (if patches from this section were previously not applied)

Note: The section MLCL Optional Security Updates applies to both scenarios. The optional updates provide additional security but are not required. You may apply some of the optional patches but choose to bypass others. For example, you may want to disable some of the vulnerable protocols but you may not want to address Weak Hashing due to cost and complexity of certificate management. This will not cause problems. However, ***all other updates are strongly recommended***.

Some updates are documented as **superseded**. These are left in the document for completeness but can be skipped.

Unqualified Patches MLCL v6.9.6 R1

|  | **INW Server** | **Acquisition - Mac-Lab IT/XT/XTi , CardioLab IT/XT/XTi and SpecialsLab** | **GE Client Review Workstation** | **Virtual Review** |
| --- | --- | --- | --- | --- |
| **Operating System Platform** | **Windows Server 2008 R2 SP1** | **Windows 7 SP1** | **Windows 7 SP1** | **Windows 7 SP1** |
| **Current Unqualified Vulnerability** | KB4462915 (CVE-2018-8320)  KB3177467(ADV990001)  KB4467106(CVE-2018-8256, CVE-2018-8476)  KB4470600 | KB4470493 (CVE-2018-8517)  KB4486564 (CVE-2019-0626)  KB4490425(ADV190006)  HPESBHF03904 rev.1  HPESBHF03874 rev.1  KB4489885(CVE-2019-0683)  KB4474419(ADV190009)  HPSBHF03572 rev. 4  KB4499164 (CVE-2019-0708) | SP93482  SP91925  KB4467106(CVE-2018-8256, CVE-2018-8476)  KB4470600 | KB4470493 (CVE-2018-8517)  KB4486564 (CVE-2019-0626)  KB4490425(ADV190006)  KB3177467(ADV990001)  KB4489885(CVE-2019-0683)  KB4474419(ADV190009)  KB4499164 (CVE-2019-0708) | SP93482  SP91925  KB4467106(CVE-2018-8256, CVE-2018-8476)  KB4470600 | KB4470493 (CVE-2018-8517)  KB4486564 (CVE-2019-0626)  KB4490425(ADV190006)  KB3177467(ADV990001)  KB4489885(CVE-2019-0683)  KB4474419(ADV190009)  KB4499164 (CVE-2019-0708) | SP93482  SP91925  KB4467106(CVE-2018-8256, CVE-2018-8476)  KB4470600 | KB4470493 (CVE-2018-8517)  KB4486564 (CVE-2019-0626)  KB4490425(ADV190006)  KB3177467(ADV990001)  KB4489885(CVE-2019-0683)  KB4474419(ADV190009)  KB4499164 (CVE-2019-0708) |

MLCL v6.9.6 R1 (New Procedure)

The following patches bring the MLCL system to a more recent patch level and address several security vulnerabilities. The following guidelines apply:

1. It is expected that some patches listed will already be on the system.
2. Pay attention to the Notes section for special handling instructions
3. Patches must be applied in order except where indicated.
4. Reboots are only required where indicated. If a Patch requests a reboot at another point, the system can be rebooted but it is not required.

|  |  |  |
| --- | --- | --- |
| **Windows 7 (Acquisition, Review and Virtual Review)** | | |
| **KB** | **Link** | **Notes** |
|  | Make the following Registry Change |  |
|  | **[HKEY\_CURRENT\_USER\Software\Microsoft\Windows\CurrentVersion\WinTrust\Trust Providers\Software Publishing]** |  |
|  | **State=dword:00023c00** |  |
| **KB2901907** | <https://www.microsoft.com/en-us/download/details.aspx?id=42642> | **Right click and Run as Administrator; Verify that .Net 4.5.2 shows in Control Panel\Programs and Features** |
| **Subsequent patches depend on installation of KB2901907** |  |  |
| **KB2639308** | <https://www.microsoft.com/en-us/download/details.aspx?id=28929> | **Install only .MSU file** |
| IE11 | <http://download.microsoft.com/download/9/2/F/92FC119C-3BCD-476C-B425-038A39625558/IE11-Windows6.1-x86-en-us.exe> |  |
|  | **Reboot Required** |  |
| KB2979596 | <https://www.microsoft.com/en-us/download/details.aspx?id=44278> | Run from cmd prompt with SQLServer2008SP4-KB2979596-x86-ENU.exe /ACTION=Patch /INSTANCENAME=MSSQLSERVER /IGNORESERVICERESTARTSTATE |
| KB3020369 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=f00e3c36-f5e3-465c-95d2-a84a22425868> |  |
| KB3138612 | [http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=0bae11c4-626f-4b7e-b539-](http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=0bae11c4-626f-4b7e-b539-06c95cb014d5)  [06c95cb014d5](http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=0bae11c4-626f-4b7e-b539-06c95cb014d5) |  |
| KB3125574 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=7ed4c8c3-0f06-4227-99e3-e9f143394687> |  |
|  | **Reboot Required** |  |
| Adobe 11.0.19 | [http:/ /suppo rtdo wnlo ads.ado be.com/ detail.jsp? ftpID=6 12 3](http://supportdownloads.adobe.com/detail.jsp?ftpID=6123) |  |
| KB4022719 | [http://catalog.update.microsoft .com/v7/site/ScopedViewInline.aspx?updateid=b9815359-6aad-467e-8666-](http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=b9815359-6aad-467e-8666-2351fadc3c45)  [2351fadc3c45](http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=b9815359-6aad-467e-8666-2351fadc3c45) |  |
| KB3205402 | [http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=f8938e57-3bdd-411e-8bdd-](http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=f8938e57-3bdd-411e-8bdd-38ebbac1db50)  [38ebbac1db50](http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=f8938e57-3bdd-411e-8bdd-38ebbac1db50) | Right Click and Run as Administrator; Apply KB3210139 and KB3210131 Only |
| **KB4025341**  **July Rollup 2017** | <https://www.catalog.update.microsoft.com/ScopedViewInline.aspx?updateid=12c93ad9-ef0e-4ce6-8a1d-84713223d24a> | This patch is required to be installed for the August rollup to successfully install. |
| **KB4019112** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=1daeb6d1-b103-4baa-bbde-5326e17e89e4> | **Run KB4014514 and KB4014504 only. For KB4014514, right click and Run as Administrator,** |
|  | **Reboot Required** |  |
| **MS09-043 KB947318** | <https://www.microsoft.com/en-us/download/details.aspx?id=22505> | **Acquisition Only** |
| **MS11-049 KB2251487** | <https://www.microsoft.com/en-us/download/details.aspx?id=26419> |  |
| **MS12-034: KB2596672** | <https://www.microsoft.com/en-us/download/details.aspx?id=29730> | **Acquisition Only** |
| **MS13-075 KB2687413** | <https://www.microsoft.com/en-us/download/details.aspx?id=40196> | **GECW Client Review Only** |
| **MS13-081 KB2862330** | <https://www.microsoft.com/en-us/download/details.aspx?id=40507> |  |
| KB3138612 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=0bae11c4-626f-4b7e-b539-06c95cb014d5> |  |
| KB3172605 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=8382aa41-9de1-4bb2-b8b0-4ab89451be64> |  |
| KB3179573 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=fb159d73-16f1-4c8a-bc3a-c768f6e2a7ce> |  |
|  | **Reboot Required** |  |
| **Patches below can be applied in any order** |  |  |
| kb947318 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=ceff8ca0-08db-41d0-b825-fcc2cebaf8b4> | **Do not run on Review Systems** |
| KB3192391 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=bc4fc430-38b5-4ef5-ba85-fb8254ac9be9> |  |
| KB2538242 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=bb49cc19-8847-4986-aa93-5e905421e55a> | Select file title starts with x86 |
| KB2538243 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=729a0dcb-df9e-4d02-b603-ed1aee074428> | Install 2 files with x86 in title; Select Repair option if required |
| KB2565063 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=719584bc-2208-4bc9-a650-d3d6347eb32e> | Install 2 files with x86 in title; Select Repair option if required |
| KB2863902 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=73ab9cea-fa20-4d92-9719-f01f13f613c1> |  |
| KB2863926 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=df24debf-341b-403b-9e0a-6cd01a025d8d> |  |
| KB2920748 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=7ac78292-3a54-4100-837e-140fa85bb0bc> |  |
| KB2863817 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=d0ab24c4-9edf-4faa-a69b-078470f6fd40> | Use all-convintl-en-us\_......cab |
| KB3085528 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=d7ba6a6e-7884-4042-a2ce-f236c43a0989> |  |
| KB2881029 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=3b158fbc-892b-4d1b-8c02-91682088ad72> |  |
| kb2553432 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=9badf612-4854-4023-9867-76e3677311af> |  |
| kb3118390 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=4ecc22c5-46d4-40b2-a640-60e9da447657> |  |
| kb3118378 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=ae54ce3d-e321-4831-a1ba-fcae8eb430a0> |  |
| kb3127953 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=95499009-678d-4bc4-96d9-384781a18627> |  |
| KB3161949 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=25c0fd19-d4e4-4af5-aad9-f308dde496d5> |  |
| KB2900986 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=82b62134-bafb-4fd3-815e-73534b9d1aa5> |  |
| kb2850016 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=3188a7d3-91d0-4780-897f-1990c4b3e952> |  |
| KB3031432 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=2ca8e6e8-fc4a-4974-a208-18cdf1d01d86> | Apply kb3004375 and KB3031432 |
| KB3059317 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=9202ee09-24c9-4ae7-83bd-3b5d4b0e5c22> |  |
| kb3101521 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=52d30a1b-2f14-4463-9034-92f46b76576d> |  |
| kb2965313 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=a4474e45-3c37-4708-9a5a-31e3538ddd44> | Use all-wordintl-en-us\_......cab |
| KB3156016 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=f21d3be8-dd35-4ac7-97b8-b4d06d4ed7f2> |  |
| KB3156019 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=b5b7f2e4-bf3f-4974-ab23-f3a2ab886d31> |  |
| KB3156017 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=3f6acb0e-47be-458e-8559-ab9f1179dfba> |  |
| KB3159398 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=2329e2b7-4e31-42e3-86aa-2ebfaa2c6339> |  |
| KB3161958 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=0fda0cfc-7ca1-4f78-ae19-90977c948ed3> |  |
| KB3170455 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=65b4f1cb-3cd4-4546-8896-dc462d484282> |  |
| KB3125869 | <https://support.microsoft.com/en-us/help/3125869/ms15-124-vulnerability-in-internet-explorer-could-lead-to-aslr-bypass-december-16,-2015> | Download and install only the “Enable the User32 exception handler hardening feature in Internet Explorer” |
| KB2880971 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=fe594d9e-9828-451f-aa56-2c2cf431ade3> |  |
| KB2810073 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=20c03f3c-cf50-4469-9e6a-c4f74622a160> | Only Run .MSP file |
| KB3000483 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=dbd91e47-4238-4bbe-8c8b-87c2d02c57d2> | Only Run 2 .MSU files |
| KB3054845 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=cd3cb1c0-dd41-45d0-a60d-794470b83761> |  |
| kb3054848 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=79ebf15b-3343-41fb-bf88-9bd6b4253fc0> |  |
| kb3054835 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=bd726abf-fa50-489d-ab30-fa13ee3e0ba0> |  |
| kb3054842 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=fc804f6e-c557-47e0-9f5e-4373b286677d> |  |
| KB3055044 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=58454b4a-dd6b-4902-865b-c57ce21d3b91> |  |
| KB2553313 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=f26e1911-9cf6-4082-8349-456230bc04ec> |  |
| KB2598244 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=aaa34820-0955-45db-b5a6-3048bb56843f> |  |
| KB3055033 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=ef6e2e39-225f-4cad-97bb-200d1fab3e53> |  |
| KB2965310 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=fbe46296-974f-4eaf-ba1f-3f57787e932b> |  |
| KB3055039 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=d5db1fcb-f98a-4b2d-abbc-003327425628> |  |
| kb3085560 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=6f15ec3c-4e27-483d-baed-6e17fba8ffc7> | Use all-convintl-en-us\_......cab |
| kb3085526 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=1c9e7d92-d1df-4cc4-8906-ff2429479d19> |  |
| kb3101544 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=5dddb0e6-6f66-4ae0-86e3-6a8d3d23a201> |  |
| kb3101543 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=396a0e18-01af-4f19-a5ea-c5c9e352321f> |  |
| kb3085594 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=74ccaa37-b9c6-4c4c-a65b-da83e3e6341a> |  |
| kb2817478 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=b1bbd02b-d4c3-48c3-b648-1852de5d2c8e> |  |
| kb3101520 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=1e5f0476-1148-43b8-bfc4-10a1a29ddc32> |  |
| kb3054984 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=35c6b5dc-c065-4d9a-a71f-9d0a6beb4df9> |  |
| kb3115123 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=e8bd0027-368c-4ecf-bc9b-5c64195e2c53> |  |
| kb3114400 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=98015a12-b9cd-48ab-bd7f-7dea92bb8f67> | Use all-convintl-en-us\_......cab |
| kb3114869 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=7efaa3ba-dee4-45ba-84b0-50c7aa10437b> |  |
| kb3114885 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=4ca07bc3-8c95-4644-be17-040a3964a02a> | use all-onenoteint-en-us\_....cab |
| kb3115474 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=8bc2bfec-84bb-488e-ae91-f4814d409dba> | use all-outlookintl-en-us\_.....cab |
| kb3115471 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=fd8a17d9-dad0-4f8d-95c4-0677ca0fbb08> |  |
| kb3118309 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=fb00cc28-9cb3-437e-bac5-069bc32f8aeb> |  |
| kb3128037 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=46311afb-a6ab-4fad-b6aa-4ec97507beba> |  |
| kb3118380 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=84ea23ce-49d8-4684-ac3b-45f0396053cf> |  |
| kb3114395 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=df66c1c1-7fab-4a43-886c-5203d1495bd8> |  |
| kb2889841 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=bb220b30-6d01-4e57-8db6-3e492d6b65d3> |  |
| kb3128034 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=9cd72446-5c11-433a-9589-fd85afcc4eb0> |  |
| KB3178687 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=726adfc6-4ac9-4409-bdab-2892b7058e78> |  |
|  | **Reboot Required** |  |
| KB3045311 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=2fd51fbf-3f70-4c85-986b-5653b0fb7f11> | Only run x86 file; Run from a cmd prompt as Administrator using the following command: AMD64\_X86-all-sqlserver2008-kb3045311-x86\_30561aef89c6d174fee7b77bed6b3b8539542558.exe /ACTION=Patch /INSTANCENAME=MSSQLSERVER /IGNORESERVICERESTARTSTATE |
| Adobe 11.0.20 | <http://supportdownloads.adobe.com/thankyou.jsp?ftpID=6157&fileID=6191> |  |

