Face Recognition Service

SDK Reference

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1 Java SDK

1.1 Quick Start

Environment Preparation

1. Enable the Face Recognition service: Log in to the **Face Recognition management console**, select a sub-service, and click **Enable Service** on the right.

   You only need to enable the service once.
2. Obtain the endpoints of Face Recognition. For details, see **Regions and Endpoints**.
3. For details about Face Recognition APIs, see the **Face Recognition API Reference**.
4. Obtain the AK/SK of your HUAWEI CLOUD account.

   If no AK/SK has been generated, log in to , enter the **My Credentials** page, and choose **Access Keys** > **Create Access Key** to obtain the access keys.
5. Install the JDK. The Java SDK can run on JDK 1.8 or later.

NOTE

- SDKs provided by Face Recognition do not support access retries. If the access is abnormal, the SDK directly returns the request results. Therefore, the client needs to establish a retry mechanism.
- When an Android system uses this Java SDK, the main thread is not supported. You are advised to use the sub-thread.
- When using the demo in the Java SDK, you are advised to use JDK 1.9+ because **readAllBytes()** is a method in JDK 1.9+.

SDK Acquisition and Installation

Take Eclipse as an example. After creating a Java project, perform the following steps to import the JAR file to the new project:

1. Download the **SDK JAR file**.
2. Copy the downloaded JAR file to the project folder.

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3. Open the project in Eclipse, right-click the project, and choose **Properties**.
4. In the displayed dialog box, click **Java Build Path**. On the **Libraries** tab, click **Add JARs** to add the downloaded JAR file.
5. Click **OK**.

Services involved in this document use the same JAR file.

1.2 SDK API Example

SDK API Example for V1

1. Construct a service client.

```
String ak = "ak";
String sk = "sk";
String projectId = "projectId";
//Proxy information. If you need to use a proxy to access the service, add the proxy information here.
ProxyHostInfo proxyHostInfo = new ProxyHostInfo("proxy",
8080,
"UserName",
"Password"
);
//Service info
String url = "https://face.cn-north-4.myhuaweicloud.com";
String region = "cn-north-4";
AuthInfo authInfo = new AuthInfo(url, region, ak, sk);
FrsClient frsClient = new FrsClient(authInfo, projectId);
//FrsClient frsClient = new FrsClient(authInfo, projectId, proxyHostInfo);//If you need to use a proxy to access the service, add the proxy information to the third parameter.
```

2. Create a face set.

```
CreateExternalFields createExternalFields = new CreateExternalFields();
createExternalFields.addField("testInteger", FieldType.INTEGER);
CreateFaceSetResult createFaceSetResult = frsClient.getFaceSetService().createFaceSet(faceSetName, faceSetCapacity, createExternalFields);
```

3. Add faces.

```
String imageId = "image1";
File image = new File("data/face.jpg");
byte[] fileData = FileUtils.readFileToByteArray(image);
String imageBase64 = Base64.encodeBase64String(fileData);
AddExternalFields addExternalFields = new AddExternalFields();
addExternalFields.addField("testInteger", 123);
AddFaceResult addFaceResult = frsClient.getFaceService().addFaceByBase64(faceSetName, imageId, imageBase64, addExternalFields);
```

4. Invoke the Face Detection service.

```
String obsUrl = "/bucket/face.jpg";
String attr = "0,1,2,3,4,5";
DetectFaceResult detectFaceResult = frsClient.getDetectService().detectFaceByObsUrl(obsUrl, attr);
```

SDK API Example for V2

1. Construct a service client.

```
String ak = "ak";
String sk = "sk";
String projectId = "projectId";
//Proxy information. If you need to use a proxy to access the service, add the proxy information here.
ProxyHostInfo proxyHostInfo = new ProxyHostInfo("proxy",
8080,
"UserName",
"Password"
);
//Service info
String url = "https://face.cn-north-4.myhuaweicloud.com";
```

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```
String region = "cn-north-4";
AuthInfo authInfo = new AuthInfo(url, region, ak, sk);
FrsClient frsClient = new FrsClient(authInfo, projectId);
//FrsClient frsClient = new FrsClient(authInfo, projectId, proxyHostInfo);//If you need to use a proxy to access the service, add the proxy information to the third parameter.
```

2. Create a face set.

