Site Recovery Manager (SRM) Storage Replication Adapter (SRA)

Program Guide 4.2

Revision History

Version	Date	Change Summary
3.0	Jan 06, 2009	Updated support flows to show field issues reported to VMware as well as to the partner
3.0.1	Jan 27, 2009	Updated section 4 and subsection 4.3.3 regarding re-certification effort required for firmware updates.
3.0.2	May 20, 2010	Section 3.3.1 to include SRA installation and supported OSs. Section 3.3.5 – additional recommended documentation added for partners to provide Sections 3.4.1, 3.4.1.3; Appendix C, D & E to clarify the Support workflows. Added statement that this program covers SRA created for SRM 4.1.
3.0.3	Sep 15, 2010	Updated Section 3.3.5 regarding SRA supporting documentation requirements and partner hosting model. Added Section 3.4.1 covering SRA support policy, and modified VCP requirement in Section 3.4.1.6.
3.0.4	Jan 07, 2011	Section 1.1 TAP Global level added; 3.3.3 VMware recommendation that partners host all GA versions of SRA; 3.3.3.3 (first bullet) Publicly available landing page clarification; (5th bullet) Support policy statement clarification; 3.3.4 (VMware Web HCL listing - standard prerequisites list added); 3.4.1.5 TOI requirement prior to listing on Web HCL; Section 7 (new standard VMware Release Milestone definitions added for clarity).
3.0.5	Aug 23, 2011	Program Fees section 3.1.3 (new); edits recommended for clarification and accuracy; 3.3.3 SRA hosting model revisited allowing VMware to continue to distribute partners SRAs and Partners who chose to host SRAs can do so. VMware has listed recommendations for better customer experience; 4.3.5 SRA Documentation only updates - new review process to enable frequent doc updates without having to go through an arduous re-test waiver review.
3.0.6	Jul 30, 2012	Program Fees section 3.1.3.2 (edits); Packaging clarification 3.3.1.1 (insertion)
3.0.7	Jan 30, 2013, March 30, 2013	Program Fees 3.1.3.2 - structure; Packaging 3.31.1; Support 3.4.1.3; Added an appendix for pre-release material (Appendix – H)
3.0.8	Sept 06, 2013	Section 1.1 (added) SRA Program Requirement for partners requiring presentation of not-promoted devices
4.0	July, 2014	Migrated to new Template; KB Articles not Mandatory,
4.1	August 28, 2015	Updates for SDDC Foundation Program
4.2	June 20 2018	TAP Alliance changes

Contents

1   Introduction

Welcome to the VMware vCenter™ Site Recovery Manager (SRM) Storage Replication Adapter (SRA) program (the "Program"). This Program offers a comprehensive set of tools and resources to help storage hardware vendors develop Storage Replication Adapters (SRAs). This program guide covers Storage Replication Adapters (SRAs) created by partners for all versions of SRM.

Partners enrolled in this Program have access to a host of benefits. The Program is aimed to assist partners in developing and certifying an adapter based on the VMware Storage Replication Adapter interface for one of the following products: Storage Arrays; Storage Replication Appliances; Replication Software.

Starting on August 31, 2015, the Partner's participation in the Software-Defined Data Center ("SDDC") Foundation and Integration Program, depending on the Program Category Option that Partner selects (either "SDDC Foundation" or "SDDC Integration"), may include participation in the Program. Please refer to the SDDC Foundation and Integration Program Guide to determine if this Program is included in the SDDC Foundation or SDDC Integration Program Category Option, or in both.

1.1   Overview of This Guide

This document explains the Program requirements, as well as the engagement, support, maintenance models and lifecycle of the Program. For more detailed certification requirements, refer to the relevant certification guides available on the Program website. Capitalized terms used in this Program Guide have the same meaning as defined in the Platform Extensibility Program Agreement (the "PEPA") unless otherwise defined herein. To the extent there is any inconsistency between the PEPA, the Program Addendum, and this Program Guide, the documents will govern in the following order of precedent: the Program Addendum, the PEPA, and then this Program Guide.

1.2   General Participation Requirements

Partner must meet the following requirements to engage in the Program:
- Establish and maintain membership in the VMware Technology Alliance Partner (TAP) Program
- Sign the appropriate Program agreements as referenced below ("Agreement") as determined by VMware.
    - If the Partner joined prior to August 31, 2015 – the PEPA and VMware vCenter SRM SRA Program Addendum entered into by VMware and Partner will govern Partner's participation in the Program.
    - If the Partner joins after August 31, 2015 – the PEPA and SDDC Foundation and Integration Program Addendum entered into by VMware and Partner will govern Partner's participation in the Program.
- Meet and follow Partner Software support requirements (outlined in Section 3.4 "Post-Release Activities").
- Provide VMware with details about timeframes for submitting certification logs for certification tests.
- Provide VMware details about development and support timeframes with respect to new Partner Software.
- Follow Program instructions for all pre-requisites to be met for the VMware Compatibility Guide (VCG) listing.

This Program may be amended periodically at the sole discretion of VMware, including but not limited to changes regarding the following:

- Requirements for TAP program enrollment

- Business and engineering processes to certify providers

- Certification tools, documentation, or other related materials

- Policies to list Partner Software on the VCG website or VMware.com, where applicable

When there is a change to this Program Guide, VMware will notify Partner through appropriate communication channels. Partner is responsible for ensuring that the communication channel with VMware is open and effective for compliance with VMware changes promptly.

Membership in the Program is effective on the effective date of the applicable Program Addendum.

1.3   Disclosure of SRA Requirements for presentation of Non-Writable Storage

Storage Replication Adapters that are to be certified by VMware must have on file a disclosure form stating whether or not the SRA requires the presentation of replicated storage in any non-writable state (NWS). Ideally, any storage in an SRM configuration that is not fully read/write should not be presented to any host. If however the storage hardware, array manager software, replication firmware or the SRA itself requires that NWS storage replicas ARE to be presented prior to their promotion during recovery, then the Partner must disclose the following

- Each and every state that NWS devices may be in
- Sense code(s) for each such state
- When to expect each state (or under what circumstances)

No SRA may be certified without prior disclosure of this information. SRAs will be tested for compliance and adherence to the disclosed behavior. Deviations that are detected may result in refusal of certification by VMware.

2 Membership Signup, Renewal, and Termination

2.1 Joining or Renewing Program Membership

Program membership is effective and valid for the duration specified in the Agreement. Each Program will be updated for each release of the corresponding VMware product that introduces significant new functionality and during this process VMware may change the Program enrollment requirements. Existing Partners will be allowed to continue to participate in the updated Program only if they meet the updated Program enrollment requirements.

2.2 Termination of Program Membership

Upon termination of the Program Agreement, Partner's Program membership is terminated; the Program collateral and Program website will no longer be accessible to the Partner. For details on termination, please review the "Term and Termination" Section of the Agreement.

2.3 Removal of Program from SDDC Foundation and Integration Program

VMware may, at its sole discretion, remove the Program from the SDDC Foundation and Integration Program. In such event, Partner will no longer have access to the Program's collateral or access to the Program website. However, the Partner's access to the collateral and websites of other programs that remain as part of the SDDC Foundation and Integration Program will not change.

