

#WWDC18

Automating App Store Connect

Session 303

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Automation



Xcode



Transporter



Reporter

Automation

NEW



App Store Connect API



Xcode



Transporter



Reporter

App Store Connect API

Standards-based

Secure

Consistent

Documented

```
GET /v1/users?sort=lastName
{
  "data": [{
    "type": "users",
    "id": "17cbd794-94a3-c7b0-1051",
    "attributes": {
      "firstName": "Kate",
      "lastName": "Bell"
    }
  }, {
    "type": "users",
    "id": "24e811a2-2ad0-46e4-b632",
    "attributes": {
```

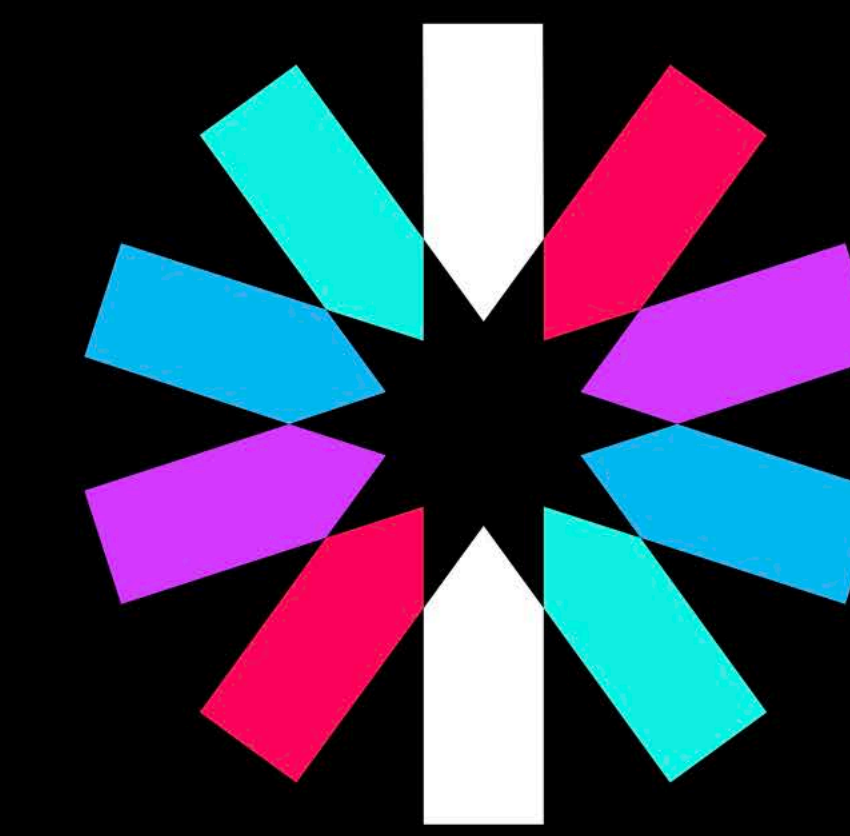
App Store Connect API

Standards-based

Secure

Consistent

Documented



JWT

App Store Connect API

Standards-based

Secure

Consistent

Documented

```
GET /v1/apps
```

```
GET /v1/builds
```

```
GET /v1/betaTesters
```

```
GET /v1/salesReports
```

```
GET /v1/financeReports
```

```
GET /v1/bundleIds
```

```
GET /v1/profiles
```

```
GET /v1/certificates
```

```
GET /v1/betaAppReviewSubmissions
```

```
GET /v1/userInvitations
```

