# Frequently Asked Questions

- 1. <u>I want to upload a package</u>
- 2. <u>I want to create JSON file for my package</u>
- 3. I want to get MD5 checksum for the files in my package
- 4. <u>I want to publish/un-publish a package</u>
- 5. I want to add members/admins to discovery group

# I want to upload a package

1. Select a Product Line from the drop down menu and then click the Upload Package link.

Microsoft Software Repository Contoso/WindowsPhone ~	🕜 MSR Support 🗸
Search         Discovery         Groups         Select a Product Line           Sewr0x         Use , or Space to separate tags	Upload Package     Oreate Group     Upload     Q Search

2. Package creation dialog shall pop up

	Package meta	data: Drag-an	d-drop package metadata-file (ison)
		idata. Drag-ani	a-drop package metadata-me (son)
Brows	ie		
Mandatory Attributes	Drag json file or browse		Optional Attributes
Manufacturer Name *	Contoso using Browse button		Package Title
/anufacturer Product Line *	WindowsPhone		Package Subtitle
ackage Type *	Double click to choose from the list		Package Description
ackage Class *	Testing	×	Parkane Subrevision
	Double click to choose from the list		Decision State
ackage Revision *			Fackage state
etention Policy *	80		Operator Name
			Customer Name
Extended Attributes			Manufacturer Package ID
xtended Attributes	=		Manufacturer Hardware Model
System Attributes			Manufacturer Model Name
			Manufacturer Hardware Variant
reated by lodified Bv			Manufacturer Variant Name
reated On			Manufacturer Platform ID
lodified On			

- 3. Drag or Browse metadata JSON to Package metadata area
  - a. Data can be edited on UI or JSON file can be edited and dragged again
- 4. Click 'Create package' button to create the package
  - a. On successful package creation, a confirmation message shall be displayed.
- 5. Drag or Browse package files to Package files area
  - a. Can be done only after creating the package.
  - b. Once the package is created, Files tab will be visible through which files can be dragged or browsed.

Contoso-Wir	ndowsPhone	e (2a7342da-828	d-4a4e-bc38-31599961d12a)				×
Package	Files	Publish					
				Package files: Drag-and-o	frop package files		
ļ		Browse					
Name				Size	Status	Progress	
✓ ONERUUF	Resource.txt			1.43 MB	I. I		
<ul> <li>ONERUUR</li> </ul>	Resource.txt		Drag json file or browse using Browse button	1.43 M8	<b>☆</b> ✓ ⊞		
				Upload Files Dow	nload All Files		

- 6. Click 'Upload files' button to upload the files
- 7. Once package is created
  - a. Editing and saving the metadata changes the created package
  - b. In order to create another package dialog must be closed and 'Create package' in the main UI must be clicked again.

### I want to create json file of my package

1. Json file refers to the file containing metadata of the package..

2. The metadata file contains the details of the package and its associated files. Following are the attributes in the metadata.

Attribute	Туре	#	Description
id	String	1	Required. Unique system generated identifier for a software
			package. Not defined in new package creation.
packageType	String	1	Required. Defines type of software package allowing multiple
			types available for same device.
packageTitle	String	01	Recommended. Name of a software package.
packageSubtitle	String	01	Optional. More detailed naming of a software package.
packageDescription	String	01	Optional. Description of a software package or content of the software package.
packageClass	List of	1*	Required. Purpose of software package.
	strings		
package Revision	String	1	Required. Software version carried in software package. Syntax is limited to unlimited number numerical parts separated by dot (.) First part of revision is expected to be most significant part followed by less significant parts in descending significance and ending to least significant part. Comparing parts from most significant to least significant until there is difference in numerical value of a part will compare revisions to identify higher-lower revision.
packageSubRevision	String	01	Optional. Can be used to define revision order of multiple software packages with same package revision. Will be used in package revision comparison when value of packageRevision of two or more packages equal to get comparison order for packages.
packageState	String	01	Optional. Can be used to carry state information of package during its lifecycle.
manufacturerName	String	1	Required. A string to identify OEM manufacturer of a software package.
manufacturerProductLine	String	1	Required. A string to identify a product line of OEM manufacturer of a software package.
manufacturerModelName	List of strings	0*	Recommended [2]. Identifies a display name of OEM manufacturer product model.
manufacturerVariantName	List of	0*	Recommended [2]. Identifies OEM manufacturer product
	strings		variant.
manufacturerPackageld	String	01	Recommended [2]. An identifier for software package within OEM manufacturer and product line scope. Value is intended to be unique unless omitted or NULL value defined. OEM shall take care of uniqueness of the attribute.
manufacturerPlatformId	List of strings	0*	Recommended [2]. Can be used to identify device platform for which software package is targeted.
manufacturerHardwareModel	List of strings	0*	Recommended [2]. Identifies OEM Manufacturer hardware model.
manufacturerHardwareVariant	List of strings	0*	Recommended [2]. Identifies OEM Manufacturer hardware variant.