3   Program Components and Process Flow

The Program provides a full spectrum of resources to guide Partners in developing, releasing, and supporting their Partner Software.

There are four Program components:

- Program Guidelines and Agreements
- Pre-Release Development and Certification Engagement
- Release Logistics
- Post-Release Activities

Program Guidelines

TAP Agreement

Program Agreement

Program Guide

Access to VMware Product & Platform

Specifications

Pre---Release Engineering

Development Kit

Certification Kit

Development Consulting

VMware Beta

Certification Suite

Release Logistics

Distribution and Landing Page

VMware Compatibility Guide

KB Article (optional)

Support Dry---Run

Post---Release Activities

TOI to VMware GSS

TSANet for Mutual Customer Scenarios
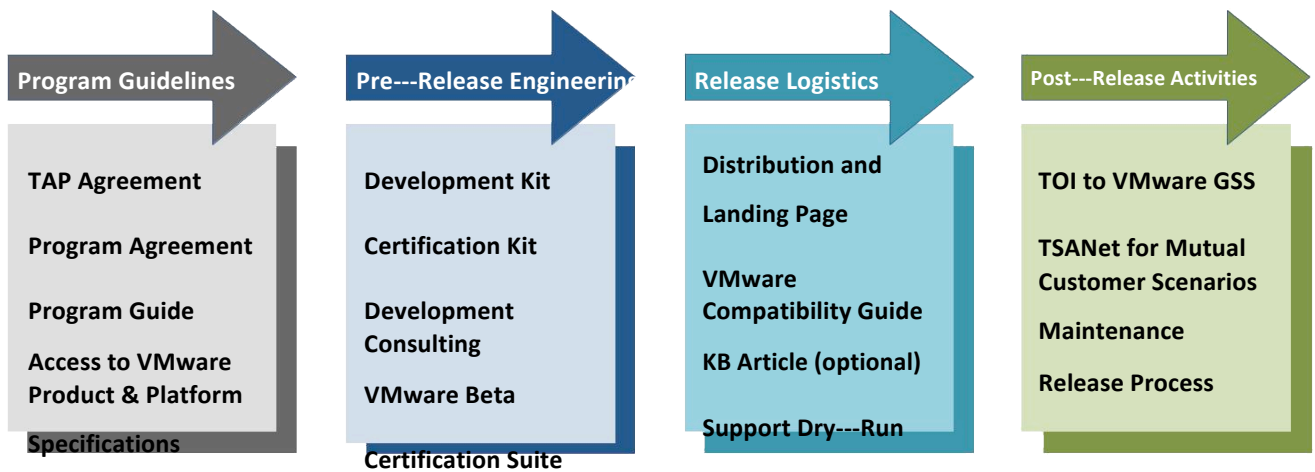
Maintenance

Release Process

Figure 1: Program Components.

The remainder of this section elaborates on the components of this Program.

3.1   Program Guidelines

This Program component includes the non-technical elements of the Program.

3.1.1   Program Guidelines and Agreements

This Program Guide and the Agreement provide the terms and conditions of this Program. Partners must agree to the terms of these documents to participate in this Program. This Program Guide is subject to change. Qualification Requirements are specified in the product Certification Guide, which is posted on the Program website.

3.1.2   Program Fees

VMware may, in its sole discretion, waive any or all of the fees associated with this Program. For exact fee amounts, please contact your VMware representative directly.

3.1.2.1   Program Entrance Fee

For Partners who joined the Program prior to August 31, 2015, the Program Entrance Fee previously paid by Partner is applicable to the specific version of the Program for which it was purchased and is a one-time, non-refundable, and non-transferable fee.

For Partners who join after August 31, 2015, the Program Entrance Fee is stated in the Program Guide applicable to the SDDC Foundation and Integration Program.

3.1.2.2   Development Consulting Fee

The Development Consulting fee provides Development Consulting via the Program website. Partners may renew the Development Consulting services as set forth in the Agreement.

Please refer to the details here: https://code.vmware.com/services/program-guide

Please note: Partners are highly encouraged to avail themselves of this service. The Development Consulting fee enables Partners who opt for this service to post questions and gain access to VMware engineers. Engineers can answer questions regarding Partner Software development per the published specification.

3.1.2.3   Certification Log Submission, Support, and Equivalency Fee

Service Request (SR) if used to submit logs for review or for certification questions. Prior to submitting a SR, each Partner shall purchase from the VMware Store a certification log submission for log review per SR. A service description can be found in the datasheet for your Program on the VMware Store website: http://www.vmware.com/go/enablement

All Partners are required to pay the Log submission, support, and equivalency fees as applicable. This improves the cert review process and provides timely VCG listings. Details on how to purchase entitlements for the certification submission are provided as part of the Program collateral on the Program website.

3.2   Pre-Release Development and Certification Engagement

This Program component includes the tools and resources available for the development and certification of Partner Software. All of the tools are available via the Program website.

3.2.1   Engineering Support

Partners in the Program will have access to the Program website, which hosts the Developer Kit(s), which include code samples and other resources for developing the Partner Software. Additionally, availing of this support enables Partner teams to communicate with VMware about technical issues around development of the Partner Software. VMware provides development and testing consultation through the Program website, using collaboration tools, or via the telephone during pre-arranged conference calls. The Agreement will state the fees due for these services.

3.2.1.1   Partner Contacts

This Program uses a co-development process that requires Partners to identify a primary point of contact (such as a Program Manager) and an Engineering Manager and/or Technical Lead. Please complete the form in *Appendix F: Sample Partner Contact Information Form* and post the information in the "Documents" folder of your private project on the Program website. Please note that VMware does not publish the contact information on any public site.

3.2.1.2   Partner Internal Triaging Process for Suspected VMware Software Issues

The Partner's Engineering Manager and/or Technical Lead shall review all suspected VMware software issues prior to the team engaging the VMware co-development engineers. Partner technical contacts shall include the internal assessment (including logs etc.) when filing a question for the VMware Engineering Team.

3.2.2   VMware Products and Development Kit

Partners will receive access to certain Pre-Release Materials and/or Development Kits, as determined by VMware. The current listing is set forth in *Appendix H: VMware Pre-Release Material(s) and Development Kit(s)*. The Pre-Release Materials and/or Development Kits may be used only in compliance with the Agreement.

VMware provides access to the applicable Pre-Release Materials and/or Development via:

- Official milestones, such as the official beta program for beta, RC, and GA milestones.
- Unofficial milestones, which refers to any point in time other than beta, RC, and RTM. To request access to such bits, please contact your EE Program Manager and provide a short justification.

As part of unofficial-milestone build delivery, VMware provides beta-type builds. When choosing to use such builds, please note the following:

- Only the ESXi installer bits are provided as beta-type builds.
- Beta-type and release-type builds are built from the same VMware change-list, but they do not have the same checksum.
- Beta-type and release-type builds are functionally the same for development kit files; checksum differences do not indicate a real difference.
- Mixing different build types might lead to PSODs and unpredictable behavior.

Scalability and timing-sensitive functionality should be qualified only on release-type builds. Beta-type builds include debugging code.

