



## VPE Software: SoloVPE Software Version 3.1 Release Notes

**Abstract:** This document provides detailed Release Note Information for Version 3 of the SoloVPE Software Suite (SV3).

**Applicability:** This article applies to Version 3.1 SoloVPE Software Suite which is a bundled software release consisting of the core SoloVPE Software Components and co-versioned optional add-on software products of SecureVPE and QuickVCA. Versioning is constructed from a Major ID, Minor ID and Build ID. (E.g. X.Y.zzz.0) where “X” represent the Major ID, “Y” represents the Minor ID and “zzz” represents the Build ID. The releases are documented according to the Major and Minor release ID’s since Build ID’s are subject to frequent changes not all associated with changes to the software. The trailing zero is not utilized in the current versioning codification.

**Symptom:** N/A

**Cause:** N/A

### Detailed Info:

Version 3.1 of the SoloVPE Software Suite was released for General Availability on March 1<sup>st</sup>, 2017 following the successful completion of the Release Candidate Validation protocol. This document serves as the inception release note KBA for the Version 3.1 release and will be revised with updated information in the event of future maintenance releases, patches and new sub-system or feature roll outs. It is intended to provide a detailed information about the software product for those groups and individuals responsible for selecting, using, configuring, implementing and validating the software products that are an integral part of C Technologies, Inc.’s variable pathlength SoloVPE system. For customers considering migration from Version 2.X this document should be reviewed in conjunction with the KBA Version 3 Release Notes KB16006 as Version 3.1 is in effect a maintenance release for Version 3.0.

### **RELEASE NOTES for Version 3.1.zzz.0**

#### *Computer System & Hardware Requirements:*

- SV3.1 has been validated for use with the Agilent Cary 60
  - SV3 has been tested with the Varian/Agilent Cary 50. General functionality was observed, however, limitations were noted that prevented full validation with the hardware platform.
  - CTI recommends upgrading the SoloVPE System to use an Agilent Cary 60 and customer electing to use Version 3.x with a Cary 50 should do so with an expectation of “As Is” performance with limited software support on that platform.
- SV3.1 has been validated for use with all hardware versions of the SoloVPE hardware when used with an Agilent Cary 60.
- SV3.1 Requires Microsoft .Net 4.5 Framework or later.
- SV3.1 Requires that the Windows User Access Control be enabled for installation, and it is strongly recommended it be enabled at the Default level for normal usage.
- SV3.1 still requires the Agilent Cary WinUV environment to run. It has been validated for use the Cary WinUV Version 5.X platform

- Cary WinUV 5 Version 5.0.1004 introduced support for Windows 7 64-Bit installations.
- Cary 50 Users can upgrade to Version 5.x however, they are limited to Windows 7 32-Bit installations because 64-Bit drivers are not available for the Cary 50 hardware. Such an implementation will require a computer with a Full Size PCI Slot on the motherboard and two (2) PCI slots on the computer chassis.
- SV3.1 has been validated for use with Cary WinUV Version 5.1.0.1019 which supports the Windows 10 operating system for the Cary 60. Earlier version of Cary WinUV are not supported in Windows 10.
- Service Contract holders may be entitled to upgrades of the SoloVPE Software however that does not include free upgrades of Cary WinUV software which is licensed in compliance with the Agilent EULA and licensing rules. Therefore, customers wishing to upgrade to Windows 10 should expect to purchase an additional license of the Cary WinUV software when upgrading their SoloVPE System.
- SV3.1 has not be validated for use nor tested with the Agilent Cary WinUV Software with Spectroscopy Configuration Manager and Spectroscopy Database Administrator (SCM/SDA) (Pharma Package).
- *Computer Hardware*
  - SV3.1 will function properly when used on the computer hardware recommended in the Agilent Cary 60 User Manual.
  - SV3.1 Validation Testing was performed using the Standard Production Computer System:
    - Dell Optiplex 3020
      - Intel Core i3-4160 (Dual Core 3.6GHz 3MB w/HD4400 Graphics)
      - 4GB 1600 MHz DDR Non-ECC RAM
      - 3.5 inch 500GB 7200rpm Hard Disk Drive
      - Intel Integrated Graphics – Dell OptiPlex
      - Windows 7 64-Bit
      - Windows 10 64-Bit
    - Panasonic Toughbook CF-53
      - Intel Core i5-4310U with Turbo Boost to 2.90GHz
      - 4GB DDR3 RAM
      - 320GB 5400rpm Hard Disk Drive
      - Windows 7 32-Bit
      - Windows 10 64-Bit
  - Improved performance was noted during testing on i5/i7 processor systems with additional RAM and Solid Stated Drive technology.