operatorName	List of strings	0*	Recommended [2]. Identifies operator or operators for which product is targeted.
customerName	List of strings	0*	Recommended [2]. Identifies customer or customers for which product is targeted.
extendedAttributes	Map with flat list of strings	0*	Optional. Enables OEM specific attribute extensions as flat list of string type attributes
retentionPolicy	String	1	Required. Name of retention policy to be applied. Retention policies are listed and described in Software Repository Retention Policy Guide.
files	List	0*	Metadata of files associated with the package

#### 3. Example JSON file

{

```
"manufacturerName": "Contoso",
"manufacturerProductLine": "WindowsPhone",
"packageType": "Firmware",
"packageClass": ["Testing"],
"packageTitle": "Phone firmware",
"packageSubtitle": "",
"packageDescription": "",
"packageRevision": "1.0.20",
"packageSubRevision": "",
"packageState": "Completed",
"manufacturerHardwareModel": [ "C-2014" ],
"manufacturerHardwareVariant": [ "313", "314" ],
"manufacturerPackageId": "Build_123.12",
"manufacturerPlatformId": ["8.1"],
"manufacturerModelName": ["The Headphone"],
"manufacturerVariantName": ["Red"],
"operatorName": [],
"customerName": [],
"extendedAttributes": {
    "myOwnAttribute1": "My Own Value1",
    "myOwnAttribute2": "My Own Value2"
},
"retentionPolicy": "90 days",
"files": [
    {
          "fileName": "firmware.pkg",
         "fileSize": "10240543",
         "fileType": "image",
          "checksum": [
              {
                   "value": "8zpOSCYd3Jmkx96DXGtKsw==",
                   "type": "MD5"
              }
         ],
```

```
"alternateUrl": [ "http://primary.local/path/firmware.pkg" ]
        },
        {
            "fileName": "firmware.signature.bin",
            "fileSize": 459,
            "fileType": "Signature",
            "checksum": [
                {
                    "value": "lHo9FcAD5r5K0AxKnIkX2g==",
                    "type": "MD5"
                }
            ],
            "alternateUrl": [ "http://primary.local/path/firmware.signature.bin"
]
        }
    ]
}
```

## I want to get MD5 checksum for the files in my package

- 1. For each file mentioned in the package metadata (JSON file), its MD5 hash value must be calculated by the source system/user before uploading to Software Repository.
- 2. It is used to ensure the file integrity during transit.
  - a. Source systems/users could use this hash value to enforce file integrity upon upload to Software Repository.
  - b. Clients could use this hash value for file integrity check after file download.
- 3. Software Repository requires MD5 hash value in Base64 encoded format.

Sample

- a. File (click to download) : package\_metadata.json
- b. MD5 hash value : **1i8HTGrUEM1LL7P1G0rj1A==**
- 4. Command prompt utility to get MD5 hash value of a file in Base64 string

<u>File Checksum Integrity Verifier (FCIV)</u> is a command-prompt utility that computes and verifies cryptographic hash values of files.

To get the base64 encoded hash value, utility usage is

>fciv package\_metadata.json -xml myMD5.xml

5. Code snippet to get MD5 hash value of a file in Base64 string

```
a. C#
using System;
using System.IO;
using System.Security.Cryptography;
••••
private string GetMD5HashFromFile(string fileName)
{
    using (var md5 = MD5.Create())
    {
        using (var stream = File.OpenRead(fileName))
        {
            return Convert.ToBase64String(md5.ComputeHash(stream));
        }
    }
}
b. Java
import org.apache.commons.codec.binary.Base64;
import org.apache.commons.codec.digest.DigestUtils;
private String GetMD5HashFromFile(String fileName)
{
       return Base64.encodeBase64String(
       DigestUtils.md5(Files.readAllBytes(Paths.get(fileName))));
}
c. Python
import hashlib
import base64
import sys
def md5base64(filePath):
    with open(filePath, 'rb') as fh:
        m = hashlib.md5()
        while True:
            data = fh.read(8192)
            if not data:
                 break
            m.update(data)
        return base64.b64encode(m.digest()).decode("utf-8")
#provide the fully qualified filename as command line argument
print(md5base64(sys.argv[1]))
```