3.2.3   Certification

Partner Software certification is generally considered to be one of the most important parts of the development process. The Program Certification Guide sets forth the Qualification Requirements and is available on the respective Program website. The Program Certification Guide is designed to guide Partners in qualifying Partner Software to VMware standards.

The following links detail the certification levels and the support structure:

• http://pubs.vmware.com/vsphere-50/index.jsp?topic=%2Fcom.vmware.vsphere.upgrade.doc_50%2FGUID-27BBBAB8-01EA-4238-8140-1C3C3EFC0AA6.html

• https://www.vmware.com/support/policies/thirdparty

This Program falls under the "VMware Certified" level of certification for Partner Software testing. This level carries the guidelines and benefits shown in Table 1:

Table 1: VMware Acceptance Levels.

Acceptance Level	Customer Support Provider	Testing Program	Process Flow
VMware Certified	VMware	Certification (Functional Verification)	Appendix C
VMware Accepted	Partner	Acceptance (Provider doesn't misbehave)	Appendix D
Partner Supported	Partner	Partner-defined	Appendix D
Community Supported	None	None	No Support Flow

The certification process begins after a Partner develops Partner Software and has completed internal QA tests and is confident the Partner Software can pass the certification suite. Prior to fully running and submitting results, Partners must reserve a certification review slot (via the Program website). When making a certification review request, Partners are encouraged to complete the Partner Software capability matrix, which includes a questionnaire pertaining to the capabilities of the Partner Software as applicable. Once testing is complete, the Partner uploads the test results to VMware, using the Workbench plugin. VMware verifies the results and either certifies the Partner Software or denies certification with due justification.

For Partners developing Software with a Software Development Kit, revisiting the following to provide a superior customer experience is recommended:

• Partner landing page recommendations

• Recommended Partner Software documentation

• Requested troubleshooting error codes documentation

• Partner support statement and support policy

• Product hosting information as applicable

• Bundling of the Partner Software with documentation

Upon successful certification, VMware updates the VMware Compatibility Guide (VCG) website to include the applicable version of the Partner Software.

The Agreement requires that Partners (if they choose to distribute their Partner Software) distribute only Partner Software that has successfully passed the certification tests and Qualification Requirements under this Program. Customer or field complaints that reveal non-compliance will result in delisting the Partner Software from the VMware Compatibility Guide (VCG)

3.3   Release Logistics

This Program component covers activities related to the release and availability of Partner Software developed and certified under this Program.

3.3.1   Packaging and Installation

This Section discusses some of the best practices and logistics of Partner Software packaging and installation.

3.3.1.1   *Packaging*

VMware recommends that Partner Software be packaged as an executable, containing a self-extracting, self-installing file where applicable. Zip all Partner Software documentation as part of the Partner Software download bundle, but keep docs separate from the installer/executable. Keeping the documentation zipped separately makes doc updates possible without going through the re-test waiver process.

Ship Partner Software with the following documentation in a single compressed archive (.zip) file:

a. Release Notes with version-specific information for the following:

- What was fixed

- What was added

- Known bugs

- Release Note organization to stay consistent over time and versions, with history included

b. Installation Guide and Configuration Guide, to include the following where applicable

- Prerequisites. For example: Java run-time environment, .NET, etc.

- Supported configurations with at least one simple, hardened test configuration, which should allow the Partner Software to perform all functions (the "proof case").
  VMware can use this example to confirm that there are no configuration issues in the customer environment and triage the issues appropriately.

- Any licensing assumptions spelled out explicitly; details of any encryption being used.

- Troubleshooting guide spelling out common error messages and typical configuration misunderstandings.

c. Process explaining how to engage your support for the Partner Software, as follows:

- Which logs to have handy and how to collect them

- What Partner Software information to gather for each type of problem (screenshots, array managers, replicated volumes, and so forth)

- Contact protocol with URLs and toll-free telephone numbers

- Any entitlement identity that might be required for support

Also, each SRA that does NOT support correct installation onto either SRM 5.0 (32-bit) or SRM 5.1 (64-bit) must include BOTH installers in the archive to be downloaded by customers from vmware.com. Both the archive (zip) file and the installer file(s) must contain the SRA name and version in their names. For the fictional SRA from Galactica Storage, Inc., for their version 3.1 installers, they would provide:

Galactica_SRA_v3.1.zip which would contain:

Galactica_SRA_v3.1-64bit.msi (or .exe)

Galactica_SRA_v3.1-32bit.msi (or .exe)

Galactica_SRA_v3.1-Release_Notes.pdf

Galactica_SRA_v3.1-Installation and Configuration.pdf

Galactica_SRA_v3.1-Support_Procedures.pdf

The SRA should be installable and supported on all operating systems for which SRM server is supported. Please refer to the "Operating System Compatibility" section in the latest VMware vCenter Site Recovery Manager Compatibility Matrixes at http:// www.vmware.com/support/pubs/srm_pubs.html for further detail. Any deviation from the listed OS support of SRM (including localized versions) should be noted for the customer in the README file or the release notes available for the SRA. VMware must be made aware of all such deviations, which will be noted on the Certification Submission Form prior to the certification review.

Each and every version, release, patch, and hot fix of the Partner Software should clearly identify itself with a fully qualified and dated release signature, at least once for every request that it handles. (Make the release signatures clearly visible in the logs whenever the Partner Software is working and include a unique release signature, insomuch as the date and at least one node of the version should be different from all other released Partner Software.

Partner Software must have version number designations. This helps users quickly discern the version without having to examine logs or open other windows or facilities.

Note: Be sure to remove all references to VMware trademarks or product names as part of Partner Software name during installation and post-installation for Partner Software listings.

3.3.1.2   Delivery to Customers

Once Partner Software has been packaged accordingly, Partners can then distribute their Partner Software to end customers from a page on their own website. The download bundle should contain all documentation that is listed as required under the Supporting Documentation Requirements Section.

VMware will distribute certified Partner Software (SRAs) from VMware.com. In this case, we recommend Partners package their Partner Software per the program specification.

3.3.1.3   Installation

During extraction or installation, Partner must present their End User License Agreement (EULA) to customers in a way that requires the customer to accept the Partner EULA prior to use of the Partner Software. If a user does not accept the EULA, the Partner Software must not install.

Customers must be presented with the option of opening documentation files after installation completes. The documentation should include a link to a webpage and customer help system that is maintained by the Partner. The customer must not be required to copy files to specific places, nor required to edit any files to configure the Partner Software.

3.3.1.4   Open Source and Encryption

Partners are expected to comply with all applicable third-party and free / open-source licenses and meet all applicable import, export, and re-export control obligations.

In the cases where VMware distributes certified Partner Software from VMware.com, Partners must follow the Program requirements.

3.3.2   Hosting

3.3.2.1   VMware Hosting

In cases where programs allow, VMware will host certified Partner Software on vmware.com, until the associated version of the VMware product has reached the end-of-life (EOL) phase. For more detail about product life cycle policies, including EOL dates, please visit:

http://www.vmware.com/support/policies/lifecycle/general/index.html

Please refer to the Program requirements for packaging as specified in "Delivery to Customer" section.