### ***Features, Functions & Structural Changes:***

SV3.1 Was developed as a maintenance release or service pack release for Version 3.0. For those customer examining a comparison with the version 2 software it is important to notes that SV3.1 includes all of the changes made in SV3.0 as well as a variety of changes such as planned enhancements, fixes, some customer requested enhancements and minor performance improvements. For the details on SV3.0, please review Knowledge Base Article: KB16006. The details changes in SV3.1 are as follows:

#### *General Changes*

- Updated package installer with Cary WinUV 5.1.0.1019 installation bundle.
- Installer verified that UAC is enabled prior to installation. If UAC is not enabled the installer will not continue and alert the user to enable UAC and try again.

- Installer prevents SoloVPE Software installation when Cary WinUV is not installed.
- Improved component registration during installation and made process more fault tolerant for more robust installation, registration and licensing.
- Introduced the “VPE Service” engine which is a new feature that creates the ability to change the ownership of Locally saved files to the Administrator of the network to which to the SoloVPE System computer has been joined, thus creating an added security tool for securing locally saved files. This feature is not installed and remains disabled by default however, the capability is introduced in SV3.1
- Incorporated an optional feature into the VPE Service engine that allows Administrators to toggle the Cary WinUV Menu Bar and Hot Key functionality on and off. This functionality is off by default and has been provides as and Advance Preview (AP) feature for advanced users open to evaluating investigational capabilities.
- Introduced a protective feature that prevents the SoloVPE Software if the SoloVPE Administration software has not been successful installed and properly configured as part of the installation process. This feature is enforced only upon initial installation and is there to prevent inadvertent damage to the hardware.
- Corrected issue that causes licensing check failure for temporary one day licenses sometimes used during service and troubleshooting (No Customer Impact – Service Group Only)
- Implemented a Network Connectivity failure trap that releases control to the user rather than resulting in a software lock and quit event. If necessary, as an ultimate failsafe the software will attempt to create an emergency save batch file to the Public Documents folder.
- Added an Export/Import capability to the Extinction Coefficient Library app.
- Added a Solo Parameter *Safety Path* that allows Administrators to define the Safe Save Folder for Emergency Saves. This helps ensure that consideration is given to making sure that permissions to this customer specified folder remains properly set.
- Improved the Safety Save event handling to increase the reliability of the feature by accounting for more potential failure scenarios and network loss events.
- Optimized coding of network interactions to expand OOB compatibility for a wider array of network policies and configuration and to improve overall performance on security transactions.
- Added UAC enforcement to repair and change actions initiated under the Add/Remove Programs functionality in Windows.
- Added the Add Manual Audit Log Entry Feature into SoloVPE Administration

*The SoloVPE Software – The core module delivering the power of Slope Spectroscopy*

- Corrected pathing to image files in Quick Check to ensure properly display of GUI graphics.
- Re-implemented the populated of the User Data Form in Quick Slope with the ability to deal with the multi-wavelength and multi-extinction coefficient data acquisition capabilities introduced in SV3.
- Fixed a potentially issue that could result in Override eSignatures getting locked out even if proper credentials were entered and force cleared incorrect password entries automatically.
- Eliminated the 0 KB file creation issue that occurs when the Autosave File Target is specified as a folder where the current user lacks Delete permissions in both the SoloVPE and the QuickVCA software stemming from a discovered Windows API constraint that attempts to save a test file confirming user access rights.
- Corrected intermittent issue that would occasionally prevent the hierarchical deployment of the Default Save Path for displaying the correct Default Path, most commonly seen when the user specific personalization settings were used but not universally employed. Created an ultimate fall back path to create a fails safe storage location in the event of data entry issues.
- Corrected issue that prevent the EC Library Entry selected from properly displaying on the Quick Slope report.

