



GE Healthcare

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
Versions:	6.9, 6.9.5
Subject:	Security Information
Date:	29 June 2018

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.



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- 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	19 July 2017	<ul style="list-style-type: none">Initial Release, includes June Roll-up
2.0	23 October 2017	<ul style="list-style-type: none">Includes October Roll-up
3.0	11 December 2017	<ul style="list-style-type: none">November Unqualified Patches
4.0	7 February 2018	<ul style="list-style-type: none">January 2018 Unqualified Patches
5.0	16 April 2018	<ul style="list-style-type: none">March Unqualified Patches
6.0	30 April 2018	<ul style="list-style-type: none">April Unqualified Patches
7.0	31 May 2018	<ul style="list-style-type: none">May Unqualified Patches
8.0	29 June 2018	<ul style="list-style-type: none">June Unqualified 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.
- If any Mac-Lab IT/CardioLab IT system has a DMS, CCW, or Carddas client , use the Mac-Lab IT/XT/XTi, CardioLab IT/XT/XTi or SpecialsLab instructions.

How to Log On to Acquisition and Review Systems

When starting up a 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.



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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.

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 System Management Homepage Patch on the INW Server – HPSBMU03051

NOTE: HPSBMU03051 must be installed before HPSBMU03380.

1. Using a non-MLCL system, visit the URL and download **cp023716.exe**
2. Place cp023716.exe on removable media
3. Log on to the server as **administrator**.
4. In Windows Explorer, navigate to the to the location on the removable media where **cp023716.exe** was placed
5. Right-click **cp023716.exe**.
6. Select **Run as Administrator**.
7. Click **Install**.
8. Click **Next**.
9. On each screen, keep the default settings and click **Next** to advance through the install wizard.
10. Click **Finish**.
11. In Windows Explorer, navigate to **C:\HP\hpsmh\bin\hpsmhd.exe**.
12. Right-click and select **Properties**.
13. Select the **Details** tab.
14. Verify the **File Version** is **7.3.3.1**.
15. Close all windows.
16. Stop the **HP System Management Homepage** service.
17. Within Windows Explorer, navigate to **C:\HP\sslshare** and permanently delete **cert.pem** and **file.pem**.
18. Restart **HP System Management Homepage** service.
19. Verify that the certificates have been recreated. Within Windows Explorer navigate to **C:\HP\sslshare** and locate and verify that the **cert.pem** and **file.pem** files are there.
20. Close Windows Explorer.
21. At the INW Server desktop, delete the **HP System Management Homepage** icon from the desktop.
22. Restart the INW server to complete the installation

How to Install HP System Management Homepage Patch on the INW Server – HPSBMU03380



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NOTE: HPSBMU03051 must be installed before HPSBMU03380.

1. Using a non-MLCL system, visit the URL and download **CP028035.exe**
2. Place **CP028035.exe** on removable media
3. Log on to the server as **administrator**.
4. In Windows Explorer, navigate to the to the location on the removable media where CP028035.exe was placed
5. Right-click **cp028035.exe**.
6. Select **Run as Administrator**.
7. Click **Install**.
8. Click **Next**.
9. On each screen, keep the default settings and click **Next** to advance through the install wizard.
10. Click **Finish**.
11. In Windows Explorer, navigate to **C:\HP\hpsmh\bin\hpsmhd.exe**.
12. Right-click and select **Properties**.
13. Select the **Details** tab.
14. Verify the **File Version** is **7.5.4.3**.
15. Close all windows.
16. At the INW Server desktop, delete the **HP System Management Homepage** icon from the desktop.
17. Restart the INW server to complete the installation

Turn On Windows Update Service Configuration - Windows Server 2008 R2 SP1 (KB976932) Only

The below steps must be performed on Centricity Cardiology INW Servers before installing Windows Server 2008 R2 SP1 (KB976932).

1. On an INW Domain Controller, log on to Windows as **Administrator** or a member of that group. On an INW Member Server, log on to Windows as **mlcltechuser**.
2. Select **Start > Run**.
3. Type **services.msc** and press **Enter**.
4. Right-click the **Windows Update** service and select **Properties**.
5. Select **Automatic** from the **Startup type** drop-down.
6. Click **Start**.
7. Click **Apply** and then click **OK**.



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8. Close the **Services Console** window.

Turn Off Windows Update Service Configuration - Windows Server 2008 R2 SP1 (KB976932) Only

These below must be performed on Centricity Cardiology INW Servers after installing Windows Server 2008 R2 SP1 (KB976932).