3.3.2.2   Partner Hosting

Partners who choose to host Partner Software on their website are encouraged to consider the following recommendations for the Partner Software landing page.

Landing Page Recommendations:

- Publicly available landing page (The link must be a live link and not result in a 404 unknown error or send users to a generic, "we can't find the page you are looking for" site.) It is OK for the landing page to require credentials to log in.

- Viewable with standard browsers

- Public statement of the Partner's support policy for their certified Partner Software. (Include a link to the support policy or information on how to get support.)

- Stated support is not beyond VMware stated support (features, versions, array models, etc.).

- Link to VMware Compatibility Guide listings.

Static Information:

- About VMware product text from VMware.com or VMware approved collateral.

- A public statement of the Partner's support policy for their Partner Software. (Include a link to the support policy or information on how to get support for released Partner Software). This information should be provided to VMware support for review prior to GA of the Partner Software.

- Link to VCG website.

Partner Software Information:

- Text that describes features/bug fixes included in that Partner Software version

- Product documentation and installation information (include any software and/or hardware prerequisite; best practices/user guide, among others)

- Product download details (download bundle should include all relevant documentation listed on the landing page)

- Product version

- Date certified/released

- MD5 SUM and SHA1 SUM

- File size

3.3.3   VMware Compatibility Guide (VCG) Posting

Partners must officially state the combinations of versions of the VMware product. VMware reserves the right to conduct its own compatibility testing to validate Partner's compatibility claims.

The compatibility for Partner Software that is "certified" is posted on the VMware Compatibility Guide website. VMware technical support is obligated to support Partner Software only with the equipment and management interfaces agreed between the Partner and VMware, contained in the VCG.

Other clarifications for VCG posting:

- VMware uses footnotes and Knowledge Base (KB) articles to document known Partner Software incompatibilities. If an incompatibility is severe enough such that the Partner Software is not supportable, the Partner Software is not posted on the VCG website until a technical fix is provided.
- VMware determines whether an incompatibility is sufficient to footnote or to deny a certain posting, or to remove any listing at any time.
- VMware removes Partner Software from the VCG listing upon Partner request or at its own discretion.
- In the spirit of joint support, VMware does not claim support for Partner Software beyond those that are certified.

3.3.4   Supporting Documentation Requirements

VMware Support requests that Partners provide links to all relevant TOI material described in *Appendix E: Transfer of Information (TOI).*

3.3.5   VMware Ready Logos

For eligible programs, once Partner has certified the Partner Software under the terms of the Program, the Partner may use the VMware Ready™ logo in their Partner Software collateral, as set forth in the Agreement. For details please refer to the https://www-review.vmware.com/partners/tech-alliance/vmware-ready.htmllink.

3.4   Post-Release Activities

This Program component includes support and sustaining policies for Partner Software.

3.4.1   Partner Software Support Policy

Unless otherwise approved in writing by VMware, Partners must provide a public statement of their support policy for Partner Software that can be linked from the Partner-landing page. This public-facing statement should be ready and released prior to GA of the Partner Software, or, if not applicable, prior to posting of the certified Partner Software on the VCG.

Support and troubleshooting of all Partner Software is the responsibility of Partner as per Partner's documented support policy.

For entitled support issues reported to VMware, VMware Global Support Services (GSS) assists customers in problem analysis and resolution. In the event the issue is diagnosed to be directly related to Partner hardware or software, GSS works with the customer to open a collaborative support request (SR) with the Partner. The support flow for the SR follows the VMware support process, as outlined in *Appendix C: VMware Customer Contacts Support Flow*.

3.4.1.1   *Support Readiness*

The goal for the Partner Software support policy is to ensure an excellent post-sale support experience for the mutual customer, and to drive best of breed customer satisfaction for Partner and VMware. In order for Partner and VMware to be successful with this goal and Program, VMware expects the Partner to provide the following:

- A clearly defined process and escalation contacts between VMware Technical Support and Partner's technical support organizations, to engage each other for smooth handoffs and collaboration for all SRs related to Partner's Partner Software. This process should establish a Senior Support Engineer-to-Senior Support Engineer relationship. For critical escalation, this process should also provide an Escalation Manager-to-Escalation Manager relationship.

- Partner shall provide ability for VMware GSS to be able to open tickets directly with Partner for the sole purpose of troubleshooting mutual customer SRs.

- Partners shall ensure adequate support readiness and training of their support organization to support the Partner Software. Partners must have a support infrastructure in place to appropriately route and track all SRs related to their Partner Software. Additionally, Partner technical support engineers must be trained to have a reasonable understanding of the applicable VMware Partner Software, in order to assist during troubleshooting during any collaborative support effort between VMware and the Partner's support team for a mutual customer situation. To provide the best possible customer support, Partners must have one VMware Certified Professional (VCP) support staff onboard. Partner support teams must be ready to support the Partner Software at or before the general availability date of the Partner Software.

- Partners should appoint a designated technical support contact who is primarily responsible for the support relationship with VMware support organization. This person shall be responsible and shall act as a single point of contact for all support-related activities, including escalations and management of the cooperative support process relationship. This person shall ensure the overall support readiness and training of their support organization to support Partner Software.

- Communications of any changes, updates, patches, etc.to the Partner Software, are to be communicated back to VMware at least 14 days before release to the general public.

3.4.1.2   *Hosting of Collaborative Technical Support Process for Mutual Customers*

Partner agrees to post current valid support and escalation processes related to Partner Software as part of the VMware dedicated or custom Technical Support Alliance Network ("TSANet").

For the duration of a Partner's participation in this Program, and to retain certification status, the Partner must maintain membership in the Technical Support Alliance Network ("TSANet", www.tsanet.org), and as such join the VMware Private TSANet Community. Any issues found with Partner Software are handled by the corresponding Partner, as described in the Third-Party Hardware and Software Support Policy documentation at http://www.vmware.com/support/policies/ThirdParty.html.

Partner shall comply with specific terms and recommendations regarding validation, support, and associated customer communication, as outlined in TSANet guidelines and in this Program Guide.

3.4.1.3   *Partner Support Experience*

Partner shall open a Support Request with VMware on behalf of an end user via the TSANet channel, when the customer support issue is specifically isolated to a VMware product, or only reproducible on a VMware platform. Partner must resolve the support ticket in accordance with the applicable support agreement between the customer and the Partner.

VMware GSS **Product Support** Teams do not support SDK APIs. During customer situations, if the issue requires troubleshooting of SDK API calls, then Partner should take the lead and work with VMware **Developer Support** in the background.