- Added the ability to set the Report Graph display status in the SoloVPE Administration software which can positively impact the rendering of printed (PDF) reports to prevent unwanted wrapping of report text around the Graphics Region when included for printing.
- In Quick Slope the Save Method button is now disabled when the Method is Modified. Save Method gets re-enabled when Set Method is clicked to commit the method changes.
- Worked to optimize code to try and improve overall software performance and speed up latency issues associated with Cary WinUV dependencies.
- Eliminated potential issue in Quick Slope when using Multi-Wavelength Quick Slope data acquisition that results in the unexpected stop in the software when the algorithm detects exceptionally high slope data at all wavelengths.
- Clarified the User Result display in the Quick Slope report to show a single result rather than incremental calculation data for clarity of reporting.
- Fixed an issue with the Rep Count Parameter that prevented proper functioning and expanded the Rep Count field with to improve the display with high Rep Count options.
- Added additional Solo parameters (Initial Rep Delay, Double Zero Step) in anticipation of future use.
- Improved data entry validation of Fixed Slope parameters to prevent impossible methods and unexpected behaviors.
- Corrected Quick Slope Report display issue which had User Result results being displayed in Extinction Coefficient Value columns of Quick Slope Report when the Extinction Coefficient values are not being used with all wavelengths being collected.
- Added Solo parameter to the SoloVPE Administration program to toggle display of the Quick Slope Search Section datasets. Set the default value of the parameter to True in order to display and save search section data by default.
- Fixed an issue that was preventing the successful configuration the Splash Screen auto close feature.
- Added an Open Data button to the Quick Slope window.

#### *The SecureVPE Software – Advanced security and compliance capabilities for the SoloVPE System*

- Improved “Prevent Saves to Local Drive” secure point enforcement to look at all workstation fixed media instead of just the drive on which the program is installed.
- Added the ability in SecureVPE call up the list of Group Members by Double-Clicking the Group Name in the Groups tab.
- Added secure point “Allow Default Path Subfolders” to make constrained saves to a default folder tolerant of subfolders. Made this parameter a modified for all Default Pathing constraints controlled by CTI in the environment.
- Added a simple report window that summarizes SecureVPE settings. The report can be printed or saved from the window.
- QuickVCA Secure Points have been added to more closely mirror the Autosave and File Path Secure Points available in the SoloVPE software.

#### *The QuickVCA Software – Validation test suite supporting the SoloVPE Validation Cuvette Adapter*

- QuickVCA (QVCA) has been updated with more secure points in cooperation with SecureVPE to more closely mirror the Autosave and File Path Secure Points available in the SoloVPE software.
- Updated the Wavelength Accuracy Test to calculate and report the mean and standard deviation for six replicates across seven wavelengths. And added the ability to set a pass/fail tolerance to the result.
- Updated the Photometric Accuracy Test to calculate and report the mean and standard deviation for six replicates for the test results. And added the ability to set a pass/fail tolerance to the result.

- Updated the Photometric Accuracy Test to allow for serial measurement of difference concentrations of Potassium Dichromate.
- Added the ability to specify the number of peaks to test for in the Wavelength Accuracy test.
- Added secure points to restrict Method and Report Modifications to great more symmetry between the SoloVPE Software secure points and the QuickVCA secure points.

### *Migration*

- Version 3.1 is Windows 10 compliant however, it must run in Cary WinUV Version 5.1.0.1019 or later. There is no direct upgrade path from Cary WinUV 5.0.x.x to 5.1.x.x and installations must start from scratch.
  - Cary WinUV 5.1.x.x is not a free update offered from Agilent. Customers will need to purchase a new license of 5.1.x.x because 5.0.x.x. licenses cannot be deactivated and are not transferable to the version 5.1.x.x
- Direct Software Upgrades are not possible from Version 2 or earlier.
- User Self Installation and upgrading is not recommended for customers migrating from Version 1 or Version 2.
- Version 1 or 2 users should review knowledge base article KB16-006 for more detailed information regarding migration from pre-Version 3.0.x.
- Experienced users should consult with Solo Service before attempting an upgrade from version 3.0.x to Version 3.1 to resolve any questions or concerns. As is the case with all software upgrades, a complete backup of the existing system should be made and verified prior to initiation and upgrades or changes to the computer system.
- Customers upgrading from Version 3.0.X to Version 3.1 should perform a complete security setting review because secure point migration is not to be presumed due to the addition and modification of security points in Version 3.1
- Updated installer to preferentially target local drive letter C:\ rather than defer to drive space availability rules increase installer reliability on multi-disk systems.

### *[Build 210 Updates]*

- Restored the ability of Administrators to manually type pathing entries into path specifying Solo Parameters in the *Solo Administration* application rather than restrict them to the Browse feature.
- Adapted the QuickVCA Save Method and Save Data events to tolerate a wider array of customer controlled security settings.