```
CreateExternalFields createExternalFields = new CreateExternalFields();
createExternalFields.addField("testInteger", FieldType.INTEGER);
CreateFaceSetResult createFaceSetResult =
frsClient.getV2().getFaceSetService().createFaceSet(faceSetName, faceSetCapacity,
createExternalFields);
```

3. Add faces.

```
String imageId = "image1";
File image = new File("data/face.jpg");
byte[] fileData = FileUtils.readFileToByteArray(image);
String imageBase64 = Base64.encodeBase64String(fileData);
AddExternalFields addExternalFields = new AddExternalFields();
addExternalFields.addField("testInteger", 123);
AddFaceResult addFaceResult = frsClient.getV2().getFaceService().addFaceByBase64(faceSetName,
imageId, imageBase64, addExternalFields);
```

4. Invoke the Face Detection service.

```
String obsUrl = "/bucket/face.jpg";
String attr = "1,2";
DetectFaceResult detectFaceResult = frsClient.getV2().getDetectService().detectFaceByObsUrl(obsUrl,
attr);
```

1.3 Mappings Between Java SDK & APIs

API	Method	API
CompareService	compareFaceByBase64	POST /v1/{project_id}/face-compare POST /v2/{project_id}/face-compare
	compareFaceByFile	
	compareFaceByObsUrl	
DetectService	detectFaceByBase64	POST /v1/{project_id}/face-detect POST /v2/{project_id}/face-detect
	detectFaceByFile	
	detectFaceByObsUrl	
FaceService	addFaceByBase64	POST /v1/{project_id}/face-sets/{face_set_name}/faces POST /v2/{project_id}/face-sets/{face_set_name}/faces
	addFaceByFile	
	addFaceByObsUrl	
	getFaces	GET /v1/{project_id}/face-sets/{face_set_name}/faces?offset=xxx&limit=xxx GET /v2/{project_id}/face-sets/{face_set_name}/faces?offset=xxx&limit=xxx
	getFace	GET /v1/{project_id}/face-sets/{face_set_name}/faces?face_id={face_id} GET /v2/{project_id}/face-sets/{face_set_name}/faces?face_id={face_id}

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API	Method	API
	deleteFaceByFaceId	DELETE /v1/{project_id}/face-sets/{face_set_name}/faces ?external_image_id=imageID DELETE /v2/{project_id}/face-sets/{face_set_name}/faces ?external_image_id=imageID
	deleteFaceByExternalImageId	DELETE /v1/{project_id}/face-sets/{face_set_name}/faces ?face_id=faceID DELETE /v2/{project_id}/face-sets/{face_set_name}/faces ?face_id=faceID
	deleteFaceByFieldId	DELETE /v1/{project_id}/face-sets/{face_set_name}/faces ?id=home DELETE /v2/{project_id}/face-sets/{face_set_name}/faces ?id=home
FaceSetService	createFaceSet	POST /v1/{project_id}/face-sets POST /v2/{project_id}/face-sets
	getAllFaceSets	GET /v1/{project_id}/face-sets GET /v2/{project_id}/face-sets
	getFaceSet	GET /v1/{project_id}/face-sets/{face_set_name} GET /v2/{project_id}/face-sets/{face_set_name}
	deleteFaceSet	DELETE /v1/{project_id}/face-sets/{face_set_name} DELETE /v2/{project_id}/face-sets/{face_set_name}
LiveDetectService	liveDetectByBase64	POST /v1/{project_id}/live-detect
	liveDetectByFile	
	liveDetectByObsUrl	
LiveDetectFaceService	liveDetectFaceByBase64	POST /v1/{project_id}/live-detect-face
	liveDetectFaceByFile	
	liveDetectFaceByObsUrl	
SearchService	searchFaceByBase64	POST /v1/{project_id}/face-sets/{face_set_name}/search POST /v2/{project_id}/face-sets/{face_set_name}/search
	searchFaceByFile	
	searchFaceByObsUrl	
	searchFaceByFaceId	

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2 Python SDK

2.1 Quick Start

Environment Preparation

1. Enable the Face Recognition service: Log in to the **Face Recognition management console**, select a sub-service, and click **Enable Service** on the right.

   You only need to enable the service once.
2. Obtain the endpoints of Face Recognition. For details, see **Regions and Endpoints**.
3. For details about Face Recognition APIs, see the **Face Recognition API Reference**.
4. Obtain the AK/SK of your HUAWEI CLOUD account.

   If no AK/SK has been generated, log in to , enter the **My Credentials** page, and choose **Access Keys** > **Create Access Key** to obtain the access keys.
5. Install the Python environment. The Python SDK can run on Python 2.7 and Python 3.6.

NOTE

SDKs provided by Face Recognition do not support access retries. If the access is abnormal, the SDK directly returns the request results. Therefore, the client needs to establish a retry mechanism.

SDK Acquisition and Installation

1. Download the **Python SDK** of Face Recognition and decompress it.
2. Download and install **setuptools**.
3. On the command-line interface (CLI), switch to the decompressed directory of Python SDK.
4. In the SDK directory, run the **Python setup.py install** command to install the Python SDK to the development environment, or directly import the **.py** file to the project.

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NOTE

During Python programming of Face Recognition, all files in the **frsclient** folder are referenced: **from frsclient import ***

2.2 SDK API Example

SDK API Example for V1

1. Construct a service client.