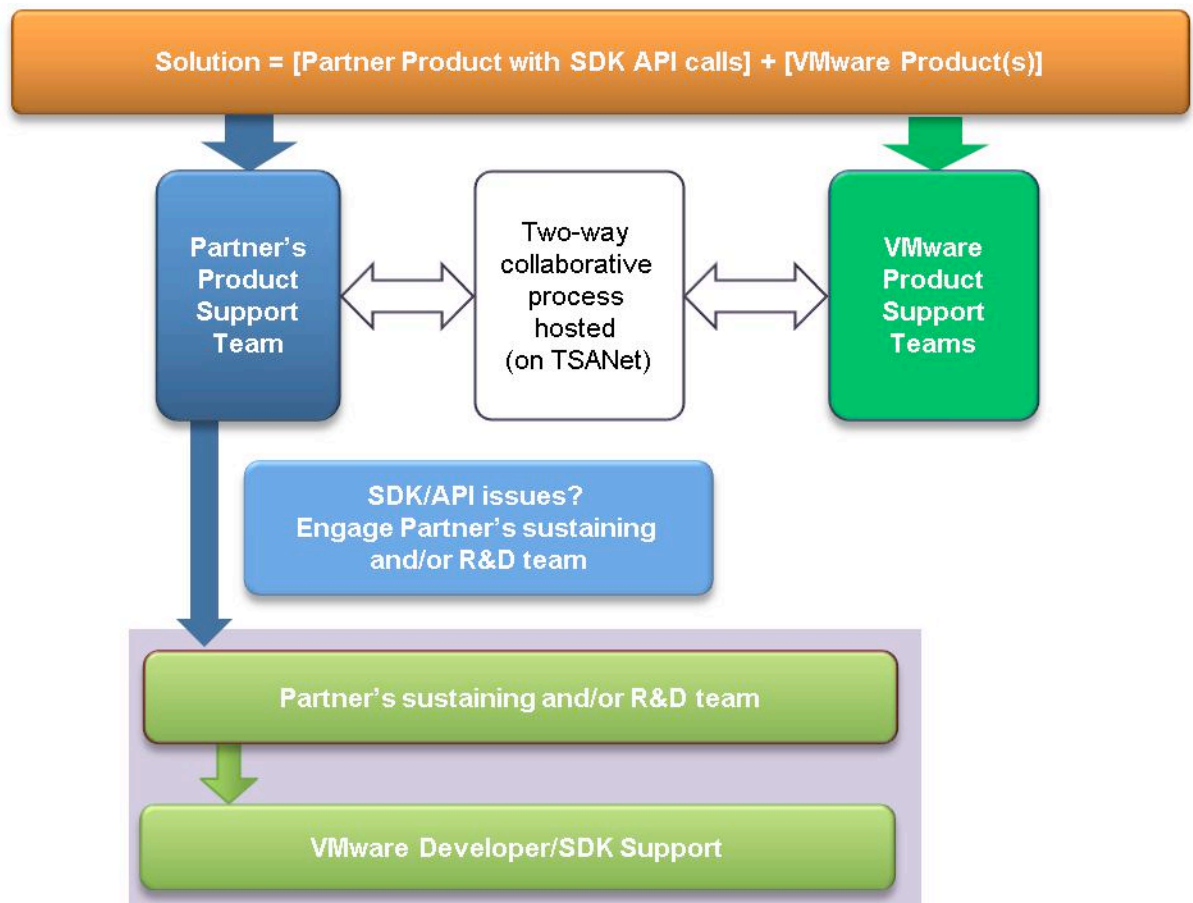The Support Call flow for SDK API related issues is shown in Figure 2:

Figure 2: SDK API Support Call Flow.

3.4.1.4   *Support Requirements and Process*

General Support Terms:

- Partners are requested to provide the "volume" information of customer support issues reported against their Partner Software (open/resolved.)

- Failure to fulfill and/or keep current with support requirements will result in non-compliance from certification perspective.

Support Request Process:

- End users can report software stability and performance issues to VMware. if they have reason to believe this is a VMware issue and, provided that the Partner's software is listed on the VCG website.

- For any issues related to the Partner's Software, VMware shall initiate a request for technical assistance from the Partner by following the Partner's support process and procedures posted on TSANet.

- KBs (Knowledge Base articles) are recommended for all Partner Software issues or knowledge that will help end users. VMware provides a link to KBs from the product VCG.
  http://blogs.vmware.com/vsphere/2012/05/oldies-but-goodies-site-recovery-manager-setup-videos.html
  http://kb.vmware.com/selfservice/microsites/search.do?language=en_US&cmd=displayKC&externalId=1014610

- VMware and Partners shall work cooperatively to troubleshoot issues to resolution (see also the flowcharts in *Appendix C: VMware Customer Contacts Support Flow* and *Appendix D: Partner Customer Contacts Support Flow*).

3.4.1.5   *Transfer of Information (TOI)*

Partners are required to provide a training session with select VMware groups on the specifics of the Partner Software. For details regarding the content of the training, refer to *Appendix E: Transfer of Information (TOI)*. Please note that the TOI and support readiness requirements must be met prior to VMware authorizing posting Partner Software on the VCG website.

3.4.1.6   *Recommended Partner Training*

To provide the best possible customer support, VMware recommends that Partners have one VMware Certified Professional (VCP) support staff on board. To become a VMware Certified Professional, please visit www.vmware.com/services/certification.html to learn about the required instructor-led courses.

3.4.2   Sustaining Policy

Partners are responsible for maintaining their Partner Software by fixing any bugs or security issues and by updating and/or upgrading the software to support new or existing applicable VMware product(s) in a timely manner, as long as the VMware support policy is applicable for that release.

Note that any major change to the Partner Software might affect the certification status. It is highly recommended that the Partner Engineering team work closely with the VMware Program Manager during the Partner Software sustaining process. See Section 3.4.2.1 "Hot Fix Process" for details on how to provide customers with a Hot Fix, as well as on how to re-certify a modified Partner Software.

Should the need arise to provide a customer an immediate fix to address an urgent issue (a "Hot Fix"), Partners must follow the process defined below. To make the Hot Fix available to all customers, Partners must either submit a full re-certification of the modified Partner Software or follow the process outlined in Section 3.4.2.1.

3.4.2.1   Hot Fix Process

VMware considers a Hot Fix to be a fix addressing a specific critical issue found by one or more customers. A Hot Fix is not a mechanism to add features or functionality to existing Partner Software. When a Hot Fix is necessary, the Partner generates the Hot Fix and notifies VMware that the fix was created, tested, and distributed to those experiencing the problem addressed by the Hot Fix. Partners are strongly urged to run at least a subset of the certification tests against a Hot Fix before releasing it.

Partners must provide a detailed description of the bug and its symptoms to VMware, so that VMware support can direct customers who file new reports of the bug to Partner. This information must be communicated to VMware by completing the Partner Software Hot Fix Notification Form, available on the developer collaboration site. Partner's support organization shall distribute the Hot Fix on a customer-by-customer basis, via a non-public distribution mechanism. Partner shall also provide an estimate as to when the fix can be rolled into an update to the Partner Software, and shall request a review slot with VMware.

In cases where a Hot Fix is not widely distributed (posted version of Partner Software), Partners are advised to track these customer distributions for support calls. Partner shall also provide the Hot Fix itself to VMware, with instructions on how to install the Hot Fix. Any changes to the Partner Software must be re-certified, as described in Section 3.4.2.2 "Re-Certification of Modified Partner Software."

3.4.2.2   Re-Certification of Modified Partner Software

If a Partner modifies certified Partner Software, internal QA tests should run successfully before requesting the revised Partner Software to be considered by VMware for re-certification. Running all certification tests is recommended, but running a subset of the certification tests might be sufficient, if the following conditions are met:

- Partner helps VMware understand the nature, scope, and impact of the changes;

- Partner provides pointers to the user and reference documentation for relevant versions used to build the Partner Software

- Partner provides a list of changes and detailed explanations thereof.