### I want to publish/un-publish a package

1. Search for the package.

Mic	rosoft	t Software Repository Contoso/Windo	wsPhone ~						MSR Support ~
Se	arch	Discovery Groups						Upload Package	Create Group
Sea	rch:	× WindowsPhone × Testing							<b>Q</b> Search
Showin	g: 6 of 6	Publish Package							Customize Grid
Ac	tion	â	Package Type 🚊	Package Title	Package Revision 🏦	Manufacturer Name 🏦	Manufacturer Product Line	Manufacturer Hardware Model 🏦	Package Class 🚊
5	e,	2a7342da-828d-4a4e-bc38-31599961d12a	Firmware	Contoso-WindowsPhone	1	Contoso	WindowsPhone		Testing
9	Q	e54fbe16-e428-4d53-974e-070f5935c830	Firmware	Contoso-WindowsPhone	1	Contoso	WindowsPhone		Testing, Public
9	Q	92416531-3ca0-461e-8c9b-4cf256f4b10d	Firmware	Testing Upload Steps II	4.0	Contoso	WindowsPhone	XBITEST	Public
9	Q	df9e28d2-8537-4bc4-b18a-12fcd9319ffa	Firmware	Higher than 5GB Test Fail	3.0.5	Contoso	WindowsPhone	Hier-Fi	Testing
9	Q	60f6b9df-db4f-41f3-9a4c-21c0ae154de1	Firmware	Testing Janne for Monitor	3.0.0	Contoso	WindowsPhone	New Hardware	Public
9	Q	591293ae-964b-4ea4-a99d-de407b7520af	Firmware	Testing Janne for Monitor	3.0.0	Contoso	WindowsPhone	New Hardware	Public

- 2. Click the globe icon against the package to be published from the Search result.
- 3. Package edit dialog shall pop up.
- 4. "Available groups" section lists all the group that you have access to.
  - a. Click the globe icon against a group to publish the package to it.

Contoso-WindowsPhone (2a7342da-828d-4a4e-bc38-31599961d12a)		:
Package Files Publish		
Available groups		Published groups
Search:		No published groups found.
Id 🔺 Group Name 🔶	Scope 🔶	
(1)         f5109041-ea80-4a8a-97ab-5b4789fcca0a         Discovery for Contoso WindowsPhone         Contoso           Testing Region         Contoso         Testing Region	, WindowsPhone, Testing	
Publish Previo	ous 1 Next	
_		

- 5. "Published groups" section lists all the group to which the package is already published to.
  - a. Click the cross icon against a group to unpublish the package from it.

Contoso-WindowsPhone (2a7342da-828d-4a4e-bc38-31599961d12a)	×
Package Files Publish	
Available groups	Published groups
No groups available.	Search:
	Id 🔺 Group Name 🔶 Scope 🔶
	t5109041-ea80-4a8a-97ab-5b4789fcca0a Discovery for Contoso WindowsPhone Contoso, WindowsPhone, Testing     Testing Region
	Unpublish Previous 1 Next

## I want to add members/admins to discovery group

- 1. Select a Product Line from the drop down menu.
  - a. Click the Groups tab.

- b. On right corner, you can search the discovery group to which members needs to be added by using search box
- c. Click Member icon at the left corner of the particular group.

Microsof	Software Repository Contoso/WindowsPhone				📀 MSR Support 🗸
Search	Discovery Groups			Sea	arch Group
Actions	Id	Name	0	Package Class 0	Operation 0
1 9	1a0d84eb-af43-427e-9d3d-3f9292231cbb	Discover for Contoso WindowsPhone Public	Public		DISCOVER
1	be20e264-7fb5-4f4c-8622-b1d97286ee67	Manage Customer Group for Contoso Window	sPhone Public Public		MANAGE_CUSTOMER_GROUP
1	c42026bb-fdce-4bf0-9d31-f3ff06578475	Manage Customer Group for Contoso Window	sPhone Testing		MANAGE_CUSTOMER_GROUP
1 9	5109041-ea80-4a8a-97ab-5b4789fcca0a	Discovery for Contoso WindowsPhone Testing	Region Testing		DISCOVER
	Member Icon				Previous 1 Next

- 2. Group details dialog shall pop up.
- 3. Choose Members tab if you need to add members.
  - a. Enter the user account details in the text box.
  - b. Click Add Member button.

and a la l	f5109041-ea80-4a8a-97ab-5b4789fcca0a				
Group Name	Discovery for Contoso WindowsPhone Testing Region	Discovery for Contoso WindowsPhone Testing Region			
/lanufacturer Name	Contoso				
Vanufacturer Product Line	WindowsPhone				
Package Class	Testing				
Dperation	DISCOVER	$\checkmark$			
tembers Admins Regions	Update Delete				

- 4. Choose Admins tab if you need to add admins.
  - a. Enter the user account details in the text box.
  - b. Click Add Admin button.

Discovery for Contoso WindowsPhone Testing Re	gion (f5109041-ea80-4a8a-97ab-5b4789fcca0a)	
Group Id	f5109041-ea80-4a8a-97ab-5b4789fcca0a	
Group Name	Discovery for Contoso WindowsPhone Testing Region	
Manufacturer Name	Contoso	
Manufacturer Product Line	WindowsPhone	
Package Class	Testing	
Operation	DISCOVER	
Members Admins Regions	Update Delete	
bc@partners.microsoft.net	Add Admin	
User account to be added	Click to add Admin	