```
ak = "ak"
sk = "sk"
project_id = "projectId"
end_point = "https://face.cn-north-4.myhuaweicloud.com"
proxy = {"http": "http://127.0.0.1:1234",
"https": "http://127.0.0.1:1234"}
auth_info = AuthInfo(ak=ak, sk=sk, end_point=end_point)
frs_client = FrsClient(auth_info=auth_info, project_id=project_id)
# frs_client = FrsClient(auth_info=auth_info, project_id=project_id, proxies=proxy) #If you need to use a proxy to access the service, add the proxy information to the third parameter.
```

2. Create a face set.

```
fss = frs_client.get_face_set_service()
external_fields = {"timestamp": {"type": "long"}, "id": {"type": "string"}, "number": {"type": "integer"}}
ret = fss.create_face_set("faceSetName", 10000, external_fields)
```

3. Add faces.

```
fs = frsClient.get_face_service()
external_fields = {"timestamp": 12,"id": "home"}
res = fs.add_face_by_obs_url("faceSetName", "/obs/image.jpg", "externalImageId", external_fields)
```

4. Detect faces.

```
ds = frs.get_detect_service()
res = ds.detect_face_by_file("imagePath", "0,1,2,3")
```

SDK API Example for V2

1. Construct a service client.

```
ak = "ak"
sk = "sk"
project_id = "projectId"
end_point = "https://face.cn-north-4.myhuaweicloud.com"
proxy = {"http": "http://127.0.0.1:1234",
"https": "http://127.0.0.1:1234"}
auth_info = AuthInfo(ak=ak, sk=sk, end_point=end_point)
frs_client = FrsClient(auth_info=auth_info, project_id=project_id)
# frs_client = FrsClient(auth_info=auth_info, project_id=project_id, proxies=proxy) #If you need to use a proxy to access the service, add the proxy information to the third parameter.
```

2. Create a face set.

```
fss = frs_client.get_v2().get_face_set_service()
external_fields = {"timestamp":{"type" : "long"},"id":{"type":"string"},"number":{"type":"integer"}}
ret = fss.create_face_set("faceSetName", 10000, external_fields)
```

3. Add faces.

```
fs = frsClient.get_v2().get_face_service()
external_fields = {"timestamp": 12,"id": "home"}
res = fs.add_face_by_obs_url("faceSetName", "/obs/image.jpg", "externalImageId", external_fields)
```

4. Detect faces.