Partners must complete a Re-Test Waiver form and submit this form along with any other applicable information (e.g., test results, source code, diffs, etc.) in the same folder where the Hot Fix notification form was submitted.

3.4.3   VMware Workbench, Dev Kits, and Cert Kits Support Lifecycle Policy

Details of this policy are available online at: https://developercenter.vmware.com/kits-lifecycle-policy.

Development Kits and Certification Kits support is dependent on the underlying vSphere product support. The VMware product support policy can be found at: https://www.vmware.com/support/policies/lifecycle.html.

4 Re-Validation

This component covers the re-validation of Partner Software when they are updated or otherwise modified. This involves doing a re-test waiver submission to check that the Partner Software is modified (check MD5 SUM match).

4.1 VMware Platform Triggers

A new major release of a VMware product requires a full re-certification of any platform-dependent Partner Software. VMware will attempt to notify Partners no later than the VMware product beta timeframe of the upcoming release dates for the major release.

4.2 VMware Product Backward Compatibility

VMware makes efforts to maintain backward compatibility between product update releases and Partner Software. Even with these efforts, VMware cannot guarantee that compatibility will not be broken. In the event that backward compatibility is not maintained and re-certification is required, VMware notifies the Partner and works to re-certify the Partner Software in a timely fashion.

4.3 Partner Software Qualification Triggers

Any bug fix or minor change to Partner Software might require a re-validation of all or a subset of these requirements. Refer to Section 3.4.2.2 "Re-Certification of Modified Partner Software" for further details regarding modified Partner Software.

4.4 Compatibility/Equivalency Claim Process

When Partner releases new versions of the Partner Software re-certification might be required, based on the impact of the changes in the new release(s) from the Partner. Partners are encouraged to run the Certification Tests in addition to their own QA tests, when making any changes, to expose potential issues related to the changes, even when full certification is not required, based upon the descriptions below: All Partner Software certification should follow the guidelines in the Certification guide. Many programs will have dependencies and pre-requisites listed. Some questions/examples that may help determine the re-certification criteria are listed in *Appendix A: Questions to Determine Re-Certification*.

http://www.vmware.com/files/pdf/support/VMware-GSS-Equivalency_and_Compatibility_Request-TP-EN.pdf?cc=www&client=VMware_Site&entqr=0&ud=1&output=xml_no_dtd&proxystylesheet=VMware_gsa_Site&site=VMware_Site&ie=UTF-8&oe=UTF-8&q=equivalency%20claim

Generally, examples of where VMware does or does not take an interest in re-certification of the Partner Software include:

- New H/W versions
- New S/W version
- New Firmware or Updates to existing Firmware
- New Version Numbers
- Product Documentation-Only Updates

New Version Numbers:

Although there is no science to version numbers, major version numbers draw more scrutiny than minor or maintenance versions. Equivalency and Compatibility status might be granted to a new Partner hardware platform that interoperates with the Partner Software. In this case, VMware might require a re-validation of all or

a subset of the Partner Software certification tests. Please refer to the certification policy listed for your specific Program.

5 Contact Information

Partners are required to provide contact information for the person who is the primary manager of the Partner relationship with VMware, as well as contact information for the technical manager of the associated engineering projects and for the Customer Support Manager. All contact information is kept strictly confidential. For a sample contact information form that includes all required information elements, see *Appendix F: Sample Partner Contact Information Form*.

6 VMware Release Milestones

Membership in this Program is ongoing, and Partners are entitled to vSphere, vCenter, and vShield Manager update releases, as well as development and certification kit refreshes for the duration of their participation in the Program. Partners shall follow the VMware Ecosystem Engineering Maintenance Release Process.

Table 2 details VMware release life cycle naming conventions. It also lists activities Partners can perform with intermediate releases. When a release becomes available, communications are sent to all Partners via email with information on how to download the release.

Table 2: VMware Release Milestones.

VMware Release Name	Definition	Partner Activities	Release Goals
Early Access	Early access code for early deployment.	Early development and compatibility testing but not certification.	Get feedback and fix problems found by Partners.
Beta	Beta release (for major and minor releases).	Perform development and compatibility testing but not certification, early certification kit available.	Get feedback and fix problems found by Partners and customers.
RC	Release Candidate (for major, minor, update releases).	Perform official certification and make submissions. General release testing has ended. Only release-blocking defects will be considered. If RC software is installed, feedback is expected and should be returned within 21 days of build availability. Reported catastrophic or certification blocking issues including business justification will be considered for delivery in the product release.	Enable certification testing so that Partner Software can be listed on VMware Compatibility Guide at GA.
RTM	Release to Manufacturing (Restricted availability to OEM media kits and product release files provided per prior approval).	NA	NA
GA	General Availability (for major, minor, update patch releases).	Perform official certification and make submissions.	General Availability of production-level product to all Partners and customers.

Partners are encouraged to engage in compatibility testing during beta or early access milestones to identify bugs that might block certification after RC.

Appendix A: Questions to Determine Re-Certification

For borderline cases where it is not obvious whether re-certification of the Partner Software is required, VMware asks the following questions to facilitate a decision:

1. What are the CLI commands and/or API calls used in the Partner Software for communicating? List all in a table, with the respective parameters. See Table 3 (below), for an example.
2. For each CLI command, answer the following questions:
    a. In the new array model or firmware/software version, is there any change with the commands or parameters? It is OK for the new model to have more parameters for the same command, but the parameters must be interpreted in the same way as previously.
    b. Does a command output differ from previous output, including content and format? Any slight change here might break the parsing code in the Partner Software.
    c. Does a command cause different behavior in the new setting? The command must behave exactly as before.
    d. Does a command require different prerequisite conditions? Different prerequisite conditions might lead to different results, and so must be carefully considered.
    e. Does a command produce different post conditions? Different post conditions might need extra cleaning, or might create problems for other successive commands.
    f. Does the privilege to run the command change? The Partner Software might fail due to changes in a command's required privilege level.
3. For API calls, answer the following questions:
    a. Is there any change in the parameters from the previous model or firmware/software version? Any change in the API signature is likely to break the code. The meaning of the parameters should also not change.
    b. Does the returned value or dataset differ from the previous model or version? The meaning and data structure, if any, should be the same as before.
    c. Does an API call behave differently from the previous version? The same API call should display the same observable behavior in the new array.
    d. Does an API require different prerequisite conditions? Different prerequisite conditions might lead to different results, and so must be scrutinized.
    e. Does a command produce different post conditions? Different post conditions might need extra cleaning or create problems for other successive API calls.
    f. Does the privilege to call the API change? The Partner Software might fail due to changes in an API call's required privilege level.

If the answer to any of the above questions is YES, then re-certification is required.

If the answer is NO, re-certification is not required. However, Partners are advised to run corresponding versions of VMware Product Certification Suite (Stage 1) for a quick sanity check. If this fails, re-certification is required.

Note: This checklist covers only re- certification caused by new array model and/or firmware. It does not include the cases caused by XML interface change.

