

# HP Server Automation

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## Technical Note: Windows<sup>®</sup> Patching – Multi Binary Issue

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## Problem

Current Windows Patching in HP Server Automation (SA) assumes that Windows® patches contain only a single binary. This behavior was correct until a few years ago when Microsoft changed their patches format to include multiple binaries.

Microsoft may release multiple binaries for various reasons, such as:

- 1) A software package has 32 bit and 64 bit variants; hence, Microsoft releases a patch containing both the binaries.
- 2) A patch needs to update more than one product; hence, Microsoft releases a patch containing multiple binaries.

If multiple binaries are released in a collection, SA windows patching cannot handle the scan and update.

## Short Term Solution

The second Tuesday of every month is commonly referred as Patch Tuesday. On Patch Tuesday, Microsoft releases the security patches, critical patches, and a patch catalog. The Server Automation engineering team validates the patches and the patch catalog, and immediately releases an SA Python Hotfix or instructions for Server Automation customers.

There are a few issues with how SA currently handles these multi-binary Windows patches. A long term resolution to this is underway. For the short term, the following instructions provide guidance on how to resolve the most commonly recognized issues with deploying multi-binary Windows patches on SA.

**Perform one of the following steps according to the Windows patching issue occurring in your system:**

- 1) Use the single MSU binary, if available from Microsoft.
  - a) If Microsoft has provided a patch bundle file that includes the multiple binaries, an SA Python script is provided to swap the multiple binary with a single bundle file. The bundle (\*.msu) files are typically available for Windows Vista & Windows Server 2008.
  - b) Run the SA Python Hotfix script and then re-import the specific Windows patch.
    - i) The SA Python Hotfix script overwrites the URL for downloading patches that contain multiple binaries and replaces it with the URL for downloading patches that contain a single binary.
    - ii) The single binary is typically an \*.msu format bundle containing multiple binaries.
- 2) Reinstall the binary that was removed by the SA Python Hotfix.
  - a) When you run the SA Python Hotfix script for Microsoft patch duplicates, it may remove what it recognizes as the least important MS patch information from the SA database.

For example, for a 64-bit OS, the script might remove the 32-bit patch.

- b) Please check to see if it removed any patches that your setup requires.
- c) If your setup requires one of the removed patches, re-download it and re-install it:
  - i) Re-download the deleted binary from the Microsoft site, and give it a different name.
  - ii) Attach the removed binary to the SA patch policy and then remediate the server against the patch policy.

For example, download the 32-bit patch binary that was removed, and remediate the server using an SA patch policy.

3) Use the SA fix-it script to resolve issues of redundant short names for discrete patches.

- a) There is a deployment problem with discrete binaries that share the same short name. These binaries actually apply to different product versions and have different long names; but they have the same short name.

For example: Microsoft’s security bulletin MS11-025 applies to multiple products Visual Studio 2008, Visual Studio 2005:

Product	Short Name	Long Name
Visual Studio 2008	Vcredist_x64.exe	vcredist_x64_a7c83077b8a28d409e36316d2d7321fa0ccdb7e8.exe
Visual Studio 2005	Vcredist_x64.exe	vcredist_x64_ee916012783024dac67fc606457377932c826f05.exe

Some customers have both of the Visual Studio products installed on a managed server (QCIM1D136873), or they may have the C Runtime for one or both of the products installed. Any of these cases can generate the error: “Checksum errors during Remediation.”

Since the short file names are the same for both the patches (e.g., vcredist\_x64.exe), using the short names will cause these files to be overwritten during the download process, leading to the Checksum errors.

- b) To solve this issue, the HP SA team provides a fixit script to change the short name to long names, consistent with the HPLN Patch Supplement.

Using short names is the main reason for this issue. The long name can be extracted from the download URL property for each patch.

## Long Term Solution

The Server Automation team is working on a long term solution where SA natively handles multiple binaries in Windows patches. The solution will eliminate the work performed by SA team on Patch Tuesdays.

The key design changes are:

- 1) The scanner that runs on the Managed Server will be augmented to return the Microsoft -provided unique ID of the individual patch.

- 2) The server-side components will be modified to use the Microsoft -provided unique ID of the individual patch.
- 3) The patch import code will be changed to use the long file names instead of the short file names.

## Known Multi-binary Issues and Short Term Fixes

This table is the schedule of the known multi-binary issues and short term fixes that have been released:

Known Issue	Short Term Fix
MS11-069	08/09/2011
MS11-068	08/09/2011
MS11-066	08/09/2011
MS11-061	08/09/2011
MS11-049	06/14/2011
MS11-044	06/14/2011
MS11-039	06/14/2011
MS11-028	04/12/2011
MS11-025	04/12/2011
MS11-011	02/08/2011
MS11-004	02/08/2011
MS11-003	02/08/2011
MS10-077	10/12/2010

Known Issue	Short Term Fix
MS10-070	09/28/2010
MS10-060	08/10/2010
MS10-047	08/10/2010
MS10-041	06/08/2010
MS10-024	04/13/2010
MS10-021	04/13/2010
MS10-019	04/13/2010
MS10-015	03/09/2010
MS09-061	10/14/2009
MS09-035	08/11/2009
MS09-004	02/10/2009
MS09-003	02/10/2009

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