```
ds = frs.get_v2().get_detect_service()
res = ds.detect_face_by_file("imagePath", "1,2")
```

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2.3 Mappings Between Python SDK & APIs

API	Method	API
CompareService	compare_face_by_base64	POST /v1/{project_id}/face-compare POST /v2/{project_id}/face-compare
	compare_face_by_file	
	compare_face_by_obs_url	
DetectService	detect_face_by_base64	POST /v1/{project_id}/face-detect POST /v2/{project_id}/face-detect
	detect_face_by_file	
	detect_face_by_obs_url	
FaceService	add_face_by_base64	POST /v1/{project_id}/face-sets/{face_set_name}/faces POST /v2/{project_id}/face-sets/{face_set_name}/faces
	add_face_by_file	
	add_face_by_obs_url	
	get_faces	GET /v1/{project_id}/face-sets/{face_set_name}/faces?offset=xxx&limit=xxx GET /v2/{project_id}/face-sets/{face_set_name}/faces?offset=xxx&limit=xxx
	get_face	GET /v1/{project_id}/face-sets/{face_set_name}/faces?face_id={face_id} GET /v2/{project_id}/face-sets/{face_set_name}/faces?face_id={face_id}
	delete_face_by_face_id	DELETE /v1/{project_id}/face-sets/{face_set_name}/faces ?external_image_id=imageID DELETE /v2/{project_id}/face-sets/{face_set_name}/faces ?external_image_id=imageID
	delete_face_by_external_image_id	DELETE /v1/{project_id}/face-sets/{face_set_name}/faces ?face_id=faceID DELETE /v2/{project_id}/face-sets/{face_set_name}/faces ?face_id=faceID

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API	Method	API
	delete_face_by_field_id	DELETE /v1/{project_id}/face-sets/{face_set_name}/faces ?id=home DELETE /v2/{project_id}/face-sets/{face_set_name}/faces ?id=home
FaceSetService	create_face_set	POST /v1/{project_id}/face-sets POST /v2/{project_id}/face-sets
	get_all_face_sets	GET /v1/{project_id}/face-sets GET /v2/{project_id}/face-sets
	get_face_set	GET /v1/{project_id}/face-sets/{face_set_name} GET /v2/{project_id}/face-sets/{face_set_name}
	delete_face_set	DELETE /v1/{project_id}/face-sets/{face_set_name} DELETE /v2/{project_id}/face-sets/{face_set_name}
LiveDetectService	live_detect_by_base64	POST /v1/{project_id}/live-detect
	live_detect_by_file	
	live_detect_by_obs_url	
SearchService	search_face_by_base64	POST /v1/{project_id}/face-sets/{face_set_name}/search POST /v2/{project_id}/face-sets/{face_set_name}/search
	search_face_by_file	
	search_face_by_obs_url	
	search_face_by_face_id	

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3 Go SDK

3.1 Quick Start

Environment Preparation

1. Enable the Face Recognition service: Log in to the **Face Recognition management console**, select a sub-service, and click **Enable Service** on the right.

   You only need to enable the service once.
2. Obtain the endpoints of Face Recognition. For details, see **Regions and Endpoints**.
3. For details about Face Recognition APIs, see the **Face Recognition API Reference**.
4. Obtain the AK/SK of your HUAWEI CLOUD account.

   If no AK/SK has been generated, log in to , enter the **My Credentials** page, and choose **Access Keys** > **Create Access Key** to obtain the access keys.
5. Install the Go and set the Go language environment variables.

NOTE

SDKs provided by Face Recognition do not support access retries. If the access is abnormal, the SDK directly returns the request results. Therefore, the client needs to establish a retry mechanism.

SDK Acquisition and Installation

1. Download the **Go SDK** of Face Recognition and decompress it.
2. On Eclipse, create a Go project, copy all content in the Go SDK folder to the folder in the newly created project.
3. Right-click the project and choose **Build Project** from the drop-down list, and wait until the building is complete.

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3.2 SDK API Example

SDK API Example for V1

1. Construct a service client.

```
authInfo := param.AuthInfo{EndPoint: "https://face.cn-north-4.myhuaweicloud.com", Ak: "ak", Sk: "sk"}
frsClient := service.NewFrsClient(&authInfo, "projectId")
//proxyInfo := param.ProxyHostInfo{Proxy: "http://127.0.0.1:8080"}
//frsClient := service.NewFrsClientWithProxy(&authInfo, "projectId", &proxyInfo)//If you need to use a proxy to access the service, add the proxy information to the third parameter.
```

2. Create a face set.

```
externalFields := param.NewCreateExternalFields()
externalFields.AddField("testInteger", param.INTEGER)
result, err := frsClient.GetFaceSetService().CreateFaceSetWithExtFields("FaceSetName", 10000, externalFields)
if nil != err {
fmt.Println(err.Error())
} else {
fmt.Println(result)
}
```

3. Add faces.