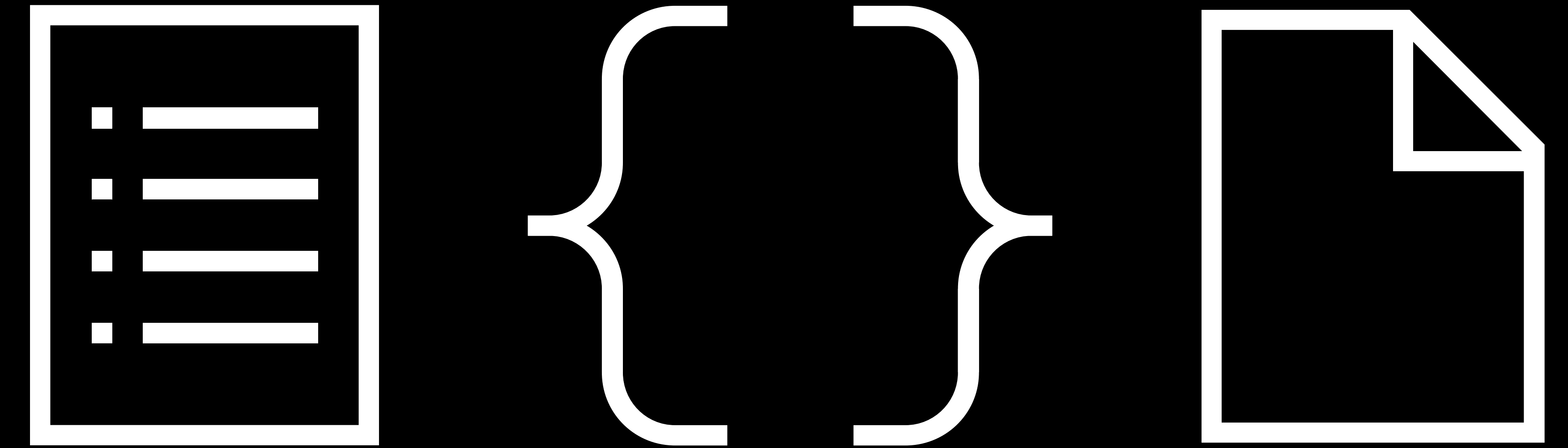
App Store Connect API

Standards-based

Secure

Consistent

Documented



What's Included



TestFlight



Users and Access



Provisioning



Reports

What's Included

TestFlight

- Manage testers and groups
- Submit for review
- Public links



What's Included

Users and Roles

- Add and remove users
- Assign roles
- Manage limited app access



What's Included

Provisioning

- Add development devices
- Register bundle IDs
- Create certificates
- Manage profiles



What's Included

Reports

- Download sales and financial reports
- Easily switch from Reporter



What's Included

Transporter changes

- Linux support
- API tokens



Getting data

Changing data

Relationships

Errors

Access and authentication

Best practices

Getting data

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Errors

Access and authentication

Best practices

`api.appstoreconnect.apple.com`

`api.appstoreconnect.apple.com/v1`

betaTesters

betaLicenseAgreements

salesReports

betaAppReviewDetails

betaBuildLocalizations

userInvitations

apps

buildDeliveries

users



certificates

betaAppReviewSubmissions

buildBetaDetails

builds

bundleIds

profiles

financeReports

betaTesterInvitations

betaAppLocalizations

devices

appEncryptionDeclarations

betaGroups

GET api.appstoreconnect.apple.com/v1/users

```
> GET api.appstoreconnect.apple.com/v1/users
```

```
HTTP/1.1 200 OK
```

```
{  
  "data": [{  
    "type": "users",  
    "id": "17cbd794-94a3-c7b0-1051",  
    "attributes": {  
      "firstName": "Kate",  
      "lastName": "Bell",  
      "email": "kate-bell@mac.com",  
      ...  
    },  
    "relationships": {...},  
    "links": {  
      "self": "https://api.appstoreconnect.apple.com/v1/users/17cbd794-94a3-c7b0-1051"  
    }  
  },  
  {  
    ...  
  }  
}
```

```
> GET api.appstoreconnect.apple.com/v1/users
```

```
HTTP/1.1 200 OK
```

```
{  
  "data": [{  
    "type": "users",  
    "id": "17cbd794-94a3-c7b0-1051",  
    "attributes": {  
      "firstName": "Kate",  
      "lastName": "Bell",  
      "email": "kate-bell@mac.com",  
      ...  
    },  
    "relationships": {...},  
    "links": {  
      "self": "https://api.appstoreconnect.apple.com/v1/users/17cbd794-94a3-c7b0-1051"  
    }  
  },  
  {  
    ...  
  }  
}
```

```
> GET api.appstoreconnect.apple.com/v1/users
```

```
HTTP/1.1 200 OK
```

```
{
  "data": [{
    "type": "users",
    "id": "17cbd794-94a3-c7b0-1051",
    "attributes": {
      "firstName": "Kate",
      "lastName": "Bell",
      "email": "kate-bell@mac.com",
      ...
    },
    "relationships": {...},
    "links": {
      "self": "https://api.appstoreconnect.apple.com/v1/users/17cbd794-94a3-c7b0-1051"
    }
  },
  {