Table 3: Example VMware (SRM Array Integration Product) Re-Certification Checklist.

CLI Command	API Calls	Parameter	Output	Behavior	Pre-Condition	Post-Condition	Privilege

Appendix B: Key Web Links

Product-Specific Information

Program website – Login required

VMware Developer Center (DC): http://developercenter.vmware.com/

    VMware Developer Center Partner Network (DCPN)

    Log in access for Developer Center Partner Network is via Developer Center. Click "DC Partner Network" in the top tab.

VMware Solutions Exchange (VSX): https://www.vmware.com/partners/tech-alliance/vmware-solution-exchange.html

VMware Product Downloads

VMware vSphere (ESX Server & VirtualCenter)

Main Download Page: http://www.vmware.com/products/vsphere/

General Support Resources

TAP Alliances - https://www.vmware.com/partners/tech-alliance.html

My VMware - https://my.vmware.com/web/vmware/login

Technology-related information — such as knowledge base articles, documentation, and user groups — can be found at http://communities.vmware.com/

VMware Branding Guidelines - http://www.vmware.com/help/usage.html

Partner Central - http://www.vmware.com/partners/partners.html

VMware Flings - http://labs.vmware.com/flings

VI SDK support – www.vmware.com/go/sdksupport

VCP training and resources – http://mylearn.vmware.com/portals/certification/?ui=www

General VMware Documentation: https://www.vmware.com/support/pubs

VMware Compatibility Guide: http://www.vmware.com/resources/compatibility/search.php?action=base&deviceCategory=san
VMware Solution Exchange Marketplace: https://marketplace.vmware.com/vsx/

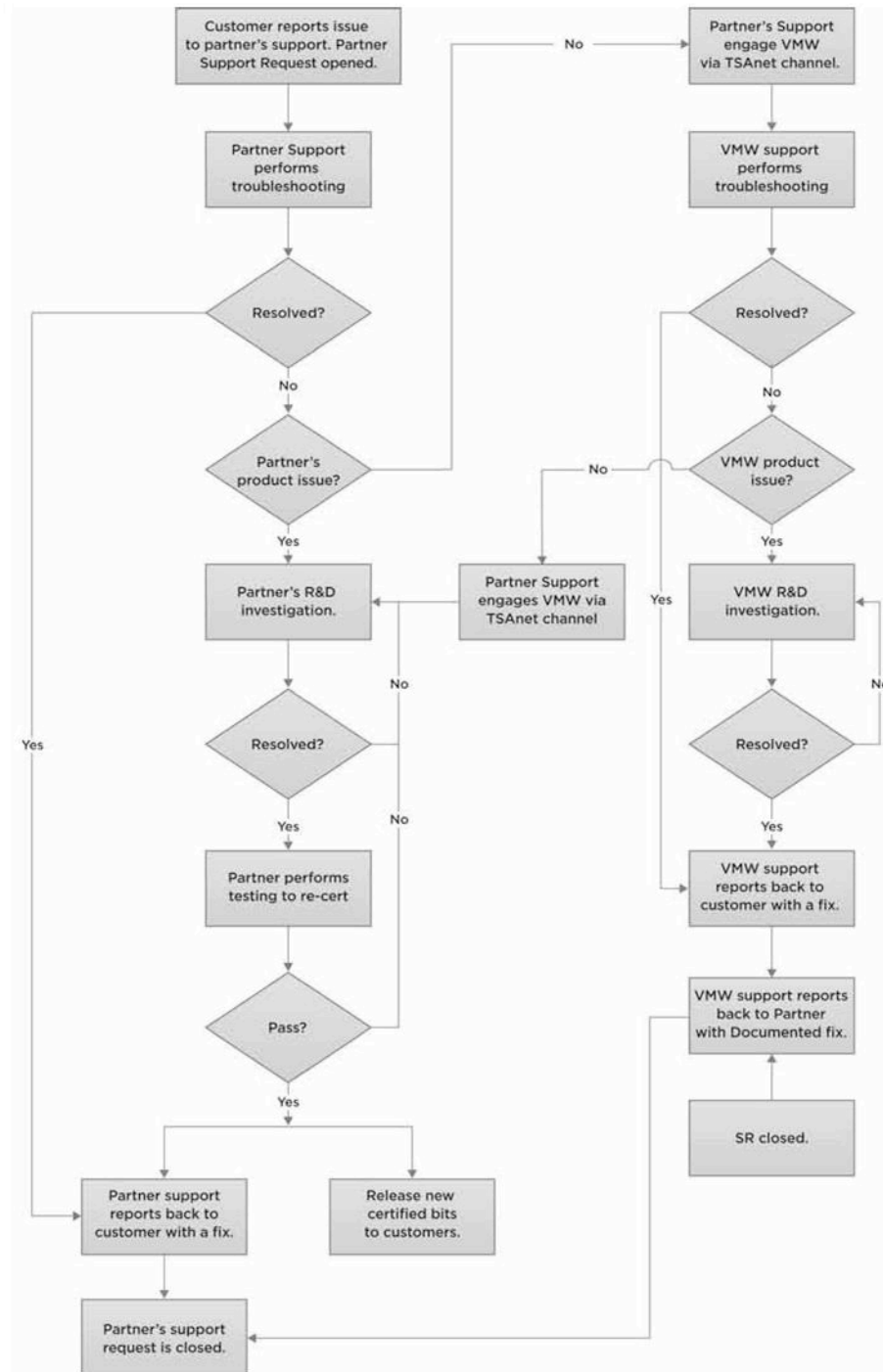# Appendix C: VMware Customer Contacts Support Flow

Figure 3: VMware Customer Contacts Support Flow.