```
externalFields := param.NewAddExternalFields()
externalFields.AddField("testInteger", 123)
result, err := frsClient.GetFaceService().AddFaceByFileFull("faceSetName", "externalImageId", "imagePath", externalFields)
if nil != err {
fmt.Println(err.Error())
} else {
fmt.Println(result)
}
```

4. Detect faces.

```
detectResult, err := frsClient.GetDetectService().DetectFaceByObsUrlWithAttr("/obs/image.jpg", "0,1,2")
if nil != err {
fmt.Println(err.Error())
} else {
fmt.Println(detectResult)
}
```

SDK API Example for V2

1. Construct a service client.

```
authInfo := param.AuthInfo{EndPoint: "https://face.cn-north-4.myhuaweicloud.com", Ak: "ak", Sk: "sk"}
frsClient := service.NewFrsClient(&authInfo, "projectId")
//proxyInfo := param.ProxyHostInfo{Proxy: "http://127.0.0.1:8080"}
//frsClient := service.NewFrsClientWithProxy(&authInfo, "projectId", &proxyInfo)//If you need to use a proxy to access the service, add the proxy information to the third parameter.
```

2. Create a face set.

```
externalFields := param.NewCreateExternalFields()
externalFields.AddField("testInteger", param.INTEGER)
result, err := frsClient.GetV2().GetFaceSetService().CreateFaceSetWithExtFields("FaceSetName", 10000, externalFields)
if nil != err {
fmt.Println(err.Error())
} else {
fmt.Println(result)
}
```

3. Add faces.

```
externalFields := param.NewAddExternalFields()
externalFields.AddField("testInteger", 123)
result, err := frsClient.GetV2().GetFaceService().AddFaceByFileFull("faceSetName", "externalImageId", "imagePath", externalFields)
```


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```
if nil != err {
fmt.Println(err.Error())
} else {
fmt.Println(result)
}
```

4. Detect faces.

```
detectResult, err := frsClient.GetV2().GetDetectService().DetectFaceByObsUrlWithAttr("/obs/
image.jpg", "0,1,2")
if nil != err {
fmt.Println(err.Error())
} else {
fmt.Println(detectResult)
}
```

3.3 Mappings Between Go SDK & APIs

API	Method	API
CompareService	CompareFaceByBase64	POST /v1/{project_id}/face-compare POST /v2/{project_id}/face-compare
	CompareFaceByFile	
	CompareFaceByObsUrl	
DetectService	DetectFaceByBase64	POST /v1/{project_id}/face-detect POST /v2/{project_id}/face-detect
	DetectFaceByFile	
	DetectFaceByObsUrl	
FaceService	AddFaceByBase64	POST /v1/{project_id}/face-sets/{face_set_name}/faces POST /v2/{project_id}/face-sets/{face_set_name}/faces
	AddFaceByFile	
	AddFaceByObsUrl	
	GetFaces	GET /v1/{project_id}/face-sets/{face_set_name}/faces?offset=xxx&limit=xxx GET /v2/{project_id}/face-sets/{face_set_name}/faces?offset=xxx&limit=xxx
	GetFace	GET /v1/{project_id}/face-sets/{face_set_name}/faces?face_id={face_id} GET /v2/{project_id}/face-sets/{face_set_name}/faces?face_id={face_id}

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API	Method	API
	DeleteFaceByFaceId	DELETE /v1/{project_id}/face-sets/{face_set_name}/faces ?external_image_id=imageID DELETE /v2/{project_id}/face-sets/{face_set_name}/faces ?external_image_id=imageID
	DeleteFaceByExternalImageId	DELETE /v1/{project_id}/face-sets/{face_set_name}/faces ?face_id=faceID DELETE /v2/{project_id}/face-sets/{face_set_name}/faces ?face_id=faceID
	DeleteFaceByFieldId	DELETE /v1/{project_id}/face-sets/{face_set_name}/faces ?id=home DELETE /v2/{project_id}/face-sets/{face_set_name}/faces ?id=home
FaceSetService	CreateFaceSet	POST /v1/{project_id}/face-sets POST /v2/{project_id}/face-sets
	GetAllFaceSets	GET /v1/{project_id}/face-sets GET /v2/{project_id}/face-sets
	GetFaceSet	GET /v1/{project_id}/face-sets/{face_set_name} GET /v2/{project_id}/face-sets/{face_set_name}
	DeleteFaceSet	DELETE /v1/{project_id}/face-sets/{face_set_name} DELETE /v2/{project_id}/face-sets/{face_set_name}
LiveDetectService	LiveDetectByBase64	POST /v1/{project_id}/live-detect
	LiveDetectByFile	
	LiveDetectByObsUrl	
SearchService	SearchFaceByBase64	POST /v1/{project_id}/face-sets/{face_set_name}/search POST /v2/{project_id}/face-sets/{face_set_name}/search
	SearchFaceByFile	
	SearchFaceByObsUrl	
	SearchFaceByFaceId	