```

```
> GET api.appstoreconnect.apple.com/v1/users
```

```
HTTP/1.1 200 OK
```

```
{  
  "data": [{  
    "type": "users",  
    "id": "17cbd794-94a3-c7b0-1051",  
    "attributes": {  
      "firstName": "Kate",  
      "lastName": "Bell",  
      "email": "kate-bell@mac.com",  
      ...  
    },  
    "relationships": {...},  
    "links": {  
      "self": "https://api.appstoreconnect.apple.com/v1/users/17cbd794-94a3-c7b0-1051"  
    }  
  },  
  {  
    ...  
  }  
}
```

```
> GET api.appstoreconnect.apple.com/v1/users
```

```
HTTP/1.1 200 OK
```

```
{  
  "data": [{  
    "type": "users",  
    "id": "17cbd794-94a3-c7b0-1051",  
    "attributes": {  
      "firstName": "Kate",  
      "lastName": "Bell",  
      "email": "kate-bell@mac.com",  
      ...  
    },  
    "relationships": {...},  
    "links": {  
      "self": "https://api.appstoreconnect.apple.com/v1/users/17cbd794-94a3-c7b0-1051"  
    }  
  },  
  {  
    ...  
  }  
}
```



```
> GET api.appstoreconnect.apple.com/v1/users
```

```
HTTP/1.1 200 OK
```

```
{  
  "data": [{  
    "type": "users",  
    "id": "17cbd794-94a3-c7b0-1051",  
    "attributes": {  
      "firstName": "Kate",  
      "lastName": "Bell",  
      "email": "kate-bell@mac.com",  
      ...  
    },  
    "relationships": {...},  
    "links": {  
      "self": "https://api.appstoreconnect.apple.com/v1/users/17cbd794-94a3-c7b0-1051"  
    }  
  },  
  {  
    ...  
  }  
}
```

```
> GET api.appstoreconnect.apple.com/v1/users
```

```
HTTP/1.1 200 OK
```

```
{  
  "data": [{  
    "type": "users",  
    "id": "17cbd794-94a3-c7b0-1051",  
    "attributes": {  
      "firstName": "Kate",  
      "lastName": "Bell",  
      "email": "kate-bell@mac.com",  
      ...  
    },  
    "relationships": {...},  
    "links": {  
      "self": "https://api.appstoreconnect.apple.com/v1/users/17cbd794-94a3-c7b0-1051"  
    }  
  },  
  {  
    ...  
  }  
}
```

```
> GET api.appstoreconnect.apple.com/v1/users/17cbd794-94a3-c7b0-1051
```

```
> GET api.appstoreconnect.apple.com/v1/users/17cbd794-94a3-c7b0-1051
```

```
HTTP/1.1 200 OK
```

```
{
  "data": {
    "type": "users",
    "id": "17cbd794-94a3-c7b0-1051",
    "attributes": {
      "firstName": "Kate",
      "lastName": "Bell",
      "email": "kate-bell@mac.com",
      ...
    },
    "relationships": {...},
    "links": {
      "self": ".../v1/users/17cbd794-94a3-c7b0-1051"
    }
  }
}
```