1. On an INW Domain Controller, log on to Windows as **Administrator** or a member of that group. On an INW Member Server, log on to Windows as **mlcltechuser**.
2. Select **Start > Run**.
3. Type **services.msc** and press **Enter**.
4. Right-click the **Windows Update** service and select **Properties**.
5. Select **Manual** from the **Startup type** drop-down.
6. Click **Stop**.
7. Click **Apply** and then click **OK**.
8. Close the **Services Console** window.



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. If 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>

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	INW Server	GE Hardware Acq/Review	Software Only System (XP)	Software Only System (Win7)
Operating System Platform	Windows Server 2008 R2 SP1	Windows XP SP3	Windows XP SP3	Windows 7 SP1
Current Unqualified Vulnerability	MS16-077: Security Update for WPAD (KB 3165191) HPSBMU03593	N/A	N/A	MS16-077: Security Update for WPAD (KB 3165191) KB4048960(CVE-2017-11788) KB4056897(CVE-2018-0747)



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	INW Server	GE Hardware Acq/Review	Software Only System (XP)	Software Only System (Win7)
	KB4048960(CVE-2017-11788) KB4056897(CVE-2018-0747) KB4054172(CVE-2018-0764) KB4054176(CVE-2018-0764) HPESBHF03805 rev.10 KB4088878 (CVE-2018-0886) KB4093108 (CVE-2018-8116) SP84968 KB4095514(CVE-2018-0765) KB4095519(CVE-2018-0765) KB4103712(CVE-2018-0886) KB4284867 (CVE-2018-8225)			KB4054172(CVE-2018-0764) KB4054176(CVE-2018-0764) HPESBHF03805 rev.10 KB4088878 (CVE-2018-0886) KB4093108 (CVE-2018-8116) SP84160 KB4095514(CVE-2018-0765) KB4095519(CVE-2018-0765) KB4103712(CVE-2018-0886) KB4284867 (CVE-2018-8225)
Security Patch				
MS14-031 KB2957189	http://www.microsoft.com/en-us/download/details.aspx?id=43143	N/A	N/A	http://www.microsoft.com/en-us/download/details.aspx?id=43147
MS15-127 KB3100465 (Domain Controller only)	https://www.microsoft.com/en-us/download/details.aspx?id=50127	N/A	N/A	N/A
HP System Management Homepage HPSBMU03380 Version: 7.5.4.3(1 Apr 2016)	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	N/A	N/A	N/A



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	INW Server	GE Hardware Acq/Review	Software Only System (XP)	Software Only System (Win7)
	NOTE: HPSBMU03051 must be installed before HPSBMU03380.			
MS15-034 KB3042553	https://www.microsoft.com/en-us/download/details.aspx?id=46480	N/A	N/A	https://www.microsoft.com/en-us/download/details.aspx?id=46501
MS14-068 KB3011780	https://www.microsoft.com/en-us/download/details.aspx?id=44966	N/A	N/A	N/A
MS14-066 KB2992611	https://www.microsoft.com/en-us/download/details.aspx?id=44618	MS14-066 KB2992611* - see note below table	MS14-066 KB2992611* - see note below table	https://www.microsoft.com/en-us/download/details.aspx?id=44633
HP System Management Homepage HPSBMU03051 Version: 7.3.3.1(19 Jun 2014)	http://h20564.www2.hp.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
MS14-016 KB2923392 (Domain Controller Only)	http://www.microsoft.com/en-us/download/details.aspx?id=42099	N/A	N/A	N/A
MS13-081 KB2884256	http://www.microsoft.com/en-in/download/details.aspx?id=40379	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=e82a6c5c-60a2-495d-befe-51e9c80522b6	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=e82a6c5c-60a2-495d-befe-51e9c80522b6	http://www.microsoft.com/en-in/download/details.aspx?id=40407
MS13-081 KB2868038	http://www.microsoft.com/en-in/download/details.aspx?id=40526	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=a13ead5b-d2fe-482d-8bbd-a85fc2e19e99	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=a13ead5b-d2fe-482d-8bbd-a85fc2e19e99	http://www.microsoft.com/en-in/download/details.aspx?id=40395
MS13-081 KB2864202	http://www.microsoft.com/en-in/download/details.aspx?id=40404	N/A	N/A	http://www.microsoft.com/en-in/download/details.aspx?id=40601
MS13-081 KB2862335	http://www.microsoft.com/en-in/download/details.aspx?id=40590	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=	http://www.microsoft.com/en-in/download/details.aspx?id=40409