|  |  |  |
| --- | --- | --- |
| KB3178688 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=322c28f5-349c-468a-ac94-901616f52372> |  |
| KB3191847 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=4b4bbe2b-a25d-4509-a069-f5efc227b4ad> |  |
| KB3191907 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=c8533f11-51f9-4f84-96d8-c619947cc7c0> |  |
| KB3118310 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=c59a1bb2-ff1f-427a-a8d7-2cab1cb3e7d1> | Use en-us file all-convintl-en-us\_....cab |
| KB3191843 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=f715a81d-102d-416a-9a89-e9ebdace0a6d> |  |
| KB3191899 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=7698c63a-b85f-4647-bcb1-1be0256c3f43> |  |
| KB3203468 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=7a599998-ca41-4840-90ea-8143724e5c6a> | Use all-proof-en-us\_......cab |
| KB3213624 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=3658f96e-a521-429d-a9a9-e70e30f5d830> |  |
| KB3178690 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=06e2c9fb-65b7-48f5-b6e2-58071f17f9bd> |  |

|  |  |  |
| --- | --- | --- |
|  | **Reboot Required** |  |
| KB4034664  August Rollup 2017  **Superseded** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=e0a94bad-5b2c-4611-9066-24491ce9bb4f> |  |
|  | Make the Following Registry Change |  |
|  | **[HKEY\_CURRENT\_USER\Software\Microsoft\Windows\CurrentVersion\WinTrust\Trust Providers\Software Publishing]** |  |
|  | **State=dword:00010000** |  |

**Windows 7 (6.9.6 R1 GECW Review)**

|  |  |  |
| --- | --- | --- |
|  | **Link** | **Notes** |
|  | https://downloadcenter.intel.com/download/22165/Intel-Graphics-Media-Accelerator-Driver-Windows-7-Windows-Vista-exe- | Display adapter driver update  Win7Vista\_151719.exe |

**Windows 2008 R2 (INW Server)**

|  |  |  |
| --- | --- | --- |
| **KB** | **Link** | **Notes** |
|  | Make the following Registry Change |  |
|  | **[HKEY\_CURRENT\_USER\Software\Microsoft\Windows\CurrentVersion\WinTrust\Trust Providers\Software**  **Publishing]** |  |
|  | **State=dword:00023c00** |  |
| KB2979596 | <https://www.microsoft.com/en-us/download/details.aspx?id=44278> | Run from cmd prompt with SQLServer2008SP4-KB2979596- x64-ENU.exe /ACTION=Patch  /INSTANCENAME=MSSQLSERVER  /IGNORESERVICERESTARTSTATE |
| KB3020369 | [http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=076f5c31-ea9c-41db-8640-](http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=076f5c31-ea9c-41db-8640-081a79c79602)  [081a79c79602](http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=076f5c31-ea9c-41db-8640-081a79c79602) |  |
| KB3138612 | [http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=5ae1092c-f211-4873-aabd-](http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=5ae1092c-f211-4873-aabd-9ee1a142acbb)  [9ee1a142acbb](http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=5ae1092c-f211-4873-aabd-9ee1a142acbb) |  |
| KB2639308 | <http://www.microsoft.com/en-ph/download/details.aspx?id=28933> | Install only .MSU file |
| **IE11** | <http://download.microsoft.com/download/7/1/7/7179A150-F2D2-4502-9D70-4B59EA148EAA/IE11-Windows6.1-x64-en-us.exe> | Right click and Run as Administrator. If installation fail with a message requesting to connect to Internet, then install from the command line with these parameter /quiet /closeprograms e.g. "IE11-Windows6.1-x64-en-us.exe /quiet /closeprograms"  Note: It could take few retry attempts to install. |
|  | **Reboot Required** |  |
| kb3125574 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=6147e6c1-663b-41bc-9582-9579343857d9> |  |
|  | **Reboot Required** |  |
| KB3172605 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=3363f98b-78a3-44a7-93df-d770b2dd150a> |  |
| KB3179573 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=366304fa-105b-4f48-a07e-d2e6bb274533> |  |
| KB4022719 | [http://catalog.update.microsoft .com/v7/site/ScopedViewInline.aspx?updateid=4aa2ed70-7c26-4727-bd11-](http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=4aa2ed70-7c26-4727-bd11-6a98b6dd622c)  [6a98b6dd622c](http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=4aa2ed70-7c26-4727-bd11-6a98b6dd622c) |  |
| KB4025341  July Rollup 2017 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=b2423c5b-0254-4747-88bb-ec1a785549cb> | This patch is required to be installed for the August rollup to successfully install. |
|  | **Reboot Required** |  |
| **OPTIONAL – INW Server Performance Enhancement** | Please see section – OPTIONAL - How to Install INW Server Performance Enhancement |  |
| **HP INW Server NIC Driver (HP ProLiant ML350 G8)** | <http://h20566.www2.hpe.com/hpsc/swd/public/detail?swItemId=MTX_de344f22b2c245ec859d7821e3>  Please see section - How to Install HP NIC Driver on the INW Server (HP ProLiant ML350 G8) |  |
| **HP INW Server NIC Driver (HP ProLiant DL370 G6)** | <http://h20566.www2.hpe.com/hpsc/swd/public/detail?swItemId=MTX_109438fbecd6411388820b630c>  Please see section - How to Install HP NIC Driver on the INW Server (HP ProLiant DL370 G6) |  |
|  |  |  |
| **MS09-043 KB947318** | <https://www.microsoft.com/en-us/download/details.aspx?id=22505> |  |
| **MS11-025 KB2538242** | <https://www.microsoft.com/en-us/download/details.aspx?id=26347> | Select file title starts with x86 |
| **MS11-049 KB2251487** | <https://www.microsoft.com/en-us/download/details.aspx?id=26419> |  |
| **KB2539530** | <https://www.microsoft.com/en-us/download/details.aspx?id=26416> |  |
| **MS12-034: KB2596672** | <https://www.microsoft.com/en-us/download/details.aspx?id=29730> |  |
| **MS13-081 KB2862330** | [https://www.microsoft.com/en-us/download/details.aspx?id=40372](https://www.microsoft.com/en-us/download/details.aspx?id=40372%20) |  |
| **KB967642** | <https://www.microsoft.com/en-us/download/details.aspx?id=21751> |  |
| **MS13-090 KB2900986** | <https://www.microsoft.com/en-us/download/details.aspx?id=40921> |  |
| **KB2919469** | <https://www.microsoft.com/en-us/download/details.aspx?id=41785> |  |
| **KB2830477** | <https://www.microsoft.com/en-us/download/details.aspx?id=41730> |  |
| **KB2871997** | <https://www.microsoft.com/en-us/download/details.aspx?id=42765> |  |
| **MS14-024 KB2817330** | <https://www.microsoft.com/en-us/download/details.aspx?id=42862> |  |
| **MS14-036 KB2878233** | <https://www.microsoft.com/en-US/download/details.aspx?id=43330> |  |
| **KB3006137** | <https://www.microsoft.com/en-us/download/details.aspx?id=45889> |  |
| **MS15-037 KB3046269** | <https://www.microsoft.com/en-us/download/details.aspx?id=46499> |  |
|  | **Reboot Required** |  |
| **KB2901983** | <https://www.microsoft.com/en-in/download/details.aspx?id=42642> |  |
| **MS14-072 KB2978128** | <https://www.microsoft.com/en-us/download/details.aspx?id=44686> |  |
| **KB2923545** | <https://www.microsoft.com/en-us/download/details.aspx?id=41984> |  |
| **KB2970228** | <https://www.microsoft.com/en-us/download/details.aspx?id=44060> |  |
| **KB2984981** | <https://www.microsoft.com/en-us/download/details.aspx?id=44482> |  |
|  | **Reboot Required** |  |
| **MS14-057 KB2972107** | <https://www.microsoft.com/en-us/download/details.aspx?id=44320> |  |
| **MS14-053 KB2972216** | <https://www.microsoft.com/en-us/download/details.aspx?id=44181> |  |
| **MS14-057 KB2979578** | <https://www.microsoft.com/en-us/download/details.aspx?id=44322> |  |
| **MS15-041 KB3037581** | <https://www.microsoft.com/en-us/download/details.aspx?id=46529> |  |
|  | **Reboot Required** |  |
| **KB2994023** | <https://www.microsoft.com/en-us/download/details.aspx?id=44451> |  |
|  | **Reboot Required** |  |
| **Patches below can be applied in any order** |  |  |
| kb2894844 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=00e0ded8-dc85-4017-8b54-a1456c63a61b> |  |
| KB3074230 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=d0baf87d-e8ec-4ddc-b8b0-89f668ee6504> |  |
| KB3074550 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=2f7719fa-8a6d-4b16-9c69-66447f308ee7> |  |
| KB3097996 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=103a0bdd-e71c-4f33-8cf1-7b68198ad536> |  |
| KB3098781 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=4ed6e065-7e37-44bb-8798-245649851dec> |  |
| KB3122656 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=428c2fef-afe5-46a7-a454-da2fa0e3af27> |  |
| KB3127229 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=8f49f137-0741-498e-9f7c-754862054221> |  |
| KB3135996 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=24aeb988-b368-435b-923b-c09b8a2d3fa5> |  |
| KB3142033 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=eac1599f-2887-40ce-9cf4-0f364dc37343> |  |
| KB3159398 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=56a7a134-5ad6-43c2-aab1-e10d2fef8f7c> |  |
| KB3161949 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=5bc0e07b-33ca-4ea2-8253-4f0dcd26783a> |  |
| KB3170455 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=45460055-be25-47ad-ad0a-2a4711fcca74> |  |
| KB3163251 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=7b053e5b-04a5-4f47-92c5-74f6caba0de7> |  |
| KB3125869 | <https://support.microsoft.com/en-us/help/3125869/ms15-124-vulnerability-in-internet-explorer-could-lead-to-aslr-bypass-december-16,-2015> | Download and install only the “Enable the User32 exception handler hardening feature in Internet Explorer” |
| KB2538243 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=729a0dcb-df9e-4d02-b603-ed1aee074428> | Only run X86-all-vcredist\_x86…. |
| KB3156016 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=de32fc3d-60a4-4fc9-9588-0c404765940a> |  |
| KB3156019 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=05cb4345-49ea-4eca-8ba3-f870466c46c7> |  |
| KB3161958 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=795571cf-bd8d-4602-bb28-11080e614333> |  |
| Adobe 11.0.20 | <http://supportdownloads.adobe.com/thankyou.jsp?ftpID=6157&fileID=6191> |  |
| KB890830 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=3ac4f294-f247-4771-813b-8f02b6f33526> |  |
| HPSBMU03653 rev.1 | <https://h20566.www2.hpe.com/hpsc/swd/public/detail?swItemId=MTX_083799d6dad34195bb47cb43c1> |  |
|  | **Reboot Required** |  |
| KB3070738 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=12e7d9ba-d1e3-4631-b83e-6bafd96d5421> |  |
| KB4019112 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=dedea6da-e039-487b-8ec6-2729551f7165> | Run KB4014514 and KB4014504 only. For KB4014514, right click and Run as Administrator . |
| KB3045311 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=2fd51fbf-3f70-4c85-986b-5653b0fb7f11> | Only run x64 file; Run from a cmd prompt as Administrator using the following command: AMD64-all-sqlserver2008-kb3045311-x64\_37a197c60990d2e83e98d1090109a4ab3f2abe4b.exe /ACTION=Patch /INSTANCENAME=MSSQLSERVER /IGNORESERVICERESTARTSTATE |
|  | **Reboot Required** |  |
|  | **Make the following Registry Change** |  |
|  | **[HKEY\_CURRENT\_USER\Software\Microsoft\Windows\CurrentVersion\WinTrust\Trust Providers\Software**  **Publishing]** | **Apply only on Domain Controller** |
|  | **State=dword:00010000** |  |
| KB4034664  August Rollup 2017  **Superseded** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=80f7899d-451d-4e3f-b54e-d488a06a3c58> | To successfully install this Rollup, you must uninstall July Rollup **KB4025341 and reboot before installing KB4034664** |
|  | **[HKEY\_LOCAL\_MACHINE\System\CurrentControlSet\Services\NTDS\Parameters]**  **LdapEnforceChannelBinding=DWORD:1** | Apply only on Domain Controller. Need starting July Rollup- KB4025341 (CVE-2017-8563) |
|  | **Reboot Required** |  |