Getting data

Changing data

Relationships

Errors

Access and authentication

Best practices

Getting data

Changing data

Relationships

Errors

Access and authentication

Best practices

Get a resource or a list of resources

GET

Create a resource

POST

Change a resource

PATCH

Delete a resource

DELETE

```
> POST /v1/userInvitations
```

```
{
```

```
  "data": {
```

```
    "type": "userInvitations",
```

```
    "attributes": {
```

```
      "firstName": "John",
```

```
      "lastName": "Appleseed",
```

```
      "email": "john-appleseed@mac.com",
```

```
      "roles": ["DEVELOPER"],
```

```
      "allAppsVisible": true
```

```
    }
```

```
  }
```

```
}
```



```
> POST /v1/userInvitations
```

```
{  
  "data": {  
    "type": "userInvitations",  
    "attributes": {  
      "firstName": "John",  
      "lastName": "Appleseed",  
      "email": "john-appleseed@mac.com",  
      "roles": ["DEVELOPER"],  
      "allAppsVisible": true  
    }  
  }  
}
```

```
> POST /v1/userInvitations
```

```
{  
  "data": {  
    "type": "userInvitations",  
    "attributes": {  
      "firstName": "John",  
      "lastName": "Appleseed",  
      "email": "john-appleseed@mac.com",  
      "roles": ["DEVELOPER"],  
      "allAppsVisible": true  
    }  
  }  
}
```

```
> POST /v1/userInvitations
```

```
{
```

```
  "data": {  
    "type": "userInvitations",  
    "attributes": {  
      "firstName": "John",  
      "lastName": "Appleseed",  
      "email": "john-appleseed@mac.com",  
      "roles": ["DEVELOPER"],  
      "allAppsVisible": true  
    }  
  }  
}
```

```
}
```

```
> POST /v1/userInvitations
```

```
{
```

```
  "data": {
```

```
    "type": "userInvitations",
```

```
    "attributes": {
```

```
      "firstName": "John",
```

```
      "lastName": "Appleseed",
```

```
      "email": "john-appleseed@mac.com",
```

```
      "roles": ["DEVELOPER"],
```

```
      "allAppsVisible": true
```

```
    }
```

```
  }
```

```
}
```

```
> POST /v1/userInvitations
```

```
HTTP/1.1 201 CREATED
```

```
{  
  "data": {  
    "type": "userInvitations",  
    "id": "24e811a2-2ad0-46e4-b632",  
    "attributes": {  
      "firstName": "John",  
      "lastName": "Appleseed",  
      "email": "john-appleseed@mac.com",  
      "roles": ["DEVELOPER"],  
      "allAppsVisible": true,  
      "expirationDate": "2018-06-10T13:15:00"  
    },  
    "links": {  
      "self": ".../v1/userInvitations/24e811a2-2ad0-46e4-b632"  
    }  
  },  
}
```

```
> POST /v1/userInvitations
```

```
HTTP/1.1 201 CREATED
```

```
{  
  "data": {  
    "type": "userInvitations",  
    "id": "24e811a2-2ad0-46e4-b632",  
    "attributes": {  
      "firstName": "John",  
      "lastName": "Appleseed",  
      "email": "john-appleseed@mac.com",  
      "roles": ["DEVELOPER"],  
      "allAppsVisible": true,  
      "expirationDate": "2018-06-10T13:15:00"  
    },  
    "links": {  
      "self": ".../v1/userInvitations/24e811a2-2ad0-46e4-b632"  
    }  
  },  
}
```

```
> POST /v1/userInvitations
```

```
HTTP/1.1 201 CREATED
```

```
{  
  "data": {  
    "type": "userInvitations",  
    "id": "24e811a2-2ad0-46e4-b632",  
    "attributes": {  
      "firstName": "John",  
      "lastName": "Appleseed",  
      "email": "john-appleseed@mac.com",  
      "roles": ["DEVELOPER"],  
      "allAppsVisible": true,  
      "expirationDate": "2018-06-10T13:15:00"  
    },  
    "links": {  
      "self": ".../v1/userInvitations/24e811a2-2ad0-46e4-b632"  
    }  
  },  
}
```

```
> POST /v1/userInvitations
```

```
HTTP/1.1 201 CREATED
```

```
{  
  "data": {  
    "type": "userInvitations",  
    "id": "24e811a2-2ad0-46e4-b632",  
    "attributes": {  
      "firstName": "John",  
      "lastName": "Appleseed",  
      "email": "john-appleseed@mac.com",  
      "roles": ["DEVELOPER"],  
      "allAppsVisible": true,  
      "expirationDate": "2018-06-10T13:15:00"  
    },  
    "links": {  
      "self": ".../v1/userInvitations/24e811a2-2ad0-46e4-b632"  
    }  
  },  
}
```



```
> PATCH /v1/users/24e811a2-2ad0-46e4-b632
```

```
{
```

```
  "data": {
```

```
    "type": "users",
```

```
    "id": "24e811a2-2ad0-46e4-b632",
```

```
    "attributes": {
```

```
      "roles": ["DEVELOPER", "MARKETING"]
```

```
    }
```

```
  }
```

```
}
```

```
> PATCH /v1/users/24e811a2-2ad0-46e4-b632
```

```
{
```

```
  "data": {
```

```
    "type": "users",
```

```
    "id": "24e811a2-2ad0-46e4-b632",
```

```
    "attributes": {
```

```
      "roles": ["DEVELOPER", "MARKETING"]
```

```
    }
```

```
  }
```

```
}
```

```
> PATCH /v1/users/24e811a2-2ad0-46e4-b632
```

```
HTTP/1.1 200 OK
```

```
{  
  "data": {  
    "type": "users",  
    "id": "24e811a2-2ad0-46e4-b632",  
    "attributes": {  
      "firstName": "John",  
      "lastName": "Appleseed",  
      "email": "john-appleseed@mac.com",  
      "roles": ["DEVELOPER", "MARKETING"],  
      "allAppsVisible": true  
    }  
  },  
  "links": {  
    "self": ".../v1/userInvitations/24e811a2-2ad0-46e4-b632"  
  }  
}
```

```
> DELETE /v1/users/24e811a2-2ad0-46e4-b632
```

```
> DELETE /v1/users/24e811a2-2ad0-46e4-b632
```

```
HTTP/1.1 204 NO CONTENT
```