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	INW Server	GE Hardware Acq/Review	Software Only System (XP)	Software Only System (Win7)
		afde3eb0-1773-4bbb-9f31-977dc19bcaca	afde3eb0-1773-4bbb-9f31-977dc19bcaca	
MS13-081 KB2862330	http://www.microsoft.com/en-in/download/details.aspx?id=40372	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=55040924-38b1-49fb-b93e-95293da6b2d5	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=55040924-38b1-49fb-b93e-95293da6b2d5	http://www.microsoft.com/en-in/download/details.aspx?id=40507
MS13-079 KB2853587 (Domain Controller Only)	http://www.microsoft.com/en-in/download/details.aspx?id=40025	N/A	N/A	N/A
MS13-065 KB2868623	http://www.microsoft.com/en-in/download/details.aspx?id=39885	N/A	N/A	http://www.microsoft.com/en-us/download/details.aspx?id=39809
MS13-062 KB2849470	http://www.microsoft.com/en-in/download/details.aspx?id=39899	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=0fd35735-82e1-4006-87b7-1a3e596d0f8d	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=0fd35735-82e1-4006-87b7-1a3e596d0f8d	http://www.microsoft.com/en-us/download/details.aspx?id=39890
MS13-049 KB2845690	http://www.microsoft.com/en-in/download/details.aspx?id=39221	N/A	N/A	http://www.microsoft.com/en-us/download/details.aspx?id=39217
MS13-018 KB2790655	http://www.microsoft.com/en-in/download/details.aspx?id=36651	N/A	N/A	http://www.microsoft.com/en-in/download/details.aspx?id=36694
MS13-001 KB2769369	http://www.microsoft.com/en-in/download/details.aspx?id=36336	N/A	N/A	http://www.microsoft.com/en-in/download/details.aspx?id=36274

* Microsoft XP SP3 Extended Support Patch – Only available to U.S. PSC contract or warranty customers. Contact GE Field Engineer for availability details.



MLCL v6.9.5 Security Updates

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 6.9.5 and must be applied first.
- 2) It is expected that some patches listed will already be on the system.
- 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) 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).

	INW Server	GE Hardware Acq/Review	Software Only System (XP)	Software Only System (Win7)
Operating System Platform	Windows Server 2008 R2 SP1	Windows XP SP3	Windows XP SP3	Windows 7 SP1
Security Patch				
MS17-010 KB4012598	N/A	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=9e189800-f354-4dc8-8170-7bd0ad7ca09a	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=9e189800-f354-4dc8-8170-7bd0ad7ca09a	N/A
MS17-013 KB4012583	N/A	https://www.microsoft.com/en-us/download/details.aspx?id=55460	https://www.microsoft.com/en-us/download/details.aspx?id=55460	N/A
CVE-2017-0176 KB4022747	N/A	https://www.microsoft.com/en-us/download/details.aspx?id=55465	https://www.microsoft.com/en-us/download/details.aspx?id=55465	N/A
CVE-2017-0222 IE8 KB4018271	N/A	https://www.microsoft.com/en-us/download/details.aspx?id=55474	https://www.microsoft.com/en-us/download/details.aspx?id=55474	N/A



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	INW Server	GE Hardware Acq/Review	Software Only System (XP)	Software Only System (Win7)
CVE-2017-0267 to 0280 KB4018466	N/A	https://www.microsoft.com/en-us/download/details.aspx?id=55437	https://www.microsoft.com/en-us/download/details.aspx?id=55437	N/A
CVE-2017-7269 KB3197835	N/A	https://www.microsoft.com/en-us/download/details.aspx?id=55425	https://www.microsoft.com/en-us/download/details.aspx?id=55425	N/A
CVE-2017-8461 KB4024323	N/A	https://www.microsoft.com/en-us/download/details.aspx?id=55429	https://www.microsoft.com/en-us/download/details.aspx?id=55429	N/A
CVE-2017-8487 KB4025218	N/A	https://www.microsoft.com/en-us/download/details.aspx?id=55469	https://www.microsoft.com/en-us/download/details.aspx?id=55469	N/A
CVE-2017-8543 KB4024402	N/A	https://www.microsoft.com/en-us/download/details.aspx?id=55439	https://www.microsoft.com/en-us/download/details.aspx?id=55439	N/A
CVE-2017-8552 KB4019204	N/A	https://www.microsoft.com/en-us/download/details.aspx?id=55452	https://www.microsoft.com/en-us/download/details.aspx?id=55452	N/A
KB3020369	https://www.microsoft.com/en-us/download/details.aspx?id=46828	N/A	N/A	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=f00e3c36-f5e3-465c-95d2-a84a22425868