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4 CSharp SDK

4.1 Quick Start

Environment Preparation

1. Enable the Face Recognition service: Log in to the **Face Recognition management console**, select a sub-service, and click **Enable Service** on the right.

   You only need to enable the service once.
2. Obtain the endpoints of Face Recognition. For details, see **Regions and Endpoints**.
3. For details about Face Recognition APIs, see the **Face Recognition API Reference**.
4. Obtain the AK/SK of your HUAWEI CLOUD account.

   If no AK/SK has been generated, log in to , enter the **My Credentials** page, and choose **Access Keys** > **Create Access Key** to obtain the access keys.
5. Install the .net development environment.

NOTE

SDKs provided by Face Recognition do not support access retries. If the access is abnormal, the SDK directly returns the request results. Therefore, the client needs to establish a retry mechanism.

SDK Acquisition and Installation

Download the **source code of CSharp SDK**.

4.2 SDK API Example

SDK API Example for V1

1. Construct a service client.

```
AuthInfo authInfo = new AuthInfo("https://face.cn-north-4.myhuaweicloud.com", "ak", "sk");
FrsClient frsClient = new FrsClient(authInfo, "project id");
```

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```
//ProxyHostInfo proxy := new ProxyHostInfo("host", 8080);
//FrsClient frsClient = new FrsClient (authInfo, "projectId", proxy);//If you need to use a proxy to access the service, add the proxy information to the third parameter.
```

2. Create a face set.

```
CreateExternalFields createExternalFields = new CreateExternalFields();
createExternalFields.AddField("testInt", FieldType.INTEGER);
createExternalFields.AddField("testStr", FieldType.STRING);
CreateFaceSetResult createFaceSetResult =
frsClient.GetFaceSetService().CreateFaceSet("face_set_name_test", 10000, createExternalFields);
Console.WriteLine(createFaceSetResult.GetJsonString());
```

3. Add faces.

```
AddExternalFields addExternalFields = new AddExternalFields();
addExternalFields.AddField("testInt", 1);
addExternalFields.AddField("testStr", "str");
AddFaceResult addFaceResult = frsClient.GetFaceService().AddFaceByFile("face_set_name_test", "/resource/3.png", addExternalFields);
Console.WriteLine(addFaceResult.GetJsonString());
```

4. Detect faces.

```
DetectFaceResult detectFaceResult = frsClient.GetDetectService().DetectFaceByUrl("/obs/1.jpg", "0,1,2");
Console.WriteLine(detectFaceResult.GetJsonString());
DetectFaceResult detectFaceResult2 = frsClient.GetDetectService().DetectFaceByFile("/resource/1.jpeg", "1,2");
Console.WriteLine(detectFaceResult2.GetJsonString());
```

SDK API Example for V2

1. Construct a service client.

```
AuthInfo authInfo = new AuthInfo("https://face.cn-north-4.myhuaweicloud.com", "ak", "sk");
FrsClient frsClient = new FrsClient(authInfo, "project id");
//ProxyHostInfo proxy := new ProxyHostInfo("host", 8080);
//FrsClient frsClient = new FrsClient (authInfo, "projectId", proxy);//If you need to use a proxy to access the service, add the proxy information to the third parameter.
```

2. Create a face set.

