[MS-RSVD]: Remote Shared Virtual Disk Protocol

Errata below are for Protocol Document Version V6.0 – 2015/10/16.

Errata Published*	Description
2016/06/27	In Section 3.2.5.5.4, Receiving a Shared Virtual Disk Information Request, corrected the processing rules for initializing the SVHDX_TUNNEL_DISK_INFO_RESPONSE structure. Changed from: • DiskType MUST be set to the value received from the virtual SCSI disk. • If the server implements RSVD Protocol version 2 and Open.IsVHDSet is TRUE, DiskFormat MUST be set to VIRTUAL_STORAGE_TYPE_DEVICE_VHDSET. Otherwise, DiskFormat MUST be set to VIRTUAL_STORAGE_TYPE_DEVICE_VHDX. • BlockSize MUST be set to the number of bytes received from virtual SCSI disk. • LinkageId MUST be set to the linkage GUID received from virtual SCSI disk. • IsMounted MUST be set to TRUE if the virtual SCSI disk indicates that the disk is ready for read or write operations. Otherwise, the server MUST set this field to FALSE. • Is4kAligned MUST be set to TRUE if the virtual SCSI disk indicates that the disk sectors are aligned to 4 kilobytes. Otherwise, the server MUST set this field to FALSE. • Reserved MUST be set to zero. • FileSize MUST be set to the value received from the virtual SCSI disk. • VirtualDiskId MUST be set to the virtual disk GUID received from virtual SCSI disk. Changed to: • DiskType MUST be set to the value received from the virtual SCSI disk, as specified in section 2.2.4.6. • If the server implements RSVD Protocol version 2 and Open.IsVHDSet is TRUE, DiskFormat MUST be set to VIRTUAL_STORAGE_TYPE_DEVICE_VHDSET. Otherwise, DiskFormat MUST be set to VIRTUAL_STORAGE_TYPE_DEVICE_VHDX. • BlockSize MUST be set to an implementation-specific<14> number of bytes received from the virtual SCSI disk. • If the virtual SCSI disk is related to another virtual disk, LinkageId MUST be set to the implementation-specific GUID of the related virtual disk. Otherwise, LinkageID MAY<15> be set to zero. • IsMounted MUST be set to TRUE if the virtual SCSI disk indicates that the disk is ready for read or write operations. Otherwise, the server MUST set this field to FALSE. • Is4kAligned MUST be set to TRUE if the virtual SCSI disk indicates that the disk sectors are aligned to 4 kilobytes. Otherwise, the server MUST set this field to FALSE. • Reserved MUST be set to zero. • FileSize MUST be set to the physical size of the virtual SCSI disk on the underlying storage. • VirtualDiskId MUST be set to the virtual disk GUID received from the virtual SCSI disk. <14> Section 3.2.5.5.4: Windows sets BlockSize to zero for DiskType VHD_TYPE_FIXED. <15> Section 3.2.5.5.4: Windows sets LinkageID to the GUID of the related virtual disk.

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	In Section 3.2.5.5.4, Receiving a Shared Virtual Disk Information Request, changed from: • If the virtual SCSI disk is related to another virtual disk, LinkageId MUST be set to the implementation-specific GUID of the related virtual disk. Otherwise, LinkageID MAY<15> be set to zero. <15> Section 3.2.5.5.4: Windows sets LinkageID to the GUID of the related virtual disk. Changed to: • If the virtual SCSI disk has a linked disk, LinkageId MUST be set to the implementation-specific unique identifier of the linked disk. Otherwise, LinkageID SHOULD be set to an implementation-specific<15> value. <15> Section 3.2.5.5.4: Windows sets LinkageID to zero.
2016/05/16	In Section 2.2.4.12, SVHDX_OPEN_DEVICE_CONTEXT Structure, and Section 2.2.4.32, SVHDX_OPEN_DEVICE_CONTEXT_V2 Structure, updated the description of the Flags field. Changed from: Flags (4 bytes): Reserved. The client SHOULD set this field to 0x00000000, and the server MUST ignore it on receipt. Changed to: Flags (4 bytes): An application-provided value for the open.
2016/05/02	In Section 2.2.4.37, SVHDX_TUNNEL_QUERY_VIRTUAL_DISK_CHANGES_REQUEST Structure, added a new field to the bit table and the subsequent field descriptions. Changed from: … SnapshotType (4 bytes): The type of snapshot. This field MUST contain one of the values defined in section 2.2.6. ByteOffset (8 bytes): The byte offset of the region in the virtual disk to query changes for. … Changed to: … SnapshotType (4 bytes): The type of snapshot. This field MUST contain one of the values defined in section 2.2.6. Reserved (4 bytes): This field ensures the 8-byte alignment of the ByteOffset field. This value MUST be set to 0 by the client and MUST be ignored by the server. ByteOffset (8 bytes): The byte offset of the region in the virtual disk to query changes for. …
2016/04/18	In Section 3.2.5.5.14, Receiving a Query Virtual Disk changes request, revised the Ranges field description. Changed from: …