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	INW Server	GE Hardware Acq/Review	Software Only System (XP)	Software Only System (Win7)
KB3125574 Convenience Rollup	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=6147e6c1-663b-41bc-9582-9579343857d9	N/A	N/A	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=7ed4c8c3-0f06-4227-99e3-e9f143394687
Reboot following convenience rollup	<u>Reboot Required</u>	N/A	N/A	<u>Reboot Required</u>
KB4022719 June 2017 Monthly Rollup	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=4aa2ed70-7c26-4727-bd11-6a98b6dd622c	N/A	N/A	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=b9815359-6aad-467e-8666-2351fad3c45
Reboot	<u>Reboot Required</u>	<u>Reboot Required</u>	<u>Reboot Required</u>	<u>Reboot Required</u>
KB4041681 October 2017 Monthly Rollup	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=cd0388fd-5aca-4a13-8417-c28e1d8b7dda Make the following Registry Change - Only on Domain Controller. Create this registry key if it doesn't exist: [HKEY_LOCAL_MACHINE\System\CurrentControlSet\Services\NTDS\Parameters] LdapEnforceChannelBinding=DWORD:1	N/A	N/A	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=8a346e85-6ae3-46aa-a9e1-2e70e760f61c



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MLCL v6.9.5 Firmware

HPSBPI02938 Pre-9/23/2013 Firmware •HP CP2025N printer	http://h20566.www2.hp.com/portal/site/hpsc/template.PAGE/public/kb/docDisplay/?spf_p.tpst=kbDocDisplay&spf_p.prp_kbDocDisplay=w_srp-navigationalState%3DdocId%253Demr_na-c04041432-2%257CdocLocale%253D%257CcalledBy%253D&javax.portlet.begCacheTok=com.vignette.cachetoken&javax.portlet.endCacheTok=com.vignette.cachetoken
HPSBPI02938 Pre-9/23/2013 Firmware •HP LaserJet Pro 400 Printer M401	http://h20566.www2.hp.com/portal/site/hpsc/template.PAGE/public/kb/docDisplay/?spf_p.tpst=kbDocDisplay&spf_p.prp_kbDocDisplay=w_srp-navigationalState%3DdocId%253Demr_na-c04041432-2%257CdocLocale%253D%257CcalledBy%253D&javax.portlet.begCacheTok=com.vignette.cachetoken&javax.portlet.endCacheTok=com.vignette.cachetoken
HPSBPI02938 Pre-9/23/2013 Firmware •HP LaserJet Pro 400 color Printer M451	http://h20566.www2.hp.com/portal/site/hpsc/template.PAGE/public/kb/docDisplay/?spf_p.tpst=kbDocDisplay&spf_p.prp_kbDocDisplay=w_srp-navigationalState%3DdocId%253Demr_na-c04041432-2%257CdocLocale%253D%257CcalledBy%253D&javax.portlet.begCacheTok=com.vignette.cachetoken&javax.portlet.endCacheTok=com.vignette.cachetoken
HPSBPI02938 Pre-9/23/2013 Firmware •HP LaserJet P2035N	N/A
HPSBPI02938 Pre-9/23/2013 Firmware •HP LaserJet 2300	N/A
RICOH SP4100N	N/A
RICOH AP410N	N/A
RICOH CL3500N	N/A
RICOH CL3000	N/A