MLCL v6.9.6 R1 only (Old Procedure)

The following patches bring the MLCL system to a more recent patch level and address several security vulnerabilities. The following guidelines apply:

1. It is expected that some patches listed will already be on the system.
2. Pay attention to the Notes section for special handling instructions
3. Patches must be applied in order except where indicated.
4. Reboots are only required where indicated. If a Patch requests a reboot at another point, the system can be rebooted but it is not required.

|  | **INW Server** | **Acquisition - Mac-Lab IT/XT/XTi , CardioLab IT/XT/XTi and SpecialsLab** | **GE Client Review Workstation** | **Virtual Review** |
| --- | --- | --- | --- | --- |
| **Operating System Platform** | **Windows Server 2008 R2 SP1** | **Windows 7 SP1** | **Windows 7 SP1** | **Windows 7 SP1** |
| **Patch** | **Download URL** | **Download URL** | **Download URL** | **Download URL** |
|  |  |  |  |  |
| **MS15-127 KB3100465 (Domain Controller only)** | <https://www.microsoft.com/en-us/download/details.aspx?id=50127> | N/A | N/A | N/A |
| **MS15-067 KB3069762** | N/A | <https://www.microsoft.com/en-us/download/details.aspx?id=47833> | <https://www.microsoft.com/en-us/download/details.aspx?id=47833> | <https://www.microsoft.com/en-us/download/details.aspx?id=47833> |
| **HP System Management Homepage HPSBMU03380 Version: 7.5.4.3(1 Apr 2016)**  **Superseded** | <https://h20566.www2.hpe.com/hpsc/swd/public/detail?idx=&action=driverDocument&itemLocale=&swItemId=MTX_544617581c264c8eaafe6b273a&mode>  Please see section - How to Install HP System Management Homepage Patch on the INW Server – HPSBMU03380  **NOTE:** HPSBMU03051 must be installed before HPSBMU03380. | N/A | N/A | N/A |
| **OPTIONAL – INW Server Performance Enhancement** | Please see section – OPTIONAL - How to Install INW Server Performance Enhancement | N/A | N/A | N/A |
| **Adobe Reader APSB15-15**  **Superseded** | <ftp://ftp.adobe.com/pub/adobe/reader/win/11.x/11.0.12/misc/> Download file - AdbeRdrUpd11012\_MUI.msp  Please see section – How to Install Adobe Reader APSB15-15 | <ftp://ftp.adobe.com/pub/adobe/reader/win/11.x/11.0.12/misc/> Download file - AdbeRdrUpd11012\_MUI.msp  Please see section – How to Install Adobe Reader APSB15-15 | <ftp://ftp.adobe.com/pub/adobe/reader/win/11.x/11.0.12/misc/> Download file - AdbeRdrUpd11012\_MUI.msp  Please see section – How to Install Adobe Reader APSB15-15 | <ftp://ftp.adobe.com/pub/adobe/reader/win/11.x/11.0.12/misc/> Download file - AdbeRdrUpd11012\_MUI.msp  Please see section – How to Install Adobe Reader APSB15-15 |
| **HP INW Server NIC Driver (HP ProLiant ML350 G8)** | <http://h20566.www2.hpe.com/hpsc/swd/public/detail?swItemId=MTX_de344f22b2c245ec859d7821e3>  Please see section - How to Install HP NIC Driver on the INW Server (HP ProLiant ML350 G8) | N/A | N/A | N/A |
| **HP INW Server NIC Driver (HP ProLiant DL370 G6)** | <http://h20566.www2.hpe.com/hpsc/swd/public/detail?swItemId=MTX_109438fbecd6411388820b630c>  Please see section - How to Install HP NIC Driver on the INW Server (HP ProLiant DL370 G6) | N/A | N/A | N/A |
| **MS14-049 KB2918614** | <https://www.microsoft.com/en-us/download/details.aspx?id=43764> |  |  |  |
| **MS09-043 KB947318** | <https://www.microsoft.com/en-us/download/details.aspx?id=22505> | <https://www.microsoft.com/en-us/download/details.aspx?id=22505> |  |  |
| **MS11-025 KB2538242** | <https://www.microsoft.com/en-us/download/details.aspx?id=26347> |  |  | Select file title starts with x86 |
| **MS11-049 KB2251487** | <https://www.microsoft.com/en-us/download/details.aspx?id=26419> | <https://www.microsoft.com/en-us/download/details.aspx?id=26419> | <https://www.microsoft.com/en-us/download/details.aspx?id=26419> | <https://www.microsoft.com/en-us/download/details.aspx?id=26419> |
| **KB2539530** | <https://www.microsoft.com/en-us/download/details.aspx?id=26416> |  |  |  |
| **MS12-034: KB2596672** | <https://www.microsoft.com/en-us/download/details.aspx?id=29730> | <https://www.microsoft.com/en-us/download/details.aspx?id=29730> | N/A | N/A |
| **MS13-075 KB2687413** | N/A | N/A | <https://www.microsoft.com/en-us/download/details.aspx?id=40196> | N/A |
| **KB2852386** | <https://www.microsoft.com/en-us/download/details.aspx?id=42739> |  |  |  |
| **MS13-081 KB2862330** | [https://www.microsoft.com/en-us/download/details.aspx?id=40372](https://www.microsoft.com/en-us/download/details.aspx?id=40372%20) | <https://www.microsoft.com/en-us/download/details.aspx?id=40507> | <https://www.microsoft.com/en-us/download/details.aspx?id=40507> | <https://www.microsoft.com/en-us/download/details.aspx?id=40507> |
| **KB967642** | <https://www.microsoft.com/en-us/download/details.aspx?id=21751> |  |  |  |
| **KB2862152** | <https://www.microsoft.com/en-us/download/details.aspx?id=41018> |  |  |  |
| **KB2893519** | <https://www.microsoft.com/en-us/download/details.aspx?id=41017> |  |  |  |
| **MS13-090 KB2900986** | <https://www.microsoft.com/en-us/download/details.aspx?id=40921> |  |  |  |
| **MS13-095 KB2868626** | <https://www.microsoft.com/en-us/download/details.aspx?id=40930> |  |  |  |
| **KB2891804** | <https://www.microsoft.com/en-us/download/details.aspx?id=41268> |  |  |  |
| **MS13-101 KB2887069** | <https://www.microsoft.com/en-us/download/details.aspx?id=41276> |  |  |  |
| **MS13-099 KB2892074** | <https://www.microsoft.com/en-us/download/details.aspx?id=41226> |  |  |  |
| **MS13-098 KB2893294** | <https://www.microsoft.com/en-us/download/details.aspx?id=41217> |  |  |  |
| **MS14-009 KB2911501** | <https://www.microsoft.com/en-us/download/details.aspx?id=41835> |  |  |  |
| **KB2919469** | <https://www.microsoft.com/en-us/download/details.aspx?id=41785> |  |  |  |
| **MS14-007 KB2912390** | <https://www.microsoft.com/en-us/download/details.aspx?id=41758> |  |  |  |
| **KB2830477** | <https://www.microsoft.com/en-us/download/details.aspx?id=41730> |  |  |  |
| **KB2929733** | <https://www.microsoft.com/en-us/download/details.aspx?id=42175> |  |  |  |
| **KB2908783** | <https://www.microsoft.com/en-us/download/details.aspx?id=42340> |  |  |  |
| **KB2928562** | <https://www.microsoft.com/en-us/download/details.aspx?id=42331> |  |  |  |
| **KB2843630** | <https://www.microsoft.com/en-us/download/details.aspx?id=41706> |  |  |  |
| **KB2871997** | <https://www.microsoft.com/en-us/download/details.aspx?id=42765> |  |  |  |
| **MS14-026 KB2931356** | <https://www.microsoft.com/en-us/download/details.aspx?id=42768> |  |  |  |
| **MS14-024 KB2817330** | <https://www.microsoft.com/en-us/download/details.aspx?id=42862> |  |  |  |
| **MS14-036 KB2957509** | <https://www.microsoft.com/en-us/download/details.aspx?id=43180> |  |  |  |
| **MS14-036 KB2878233** | <https://www.microsoft.com/en-US/download/details.aspx?id=43330> |  |  |  |
| **MS14-033 KB2939576** | <https://www.microsoft.com/en-us/download/details.aspx?id=43162> |  |  |  |
| **MS14-031 KB2957189** | <https://www.microsoft.com/en-us/download/details.aspx?id=43143> | <https://www.microsoft.com/en-us/download/details.aspx?id=43147> | <https://www.microsoft.com/en-us/download/details.aspx?id=43147> | <https://www.microsoft.com/en-us/download/details.aspx?id=43147> |
| **HP System Management Homepage HPSBMU03051 Version: 7.3.3.1(19 Jun 2014)**  **Superseded** | <http://h20564.www2.hpe.com/hpsc/swd/public/detail?swItemId=MTX_e8076c2a35804685ad65b2b1ba>  Please see section - How to Install HP System Management Homepage Patch on the INW Server – HPSBMU03051 | N/A | N/A | N/A |
| **MS14-036 KB2957503** | <https://www.microsoft.com/en-us/download/details.aspx?id=43194> |  |  |  |
| **KB2800095** | <https://www.microsoft.com/en-us/download/details.aspx?id=42363> |  |  |  |
| **MS14-040 KB2961072** | <https://www.microsoft.com/en-us/download/details.aspx?id=43459> |  |  |  |
| **MS14-039 KB2973201** | <https://www.microsoft.com/en-us/download/details.aspx?id=43475> |  |  |  |
| **KB2973351** | [https://www.microsoft .com/en- us/download/details.aspx?id=43471](https://www.microsoft.com/en-us/download/details.aspx?id=43471) |  |  |  |
| **MS14-046 KB2937610** | <https://www.microsoft.com/en-us/download/details.aspx?id=43954> |  |  |  |
| **MS14-046 KB2943357** | <https://www.microsoft.com/en-us/download/details.aspx?id=43930> |  |  |  |
| **MS14-045 KB2976897** | <https://www.microsoft.com/en-us/download/details.aspx?id=43885> |  |  |  |
| **MS14-047 KB2978668** | <https://www.microsoft.com/en-us/download/details.aspx?id=43842> |  |  |  |
| **KB2966583** | <https://www.microsoft.com/en-us/download/details.aspx?id=43470> |  |  |  |
| **MS14-045 KB2993651** | <https://www.microsoft.com/en-us/download/details.aspx?id=44040> |  |  |  |
| **MS14-053 KB2973112** | <https://www.microsoft.com/en-us/download/details.aspx?id=44184> |  |  |  |
| **KB2977728** | <https://www.microsoft.com/en-us/download/details.aspx?id=44086> |  |  |  |
| **KB2978092** | <https://www.microsoft.com/en-us/download/details.aspx?id=44131> |  |  |  |
| **KB2985461** | <https://www.microsoft.com/en-us/download/details.aspx?id=44100> |  |  |  |
| **KB2984972** | <https://www.microsoft.com/en-us/download/details.aspx?id=44336> |  |  |  |
| **MS14-057 KB2972100** | <https://www.microsoft.com/en-us/download/details.aspx?id=44312> |  |  |  |
| **MS14-057 KB2979570** | <https://www.microsoft.com/en-us/download/details.aspx?id=44327> |  |  |  |
| **KB2977292** | <https://www.microsoft.com/en-us/download/details.aspx?id=44335> |  |  |  |
| **MS14-072 KB2978120** | <https://www.microsoft.com/en-us/download/details.aspx?id=44603> |  |  |  |
| **MS14-078 KB2991963** | <https://www.microsoft.com/en-us/download/details.aspx?id=44708> |  |  |  |
| **MS14-066 KB2992611** | <https://www.microsoft.com/en-us/download/details.aspx?id=44618> | <https://www.microsoft.com/en-us/download/details.aspx?id=44633> | <https://www.microsoft.com/en-us/download/details.aspx?id=44633> | <https://www.microsoft.com/en-us/download/details.aspx?id=44633> |
| **MS14-071 KB3005607** | <https://www.microsoft.com/en-us/download/details.aspx?id=44778> |  |  |  |
| **MS14-064 KB3006226** | <https://www.microsoft.com/en-us/download/details.aspx?id=44770> |  |  |  |
| **MS14-064 KB3010788** | <https://www.microsoft.com/en-us/download/details.aspx?id=44861> |  |  |  |
| **MS14-074 KB3003743** | <https://www.microsoft.com/en-us/download/details.aspx?id=44852> |  |  |  |
| **MS14-068 KB3011780** | <https://www.microsoft.com/en-us/download/details.aspx?id=44966> |  |  |  |
| **KB3006625** | <https://www.microsoft.com/en-us/download/details.aspx?id=45043> |  |  |  |
| **KB3013410** | <https://www.microsoft.com/en-us/download/details.aspx?id=45160> |  |  |  |
| **KB3014406** | <https://www.microsoft.com/en-us/download/details.aspx?id=45191> |  |  |  |
| **MS15-007 KB3014029** | <https://www.microsoft.com/en-us/download/details.aspx?id=45351> |  |  |  |
| **MS15-003 KB3021674** | <https://www.microsoft.com/en-us/download/details.aspx?id=45417> |  |  |  |
| **MS15-005 KB3022777** | <https://www.microsoft.com/en-us/download/details.aspx?id=45479> |  |  |  |
| **KB3020338** | <https://www.microsoft.com/en-us/download/details.aspx?id=45714> |  |  |  |
| **MS15-014 KB3004361** | <https://www.microsoft.com/en-us/download/details.aspx?id=45565> |  |  |  |
| **KB3006137** | <https://www.microsoft.com/en-us/download/details.aspx?id=45889> |  |  |  |
| **MS15-027 KB3002657** | <https://www.microsoft.com/en-us/download/details.aspx?id=46200> |  |  |  |
| **MS15-028 KB3030377** | <https://www.microsoft.com/en-us/download/details.aspx?id=46126> |  |  |  |
| **MS15-021 KB3032323** | <https://www.microsoft.com/en-us/download/details.aspx?id=45969> |  |  |  |
| **MS15-020 KB3033889** | <https://www.microsoft.com/en-us/download/details.aspx?id=46153> |  |  |  |
| **KB3033929** | <https://www.microsoft.com/en-us/download/details.aspx?id=46083> |  |  |  |
| **MS15-023 KB3034344** | <https://www.microsoft.com/en-us/download/details.aspx?id=45982> |  |  |  |
| **MS15-029 KB3035126** | <https://www.microsoft.com/en-us/download/details.aspx?id=45962> |  |  |  |
| **MS15-024 KB3035132** | <https://www.microsoft.com/en-us/download/details.aspx?id=46133> |  |  |  |
| **MS15-020 KB3039066** | <https://www.microsoft.com/en-us/download/details.aspx?id=46275> |  |  |  |
| **MS15-041 KB3037574** | <https://www.microsoft.com/en-us/download/details.aspx?id=46528> |  |  |  |
| **MS15-038 KB3045685** | <https://www.microsoft.com/en-us/download/details.aspx?id=46461> |  |  |  |
| **MS15-035**  **KB3046306** | [https://www.microsoft .com/en- us/download/details.aspx?id=46495](https://www.microsoft.com/en-us/download/details.aspx?id=46495) |  |  |  |
| **MS15-034**  **KB3042553** | <https://www.microsoft.com/en-us/download/details.aspx?id=46480> | <https://www.microsoft.com/en-us/download/details.aspx?id=46501> | <https://www.microsoft.com/en-us/download/details.aspx?id=46501> | <https://www.microsoft.com/en-us/download/details.aspx?id=46501> |
| **MS15-037 KB3046269** | <https://www.microsoft.com/en-us/download/details.aspx?id=46499> |  |  |  |
| **MS15-039 KB3046482** | <https://www.microsoft.com/en-us/download/details.aspx?id=46479> |  |  |  |
| **MS15-038 KB3045999** | <https://www.microsoft.com/en-us/download/details.aspx?id=46556> |  |  |  |
| **KB3020370** | <https://www.microsoft.com/en-us/download/details.aspx?id=46737> |  |  |  |
| **KB3048761** | <https://www.microsoft.com/en-us/download/details.aspx?id=46795> |  |  |  |
|  | **Reboot Required** |  |  |  |
|  | Make the following Registry Change  **[HKEY\_CURRENT\_USER\Software\M icrosoft\Windows\CurrentVersion\ WinTrust\Trust Providers\Software Publishing]**  **State=dword:00023c00** |  |  |  |
| **KB2901907** | <https://www.microsoft.com/en-in/download/details.aspx?id=42642>  **Right click and Run as Administrator** |  |  |  |
|  | Make the following Registry Change  **[HKEY\_CURRENT\_USER\Software\M icrosoft\Windows\CurrentVersion\ WinTrust\Trust Providers\Software Publishing]**  **State=dword:00010000** |  |  |  |
| **MS14-072 KB2978128** | <https://www.microsoft.com/en-us/download/details.aspx?id=44686> |  |  |  |
| **KB2923545** | <https://www.microsoft.com/en-us/download/details.aspx?id=41984> |  |  |  |
| **KB2970228** | <https://www.microsoft.com/en-us/download/details.aspx?id=44060> |  |  |  |
| **KB2984981** | <https://www.microsoft.com/en-us/download/details.aspx?id=44482> |  |  |  |
|  | **Reboot Required** |  |  |  |
| **MS14-057 KB2972107** | <https://www.microsoft.com/en-us/download/details.aspx?id=44320> |  |  |  |
| **MS14-053 KB2972216** | <https://www.microsoft.com/en-us/download/details.aspx?id=44181> |  |  |  |
| **MS14-057 KB2979578** | <https://www.microsoft.com/en-us/download/details.aspx?id=44322> |  |  |  |
| **MS15-041 KB3037581** | <https://www.microsoft.com/en-us/download/details.aspx?id=46529> |  |  |  |
|  | **Reboot Required** |  |  |  |
| **KB2994023** | <https://www.microsoft.com/en-us/download/details.aspx?id=44451> |  |  |  |
| **KB3008627** | <https://www.microsoft.com/en-us/download/details.aspx?id=44850> |  |  |  |
| **KB3020369** | <https://www.microsoft.com/en-us/download/details.aspx?id=46828> |  |  |  |
| **KB3045645** | <https://www.microsoft.com/en-us/download/details.aspx?id=46806> |  |  |  |
| **MS14-025 KB2928120 Domain Controller Only** | <https://www.microsoft.com/en-us/download/details.aspx?id=42683> |  |  |  |
|  | **Reboot Required** |  |  |  |
| **KB2577795** | <https://support.microsoft.com/en-us/kb/2577795> |  |  |  |