Demo

Sehoon Shon, TestFlight Engineer

Getting data

Changing data

Relationships

Errors

Access and authentication

Best practices

Getting data

Changing data

Relationships

Errors

Access and authentication

Best practices

Beta Group

Beta Tester

Beta Tester

Beta Tester

```
> GET /v1/betaGroups
```

```
HTTP/1.1 200 OK
```

```
{  
  "data": [{  
    "type": "betaGroups",  
    "id": "55099ada-d790-4db1-bea5",  
    "attributes": {...},  
    "relationships": {  
      "app": {...},  
      "betaTesters": {...},  
      "builds": {...}  
    },  
    "links": {  
      "self": "/v1/betaGroups/55099ada-d790-4db1-bea5"  
    }  
  },  
  {  
    "type": "betaGroups",  
    "id": "55099ada-d790-4db1-bea5",  
    "attributes": {...},  
    "relationships": {  
      "app": {...},  
      "betaTesters": {...},  
      "builds": {...}  
    },  
    "links": {  
      "self": "/v1/betaGroups/55099ada-d790-4db1-bea5"  
    }  
  }  
]
```

```
> GET /v1/betaGroups
```

```
HTTP/1.1 200 OK
```

```
{  
  "data": [{  
    "type": "betaGroups",  
    "id": "55099ada-d790-4db1-bea5",  
    "attributes": {...},  
    "relationships": {  
      "app": {...},  
      "betaTesters": {...},  
      "builds": {...}  
    },  
    "links": {  
      "self": "/v1/betaGroups/55099ada-d790-4db1-bea5",  
    }  
  },  
  {
```

```
> GET /v1/betaGroups
```

```
HTTP/1.1 200 OK
```

```
{  
  "data": [{  
    "type": "betaGroups",  
    "id": "55099ada-d790-4db1-bea5",  
    "attributes": {...},  
    "relationships": {  
      "app": {...},  
      "betaTesters": {  
        "links": {  
          "self": "/v1/betaGroups/55099ada-d790-4db1-bea5/relationships/betaTesters",  
          "related": "/v1/betaGroups/55099ada-d790-4db1-bea5/betaTesters"  
        }  
      },  
      "builds": {...}  
    }  
  }  
}
```

```
> GET /v1/betaGroups
```

```
HTTP/1.1 200 OK
```

```
{  
  "data": [{  
    "type": "betaGroups",  
    "id": "55099ada-d790-4db1-bea5",  
    "attributes": {...},  
    "relationships": {  
      "app": {...},  
      "betaTesters": {  
        "links": {  
          "self": "/v1/betaGroups/55099ada-d790-4db1-bea5/relationships/betaTesters",  
          "related": "/v1/betaGroups/55099ada-d790-4db1-bea5/betaTesters"  
        }  
      },  
      "builds": {...}  
    }  
  }  
}
```

```
> POST /v1/betaGroups/55099ada-d790-4db1-bea5/relationships/betaTesters
```

```
{  
  "data": [  
    {  
      "type": "betaTesters",  
      "id": "3789c90b-f697-4157-8983"  
    },  
    {  
      "type": "betaTesters",  
      "id": "4277b871-ce4e-4fc7-9e34"  
    }  
  ]  
}
```

```
> POST /v1/betaGroups/55099ada-d790-4db1-bea5/relationships/betaTesters
```

```
{  
  "data": [  
    {  
      "type": "betaTesters",  
      "id": "3789c90b-f697-4157-8983"  
    },  
    {  
      "type": "betaTesters",  
      "id": "4277b871-ce4e-4fc7-9e34"  
    }  
  ]  
}
```

```
> POST /v1/betaGroups/55099ada-d790-4db1-bea5/relationships/betaTesters
```

```
HTTP/1.1 204 NO CONTENT
```



```
> GET /v1/betaGroups
```

```
HTTP/1.1 200 OK
```

```
{  
  "data": [{  
    "type": "betaGroups",  
    "id": "55099ada-d790-4db1-bea5",  
    "attributes": {...},  
    "relationships": {  
