# Protocols EFI Firmware Management Test Case

## EFI\_FIRMWARE\_MANAGEMENT\_PROTOCOL

Reference Document:

*UEFI 2.3 Specification*, Chapter 32.

### GetImageInfo()

|  |  |  |  |
| --- | --- | --- | --- |
| Number | GUID | Assertion | Test Description |
| 32.1.1.1.1 | 0xd02b40ae, 0x62f, 0x4155,  0xbb, 0xdd, 0x4, 0x29, 0x18, 0x94, 0xea, 0x31 | **EFI\_FIRMWARE\_MANAGEMENT\_PROTOCOL.GetImageInfo()**returns  EFI\_SUCCESS | Call function with all valid parameters. The function should return **EFI\_SUCCESS**.  Check for expected return code.  Check *\*DescriptorVersion* is equal to 1.  Check *ImageIndex* is between 1 and *\*DescriptorCount*.  Check *AttributesSupported* has no bits set beyond bit 3.  Check *AttributesSetting* has no bits set beyond bit 3.  Check Compatibilities bits 1 thru 15 are 0s. |
| 32.1.2.1.1 | 0x3789b80e, 0xab70, 0x4dc9, 0xbb, 0xbd, 0x70, 0x63, 0x76, 0x36, 0xab, 0x52 | **EFI\_FIRMWARE\_MANAGEMENT\_PROTOCOL.GetImageInfo()**returns  EFI\_BUFFER\_TOO\_SMALL | Call function with valid parameters, except *\*ImageInfoSize* = 1. The function should return **EFI\_BUFFER\_TOO\_SMALL** and *\*ImageInfoSize* > 1. |
| 32.1.2.1.2 | 0xca1d7706, 0x256b, 0x464e, 0xb6, 0xee, 0x50, 0x34, 0x1e, 0xec, 0x3c, 0x83 | **EFI\_FIRMWARE\_MANAGEMENT\_PROTOCOL.GetImageInfo()**returns  EFI\_INVALID\_PARAMETER | Call function with valid parameters, except *ImageInfoSize* is NULL. The function should return **EFI\_INVALID\_PARAMETER**. |

### GetImage()

|  |  |  |  |
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| Number | GUID | Assertion | Test Description |
| 32.2.1.1.1 | 0xff704c46, 0x3999, 0x4a28, 0xa3, 0x6e, 0x76, 0x8a, 0xb6, 0xad, 0x89, 0xd8 | **EFI\_FIRMWARE\_MANAGEMENT\_PROTOCOL.GetImage()**returns  **EFI\_SUCCESS** or  **EFI\_UNSUPPORTED** | Authentication not required.  Call function with all valid parameters. The function should return **EFI\_SUCCESS** or **EFI\_UNSUPPORTED**. |
| 32.2.2.1.1 | 0x3c8d87b2, 0x6a89, 0x4a6c,  0xbc, 0x75, 0xe6, 0x86, 0xa1, 0x49, 0x13, 0xf0 | **EFI\_FIRMWARE\_MANAGEMENT\_PROTOCOL.GetImage()**returns  EFI\_BUFFER\_TOO\_SMALL | Function is supported.  Authentication not required.  Call function with valid parameters, except *\*ImageSize* = 1. The function, if supported, should return **EFI\_BUFFER\_TOO\_SMALL** and *\*ImageSize* > 1. |
| 32.2.2.1.2 | 0x88031c96, 0x99bf, 0x4d2c,  0x9f, 0x57, 0xa7, 0x2, 0x6a, 0xbc, 0xd3, 0x51 | **EFI\_FIRMWARE\_MANAGEMENT\_PROTOCOL.GetImage()**returns  EFI\_INVALID\_PARAMETER | Function is supported.  Authentication not required.  Call function with valid parameters, except *Image* is NULL. The function should return **EFI\_INVALID\_PARAMETER**. |
| 32.2.2.1.3 | 0x7a386361, 0x3a5d, 0x4e58, 0x8a, 0x51, 0x4d, 0x93, 0xb6, 0x55, 0x95, 0xf4 | **EFI\_FIRMWARE\_MANAGEMENT\_PROTOCOL.GetImage()**returns  **EFI\_INVALID\_PARAMETER** or  **EFI\_NOT\_FOUND** | Function is supported.  Authentication not required.  Call function with valid parameters, except *ImageIndex* = 0 or *ImageIndex* = *\*DescriptorCount* + 1. The function should return **EFI\_INVALID\_PARAMETER** or **EFI\_NOT\_FOUND**. |
| 32.2.2.1.4 | 0xd6a77629, 0x5afd, 0x4854, 0x87, 0xc8, 0xee, 0x9f, 0xc5, 0x3d, 0xbe, 0x3d | **EFI\_FIRMWARE\_MANAGEMENT\_PROTOCOL.GetImage()**returns  EFI\_SECURITY\_VIOLATION | Function is supported.  Authentication required.  Call function with valid parameters, except *Image* has a dummy authentication data. The function should return **EFI\_SECURITY\_VIOLATION**. |