MLCL V6.9.6 2017 Patch Updates 1

The following patches bring the MLCL system to a more recent patch level and address several security vulnerabilities. The following guidelines apply:

1. The above patches are required patches for 6.9.6 and must be applied first.
2. It is expected that some patches listed will already be on the system.
3. Pay attention to the Notes section for special handling instructions
4. Patches must be applied in order except where indicated.
5. Reboots are only required where indicated. If a Patch requests a reboot at another point, the system can be rebooted but it is not required.
6. Patches will not install if the software component to be patched is not present (such as an IE8 patch on a system that does not have IE8 installed).

**Note:** KB4022719 replaces KB4012215 and KB4019263 for both Windows 7 and Windows Server 2008 R2 to address CVE-2017-8543, CVE-2017-8544, CVE-2017-

0277, CVE-2017-0276, CVE-2017-0275, CVE-2017-0274, CVE-2017-0272, CVE-2017-0271, CVE-2017-0270, CVE-2017-0269, CVE-2017-0268, CVE-2017-0171, CVE-

2017-0280, CVE-2017-0279 and CVE-2017-0278.

|  |  |  |
| --- | --- | --- |
| **Windows 7 (Acquisition, Review and Virtual Review)** | | |
| **KB** | **Link** | **Notes** |
|  | Make the following Registry Change |  |
|  | **[HKEY\_CURRENT\_USER\Software\Microsoft\Windows\CurrentVersion\WinTrust\Trust Providers\Software Publishing]** |  |
|  | **State=dword:00023c00** |  |
| KB2901907 | <https://www.microsoft.com/en-us/download/details.aspx?id=42642> | Right click and Run as Administrator; Verify that .Net 4.5.2 shows in Control Panel\Programs and Features |
| Subsequent patches depend on installation of KB2901907. |  |  |
| KB2979596 | <https://www.microsoft.com/en-us/download/details.aspx?id=44278> | Run from cmd prompt with SQLServer2008SP4-KB2979596-x86-ENU.exe /ACTION=Patch /INSTANCENAME=MSSQLSERVER /IGNORESERVICERESTARTSTATE |
| KB3020369 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=f00e3c36-f5e3-465c-95d2-a84a22425868> |  |
| KB3138612 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=0bae11c4-626f-4b7e-b539-06c95cb014d5> |  |
| KB2639308 | <https://www.microsoft.com/en-us/download/details.aspx?id=28929> | Install only .MSU file |
| IE11 | <http://download.microsoft.com/download/9/2/F/92FC119C-3BCD-476C-B425-038A39625558/IE11-Windows6.1-x86-en-us.exe> | Right click and Run as Administrator. If installation fail with a message requesting to connect to Internet, then install from the command line with these parameter /quiet /closeprogra  ms e.g. "IE11-Windows6.1-x86-en-us.exe /quiet /closeprograms"  Note: It could take few retry attempts to install. |
|  | **Reboot Required** |  |
| KB3125574 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=7ed4c8c3-0f06-4227-99e3-e9f143394687> |  |
|  | **Reboot Required** |  |
| KB3172605 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=8382aa41-9de1-4bb2-b8b0-4ab89451be64> |  |
| Adobe 11.0.19  **Superseded** | <http://supportdownloads.adobe.com/detail.jsp?ftpID=6123> |  |
| KB3179573 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=fb159d73-16f1-4c8a-bc3a-c768f6e2a7ce> |  |
| KB4022719**Superseded** | [http://catalog.update.microsoft .com/v7/site/ScopedViewInline.aspx?updateid=b9815359-6aad-467e-8666-](http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=b9815359-6aad-467e-8666-2351fadc3c45)  [2351fadc3c45](http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=b9815359-6aad-467e-8666-2351fadc3c45) |  |
| KB3205402  **Superseded** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=f8938e57-3bdd-411e-8bdd-38ebbac1db50> | Right Click and Run as Administrator; Apply KB3210139 and KB3210131 Only |
|  | **Reboot Required** |  |
| **Patches below can be applied in any order** |  |  |
| kb947318 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=ceff8ca0-08db-41d0-b825-fcc2cebaf8b4> | **Do not run on Review Systems** |
| KB3192391 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=bc4fc430-38b5-4ef5-ba85-fb8254ac9be9> |  |
| KB2538242 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=bb49cc19-8847-4986-aa93-5e905421e55a> | Select file title starts with x86 |
| KB2538243 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=729a0dcb-df9e-4d02-b603-ed1aee074428> | Install files with x86 in title; Select Repair option if required |
| KB2565063 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=719584bc-2208-4bc9-a650-d3d6347eb32e> | Install files with x86 in title; Select Repair option if required |
| KB2863902 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=73ab9cea-fa20-4d92-9719-f01f13f613c1> |  |
| KB2863926 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=df24debf-341b-403b-9e0a-6cd01a025d8d> |  |
| KB2920748 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=7ac78292-3a54-4100-837e-140fa85bb0bc> |  |
| KB2863817 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=d0ab24c4-9edf-4faa-a69b-078470f6fd40> | Use all-convintl-en-us\_......cab |
| KB3104002  **Superseded** | <https://www.microsoft.com/en-us/download/details.aspx?id=50346> |  |
| KB3085528 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=d7ba6a6e-7884-4042-a2ce-f236c43a0989> |  |
| KB2881029 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=3b158fbc-892b-4d1b-8c02-91682088ad72> |  |
| kb2553432 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=9badf612-4854-4023-9867-76e3677311af> |  |
| kb3118390 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=4ecc22c5-46d4-40b2-a640-60e9da447657> |  |
| kb3118378 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=ae54ce3d-e321-4831-a1ba-fcae8eb430a0> |  |
| kb3127953 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=95499009-678d-4bc4-96d9-384781a18627> |  |
| KB3161949 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=25c0fd19-d4e4-4af5-aad9-f308dde496d5> |  |
| KB2900986 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=82b62134-bafb-4fd3-815e-73534b9d1aa5> |  |
| kb2850016 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=3188a7d3-91d0-4780-897f-1990c4b3e952> |  |
| KB3031432 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=2ca8e6e8-fc4a-4974-a208-18cdf1d01d86> | Apply kb3004375 and KB3031432 |
| KB3059317 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=9202ee09-24c9-4ae7-83bd-3b5d4b0e5c22> |  |
| kb3101521 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=52d30a1b-2f14-4463-9034-92f46b76576d> |  |
| kb2965313 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=a4474e45-3c37-4708-9a5a-31e3538ddd44> | Use all-wordintl-en-us\_......cab |
| KB3156016 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=f21d3be8-dd35-4ac7-97b8-b4d06d4ed7f2> |  |
| KB3156019 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=b5b7f2e4-bf3f-4974-ab23-f3a2ab886d31> |  |
| KB3156017 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=3f6acb0e-47be-458e-8559-ab9f1179dfba> |  |
| KB3159398 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=2329e2b7-4e31-42e3-86aa-2ebfaa2c6339> |  |
| KB3161958 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=0fda0cfc-7ca1-4f78-ae19-90977c948ed3> |  |
| KB3170455 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=65b4f1cb-3cd4-4546-8896-dc462d484282> |  |
| KB3177186 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=88aaa062-4a7b-4690-ac06-8527d3db830d> |  |
| KB3125869 | <https://support.microsoft.com/en-us/help/3125869/ms15-124-vulnerability-in-internet-explorer-could-lead-to-aslr-bypass-december-16,-2015> | Download and install only the “Enable the User32 exception handler hardening feature in Internet Explorer” |
| KB2880971 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=fe594d9e-9828-451f-aa56-2c2cf431ade3> |  |
| KB2810073 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=20c03f3c-cf50-4469-9e6a-c4f74622a160> | Only Run .MSP file |
| KB3000483 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=dbd91e47-4238-4bbe-8c8b-87c2d02c57d2> | Only Run 2 .MSU files |
| KB3054845 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=cd3cb1c0-dd41-45d0-a60d-794470b83761> |  |
| kb3054848 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=79ebf15b-3343-41fb-bf88-9bd6b4253fc0> |  |
| kb3054835 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=bd726abf-fa50-489d-ab30-fa13ee3e0ba0> |  |
| kb3054842 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=fc804f6e-c557-47e0-9f5e-4373b286677d> |  |
| KB3055044 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=58454b4a-dd6b-4902-865b-c57ce21d3b91> |  |
| KB2553313 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=f26e1911-9cf6-4082-8349-456230bc04ec> |  |
| KB2598244 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=aaa34820-0955-45db-b5a6-3048bb56843f> |  |
| KB3055033 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=ef6e2e39-225f-4cad-97bb-200d1fab3e53> |  |
| KB2965310 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=fbe46296-974f-4eaf-ba1f-3f57787e932b> |  |
| KB3055039 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=d5db1fcb-f98a-4b2d-abbc-003327425628> |  |
| kb3085560 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=6f15ec3c-4e27-483d-baed-6e17fba8ffc7> | Use all-convintl-en-us\_......cab |
| kb3085526 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=1c9e7d92-d1df-4cc4-8906-ff2429479d19> |  |
| kb3101544 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=5dddb0e6-6f66-4ae0-86e3-6a8d3d23a201> |  |
| kb3101543 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=396a0e18-01af-4f19-a5ea-c5c9e352321f> |  |
| kb3085594 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=74ccaa37-b9c6-4c4c-a65b-da83e3e6341a> |  |
| kb2817478 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=b1bbd02b-d4c3-48c3-b648-1852de5d2c8e> |  |
| kb3101520 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=1e5f0476-1148-43b8-bfc4-10a1a29ddc32> |  |
| kb3054984 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=35c6b5dc-c065-4d9a-a71f-9d0a6beb4df9> |  |