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	INW Server	GE Hardware Acq/Review	Software Only System (XP)	Software Only System (Win7)
Operating System Platform	Windows Server 2008 R2 SP1	Windows XP SP3	Windows XP SP3	Windows 7 SP1
Current Unqualified Vulnerability	MS16-077: Security Update for WPAD (KB 3165191), HPSBMU03593 KB4025337(CVE-2017-8589, CVE-2017-8582, CVE-2017-8565, CVE-2017-8563, CVE-2017-8495, CVE-2017-8486) KB4034679(CVE-2017-8620, CVE-2017-0174, CVE-2017-8633) KB4048960(CVE-2017-11788) KB4056897(CVE-2018-0747) KB4054172(CVE-2018-0764) KB4054176(CVE-2018-0764) HPESBHF03805 rev.10 KB4088878 (CVE-2018-0886) KB4093108 (CVE-2018-8116) SP84968 KB4095514(CVE-2018-0765) KB4095519(CVE-2018-0765) KB4103712(CVE-2018-0886) KB4284867 (CVE-2018-8225)	N/A	N/A	MS16-077: Security Update for WPAD (KB 3165191) KB4025337(CVE-2017-8589, CVE-2017-8582, CVE-2017-8565, CVE-2017-8563, CVE-2017-8495, CVE-2017-8486) KB4034679(CVE-2017-8620, CVE-2017-0174, CVE-2017-8633) KB4048960(CVE-2017-11788) KB4056897(CVE-2018-0747) KB4054172(CVE-2018-0764) KB4054176(CVE-2018-0764) HPESBHF03805 rev.10 KB4088878 (CVE-2018-0886) KB4093108 (CVE-2018-8116) SP84160 KB4095514(CVE-2018-0765) KB4095519(CVE-2018-0765) KB4103712(CVE-2018-0886) KB4284867 (CVE-2018-8225)
Security Patch				
MS15-127 KB3100465	https://www.microsoft.com/en-us/download/details.aspx?id=50127	N/A	N/A	N/A



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	INW Server	GE Hardware Acq/Review	Software Only System (XP)	Software Only System (Win7)
(Domain Controller only)				
HP System Management Homepage HPSBMU03380 Version: 7.5.4.3(1 Apr 2016)	https://h20566.www2.hp.com/hpsc/swd/public/detail?idx=&action=driverDocument&itemLocale=&swItemId=MTX544617581c264c8eaaf6b273a&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
Windows Server 2008 R2 SP1 KB976932	Pre-Installation Requirement - Turn On Windows Update Service Configuration instruction section. http://www.microsoft.com/en-us/download/details.aspx?id=5842 Post-Installation Requirement - Turn Off Windows Update Service Configuration instruction section.	N/A	N/A	N/A
2007 Microsoft Office Suite SP3 KB2526086	N/A	http://www.microsoft.com/en-us/download/details.aspx?id=27838	http://www.microsoft.com/en-us/download/details.aspx?id=27838	N/A
Service Pack 3 for Office Language Pack 2007 KB2526086	N/A	http://www.microsoft.com/en-us/download/details.aspx?id=27829	http://www.microsoft.com/en-us/download/details.aspx?id=27829	N/A



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	INW Server	GE Hardware Acq/Review	Software Only System (XP)	Software Only System (Win7)
MS15-034 KB3042553	https://www.microsoft.com/en-us/download/details.aspx?id=46480	N/A	N/A	https://www.microsoft.com/en-us/download/details.aspx?id=46501
MS14-068 KB3011780	https://www.microsoft.com/en-us/download/details.aspx?id=44966	N/A	N/A	N/A
MS14-066 KB2992611	https://www.microsoft.com/en-us/download/details.aspx?id=44618	MS14-066 KB2992611* - see note below table	MS14-066 KB2992611* - see note below table	https://www.microsoft.com/en-us/download/details.aspx?id=44633
MS14-031 KB2957189	https://www.microsoft.com/en-us/download/details.aspx?id=43143	N/A	N/A	http://www.microsoft.com/en-us/download/details.aspx?id=43147
HP System Management Homepage HPSBMU03051 Version: 7.3.3.1(19 Jun 2014)	http://h20564.www2.hp.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
MS14-016 KB2923392 (Domain Controller only)	http://www.microsoft.com/en-us/download/details.aspx?id=42099	N/A	N/A	N/A
MS13-081 KB2884256	http://www.microsoft.com/en-us/download/details.aspx?id=40379	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=e82a6c5c-60a2-495d-befe-51e9c80522b6	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=e82a6c5c-60a2-495d-befe-51e9c80522b6	http://www.microsoft.com/en-us/download/details.aspx?id=40407
MS13-081 KB2868038	http://www.microsoft.com/en-us/download/details.aspx?id=40526	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=a13ead5b-d2fe-482d-8bbd-a85fc2e19e99	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=a13ead5b-d2fe-482d-8bbd-a85fc2e19e99	http://www.microsoft.com/en-us/download/details.aspx?id=40395
MS13-081 KB2864202	http://www.microsoft.com/en-us/download/details.aspx?id=40404	N/A	N/A	http://www.microsoft.com/en-us/download/details.aspx?id=40601
MS13-081	http://www.microsoft.com/en-	http://catalog.update.microsoft.com/v7	http://catalog.update.microsoft.com/v7	http://www.microsoft.com/en-