      "app": {...},  
      "betaTesters": {  
        "links": {  
          "self": "/v1/betaGroups/55099ada-d790-4db1-bea5/relationships/betaTesters",  
          "related": "/v1/betaGroups/55099ada-d790-4db1-bea5/betaTesters"  
        }  
      },  
      "builds": {...}  
    }  
  },  
  ]  
}
```

```
> GET /v1/betaGroups
```

```
HTTP/1.1 200 OK
```

```
{
  "data": [{
    "type": "betaGroups",
    "id": "55099ada-d790-4db1-bea5",
    "attributes": {...},
    "relationships": {
      "app": {...},
      "betaTesters": {
        "links": {
          "self": "/v1/betaGroups/55099ada-d790-4db1-bea5/relationships/betaTesters",
          "related": "/v1/betaGroups/55099ada-d790-4db1-bea5/betaTesters"
        }
      },
      "builds": {...}
    }
  }],
}
```

```
> GET /v1/betaGroups
```

```
HTTP/1.1 200 OK
```

```
{  
  "data": [{  
    "type": "betaGroups",  
    "id": "55099ada-d790-4db1-bea5",  
    "attributes": {...},  
    "relationships": {  
      "app": {...},  
      "betaTesters": {  
        "links": {  
          "self": "/v1/betaGroups/55099ada-d790-4db1-bea5/relationships/betaTesters",  
          "related": "/v1/betaGroups/55099ada-d790-4db1-bea5/betaTesters"  
        }  
      },  
      "builds": {...}  
    }  
  },  
  ]  
}
```

```
> GET /v1/betaGroups/55099ada-d790-4db1-bea5/betaTesters
```

```
HTTP/1.1 200 OK
```

```
{  
  "data": [  
    {  
      "type": "betaTesters",  
      "id": "4277b871-ce4e-4fc7-9e34",  
      "attributes": {  
        "firstName": "John",  
        "lastName": "Appleseed",  
        "email": "john-appleseed@mac.com",  
        "inviteType": "EMAIL"  
      },  
      "relationships": {...},  
      "links": {  
        "self": ".../v1/betaTesters/4277b871-ce4e-4fc7-9e34"  
      }  
    }  
  ]  
}
```

```
> GET /v1/betaGroups?include=betaTesters
```

```
> GET /v1/betaGroups?include=betaTesters
```

```
> GET /v1/betaGroups?include=betaTesters
```

```
> GET /v1/betaGroups?include=betaTesters
```

```
HTTP/1.1 200 OK
```

```
{
  "data": [{
    "type": "betaGroups",
    "id": "55099ada-d790-4db1-bea5",
    "attributes": {...},
    "relationships": {
      "betaTesters": {
        "links": {
          "self": "/v1/betaGroups/55099ada-d790-4db1-bea5/relationships/betaTesters",
          "related": "/v1/betaGroups/55099ada-d790-4db1-bea5/betaTesters"
        },
        "data": [
          { "type": "betaTesters", "id": "3789c90b-f697-4157-8983" },
          { "type": "betaTesters", "id": "4277b871-ce4e-4fc7-9e34" }
        ]
      }
    }
  ]
}
```



```
> GET /v1/betaGroups?include=betaTesters
```

```
HTTP/1.1 200 OK
```

```
{
  "data": [{
    "type": "betaGroups",
    "id": "55099ada-d790-4db1-bea5",
    "attributes": {...},
    "relationships": {
      "betaTesters": {
        "links": {
          "self": "/v1/betaGroups/55099ada-d790-4db1-bea5/relationships/betaTesters",
          "related": "/v1/betaGroups/55099ada-d790-4db1-bea5/betaTesters"
        },
        "data": [
          { "type": "betaTesters", "id": "3789c90b-f697-4157-8983" },
          { "type": "betaTesters", "id": "4277b871-ce4e-4fc7-9e34" }
        ]
      }
    }
  ]
}
```

```
> GET /v1/betaGroups?include=betaTesters
```

```
HTTP/1.1 200 OK
```