| kb3115123 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=e8bd0027-368c-4ecf-bc9b-5c64195e2c53> |  |
| kb3114400 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=98015a12-b9cd-48ab-bd7f-7dea92bb8f67> | Use all-convintl-en-us\_......cab |
| kb3114869 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=7efaa3ba-dee4-45ba-84b0-50c7aa10437b> |  |
| kb3114885 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=4ca07bc3-8c95-4644-be17-040a3964a02a> | use all-onenoteint-en-us\_....cab |
| kb3115474 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=8bc2bfec-84bb-488e-ae91-f4814d409dba> | use all-outlookintl-en-us\_.....cab |
| kb3115471 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=fd8a17d9-dad0-4f8d-95c4-0677ca0fbb08> |  |
| kb3118309 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=fb00cc28-9cb3-437e-bac5-069bc32f8aeb> |  |
| kb3128037 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=46311afb-a6ab-4fad-b6aa-4ec97507beba> |  |
| kb3118380 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=84ea23ce-49d8-4684-ac3b-45f0396053cf> |  |
| kb3114395 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=df66c1c1-7fab-4a43-886c-5203d1495bd8> |  |
| kb2889841 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=bb220b30-6d01-4e57-8db6-3e492d6b65d3> |  |
| kb3128034 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=9cd72446-5c11-433a-9589-fd85afcc4eb0> |  |
| KB3178687 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=726adfc6-4ac9-4409-bdab-2892b7058e78> |  |
|  | **Reboot Required** |  |
| KB3045311 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=2fd51fbf-3f70-4c85-986b-5653b0fb7f11> | Only run x86 file; Run from a cmd prompt as Administrator using the following command: AMD64\_X86-all-sqlserver2008-kb3045311-x86\_30561aef89c6d174fee7b77bed6b3b8539542558.exe /ACTION=Patch /INSTANCENAME=MSSQLSERVER /IGNORESERVICERESTARTSTATE |
|  | **Reboot Required** |  |
|  | Make the Following Registry Change |  |
|  | **[HKEY\_CURRENT\_USER\Software\Microsoft\Windows\CurrentVersion\WinTrust\Trust Providers\Software Publishing]** |  |
|  | **State=dword:00010000** |  |

**Windows 7 (6.9.6 R1 GECW Review)**

|  |  |  |
| --- | --- | --- |
|  | **Link** | **Notes** |
|  | https://downloadcenter.intel.com/download/22165/Intel-Graphics-Media-Accelerator-Driver-Windows-7-Windows-Vista-exe- | Display adapter driver update  Win7Vista\_151719.exe |

**Windows 2008R2 (INW Server)**

|  |  |  |
| --- | --- | --- |
| **KB** | **Link** | **Notes** |
|  | Make the following Registry Change |  |
|  | **[HKEY\_CURRENT\_USER\Software\Microsoft\Windows\CurrentVersion\WinTrust\Trust Providers\Software**  **Publishing]** |  |
|  | **State=dword:00023c00** |  |
| KB2979596 | <https://www.microsoft.com/en-us/download/details.aspx?id=44278> | Run from cmd prompt with SQLServer2008SP4-KB2979596-x64-ENU.exe /ACTION=Patch /INSTANCENAME=MSSQLSERVER /IGNORESERVICERESTARTSTATE |
| KB3020369 | [http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=076f5c31-ea9c-41db-8640-](http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=076f5c31-ea9c-41db-8640-081a79c79602)  [081a79c79602](http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=076f5c31-ea9c-41db-8640-081a79c79602) |  |
| KB3138612 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=5ae1092c-f211-4873-aabd-9ee1a142acbb> |  |
| KB2639308 | <http://www.microsoft.com/en-ph/download/details.aspx?id=28933> | Install only .MSU file |
| IE11 | <http://download.microsoft.com/download/7/1/7/7179A150-F2D2-4502-9D70-4B59EA148EAA/IE11-Windows6.1-x64-en-us.exe> | Right click and Run as Administrator. If installation fail with a message requesting to connect to Internet, then install from the command line with these parameter /quiet /closeprograms e.g. "IE11-Windows6.1-x64-en-us.exe /quiet /closeprograms"  Note: It could take few retry attempts to install. |
|  | **Reboot Required** |  |
| kb3125574 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=6147e6c1-663b-41bc-9582-9579343857d9> |  |
|  | **Reboot Required** |  |
| Adobe 11.0.19  **Superseded** | <http://supportdownloads.adobe.com/detail.jsp?ftpID=6123> |  |
| KB3172605 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=3363f98b-78a3-44a7-93df-d770b2dd150a> |  |
| KB3179573 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=366304fa-105b-4f48-a07e-d2e6bb274533> |  |
| KB4022719 | [http://catalog.update.microsoft .com/v7/site/ScopedViewInline.aspx?updateid=4aa2ed70-7c26-4727-bd11-](http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=4aa2ed70-7c26-4727-bd11-6a98b6dd622c)  [6a98b6dd622c](http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=4aa2ed70-7c26-4727-bd11-6a98b6dd622c) |  |
|  |  |  |
|  | **Reboot Required** |  |
| **Patches below can be applied in any order** |  |  |
| kb2894844 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=00e0ded8-dc85-4017-8b54-a1456c63a61b> |  |
| KB3205402  **Superseded** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=5036bd76-3251-49ba-ad86-a99b00853ad4> | Only apply KB3210139 (Right click and run as Administrator) & KB3210131 |
| KB2972216 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=e63b4eca-27a1-4fd0-b311-e468da0cd02e> |  |
| KB2972107 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=151e15f7-fa7a-40c4-a58a-721cb88e8071> |  |
| KB2979578 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=d44bd7d1-ec33-4a65-942c-093aec39b02b> |  |
| KB2978128 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=e257d135-40b9-4361-9e7d-8537d256d54b> |  |
| KB3074230 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=d0baf87d-e8ec-4ddc-b8b0-89f668ee6504> |  |
| KB3074550 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=2f7719fa-8a6d-4b16-9c69-66447f308ee7> |  |
| KB3097996 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=103a0bdd-e71c-4f33-8cf1-7b68198ad536> |  |
| KB3098781 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=4ed6e065-7e37-44bb-8798-245649851dec> |  |
| KB3122656 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=428c2fef-afe5-46a7-a454-da2fa0e3af27> |  |
| KB3127229 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=8f49f137-0741-498e-9f7c-754862054221> |  |
| KB3135996 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=24aeb988-b368-435b-923b-c09b8a2d3fa5> |  |
| KB3156017 | [http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=7a300bcb-8e8a-4e38-a04d-](http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=7a300bcb-8e8a-4e38-a04d-9da62feda917)  [9da62feda917](http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=7a300bcb-8e8a-4e38-a04d-9da62feda917) |  |
| KB3142033 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=eac1599f-2887-40ce-9cf4-0f364dc37343> |  |
| KB3159398 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=56a7a134-5ad6-43c2-aab1-e10d2fef8f7c> |  |
| KB3161949 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=5bc0e07b-33ca-4ea2-8253-4f0dcd26783a> |  |
| KB3170455 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=45460055-be25-47ad-ad0a-2a4711fcca74> |  |
| KB3163251 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=7b053e5b-04a5-4f47-92c5-74f6caba0de7> |  |
| KB3184471 | [http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=8b314103-7382-4c65-8679-](http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=8b314103-7382-4c65-8679-135d24dc8966)  [135d24dc8966](http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=8b314103-7382-4c65-8679-135d24dc8966) |  |
| KB3177186 | [http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=04c3010d-9989-495c-ab1c-](http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=04c3010d-9989-495c-ab1c-dbc011015822)  [dbc011015822](http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=04c3010d-9989-495c-ab1c-dbc011015822) |  |
| KB3125869 | <https://support.microsoft.com/en-us/help/3125869/ms15-124-vulnerability-in-internet-explorer-could-lead-to-aslr-bypass-december-16,-2015> |  |
| KB2538243 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=729a0dcb-df9e-4d02-b603-ed1aee074428> | Only run X86-all-vcredist\_x86…. |
| KB3156016 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=de32fc3d-60a4-4fc9-9588-0c404765940a> |  |
| KB3156019 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=05cb4345-49ea-4eca-8ba3-f870466c46c7> |  |
| KB3161958 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=795571cf-bd8d-4602-bb28-11080e614333> |  |
| HPSBMU03653 rev.1 | <https://h20566.www2.hpe.com/hpsc/swd/public/detail?swItemId=MTX_083799d6dad34195bb47cb43c1> |  |
|  | **Reboot Required** |  |
| KB3045311 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=2fd51fbf-3f70-4c85-986b-5653b0fb7f11> | Only run x64 file; Run from a cmd prompt as Administrator using the following command: AMD64-all-sqlserver2008-kb3045311-x64\_37a197c60990d2e83e98d1090109a4ab3f2abe4b.exe /ACTION=Patch /INSTANCENAME=MSSQLSERVER /IGNORESERVICERESTARTSTATE |
|  | **Make the following Registry Change** |  |
|  | **[HKEY\_CURRENT\_USER\Software\Microsoft\Windows\CurrentVersion\WinTrust\Trust Providers\Software**  **Publishing]** | Apply only on Domain Controller |
|  | **State=dword:00010000** |  |
|  | **Reboot Required** |  |

MLCL V6.9.6 2017 Patch Updates 2

The following patches bring the MLCL system to a more recent patch level and address several security vulnerabilities. The following guidelines apply:

1. The above patches are required patches for 6.9.6 and must be applied first.
2. It is expected that some patches listed will already be on the system.
3. Pay attention to the Notes section for special handling instructions
4. Patches must be applied in order except where indicated.
5. Reboots are only required where indicated. If a Patch requests a reboot at another point, the system can be rebooted but it is not required.
6. Patches will not install if the software component to be patched is not present (such as an IE8 patch on a system that does not have IE8 installed).