### *[Build 229 Updates]*

- Resolved an issue with redundant/repetitive Solo Parameter appends when running upgrades on top of 3.0.x versions. This is not an issue for clean 3.1.x installations.
- Updated the High Abs Threshold Alert evaluation to be consistent with Version 2 of the SoloVPE Software by looking at the Average Absorbance of the Quick Slope Section Data instead of the Max Absorbance value of the Quick Slope Section Data.
- Made Sidebar locking behavior consistent between Quick Slope and Quick Survey.
- Added pre-verification of System ID prior to new license addition.
- Clarified the Baseline-Scatter Correction Validation message to eliminate references to Simple Raleigh Scatter Correction which was never incorporated into Version 3 of the software.
- Clarified the Fixed Slope Data Point validation message box.
- Updated the VPE System Service to try to make Automatic Startup more reliable for a wider range of system configurations and eliminate the Delayed Startup workaround.

- Made the Safety Path apply to both Network Loss Emergency Saves and the general Autosave Failure safety save events for consistency behaviors rather than having the Autosave Failure save go to the Public Documents subfolder structure.
- Forced the Autosave File Path and File Name stamp on the report to appear consistently for all secure points configurations, resolving a regression issue in version 210.
- Made the “*Table Column Gap*” parameter accessible to users in the SoloVPE Administration application.
- Prevented Hotkey combination from closing the eSignature form by ending sub-process.
- Forced reassertion of Report Modification Secure Point setting for current user profile to prevent inadvertent Report Modification rights being granted in QuickVCA and SoloVPE software based upon user actions or file events.

**[Build 275 Updates]**

- Created a new more customizable Photometric Accuracy – Generic test in QuickVCA to give users more flexibility in created test methods according to their requirements.
- Increased the wavelength count in the QuickVCA Holmium Oxide Wavelength Accuracy test to fourteen possible peak entries.
- Resolved issue in the Analyze window that allowed closure of the R2 optimization window by double-clicking the Optimization List
- Implemented the optional Plug-In capability to create future proofing options by making it possible to add new and/or customer functionality without in any way impacting or modifying the standard software.
- Added a SecureVPE Secure point to control access and the enabled status of the Plug-In feature/options.
- Updated the Fibrette Load Message to provide clearer guidance for users of the Quick Set Coupler and/or the Legacy Fibrette Coupler.
- Resolved issue in Quick Check that resulted in the “Operator” information being left off of the Quick Check Report.
- Updated software package to reflect updated C Technologies, Inc. Security Certificate
- Added new SecureVPE Secure Point to control access to the Quick Check Coupler Check test, allowing Administrators to specify which Users/Groups can run the Coupler Check and which can only run the standard Quick Check.
- Created new Solo Parameters in SoloVPE Administration that give Administrators the ability to change some of the key Quick Slope data acquisition parameters that are set by default when the software loads, allowing them to tailor the “default” method to the needs of the organization without having to create a specific Method File.
- Created new SecureVPE Secure Points that give Administrators the option of disabling the Windows User Access Control and asserting control over access to the UAC Aware apps (e.g. SoloVPE Administration, SecureVPE) by User/Group through Secure Points.
- Updated software for greater consistency with the .NET framework used by the software.
- Corrected various typographical errors.
- Resolved wavelength rounding inconsistencies in the QuickVCA Wavelength Accuracy test screen.
- Resolved issue in QuickVCA Setup screen that displays an Error message “(10528) Expecting a valid field identifier”, when the User/Group Secure Point for Method Modification rights is not granted.
- Created the ability in QuickVCA of setting Standard Deviation tolerances independently (by filter and wavelength) based upon the Absorbance level for the Photometric Accuracy test to comply with recent changes in the USP requirements.
- Resolved Reporting Issue when using dual-wavelength scatter correction in Multi-Quick Slope that displays the first scatter correction wavelength twice on the report instead of the second scatter correction wavelength. All underlying data is correct.

- Resolved a wavelength formatting issue in Quick Survey Advanced Controls window that occurs when updating the Scan Start and Scan Stop wavelengths.
- Updated ValidateVPE parameters to be preloaded as required by the SoloVPE Service group (Service Impact Only)
- Updated QuickVCA default parameters to match method updated requirements.
- Implemented change to reassert the Vessel Max Pathlength parameter for the software which could result in the SoloVPE not collecting data up to the full pathlength range of the specified vessel being used.
- Changes to the SoloVPE and QuickVCA software may necessitate recreation of existing method files, but all batch and data files are fully compatible with the updated software due to the consistency of the WinUV platform in which it runs.