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	▪ The Ranges field is filled with an array of SVHDX_VIRTUAL_DISK_CHANGED_RANGE structures, each initialized as follows: … Changed to: … ▪ The Ranges field is filled with an array of SVHDX_VIRTUAL_DISK_CHANGED_RANGE structures returned from the virtual SCSI disk in an implementation-specific manner, each initialized as follows: …
2016/04/18	In Section 3.2.5.5.7, Receiving a Start Meta-Operation Request, added missing operation types. Changed from: If the OperationType is not one of SvhdxMetaOperationTypeCreateSnapshot, SvhdxMetaOperationTypeOptimize, or SvhdxMetaOperationTypeExtractVHD, the operation is failed with the STATUS_INVALID_PARAMETER. Processing for a specific OperationType is as specified in sections 3.2.5.5.7.1, 3.2.5.5.7.2, and 3.2.5.5.7.3. Changed to: SvhdxMetaOperationTypeOptimize, SvhdxMetaOperationTypeExtractVHD, SvhdxMetaOperationTypeConvertToVHDSet, SvhdxMetaOperationTypeResize, or SvhdxMetaOperationTypeApplySnapshot, the operation is failed with the STATUS_INVALID_PARAMETER. Processing for a specific OperationType is specified in the following subsections.
2016/04/04	In Section 2.2.4.27, SVHDX_CHANGE_TRACKING_START_REQUEST Structure, the LogFileNameOffset field was added as follows: LogFileNameOffset (4 bytes): The offset, in bytes, of the LogFileName field.
2016/04/04	In Section 3.2.5.3, Receiving a Read Request, changed from: If the Open is found and Open.InitiatorId is zero, the server MUST process as follows: Changed to: If the Open is found, Open.IsVirtualSCSIDisk is true, and Open.InitiatorId is zero, the server MUST process as follows: In Section 3.2.5.4, Receiving a Write Request, changed from: If the Open is found and Open.InitiatorId is zero, the server MUST process as follows: Changed to:

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	If the Open is found, Open.IsVirtualSCSIDisk is true, and Open.InitiatorId is zero, the server MUST process as follows:
2016/02/22	In Section 3.2.5.5.7.1, Receiving a Create Snapshot Request, updated the definition of stage value validation. Changed from: … Each Stage2 through Stage6 field is checked with the following: ▪ If the current stage value is less than or equal to that of the prior stage, the operation is failed with STATUS_INVALID_PARAMETER_3. ▪ If the current stage value is not SvhdxSnapshotStageInvalid and the server has observed an SvhdxSnapshotStageInvalid for this request, the operation is failed with STATUS_INVALID_PARAMETER_4. … Changed to: … Each Stage2 through Stage6 is processed as follows: ▪ If the current stage value is not SvhdxSnapshotStageInvalid and is less than or equal to the previous stage value, the server MUST fail the request with STATUS_INVALID_PARAMETER_4. ▪ If the current state value is not SvhdxSnapshotStageInvalid and if the previous stage value is equal to SvhdxSnapshotStageInvalid, the server MUST fail the request with STATUS_INVALID_PARAMETER_3. …
2016/01/25	In various sections, changes have been made to clarify the Create Context V2 structure relative to the V1 structure. In Section 1.5, Prerequisites/Preconditions, the second bullet has been changed from: ▪ The SMB client and server support the SVHDX_OPEN_DEVICE_CONTEXT create context, as specified in section 2.2.4.12. Changed to: ▪ The SMB client and server support accessing shared virtual disk files on a remote server. In Section 2.2.1, Constants, two new constants have been added: | Constant name	Meaning
RSVD_ECP_CONTEXT_VERSION_1 0x00000001	Value of Version field in create context specified in section 2.2.4.12
RSVD_ECP_CONTEXT_VERSION_2 0x00000002	Value of Version field in create context specified in section 2.2.4.32 | In Section 2.2.4.12, SVHDX_OPEN_DEVICE_CONTEXT Structure, the Version field has been changed from:

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	Version (4 bytes): The version of the create context. It MUST be set to 0x0000001. Changed to: Version (4 bytes): The version of the create context. It MUST be set to RSVD_ECP_CONTEXT_VERSION_1. In Section 2.2.4.31, SVHDX_OPEN_DEVICE_CONTEXT_RESPONSE Structure, the Version field has been changed from: Version (4 bytes): The version of the create context. It MUST be set to the highest supported version of the protocol, as specified in section 1.7. Changed to: Version (4 bytes): The version of the create context. It MUST be set to RSVD_ECP_CONTEXT_VERSION_1. In Section 2.2.4.32, SVHDX_OPEN_DEVICE_CONTEXT_V2 Structure, the Version field has been changed from: Version (4 bytes): The version of the create context. It MUST be set to 0x00000002. Changed to: Version (4 bytes): The version of the create context. It MUST be set to RSVD_ECP_CONTEXT_VERSION_2. In Section 2.2.4.33, SVHDX_OPEN_DEVICE_CONTEXT_V2_RESPONSE Structure, the Version field has been changed from: Version (4 bytes): The version of the create context received. Changed to: Version (4 bytes): The version of the create context. It MUST be set to RSVD_ECP_CONTEXT_VERSION_2.
2016/01/25	In Section 3.2.1.2, Per Open, changed from: InitiatorId: A GUID that identifies the initiator of the open request. Changed to: Open.InitiatorId: A GUID that identifies the initiator of the open request.
2016/01/25	In Section 2.2.4.17, SVHDX_META_OPERATION_START_REQUEST Structure, the second paragraph of the Data field has been changed from: If the OperationType is SvhdxMetaOperationTypeCreateSnapshot, this field is provided in the format SVHDX_META_OPERATION_CREATE as specified in section 2.2.4.17.1.

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	Changed to:
	If the OperationType is SvhdxMetaOperationTypeCreateSnapshot, this field is provided in the format SVHDX_META_OPERATION_CREATE_SNAPSHOT as specified in section 2.2.4.17.1.
2016/01/25	In Section 2.2.4.8, SVHDX_TUNNEL_SCSI_RESPONSE Structure, the Length field has been changed from:
	Length (2 bytes): Specifies the size, in bytes, of the SVHDX_TUNNEL_SCSI_RESPONSE structure.
	Changed to:
	Length (2 bytes): Specifies the size, in bytes, of the SVHDX_TUNNEL_SCSI_RESPONSE structure excluding the DataBuffer field. This field MUST be set to 36.
	The size of SrbStatus has been changed from 1 byte to 7 bits.
2016/01/11	In several sections, added clarification regarding Sense Information. In Section 2.2.4.4, SVHDX_TUNNEL_SRB_STATUS_RESPONSE Structure, the description of the SenseInfoExLength field has been changed from:
	SenseInfoExLength (1 byte): The length, in bytes, of the request sense data buffer.
	Changed to:
	SenseInfoExLength (1 byte): The length, in bytes, of the sense data in the SenseDataEx field.
	The SenseDataEx field has been changed from:
	SenseDataEx (variable): A buffer of maximum size 20 bytes that contains the sense data.
	Changed to:
	SenseDataEx (20 bytes): A buffer that contains the sense data.
	In Section 2.2.4.8, SVHDX_TUNNEL_SCSI_RESPONSE Structure, the description of the SenseInfoExLength field has been changed from:
	SenseInfoExLength (1 byte): The length, in bytes, of the request sense data buffer.
	Changed to:
	SenseInfoExLength (1 byte): The length, in bytes, of the sense data in the SenseDataEx field.
	The SenseDataEx field has been changed from:
	SenseDataEx (variable): A buffer of maximum size 20 bytes that contains the sense data.

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	Changed to: SenseDataEx (20 bytes): A buffer that contains the sense data. In Section 3.2.5.5.5, Receiving a SCSI Command Request, the 8th bullet of the second list has been changed from: ▪ The SenseInfoExLength field is set to the length of the sense information received from the virtual SCSI disk, if any. Changed to: ▪ The SenseInfoExLength field is set to the SenseInfoExLength received in the request.

* Date format: YYYY/MM/DD