**Note:** KB4022719 replaces KB4012215 and KB4019263 for both Windows 7 and Windows Server 2008 R2 to address CVE-2017-8543, CVE-2017-8544, CVE-2017-

0277, CVE-2017-0276, CVE-2017-0275, CVE-2017-0274, CVE-2017-0272, CVE-2017-0271, CVE-2017-0270, CVE-2017-0269, CVE-2017-0268, CVE-2017-0171, CVE-

2017-0280, CVE-2017-0279 and CVE-2017-0278.

|  |  |  |
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| **Windows 7 (Acquisition, Review and Virtual Review)** | | |
| **KB** | **Link** | **Notes** |
|  | Make the following Registry Change |  |
|  | **[HKEY\_CURRENT\_USER\Software\Microsoft\Windows\CurrentVersion\WinTrust\Trust Providers\Software Publishing]** |  |
|  | **State=dword:00023c00** |  |
| Adobe 11.0.20 | <http://supportdownloads.adobe.com/thankyou.jsp?ftpID=6157&fileID=6191> |  |

|  |  |  |
| --- | --- | --- |
| **KB4025341**  **July Rollup 2017** | <https://www.catalog.update.microsoft.com/ScopedViewInline.aspx?updateid=12c93ad9-ef0e-4ce6-8a1d-84713223d24a> | This patch is required to be installed for the August rollup to successfully install. |
| KB4019112 | <https://www.catalog.update.microsoft.com/ScopedViewInline.aspx?updateid=1daeb6d1-b103-4baa-bbde-5326e17e89e4> | Run KB4014514 and KB4014504 only. For KB4014514, right click and Run as Administrator, |
| KB3191847 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=4b4bbe2b-a25d-4509-a069-f5efc227b4ad> |  |
| KB3191907 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=c8533f11-51f9-4f84-96d8-c619947cc7c0> |  |
| KB3118310 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=c59a1bb2-ff1f-427a-a8d7-2cab1cb3e7d1> | Use en-us file all-convintl-en-us\_....cab |
| KB3191843 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=f715a81d-102d-416a-9a89-e9ebdace0a6d> |  |
| KB3191899 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=7698c63a-b85f-4647-bcb1-1be0256c3f43> |  |
| KB3203468 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=7a599998-ca41-4840-90ea-8143724e5c6a> | Use all-proof-en-us\_......cab |
| KB3213624 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=3658f96e-a521-429d-a9a9-e70e30f5d830> |  |
|  | **Reboot Required** |  |
| KB3178688 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=322c28f5-349c-468a-ac94-901616f52372> |  |
| KB3178690 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=06e2c9fb-65b7-48f5-b6e2-58071f17f9bd> |  |
|  | **Reboot Required** |  |
| KB4034664  August Rollup 2017  **Superseded** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=e0a94bad-5b2c-4611-9066-24491ce9bb4f> | To successfully install this Rollup, you must uninstall July Rollup **KB4025341 and reboot before installing KB4034664** |

|  |  |  |
| --- | --- | --- |
|  | **Make the Following Registry Change** |  |
|  | **[HKEY\_CURRENT\_USER\Software\Microsoft\Windows\CurrentVersion\WinTrust\Trust Providers\Software Publishing]** |  |
|  | **State=dword:00010000** |  |
|  |  |  |
|  | **Reboot Required** |  |

**Windows 2008R2 (INW Server)**

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| --- | --- | --- |
| **KB** | **Link** | **Notes** |
| Adobe 11.0.20 | <http://supportdownloads.adobe.com/thankyou.jsp?ftpID=6157&fileID=6191> |  |
| KB4025341  July Rollup 2017 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=b2423c5b-0254-4747-88bb-ec1a785549cb> | This patch is required to be installed for the August rollup to successfully install. |
| KB4019112 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=dedea6da-e039-487b-8ec6-2729551f7165> | **Run KB4014514 and KB4014504 only. For KB4014514, right click and Run as Administrator,** |
| KB890830 | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=c860821d-5eef-4d0c-9e9d-ee4638f34dca> | **Run on Domain Controller only.** |
|  | **Reboot Required** |  |
| KB4034664  August Rollup 2017  **Superseded** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=80f7899d-451d-4e3f-b54e-d488a06a3c58> | **To successfully install this Rollup, you must uninstall July Rollup** **KB4025341 and reboot before applying KB4034664** |
|  | **[HKEY\_LOCAL\_MACHINE\System\CurrentControlSet\Services\NTDS\Parameters]**  **LdapEnforceChannelBinding=DWORD:1** | Apply only on Domain Controller. Need starting July Rollup- KB4025341 (CVE-2017-8563) |
|  | **Reboot Required** |  |
|  |  |  |

Patches post Old and New procedure

MLCL V6.9.6 2017 Patch Updates 3

The following patches bring the MLCL system to a more recent patch level and address several security vulnerabilities. The following guidelines apply:

1. The above patches are required patches for 6.9.6 and must be applied first.
2. It is expected that some patches listed will already be on the system.
3. Pay attention to the Notes section for special handling instructions
4. Patches must be applied in order except where indicated.
5. Reboots are only required where indicated. If a Patch requests a reboot at another point, the system can be rebooted but it is not required.
6. Patches will not install if the software component to be patched is not present (such as an IE8 patch on a system that does not have IE8 installed).

**Note:** KB4041681 replaces KB4041678 for both Windows 7 and Windows Server 2008 R2 to address CVE-2017-11771, CVE-2017-11772, CVE-2017-11780, CVE-2017-11781

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| **Windows 7 (Acquisition, Review and Virtual Review)** | | |
| **KB** | **Link** | **Notes** |
| **Adobe 11.0.23** | <http://supportdownloads.adobe.com/thankyou.jsp?ftpID=6279&fileID=6314> |  |

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| --- | --- | --- |
| **KB4041681**  **October 2017**  **Monthly Rollup** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=8a346e85-6ae3-46aa-a9e1-2e70e760f61c> |  |

|  |  |  |
| --- | --- | --- |
|  | **Reboot Required** |  |

**Windows 2008R2 (INW Server)**

|  |  |  |
| --- | --- | --- |
| **KB** | **Link** | **Notes** |
| **Adobe 11.0.23** | <http://supportdownloads.adobe.com/thankyou.jsp?ftpID=6279&fileID=6314> |  |
| **KB4041681**  **October 2017**  **Monthly Rollup** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=cd0388fd-5aca-4a13-8417-c28e1d8b7dda> | **To successfully install this Rollup, you must uninstall July Rollup** **KB4025341,**  **August Rollup KB4034664 and reboot before applying KB4041681**  Make the following Registry Change – Only on  Domain Controller if it does not exist:  [HKEY\_LOCAL\_MACHINE\System\CurrentContro  lSet\Services\NTDS\Parameters]  LdapEnforceChannelBinding=DWORD:1  **This registry key is needed on Domain controller** starting July Rollup- KB4025341 (CVE-2017-8563) |
|  |  |  |
|  | **Reboot Required** |  |
|  |  |  |

MLCL V6.9.6 2018 Patch Updates 4

The following patches bring the MLCL system to a more recent patch level and address several security vulnerabilities. The following guidelines apply:

1. The above patches are required patches for 6.9.6 and must be applied first.
2. Pay attention to the Notes section for special handling instructions
3. Patches must be applied in order except where indicated.
4. Reboots are only required where indicated. If a Patch requests a reboot at another point, the system can be rebooted but it is not required.
5. Refer to the above links for the following previously qualified patches KB4019112. These patches were previously qualified but not listed. Please apply these patch to the to virtual review system other systems do not require these patches to be installed separately. In case you receive a message like “Not applicable to the computer”, ignore that is an indication that the patch already exist on the system.

**Follow these steps to make the following registry changes to remediate June and September monthly rollup vulnerabilities.**

**Reference:** <https://portal.msrc.microsoft.com/en-us/security-guidance/advisory/CVE-2017-8529>

**Windows 7 (Acquisition, Review and Virtual Review) & Windows 2008R2 (INW Server)**:

1. Click **Start**, click **Run**, type **regedt32** or type **regedit**, and then click **OK**.
2. In Registry Editor, locate the following registry folder: **HKEY\_LOCAL\_MACHINE\SOFTWARE\Microsoft\Internet Explorer\Main\FeatureControl\**
3. Right-click **FeatureControl**, point to **New**, and then click **Key**.
4. Type **FEATURE\_ENABLE\_PRINT\_INFO\_DISCLOSURE\_FIX**, and then press Enter to name the new subkey.
5. Right-click **FEATURE\_ENABLE\_PRINT\_INFO\_DISCLOSURE\_FIX**, point to **New**, and then click **DWORD Value**.
6. Type "iexplore.exe" for the new DWORD value.
7. Double-click the new DWORD value named iexplore.exe and change the **Value** data field to **1**.
8. Click **OK** to close.

**Windows 2008R2 (INW Server)**:

1. Click **Start**, click **Run**, type **regedt32** or type **regedit**, and then click **OK**.
2. In Registry Editor, locate the following registry folder: **HKEY\_LOCAL\_MACHINE\SOFTWARE\WOW6432Node\Microsoft\Internet Explorer\Main\FeatureControl\**
3. Right-click **FeatureControl**, point to **New**, and then click **Key**.
4. Type **FEATURE\_ENABLE\_PRINT\_INFO\_DISCLOSURE\_FIX**, and then press Enter to name the new subkey.
5. Right-click **FEATURE\_ENABLE\_PRINT\_INFO\_DISCLOSURE\_FIX**, point to **New**, and then click **DWORD Value**.
6. Type "iexplore.exe" for the new DWORD value.
7. Double-click the new DWORD value named iexplore.exe and change the **Value** data field to **1**.
8. Click **OK** to close.