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	INW Server	GE Hardware Acq/Review	Software Only System (XP)	Software Only System (Win7)
KB2862335	us/download/details.aspx?id=40590	/site/ScopedViewInline.aspx?updateid=afde3eb0-1773-4bbb-9f31-977dc19bcaca	/site/ScopedViewInline.aspx?updateid=afde3eb0-1773-4bbb-9f31-977dc19bcaca	us/download/details.aspx?id=40409
MS13-081 KB2862330	http://www.microsoft.com/en-us/download/details.aspx?id=40372	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=55040924-38b1-49fb-b93e-95293da6b2d5	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=55040924-38b1-49fb-b93e-95293da6b2d5	http://www.microsoft.com/en-us/download/details.aspx?id=40507
MS13-079 KB2853587 (Domain Controller only)	http://www.microsoft.com/en-us/download/details.aspx?id=40025	N/A	N/A	N/A
MS13-065 KB2868623	http://www.microsoft.com/en-us/download/details.aspx?id=39885	N/A	N/A	http://www.microsoft.com/en-us/download/details.aspx?id=39809
MS13-062 KB2849470	http://www.microsoft.com/en-us/download/details.aspx?id=39899	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=0fd35735-82e1-4006-87b7-1a3e596d0f8d	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=0fd35735-82e1-4006-87b7-1a3e596d0f8d	http://www.microsoft.com/en-us/download/details.aspx?id=39890
MS13-049 KB2845690	http://www.microsoft.com/en-us/download/details.aspx?id=39221	N/A	N/A	http://www.microsoft.com/en-us/download/details.aspx?id=39217
MS13-018 KB2790655	http://www.microsoft.com/en-us/download/details.aspx?id=36651	N/A	N/A	http://www.microsoft.com/en-us/download/details.aspx?id=36694
MS13-001 KB2769369	http://www.microsoft.com/en-us/download/details.aspx?id=36336	N/A	N/A	http://www.microsoft.com/en-us/download/details.aspx?id=36274
MS12-054 KB2705219	http://www.microsoft.com/en-us/download/details.aspx?id=30492	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=aeb95635-30b8-4316-ac16-f4be037320a4	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=aeb95635-30b8-4316-ac16-f4be037320a4	http://www.microsoft.com/en-us/download/details.aspx?id=30547
MS12-054 KB2712808	http://www.microsoft.com/en-us/download/details.aspx?id=30555	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=	http://www.microsoft.com/en-us/download/details.aspx?id=30535



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	INW Server	GE Hardware Acq/Review	Software Only System (XP)	Software Only System (Win7)
		a506f3f3-d548-4093-8870-e2cb364d02f6	a506f3f3-d548-4093-8870-e2cb364d02f6	
MS12-053 KB2723135	N/A	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=b3a7222c-310e-44b5-9242-c2b378e76f26	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=b3a7222c-310e-44b5-9242-c2b378e76f26	N/A
MS12-036 KB2685939	http://www.microsoft.com/en-us/download/details.aspx?id=30021	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=78d6bd61-50c5-43d3-ace6-1cd82c8e4a6b	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=78d6bd61-50c5-43d3-ace6-1cd82c8e4a6b	http://www.microsoft.com/en-us/download/details.aspx?id=30087
MS12-020 KB2621440	http://www.microsoft.com/en-us/download/details.aspx?displaylang=en&id=29116	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=6616ac60-d0df-4e7e-afc8-99e7f201a638	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=6616ac60-d0df-4e7e-afc8-99e7f201a638	http://www.microsoft.com/download/en/details.aspx?displaylang=en&id=29132
MS12-020 KB2667402	http://www.microsoft.com/en-us/download/details.aspx?displaylang=en&id=29169	N/A	N/A	http://www.microsoft.com/en-us/download/details.aspx?displaylang=en&id=29145
MS12-017 KB2647170 (Domain Controller Only)	http://www.microsoft.com/en-us/download/details.aspx?displaylang=en&id=29164	N/A	N/A	N/A
MS12-005 KB2584146	http://www.microsoft.com/download/en/details.aspx?displaylang=en&id=28620	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=56b2ce05-c7b8-4c02-8093-833ffb1166ea	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=56b2ce05-c7b8-4c02-8093-833ffb1166ea	http://www.microsoft.com/download/en/details.aspx?displaylang=en&id=28597
MS12-004 KB2598479	N/A	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=13302bb8-e02d-4453-87dc-c2350c4a8a56	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=13302bb8-e02d-4453-87dc-c2350c4a8a56	N/A