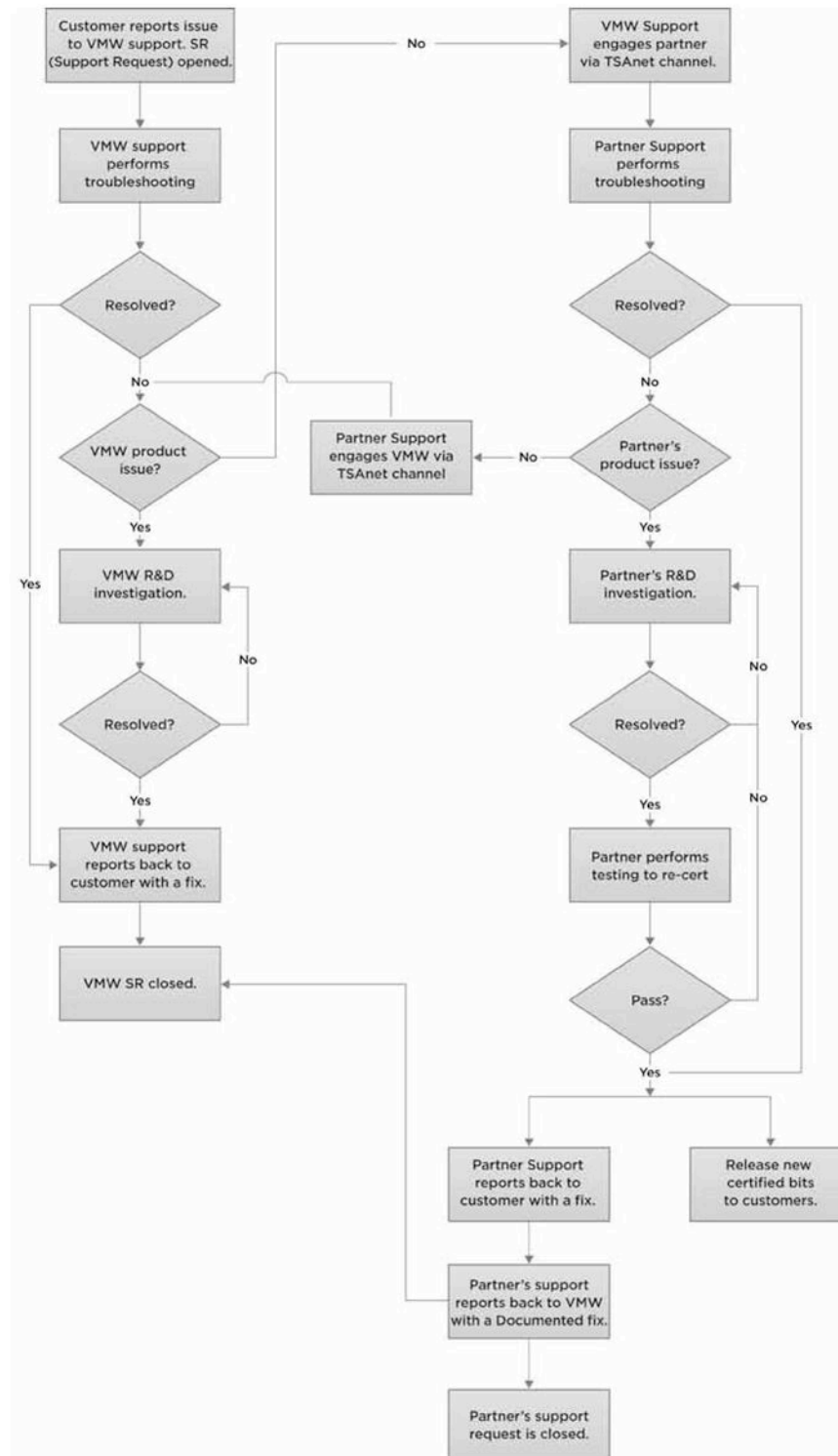# Appendix D: Partner Customer Contacts Support Flow

Figure 4: Partner Customer Contacts Support Flow.

Appendix E: Transfer of Information (TOI)

Partner shall provide TOI training for VMware (e.g., support, sales, sustaining engineering, QA, Alliances). Partner shall provide a short training to VMware personnel on the specifics of troubleshooting the Partner Software to help isolate the issue.

Note: Partner shall be responsible for supporting the Partner Software. This TOI is intended to ensure that VMware support engineers can easily isolate issues and smoothly engage Partner's support team for further troubleshooting.

Partner shall provide access to additional TOI materials at no charge upon the availability of any updates, upgrades or new versions of Partner Software.   Partner's TOI material should cover troubleshooting, internally developed tools, and access to Partner's knowledge database, as necessary to get knowledge of their Partner Software when isolating reported issues.

A significant amount of content can be handled through documentation, which can keep an interactive information transfer to a very short duration. During the interactive session, Partner should, at a minimum, show VMware personnel the error logs from both good states and failed states, and explain the errors codes (or refer to documentation), so that VMware personnel have a basic understanding of what can be expected when fielding customer calls.

The session should be done via WebEx or some other method that enables recording of the training session.

Information to be documented for mutual customers of selected parts being presented at the TOI includes:

1. Prerequisites for Partner Software.
    a. SW pre-requisites (perl, java, array management software, etc.)
    b. HW prerequisites (array HW and firmware versions, visibility, credentials, etc.)
    c. Licensing requirements (yes/no) If yes, please provide details.
2. Partner Software installation (if applicable): step-by-step installation guide.
3. Partner Software initial configuration (config files, UI parameters, special options, etc.), documented list of pre and post installation configuration and optional parameters.
4. Release notes and version information (to include information on known and fixed issues).
5. Product behavior, information on failback process.
6. Array capabilities and basic administration.
7. Troubleshooting:
    a. List of all error messages, what they mean, appropriate remedies.
    b. Log files with known results (to include what the Partner Software injects into the Partner Software logs). This should be further broken down to clearly identify:
        i. Expected good output and what it means (i.e. what is expected when everything is running correctly).
        ii. Expected bad output and what it means, such as:
            1. This XML block means the arrays can't see each other.
            2. This XML block means that the LUN is not replicated.
            3. This XML block means that something else is broken.
    c. Log files with error messages with a "verbose mode" option. (Verbose option should be available, but turned off by default; it could be invoked when it is not possible to make a good determination from the default logs.)
8. URL location where customers download the Partner Software.
9. URL location where customers can see their support policy for Partner Software.

Appendix F: Sample Partner Contact Information Form

Partner Alliance/Business Contact

Employee Name: _____

Title: _____

Address: _____

Phone: _____

Email: _____

Role and Responsibility of Contact: Help with strategic Partner alignment and getting legal agreements signed.

Partner Engineering Manager Contact

Employee Name: _____

Title: _____

Address: _____

Phone: _____

Email: _____

Partner Technical Support Manager Contact

Employee Name: _____

Title: _____

Address: _____

Phone: _____

Email: _____

Role and Responsibility of Contact: Manage the support relationship with VMware. He/she will be responsible and will act as a single point of contact for all support related activities including escalations and the management of the TSANet infrastructure. He/she should ensure the overall support readiness and training of their support organization to support their Partner Software.

Appendix G: Glossary of Terms and Acronyms

This Appendix defines acronyms and terms used in this guide.

API   Application Programming Interface

CLI   Command Line Interface

EASE   Ecosystems and Solutions Engineering

EULA   End User License Agreement

GA   General Availability

GSS   Global Support Services

HCL   Hardware Compatibility List

KB   Knowledge Base

PRD   Product Requirements Document

QA   Quality Assurance

RC   Release Candidate

SAN   Storage Array Network

SDK   **Software Development Kit**

SR   Support Request

TAP   Technology Alliance Partner

TOI   Transfer of Information

TSANet   Technical Support Alliance Network

vC Ops   vCenter Operations Manager

VCG   VMware Compatibility Guide

VCP   VMware Certified Professional

Appendix H: VMware Pre-Release Material(s) and Development Kit(s)

Under this Program, VMware may provide to Partner the VMware Pre-Release Material(s) or VMware Development Kit(s) listed below. Partner's use of the VMware Pre-Release Material(s) or VMware Development Kit(s) is subject to the terms and conditions of the Program Agreement.

VMware Pre-Release Material(s):

- VMware vSphere 5.x, 6.x

- VMware WorkBench 2.x, 3.x

- VMware vCenter Site Recovery Manager 5.x, 6.x

- VMware vCenter Server 5.x, 6.x

- VMware vCloudSuite 5.5, 6.x

- SRM Certification Plugin 5.x, 6.x