```
CreateExternalFields createExternalFields = new CreateExternalFields();
createExternalFields.AddField("testInt", FieldType.INTEGER);
createExternalFields.AddField("testStr", FieldType.STRING);
CreateFaceSetResult createFaceSetResult =
frsClient.GetV2().GetFaceSetService().CreateFaceSet("face_set_name_test", 10000, createExternalFields);
Console.WriteLine(createFaceSetResult.GetJsonString());
```

3. Add faces.

```
AddExternalFields addExternalFields = new AddExternalFields();
addExternalFields.AddField("testInt", 1);
addExternalFields.AddField("testStr", "str");
AddFaceResult addFaceResult =
frsClient.GetV2().GetFaceService().AddFaceByFile("face_set_name_test", "/resource/3.png", addExternalFields);
Console.WriteLine(addFaceResult.GetJsonString());
```

4. Detect faces.

```
DetectFaceResult detectFaceResult = frsClient.GetV2().GetDetectService().DetectFaceByUrl("/obs/1.jpg", "0,1,2");
Console.WriteLine(detectFaceResult.GetJsonString());
DetectFaceResult detectFaceResult2 = frsClient.GetV2().GetDetectService().DetectFaceByFile("/resource/1.jpeg", "1,2");
Console.WriteLine(detectFaceResult2.GetJsonString());
```

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4.3 Mappings Between CSharp SDK & APIs

API	Method	API
CompareService	CompareFaceByBase64	POST /v1/{project_id}/face-compare POST /v2/{project_id}/face-compare
	CompareFaceByFile	
	CompareFaceByUrl	
DetectService	DetectFaceByBase64	POST /v1/{project_id}/face-detect POST /v2/{project_id}/face-detect
	DetectFaceByFile	
	DetectFaceByUrl	
FaceService	AddFaceByBase64	POST /v1/{project_id}/face-sets/{face_set_name}/faces POST /v2/{project_id}/face-sets/{face_set_name}/faces
	AddFaceByFile	
	AddFaceByUrl	
	GetFaces	GET /v1/{project_id}/face-sets/{face_set_name}/faces?offset=xxx&limit=xxx GET /v2/{project_id}/face-sets/{face_set_name}/faces?offset=xxx&limit=xxx
	GetFace	GET /v1/{project_id}/face-sets/{face_set_name}/faces?face_id={face_id} GET /v2/{project_id}/face-sets/{face_set_name}/faces?face_id={face_id}
	DeleteFaceByFaceId	DELETE /v1/{project_id}/face-sets/{face_set_name}/faces ?external_image_id=imageID DELETE /v2/{project_id}/face-sets/{face_set_name}/faces ?external_image_id=imageID
	DeleteFaceByExternalImageId	DELETE /v1/{project_id}/face-sets/{face_set_name}/faces ?face_id=faceID DELETE /v2/{project_id}/face-sets/{face_set_name}/faces ?face_id=faceID

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API	Method	API
	DeleteFaceByFieldId	DELETE /v1/{project_id}/face-sets/{face_set_name}/faces ?id=home DELETE /v2/{project_id}/face-sets/{face_set_name}/faces ?id=home
FaceSetService	CreateFaceSet	POST /v1/{project_id}/face-sets POST /v2/{project_id}/face-sets
	GetAllFaceSets	GET /v1/{project_id}/face-sets GET /v2/{project_id}/face-sets
	GetFaceSet	GET /v1/{project_id}/face-sets/{face_set_name} GET /v2/{project_id}/face-sets/{face_set_name}
	DeleteFaceSet	DELETE /v1/{project_id}/face-sets/{face_set_name} DELETE /v2/{project_id}/face-sets/{face_set_name}
LiveDetectService	LiveDetectByBase64	POST /v1/{project_id}/live-detect
	LiveDetectByFile	
	LiveDetectByObsUrl	
SearchService	SearchFaceByBase64	POST /v1/{project_id}/face-sets/{face_set_name}/search POST /v2/{project_id}/face-sets/{face_set_name}/search
	SearchFaceByFile	
	SearchFaceByObsUrl	
	SearchFaceByFaceId	

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A Change History

Date	Description
2019-01-30	This is the third official release, in which the Python SDK example synchronized with the SDK code style. Modified the following topics: • **Quick Start** • **SDK API Example** • **Mappings Between Python SDK & APIs**
2018-12-28	This is the second official release, in which **CSharp SDK** is added.
2018-12-12	This is the first official release.

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