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	INW Server	GE Hardware Acq/Review	Software Only System (XP)	Software Only System (Win7)
MS12-004 KB2631813	http://www.microsoft.com/download/en/details.aspx?displaylang=en&id=28617	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=5ed104d6-bcbd-42df-bea3-9d79c1f67516	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=5ed104d6-bcbd-42df-bea3-9d79c1f67516	http://www.microsoft.com/en-us/download/details.aspx?displaylang=en&id=28595
MS11-083 KB2588516	http://www.microsoft.com/download/en/details.aspx?displaylang=en&id=27894	N/A	N/A	http://www.microsoft.com/download/en/details.aspx?displaylang=en&id=27902
MS11-065 KB2570222	N/A	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=bc650c75-d11a-4b8e-9cb8-b505335a5d95	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=bc650c75-d11a-4b8e-9cb8-b505335a5d95	N/A
MS11-064 KB2563894	http://www.microsoft.com/download/en/details.aspx?displaylang=en&id=27074	N/A	N/A	http://www.microsoft.com/download/en/details.aspx?displaylang=en&id=27052
MS11-063 KB2567680	http://www.microsoft.com/download/en/details.aspx?displaylang=en&id=27039	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=a65a95ea-8da5-4961-be35-ff11252f5430	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=a65a95ea-8da5-4961-be35-ff11252f5430	http://www.microsoft.com/download/en/details.aspx?displaylang=en&id=27025
MS11-062 KB2566454	N/A	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=5feaa407-3d5b-4bda-abc9-33cd58b5ac15	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=5feaa407-3d5b-4bda-abc9-33cd58b5ac15	N/A
MS11-089 KB2596785	N/A	http://www.microsoft.com/download/en/details.aspx?displaylang=en&id=28512	http://www.microsoft.com/download/en/details.aspx?displaylang=en&id=28512	http://www.microsoft.com/download/en/details.aspx?displaylang=en&id=28512
MS11-058 KB2562485 (Domain Controller only)	http://www.microsoft.com/en-us/download/details.aspx?id=27027	N/A	N/A	N/A

* Microsoft XP SP3 Extended Support Patch – Only available to U.S. PSC contract or warranty customers. Contact GE Field Engineer for availability details.



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MLCL v6.9 Security Updates

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 and must be applied first.
- 2) It is expected that some patches listed will already be on the system.
- 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) 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).

	INW Server	GE Hardware Acq/Review	Software Only System (XP)	Software Only System (Win7)
Operating System Platform	Windows Server 2008 R2 SP1	Windows XP SP3	Windows XP SP3	Windows 7 SP1
Security Patch				
MS17-010 KB4012598	N/A	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=9e189800-f354-4dc8-8170-7bd0ad7ca09a	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=9e189800-f354-4dc8-8170-7bd0ad7ca09a	N/A
MS17-013 KB4012583	N/A	https://www.microsoft.com/en-us/download/details.aspx?id=55460	https://www.microsoft.com/en-us/download/details.aspx?id=55460	N/A
CVE-2017-0176 KB4022747	N/A	https://www.microsoft.com/en-us/download/details.aspx?id=55465	https://www.microsoft.com/en-us/download/details.aspx?id=55465	N/A
CVE-2017-0222 IE8 KB4018271	N/A	https://www.microsoft.com/en-us/download/details.aspx?id=55474	https://www.microsoft.com/en-us/download/details.aspx?id=55474	N/A



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	INW Server	GE Hardware Acq/Review	Software Only System (XP)	Software Only System (Win7)
CVE-2017-0267 to 0280 KB4018466	N/A	https://www.microsoft.com/en-us/download/details.aspx?id=55437	https://www.microsoft.com/en-us/download/details.aspx?id=55437	N/A
CVE-2017-7269 KB3197835	N/A	https://www.microsoft.com/en-us/download/details.aspx?id=55425	https://www.microsoft.com/en-us/download/details.aspx?id=55425	N/A
CVE-2017-8461 KB4024323	N/A	https://www.microsoft.com/en-us/download/details.aspx?id=55429	https://www.microsoft.com/en-us/download/details.aspx?id=55429	N/A
CVE-2017-8487 KB4025218	N/A	https://www.microsoft.com/en-us/download/details.aspx?id=55469	https://www.microsoft.com/en-us/download/details.aspx?id=55469	N/A
CVE-2017-8543 KB4024402	N/A	https://www.microsoft.com/en-us/download/details.aspx?id=55439	https://www.microsoft.com/en-us/download/details.aspx?id=55439	N/A
CVE-2017-8552 KB4019204	N/A	https://www.microsoft.com/en-us/download/details.aspx?id=55452	https://www.microsoft.com/en-us/download/details.aspx?id=55452	N/A
KB3020369	https://www.microsoft.com/en-us/download/details.aspx?id=46828	N/A	N/A	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=f00e3c36-f5e3-465c-95d2-a84a22425868