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| **Windows 7 (Acquisition, Review and Virtual Review)** | | |
| **KB** | **Link** | **Notes** |
| **KB4048957**  **November 2017 Monthly Rollup** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=224b07ab-de98-45f0-8b9c-83551cac66f6> |  |

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|  | **Reboot Required** |  |
| **KB4054518**  **December 2017 Monthly Rollup** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=5b48d1cb-83f7-43e1-9308-18872ffe4dce> |  |
|  | **Reboot Required** |  |
| **KB3203468**  **July 2017 Microsoft Office 2010** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=7a599998-ca41-4840-90ea-8143724e5c6a> |  |
| **KB3213626**  **September 2017 Microsoft Office 2010** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=2bb1487f-b287-41a9-b0ec-01b42aa4759e> |  |
| **KB3128027**  **September 2017 Microsoft PowerPoint 2010** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=474aa90a-7767-4f4f-b3f5-2ffa12fea4e6> |  |
| **KB3141537**  **September 2017 Microsoft Publisher 2010** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=0c646d3e-697d-4463-a6ea-afb3493c5cea> |  |
| **KB2553338**  **October 2017 Microsoft Office 2010 SP2** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=14e73852-cbd2-456a-a9a8-7f0c10f1fa40> | Might get error message (The upgrade path cannot be installed…) This error message can be ignored. |
| **KB2837599**  **October 2017 Microsoft Office 2010 SP2** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=54ccbc02-879e-4aa1-b817-12418ce8dfcd> |  |
| **KB4011612**  **December 2017 Microsoft Office 2010 SP2** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=8230d598-8ab1-4efc-89b6-d3507a6dfd20> | Might get error message (The upgrade path cannot be installed…) This error message can be ignored. |
| **KB4011660**  **January 2018 Microsoft Excel 2010** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=d7594745-04d5-4631-b2d7-289816f4dd43> |  |
| **KB4011659**  **January 2018 Microsoft Word 2010** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=0b5a1bf0-3043-47fd-afc3-d2fb55a46a96> |  |
| **KB4011611**  **January 2018 Microsoft Office 2010 SP2** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=3b2c376c-ea57-4925-b81d-3b765d456f2b> | Extract to a location and run the extraction to install. Check installed updates for a successful install. |
| **KB4011610**  **January 2018 Microsoft Office 2010** | <https://www.microsoft.com/en-us/download/details.aspx?id=56447> |  |
| **KB4054172**  **January 2018 .NET Framework** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=537fc3ba-4248-40b8-9498-8a671abebfe9> | Install the following KB4054172, KB4019990 and KB4054176 |
| **KB2719662** | Create the following Registry Keys |  |
|  | **Key=[HKEY\_LOCAL\_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Policies\Windows\Sidebar\]**  **Value Name=[TurnOffSidebar]**  **Type=[REG\_DWORD]**  **Data=[1]** |  |
| **KB2269637** | Create the following Registry Keys |  |
|  | **Key=[** **HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Control\Session Manager\]**  **Value Name=[CWDIllegalInDllSearch]**  **Type=[REG\_DWORD]**  **Data=[1]** |  |

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|  | **Reboot Required** |  |

**Windows 2008R2 (INW Server)**

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| **KB** | **Link** | **Notes** |
| **KB3177467**  **Service Stack** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=f1b99598-a22d-4fbe-9b63-09724833acc3> | **Required for successful Monthly rollup installation without uninstalling previous monthly rollup** |
|  | **Reboot Required** |  |
| **KB4048957**  **November 2017 Monthly Rollup** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=435d3006-04ae-4c27-a5f9-3c36f09e58ed> |  |
|  | **Reboot Required** |  |
| **KB4054518**  **December 2017 Monthly Rollup** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=09064e30-6f3e-4c99-8d09-fbc2ba06b436> |  |
|  | **Reboot Required** |  |
| **KB4054172**  **January 2018 .NET Framework** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=fdecaf44-50a3-4667-a935-f9e7af0bb317> |  |
| **KB2269637** | Create the following Registry Keys |  |
|  | **Key=[** **HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Control\Session Manager\]**  **Value Name=[CWDIllegalInDllSearch]**  **Type=[REG\_DWORD]**  **Data=[1]** |  |
|  | **Reboot Required** |  |
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MLCL V6.9.6 2018 Patch Updates 5

The following patches bring the MLCL system to a more recent patch level and address several security vulnerabilities. The following guidelines apply:

1. The above patches are required patches for 6.9.6 and must be applied first.
2. Pay attention to the Notes section for special handling instructions
3. Patches must be applied in order except where indicated.
4. Reboots are only required where indicated. If a Patch requests a reboot at another point, the system can be rebooted but it is not required.

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| **Windows 7 (Acquisition, Review and Virtual Review)** | | |
| **KB** | **Link** | **Notes** |
|  | Make the following Registry Change |  |
|  | **[HKEY\_CURRENT\_USER\Software\Microsoft\Windows\CurrentVersion\WinTrust\Trust Providers\Software Publishing]** |  |
|  | **State=dword:00023c00** |  |
| **KB4056894**  **January 2018 Monthly Rollup** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=63bb3909-e5fe-45a2-8d59-44f9df52317f> |  |

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|  | **Reboot Required** |  |
| **KB4091290** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=c70372c5-bd6c-48f7-b562-c326bc1327a4> |  |
| **KB4074598**  **February Monthly Rollup** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=651e95ab-6e7c-4ea6-9cd2-3cbabd9b76f0> |  |
|  | **Reboot Required** |  |
| **KB4099950** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=0872a60d-385a-4486-8322-9e759802017a> | **CAUTION: This patch has to be applied before March Monthly rollup KB4088875. Not applying this before March rollup can affect NIC settings.** |
| **KB4088875 March Monthly Rollup** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=3ed75c38-aa36-437e-bf4f-574789591e03> |  |
|  | **Reboot Required** |  |
| **KB4096040** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=be3cdb55-862c-4362-b015-894e381e07f9> |  |
| **KB4099467** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=f325deb3-28fc-45a3-ab7b-5264f801daf6> |  |
|  | **Reboot Required** |  |
| **KB4093118**  **April Monthly Rollup** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=647f49ef-0f0a-49dc-9766-dd255cded1af> |  |
| **KB4011707** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=969c78ec-cd6a-4295-ade3-a57ca7f8b3b2> |  |
| **KB3114874** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=9fae99be-ddc3-4e37-b3ee-9b631fd50eca> |  |
| **KB3114416** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=da77f81d-187b-4cae-a75a-d64766a7713d> |  |
| **KB4057114** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=0aa653a1-1459-44cd-be0b-0fcb77e4ef85> | **Install AMD64\_X86-en-sqlserver2008-kb4057114-x86\_a9295f99a2ee7c714f540f3697be0fd4aee7a7bf.exe**  Run from a cmd prompt as Administrator using the following command: AMD64\_X86-en-sqlserver2008-kb4057114-x86\_a9295f99a2ee7c714f540f3697be0fd4aee7a7bf.exe /ACTION=Patch /INSTANCENAME=MSSQLSERVER /IGNORESERVICERESTARTSTATE |
|  | **Reboot Required** |  |
| **KB4103718**  **May 2018 Monthly Rollup** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=3f4d0c73-a177-48cf-a3e7-97d1a94cba87> |  |
|  | **Reboot Required** |  |
| **KB4095874**  **.NET 3.5 SP1 and KB4096495 .NET 4.5.2** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=d000d6a2-3321-4381-9a24-3345b2cd0435> | **KB4099633 is the KB number to use to download and install the patch for KB4095874 and KB4096495. Inside your downloaded file has multiple KBs. Follow these order of installation:**   1. **Install KB4019990(You may see already installed message for this KB, ignore and continue)** 2. **KB4095874** 3. **KB4096495** |
|  | **Reboot Required** |  |
| **KB4022146**  **Microsoft Excel 2010** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=5795d737-4091-4784-a707-007b99d3daef> | **KB4022146**  **Microsoft Excel 2010** |
| **KB2899590**  **Microsoft Office 2010** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=d8acdbaf-7f56-4c65-a898-9fdfc7a2d83a> | **KB2899590**  **Microsoft Office 2010** |
|  | Make the Following Registry Change |  |
|  | **[HKEY\_CURRENT\_USER\Software\Microsoft\Windows\CurrentVersion\WinTrust\Trust Providers\Software Publishing]** |  |
|  | **State=dword:00010000** |  |

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|  | **Reboot Required** |  |

**Windows 2008R2 (INW Server)**

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| **KB** | **Link** | **Notes** |
|  | Make the following Registry Change |  |
|  | **[HKEY\_CURRENT\_USER\Software\Microsoft\Windows\CurrentVersion\WinTrust\Trust Providers\Software Publishing]** |  |
|  | **State=dword:00023c00** |  |
| **CP031045 Firmware Update for ML350p Gen 8 Server** | <https://support.hpe.com/hpsc/swd/public/detail?swItemId=MTX_13ce4f3fc79b4433873342345b> | **Refer to “ML350p Gen8 (P72) BIOS Update to v 2015.07.01 (B) Instructions” section above for installation instructions. This should be installed before installing “ML350p Gen8 (P72) BIOS Update to v2018.01.22 Instructions”. This should only be installed on ML350p G8 Servers.** |
| **CP034981 Firmware Update for ML350p Gen 8 Server** | <https://support.hpe.com/hpsc/swd/public/detail?sp4ts.oid=5195931&swItemId=MTX_58f2f298203c4664a6e5c9402d&swEnvOid=4184#tab1> | **Refer to “ML350p Gen8 (P72) BIOS Update to v2018.01.22 Instructions” section above for installation instructions. Install “ML350p Gen8 (P63) BIOS Update to v 2015.07.01 (B) Instructions” before installing this update. This should only be installed on ML350p G8 Servers.** |
| **CP035397 Firmware Update for DL370 Gen 6 Server** | <https://support.hpe.com/hpsc/swd/public/detail?swItemId=MTX_df78827f61164b6f952314da7c> | **Refer to “DL370 Gen6 BIOS Update to v2018.02.22 Instructions” section above for installation instructions. This should only be installed on DL370 G6 Servers.** |
|  | **Reboot Required** |  |
| **KB4056894**  **January 2018 Monthly Rollup** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=fc887fd2-cd35-434b-b6e3-1fef99b2e7ce> |  |
|  | **Reboot Required** |  |
| **KB4091290** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=c96d43ea-477f-47a1-919f-6936c8d628a3> |  |
| **KB4074598**  **February Monthly Rollup** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=f3ab18cb-219e-4287-b14c-3a05c8d9479a> |  |
|  | **Reboot Required** |  |
| **KB4099950** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=38b41383-c716-488c-a937-163bf04f6956> | **CAUTION: This patch has to be applied before March Monthly rollup KB4088875. Not applying this before March rollup can affect NIC settings.** |
| **KB4096040** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=3af42ab1-13ed-42b5-9e4e-a841a71e7f2c> |  |
| **KB4088875 March Monthly Rollup** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=03df6731-e0a6-4917-9da3-161a0b7f6b09> |  |
| **KB4099467** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=38800bcc-c954-4822-b864-6ae91cc19bb2> |  |
|  | **Reboot Required** |  |
| **KB4093118**  **April Monthly Rollup** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=d2c7363c-323f-4e92-892a-90b83027e4aa> |  |
|  | **Reboot Required** |  |
| **KB4057114** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=0aa653a1-1459-44cd-be0b-0fcb77e4ef85> | **Install AMD64-en-sqlserver2008-kb4057114-x64\_9ce0b7c5909d8fcc5b9a12d17f29b7864a9df33a.exe file.** Run from a cmd prompt as Administrator using the following command: AMD64-en-sqlserver2008-kb4057114-x64\_9ce0b7c5909d8fcc5b9a12d17f29b7864a9df33a.exe /ACTION=Patch /INSTANCENAME=MSSQLSERVER /IGNORESERVICERESTARTSTATE |
|  | **Reboot Required** |  |
| **KB4103718**  **May 2018 Monthly Rollup** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=4fe75106-a2ba-4186-aecd-10424a19225e> |  |
|  | **Reboot Required** |  |
| **KB4095874**  **.NET 3.5 SP1 and KB4096495 .NET 4.5.2** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=62ccd808-b5a5-4be9-8a38-8e2a829e29d1> | **KB4099633 is the KB number to use to download and install the patch for KB4095874 and KB4096495. The downloaded file has multiple KBs. Follow these order of installation:**   1. **Install KB4019990(You may see already installed message for this KB, ignore and continue)** 2. **KB4095874** 3. **KB4096495** |
|  | Make the Following Registry Change |  |
|  | **[HKEY\_CURRENT\_USER\Software\Microsoft\Windows\CurrentVersion\WinTrust\Trust Providers\Software Publishing]** |  |
|  | **State=dword:00010000** |  |
|  | **Reboot Required** |  |
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MLCL V6.9.6 2018 Patch Updates 6

The following patches bring the MLCL system to a more recent patch level and address several security vulnerabilities. The following guidelines apply:

1. The above patches are required patches for 6.9.6 and must be applied first.
2. Pay attention to the Notes section for special handling instructions
3. Patches must be applied in order except where indicated.
4. Reboots are only required where indicated. If a Patch requests a reboot at another point, the system can be rebooted but it is not required.