#### ***[Build 289 Updates]***

- Resolved issue that caused the Baseline Not Require Alert from firing.
- Resolved issue that could cause Quick and Multi-Quick Slope Datapoint setting to not be retained with when Set Method and Save events.
- Resolved issue that prevented the Fixed Slope Datapoint Default Override parameters from being enforced.
- Updated the descriptions for the four Arrange Graph buttons on the SoloVPE Toolbar for clarity and consistency where referenced in SoloVPE Administration and SecureVPE.
- Implemented validation of Dual WL Scatter entries to force two distinct wavelength entries
- Set Default R<sup>2</sup> Decimal Display to 6-digits (from 5-digits) to match Version 2 Default.
- [CTISERVICE ONLY] – Updated ValidateVPE settings to support CTI Service Providers – No Customer Impact.

#### ***[Build 313 Updates]***

- Updated the Audit Log to include all Sidebar Menu actions.
- Resolved issue that would incorrectly report a save event as unsuccessful when saving a Method within QVCA.
- Updated the Audit Log to include all collection events in SoloVPE Software.
- Updated the Audit Log to include failed login attempts when Perimeter Authentication is enabled for SoloVPE Software.
- Updated the “New to SoloVPE” button to link to the CTech Support Portal when a network connection is present.
- Resolved issue that would allow a user to make changes to a Method without having to Set Method.
- Resolved issue that left the Concentration field blank when setting a Method’s Quick Slope Results to Extinction Coefficient.
- Updated the Audit Log to include when an Initial Auto-Save File Path is specified.
- Created a new SecureVPE Setting that requires Admin credentials when opening an instance of SoloVPE Software following the interruption of a collection event during the previous SoloVPE Software instance.
- Updated the Volume Calculator to include appropriate value range.
- Resolved issue that produced a false error message following the completion of a Coupler Check.
- Resolved issue that allowed a user to enter an unsupported value for the DefaultVessel parameter within Solo Administration.
- Updated Holmium Oxide tests run within QVCA to include a configurable Averaging Time parameter.
- Resolved issue that allowed a user to access SoloVPE Software whilst Solo Administration was open.
- Resolved issue that saw inaccurate Fixed Slope data being recorded for Dual LN Scatter Correction enabled runs.
- Improved NIST Filter Test accuracy within QVCA.

- Updated the Audit Log to include both Quick Check and Coupler Check results.
- Updated ESignature activity recorded within the Audit Log to include Time Zones.
- Updated the Audit Log to include attempts made to configure an illegal Autosave path.
- Updated Coupler Checks to allow users to add comments following their completion.
- Updated the Audit Log to record Solo Administration and SecureVPE access.
- Improved the acceptable value range for both LoginAttemptsAllowed and ESignatureAttemptsAllowed within SecureVPE Settings.
- Created a new Secure Point that grants selected Users with Administration Override Rights.
- Resolved issue that saw the datapoints for Replicate enabled runs being inaccurately recorded.
- Added a user-dictated Pass/Fail Criteria for runs performed within Quick Slope.

#### **[Build 316 Updates]**

- Updated the value range of the ECDisplayDigits parameter within Solo Administration to 0-4.
- Improved the failure threshold criteria for Stray Light testing within QVCA to be more apparent when those limits are reached.
- Resolved an issue that saw the previously implemented Standard Deviation formula yielding inaccurate data within QVCA.
- Resolved an issue that saw saved Method Files retaining Solo Administration parameters that were no longer reflective of the currently selected parameters.
- Improved distinction between reported results for Quick Check and Couple Check.
- Resolved an issue that saw saved EC values being improperly rounded.