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	INW Server	GE Hardware Acq/Review	Software Only System (XP)	Software Only System (Win7)
KB3125574 Convenience Rollup	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=6147e6c1-663b-41bc-9582-9579343857d9	N/A	N/A	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=7ed4c8c3-0f06-4227-99e3-e9f143394687
Reboot following convenience rollup	<u>Reboot Required</u>	N/A	N/A	<u>Reboot Required</u>
KB4022719 June 2017 Monthly Rollup	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=4a2ed70-7c26-4727-bd11-6a98b6dd622c	N/A	N/A	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=b9815359-6aad-467e-8666-2351fad3c45
Reboot	<u>Reboot Required</u>	<u>Reboot Required</u>	<u>Reboot Required</u>	<u>Reboot Required</u>
KB4041681 October 2017 Monthly Rollup	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=cd0388fd-5aca-4a13-8417-c28e1d8b7dda Make the following Registry Change - Only on Domain Controller. Create this registry key if it doesn't exist: [HKEY_LOCAL_MACHINE\System\CurrentControlSet\Services\NTDS\Parameters] LdapEnforceChannelBinding=DWORD:1	N/A	N/A	http://catalog.update.microsoft.com/v7/site/ScopedViewInline.aspx?updateid=8a346e85-6ae3-46aa-a9e1-2e70e760f61c



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MLCL v6.9 Firmware

HPSBPI02938 Pre-9/23/2013 Firmware •HP CP2025N printer	http://h20566.www2.hp.com/portal/site/hpsc/template.PAGE/public/kb/docDisplay/?spf_p.tpst=kbDocDisplay&spf_p.prp_kbDocDisplay=wsrp-navigationalState%3DdocId%253Demr_na-c04041432-2%257CdocLocale%253D%257CcalledBy%253D&javax.portlet.begCacheTok=com.vignette.cachetoken&javax.portlet.endCacheTok=com.vignette.cachetoken
HPSBPI02938 Pre-9/23/2013 Firmware •HP LaserJet Pro 400 Printer M401	http://h20566.www2.hp.com/portal/site/hpsc/template.PAGE/public/kb/docDisplay/?spf_p.tpst=kbDocDisplay&spf_p.prp_kbDocDisplay=wsrp-navigationalState%3DdocId%253Demr_na-c04041432-2%257CdocLocale%253D%257CcalledBy%253D&javax.portlet.begCacheTok=com.vignette.cachetoken&javax.portlet.endCacheTok=com.vignette.cachetoken
HPSBPI02938 Pre-9/23/2013 Firmware •HP LaserJet Pro 400 color Printer M451	http://h20566.www2.hp.com/portal/site/hpsc/template.PAGE/public/kb/docDisplay/?spf_p.tpst=kbDocDisplay&spf_p.prp_kbDocDisplay=wsrp-navigationalState%3DdocId%253Demr_na-c04041432-2%257CdocLocale%253D%257CcalledBy%253D&javax.portlet.begCacheTok=com.vignette.cachetoken&javax.portlet.endCacheTok=com.vignette.cachetoken
HPSBPI02938 Pre-9/23/2013 Firmware •HP LaserJet P2035N	N/A
HPSBPI02938 Pre-9/23/2013 Firmware •HP LaserJet 2300	N/A
RICOH SP4100N	N/A
RICOH AP410N	N/A
RICOH CL3500N	N/A
RICOH CL3000	N/A



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Contact Information

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

Notes:

Microsoft Windows Server 2008 R2 SP1 Security Patch Support

For MLCL v6.9, since Windows Server 2008 R2 security patch support ended April 2013, Microsoft Windows Server 2008 R2 Service Pack 1 - KB976932, 2007 Microsoft Office Suite SP3 - KB2526086, Microsoft Office 2007 Language Pack SP3 - KB2526086 is a prerequisite for installation of security patches past MS12-054 KB2712808.