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| **Windows 7 (Acquisition, Review and Virtual Review)** | | |
| **KB** | **Link** | **Notes** |
|  | Make the following Registry Change |  |
|  | **[HKEY\_CURRENT\_USER\Software\Microsoft\Windows\CurrentVersion\WinTrust\Trust Providers\Software Publishing]** |  |
|  | **State=dword:00023c00** |  |
| **Z600 BIOS Update to v3.61** | <https://support.hp.com/us-en/drivers/selfservice/hp-z600-workstation/3718663> | **Refer to Z600 BIOS Update to v3.61 Instructions above**  **WARNING: After installing this BIOS version onto the system, prior BIOS versions cannot be installed onto the system.** |
|  | **Reboot Required** |  |
| **KB4284826**  **June 2018 Monthly Rollup** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=326a9830-3983-402d-b48b-7a35f99c516a> |  |

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|  | **Reboot Required** |  |
| **KB4338818**  **July 2018 Monthly Rollup** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=ea409dca-1368-48cf-94c1-d510b1690d74> |  |
|  | **Reboot Required** |  |
| **KB4338821** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=dafd8f28-09a9-4d17-8a6c-93341a8379ec> |  |
|  | **Reboot Required** |  |
| **KB4343900 August 2018 Monthly Rollup** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=d785f6dd-d90b-4cb9-838a-8faf5971165f> |  |
|  | **Reboot Required** |  |
| **KB4343894**  **IE 11** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=3fc3f78a-19c5-45bc-9f06-6a14cec0f007> |  |
|  | **Reboot Required** |  |
| **KB4457144**  **September 2018 Monthly Rollup** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=f5c88de4-720e-4ed1-b95f-6ce4d4d06087> |  |
|  | **Reboot Required** |  |
| **KB4345590**  **.NET Framework** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=08968031-142d-4dcb-9fd8-29fbd6ae9960> | **Install KB4344149 first (restart if prompted) followed by KB4344152** |
|  | **Reboot Required** |  |
| **KB3203468**  **Microsoft Office Proof 2010 SP2** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=7a599998-ca41-4840-90ea-8143724e5c6a> |  |
| **KB4032223**  **Microsoft Excel 2010** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=cd28cd6b-b3c2-4266-b417-d26d53f7d75f> |  |
| **KB4227175**  **Microsoft Excel 2010** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=bba3a281-f10f-45bc-adf8-9e4436d4c39b> |  |
| **KB4018311**  **Microsoft Office 2010 SP2** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=f96028c5-b20a-41a6-9963-83261d690a62> |  |
| **KB3213636**  **Microsoft Office 2010 SP2** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=7e7049e7-b870-4c87-af60-bc5a0bace002> |  |
| **KB4022198**  **Microsoft Office 2010 SP2** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=cc4958f4-308d-474c-a655-567e41cf9b1d> |  |
| **KB3115197**  **Microsoft Office 2010 SP2** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=393d97f5-b447-43c5-9e0c-b6707c8d29ce> |  |
| **KB3115248**  **Microsoft Office 2010 SP2** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=4cc02a6f-9551-4909-bce1-4a45d41404ec> |  |
| **KB4022199**  **Microsoft Office 2010 SP2** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=3f3c71ef-c743-4824-8951-deb8cdabf2eb> |  |
| **KB4022137**  **Microsoft Office 2010 SP2** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=9d64be86-d3f2-47a4-a9a3-f8ae05842ed3> |  |
| **KB4018310**  **Microsoft PowerPoint 2010** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=4cc49d2c-fe7e-4a55-987e-4b1d4ccb8e1c> |  |
| **KB4011186**  **Microsoft Publisher 2010** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=4564150c-2ab1-42e4-a135-105b924dc45d> |  |
| **KB4022202**  **Microsoft Word 2010** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=59253783-a245-4897-993e-57a2ed30c0e0> |  |
| **KB4011674**  **Microsoft Word 2010** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=b13107b6-02b9-4f00-a6d9-3bf44a3c1247> |  |
| **KB4022141**  **Microsoft Word 2010** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=d2f428f2-7c02-4a49-8680-4407404cb7a2> |  |
|  | Make the Following Registry Change |  |
|  | **[HKEY\_CURRENT\_USER\Software\Microsoft\Windows\CurrentVersion\WinTrust\Trust Providers\Software Publishing]** |  |
|  | **State=dword:00010000** |  |

|  |  |  |
| --- | --- | --- |
|  | **Reboot Required** |  |

**Windows 2008R2 (INW Server)**

|  |  |  |
| --- | --- | --- |
| **KB** | **Link** | **Notes** |
|  | Make the following Registry Change |  |
|  | **[HKEY\_CURRENT\_USER\Software\Microsoft\Windows\CurrentVersion\WinTrust\Trust Providers\Software Publishing]** |  |
|  | **State=dword:00023c00** |  |
| **HPESBHF03874 rev.1 ML350p Gen8 (CP036431)** | <https://support.hpe.com/hpsc/swd/public/detail?sp4ts.oid=5195931&swItemId=MTX_3a5fbdd653f94fac9e2a12e8dc&swEnvOid=4184> | **Refer to ML350p Gen8 BIOS Update to 5/21/2018 Instructions above** |
|  | **Reboot Required** |  |
| **HPESBHF03874 rev.1 DL370 Gen6 (SP99324)** | <https://support.hpe.com/hpsc/swd/public/detail?sp4ts.oid=3890183&swItemId=MTX_37660617800b4f3db17cb11599&swEnvOid=4184> | **Refer to DL370 Gen6 BIOS Update to 5/21/2018 Instructions above** |
|  | **Reboot Required** |  |
| **KB4284826 June 2018 Monthly Rollup** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=999fa80e-c59d-4ff6-8268-c6a8c365f428> |  |
|  | **Reboot Required** |  |
| **KB4338818 July 2018 Monthly Rollup** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=1c930eab-7b7e-4616-b5b5-d6e4a723bc71> |  |
|  | **Reboot Required** |  |
| **KB4338821** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=8e951203-5d8e-4f69-9560-ce698c4f7a77> |  |
|  | **Reboot Required** |  |
| **KB4343900 August 2018 Monthly Rollup** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=71600c77-2a56-4ba2-991b-ad477cfc9eb9> | **Create the following registry settings if they do not exist**  **Key=[HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Control\Session Manager\Memory Management]**  **Value Name=[** **FeatureSettingsOverride]**  **Type=[REG\_DWORD]**  **Data=[0]**  **Key=[HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Control\Session Manager\Memory Management]**  **Value Name=[** **FeatureSettingsOverrideMask]**  **Type=[REG\_DWORD]**  **Data=[3]** |
|  | **Reboot Required** |  |
| **KB4343894**  **IE 11** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=6525d333-fafc-4345-ad06-6edc8db84aaf> |  |
|  | **Reboot Required** |  |
| **KB4457144**  **September 2018 Monthly Rollup** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=2986185e-cd31-4f1d-99a5-bea6bd1ef53c> |  |
|  | **Reboot Required** |  |
| **KB4345590**  **.NET Framework** | <http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=14afae30-094f-4dca-ba5f-e22347edb98f> | **Install KB4344149 first (restart if prompted) followed by KB4344152** |
|  | Make the Following Registry Change |  |
|  | **[HKEY\_CURRENT\_USER\Software\Microsoft\Windows\CurrentVersion\WinTrust\Trust Providers\Software Publishing]** |  |
|  | **State=dword:00010000** |  |
|  | **Reboot Required** |  |
|  |  |  |

MLCL v6.9.6 Optional Security Updates

The following optional updates may be applied to further enhance the security profile of the MLCL systems. These updates should be evaluated on a site-by-site basis in accordance with local IT policy. The configuration changes in this section are compatible with MLCL product functionality but may introduce site specific IT impact as a result of disabling of legacy SSL protocols, prohibiting remote desktop usage and requiring certificate generation and maintenance.

**Additional Security Setting and Patches**

|  | **INW Server** | **Acquisition - Mac-Lab IT/XT/XTi , CardioLab IT/XT/XTi and SpecialsLab** | **GE Client Review Workstation** | **Virtual Review** |
| --- | --- | --- | --- | --- |
| **Patch** | **Download URL** | **Download URL** | **Download URL** | **Download URL** |
| **MS16-047 KB3149090**  **Superseded** | https://technet.microsoft.com/library/security/MS16-047 | <https://technet.microsoft.com/library/security/MS16-047> | <https://technet.microsoft.com/library/security/MS16-047> | <https://technet.microsoft.com/library/security/MS16-047> |
| **Plugin 20007 – Disable SSL V2/V3 – KB187498** | Please see section - How to Install Plugin 20007 – Disable SSL V2/V3 – KB187498 | Please see section - How to Install Plugin 20007 – Disable SSL V2/V3 – KB187498 | Please see section - How to Install Plugin 20007 – Disable SSL V2/V3 – KB187498 | Please see section - How to Install Plugin 20007 – Disable SSL V2/V3 – KB187498 |
| **Plugin 78479 - Poodle** | No change needed. Step above fixes this. | No change needed. Step above fixes this. | No change needed. Step above fixes this. | No change needed. Step above fixes this. |
| **Plugin 35291 – Weak Hashing** | Please see section - How to Install Plugin 35291 – Weak Hashing  (Refer to <https://technet.microsoft.com/en-us/library/ms191192(v=sql.105).aspx>  for more information) | Please see section - How to Install Plugin 35291 – Weak Hashing  (Refer to <https://technet.microsoft.com/en-us/library/ms191192(v=sql.105).aspx>  for more information) | Please see section - How to Install Plugin 35291 – Weak Hashing  (Refer to <https://technet.microsoft.com/en-us/library/ms191192(v=sql.105).aspx>  for more information) | Please see section - How to Install Plugin 35291 – Weak Hashing  (Refer to <https://technet.microsoft.com/en-us/library/ms191192(v=sql.105).aspx>  for more information) |
| **Plugin 45411** | No change needed. Step above fixes this. | No change needed. Step above fixes this. | No change needed. Step above fixes this. | No change needed. Step above fixes this. |
| **Plugin 65821 – SSL RC4 Cipher Suites Supported (Bar Mitzvah)** | Please see section - How to Install Plugin 65821 – SSL RC4 Cipher Suites Supported (Bar Mitzvah) | Please see section - How to Install Plugin 65821 – SSL RC4 Cipher Suites Supported (Bar Mitzvah) | Please see section - How to Install Plugin 65821 – SSL RC4 Cipher Suites Supported (Bar Mitzvah) | Please see section - How to Install Plugin 65821 – SSL RC4 Cipher Suites Supported (Bar Mitzvah) |
| **Plugin 63155 -Microsoft Windows Unquoted Service Path Enumeration** | Please see section - How Remove Vulnerability for Plugin 63155 – Microsoft Windows Unquoted Service Path Enumeration | Please see section - How Remove Vulnerability for Plugin 63155 – Microsoft Windows Unquoted Service Path Enumeration | Please see section - How Remove Vulnerability for Plugin 63155 – Microsoft Windows Unquoted Service Path Enumeration | Please see section - How Remove Vulnerability for Plugin 63155 – Microsoft Windows Unquoted Service Path Enumeration |
| **Plugin 59915 – Vulnerabilities in Gadgets Could Allow Remote Code Execution** | N/A | Please follow the section titled **“Disable the Sidebar in the system Registry”** in the following Article:  <https://technet.microsoft.com/library/security/2719662> | Please follow the section titled **“Disable the Sidebar in the system Registry”** in the following Article:  <https://technet.microsoft.com/library/security/2719662> | Please follow the section titled **“Disable the Sidebar in the system Registry”** in the following Article:  <https://technet.microsoft.com/library/security/2719662> |
| **Disable SMB1 Protocol** | Please see section How to Disable the SMB1 Protocol | Please see section How to Disable the SMB1 Protocol | Please see section How to Disable the SMB1 Protocol | Please see section How to Disable the SMB1 Protocol |

**Password Policy**

Password Policy: Minimum Password Length may be changed above the 14 characters limit to meet security requirements. Refer to **Password** section of the Security Guide for further details about changing passwords.

**Optionally Remove Abode Reader on INW Server**

We recommend that abode reader be uninstalled on the INW Server. On the server Adobe reader is only used to review INW operator manual. The manual is available in printed format and through online manual portal.

**Further MLCL Systems Security Recommendations**

We strongly recommend following these recommendations:

* Change default password to stronger, more secure and unique for each user account
* Disable RDP in for each system using the following steps:
  + My Computer>Properties>Remote settings>Remote
  + Check “Don’t allow connections to this computer”.
  + Click ok and reboot.
* If Insite functionality is not used on the system then turn off the VNC service using the following steps:
  + Click on Start button
  + Click on Control Panel
  + Click on Administrative Tools
  + Double click Services
  + Right Click TightVNC Server and select Properties
  + Under Startup type select Disabled from the dropdown
  + Click on Apply and Ok

We also recommend following these general recommendations and the recommendations listed in MLCL Security guide

* Enhanced physical security
* Network firewalls
* Demilitarized Zones and perimeter defenses for site network
* Intrusion detection systems - network intrusion protection system
* Virtual Private Networks
* Network traffic analysis
* Log analysis

Contact Information

If you have any additional questions, please contact our Technical Support Department.