#### **Known Issues & Errata:**

- Latency Issues Present in WinUV/ADL: Cary WinUV is a mature product that has undergone successive upgrades over the years to support evolutions in hardware and operating systems. The ADL Shell functionality has received limited upgrade and exhibits some performance deficits which may be observed while working in the dialog windows.
  - Screen refresh rates can be noticeably slower in less powerful systems.
  - Screen rendering and control updates can be impacted by very rapid data entry.
  - User Action to software action response time can also be impacted by system resources or working within large data sets and complex methods.
  - *Workaround:* Restart the software periodically ideally with each data acquisition session.
  - *Mitigation:* Maximizing system hardware for processor power and RAM has also been shown to positively impact this issue.
- Cary WinUV Graph Rendering: When data is displayed in point mode in Cary WinUV, the graphical placement of the data point is not plotted from the center of the point (circular graphical element), the data point is placed relative to the point of intersection between tangent lines drawn from the top center and left middle quadrants. Can be most easily seen in Track mode.
- SecureVPE: SecureVPE does not allow the addition of “*Built In*” users and groups. While this has been done intentionally, the software does not provide a notification of this, instead any attempt at adding a Built-in user or group will simply not produce the result the user expects.
- SecureVPE: Customers must not use the default Power Users group available in Windows which is included by Microsoft for legacy reasons only. Use of the Power Users group will cause inconsistent behavior and enforcement of security features.
- Date Formatting: Not all date and time stamps are rendered 100% consistently due to multiple threads of software activity some of which are controlled by the OS, some by Cary WinUV and others by the Solo



software.

- Regional Settings: The system OS can leverage certain elements of the OS regional settings such as time zone and general local, however, numeric values cannot be rendered using the comma “,” for decimal display. Commas are acceptable for thousands dividers but the period/dot “.” must be used for decimal notations.
- Language Settings: The SoloVPE software is not adaptable or compliant for language settings other than English currently.
- PDF Output: When printing to a PDF file and Cary WinUV is configured to print both the Graphic Region and the Report Region, Cary WinUV does not send margin information to the print driver which results in improper wrapping of report text around the graphics region and no left or right margins in the display.
  - *Workaround:* Do not set the Graphics Region to print by default and when using Quick Slope, choose to insert the graph into the report.
  - *Mitigation:* Try to configure a print profile that utilizes different PDF writer settings such as landscape mode, scaling and different paper sizes to find an optimal print settings for your method.
- The VPE System Service in Version 210 and earlier will not automatically start on some systems. The work around requires an Administrator to change the Start Type to Automatic (Delayed Start) which creates a 120 second delay prior to initiating the system startup. The delay duration can be configured by an Administrator through customized Registry entries if desired.
- The Safety Path in Version 210 only applies to loss of network emergency saves not standard save failure events which will still direct the Error-Save file to the Public Documents sub-folder structure.
- Agilent Cary WinUV Hot Keys remain active when the system is moving, so inadvertent or intentional typing when the system is moving will be stored in the buffer and released once the lock on system resourced is released when the system stops moving and/or acquiring data. These keystrokes will first be processed as Hot Keys because they were not typed into a field since such action is disabled without system focus and as a result Hot Key action will occur which will be an unexpected result to most users. The proper way to avoid this is to not type when the system is moving and scanning since the computer is not able to accept keystrokes at that time.
- Licenses created in Time Zones different from those seen on devices that use said licenses will see their validity slightly compromised in regards to their respective active duration length.
- Closure of the SoloVPE Software is not recorded within the Audit Log if said closure was initiated using the Task Manager.
- Extinction Coefficient values added to the EC Library that exceed 4 digits after a decimal point will see this value rounded when employed within Quick Slope.
- Invalid data can be entered and accepted for both ESignReasonRequired and AdminOverrideRequiredPostInterrupt SecureVPE Settings.
- The ObjectID will not be accurate when reporting failed login attempts for QVCA when Perimeter Authentication is enabled.
- The rounding of entered Pass/Fail Criteria values become compromised if said values are too high

## Document Info:

| Revision History |            |                                   |             |                |              |
|------------------|------------|-----------------------------------|-------------|----------------|--------------|
| Rev              | Rev Date   | Revision Changes                  | Revision By | QA Approval By | Approve Date |
| 00               | 2017-06-06 | Initial Release (Released for GA) | MS          | MCS            | 2017-06-06   |
| 01               | 2017-06-10 | Updated for Build 210             | MS          | MCS            | 2017-06-10   |
| 02               | 2017-06-19 | Updated for Build 220             | MS          | MCS            | 2017-06-19   |
| 03               | 2017-08-25 | Updated for Build 229             | MS          | MCS            | 2017-08-25   |
| 04               | 2018-01-24 | Updated for Build 275             | MS          | MCS            | 2018-01-24   |
| 05               | 2018-03-14 | Updated for Build 289             | MCS         | MS             | 2018-03-14   |
| 06               | 2019-05-23 | Updated for Build 313             | MS          | DW             | 2019-05-23   |
| 07               | 2019-06-14 | Updated for Build 316             | MS          | DW             | 2019-06-14   |

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