### SetImage()

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| Number | GUID | Assertion | Test Description |
| 32.3.2.1.1 | 0x4ea24764, 0xa6b1, 0x43b5, 0xb8, 0xa0, 0xd3, 0x3f, 0xdc, 0x8b, 0xc6, 0xe4 | **EFI\_FIRMWARE\_MANAGEMENT\_PROTOCOL.SetImage()**returns  EFI\_INVALID\_PARAMETER | Function is supported.  Authentication not required.  Call function with valid parameters, except *Image* is NULL. The function should return **EFI\_INVALID\_PARAMETER**. |
| 32.3.2.1.2 | 0xc82d1373,  0x1f87,  0x45f4,  0xaf, 0xfc,  0x10, 0xa7,  0xf7, 0xb0,  0x9c, 0xb0 | **EFI\_FIRMWARE\_MANAGEMENT\_PROTOCOL.SetImage()**returns  **EFI\_INVALID\_PARAMETER** or **EFI\_ABORTED** | Function is supported.  Authentication not required.  Call function with valid parameters, except *ImageIndex* = 0 or *ImageIndex* = *\*DescriptorCount* + 1. The function should return **EFI\_INVALID\_PARAMETER** or **EFI\_ABORTED**. |
| 32.3.2.1.3 | 0x2410a859,  0xdf6f,  0x4857, 0x92,  0x4a, 0x26,  0x37, 0x7,  0x11, 0xf,  0x1c | **EFI\_FIRMWARE\_MANAGEMENT\_PROTOCOL.SetImage()**returns    **EFI\_SECURITY\_VIOLATION** | Function is supported.  Authentication not required.  Call function with valid parameters, except *ImageIndex* = 0 or *ImageIndex* = *\*DescriptorCount* + 1. The function should return **EFI\_INVALID\_PARAMETER** or **EFI\_ABORTED**.  Image has dummy authentication data.  The function should return  EFI\_SECURITY\_VIOLATION. |

### CheckImage()

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| Number | GUID | Assertion | Test Description |
| 32.4.2.1.1 | 0x3987172c, 0xe6a0, 0x4099, 0xb1, 0x2b, 0xd8, 0xef, 0xf2, 0x62, 0x75, 0x93 | **EFI\_FIRMWARE\_MANAGEMENT\_PROTOCOL.CheckImage()**returns  EFI\_INVALID\_PARAMETER | Function is supported.  Authentication not required.  Call function with valid parameters, except *Image* is NULL. The function should return **EFI\_INVALID\_PARAMETER**. |
| 32.4.2.1.2 | 0xd6dad28e, 0x7f0f, 0x4f56,  0x9a, 0x93, 0x14, 0x7d, 0xb3, 0x74, 0x0, 0xc9 | **EFI\_FIRMWARE\_MANAGEMENT\_PROTOCOL.CheckImage()**returns  EFI\_SECURITY\_VIOLATION | Function is supported.  Authentication required.  Call function with valid parameters, except *Image* has a dummy authentication data. The function should return **EFI\_SECURITY\_VIOLATION**. |

### GetPackageInfo()

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| Number | GUID | Assertion | Test Description |
| 32.5.1.1.1 | 0x70884539, 0x9a34, 0x4146, 0x83, 0x3a, 0x4d, 0x89, 0x8b, 0x9c, 0x7e, 0xa4 | **EFI\_FIRMWARE\_MANAGEMENT\_PROTOCOL.GetPackageInfo()**returns  **EFI\_SUCCESS** or  **EFI\_UNSUPPORTED** | Call function with all valid parameters. The function should return **EFI\_SUCCESS** or **EFI\_UNSUPPORTED**.  Check *\*AttributesSupported* has no bits set beyond bit 2.  Check *\*AttributesSetting* has no bits set beyond bit 2. |

### SetPackageInfo()

|  |  |  |  |
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| Number | GUID | Assertion | Test Description |
| 32.6.2.1.1 | 0xb5288fc3, 0xe906, 0x4468, 0x83, 0x3d, 0xd4, 0xa6, 0x58, 0xa5, 0x4f, 0xbd | **EFI\_FIRMWARE\_MANAGEMENT\_PROTOCOL.SetPackageInfo()**returns  EFI\_INVALID\_PARAMETER | Function is supported.  Authentication not required.  Call function with valid parameters, except *\*\*PackageVersionName* is longer than the value returned in *\*PackageVersionNameMaxLen*. The function should return **EFI\_INVALID\_PARAMETER**. |
| 32.6.2.1.2 | 0x57355301, 0x1343, 0x497f,  0xbe, 0xe0, 0x8e, 0x5c, 0x27, 0xd2, 0x40, 0x2 | **EFI\_FIRMWARE\_MANAGEMENT\_PROTOCOL.SetPackageInfo()**returns  EFI\_SECURITY\_VIOLATION | Function is supported.  Authentication is required.  Call function with valid parameters, except *Image* is NULL. The function should return **EFI\_SECURITY\_VIOLATION**. |
| 32.6.2.1.3 | 0xadeab82d, 0x7592, 0x40fe,  0x87, 0xa8, 0x93, 0x2b, 0xad, 0x97, 0xff, 0x5e | **EFI\_FIRMWARE\_MANAGEMENT\_PROTOCOL.SetPackageInfo()**returns  EFI\_SECURITY\_VIOLATION | Function is supported.  Authentication is required.  Call function with valid parameters, except *ImageSize* is 0. The function should return **EFI\_SECURITY\_VIOLATION**. |
| 32.6.2.1.4 | 0x9be658d2, 0x1312, 0x4254, 0x91, 0x10, 0x59, 0x0, 0xd5, 0xfd, 0x6c, 0x6c | **EFI\_FIRMWARE\_MANAGEMENT\_PROTOCOL.SetPackageInfo()**returns  EFI\_SECURITY\_VIOLATION | Function is supported.  Authentication is required.  Call function with valid parameters, except *Image* has a dummy authentication data. The function should return **EFI\_SECURITY\_VIOLATION**. |