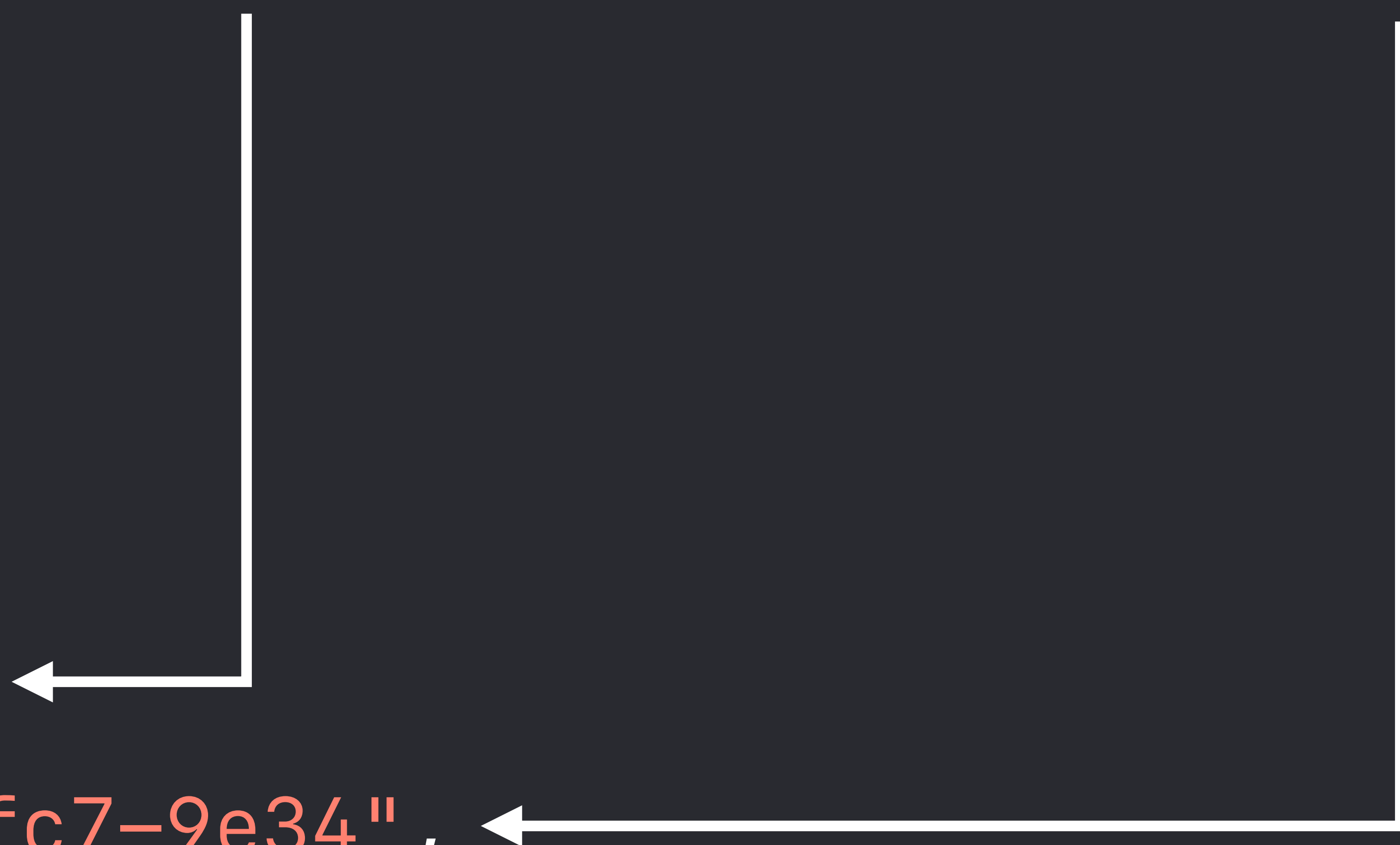
```
{  
  "data": [{  
    "type": "betaGroups",  
    "id": "55099ada-d790-4db1-bea5",  
    "attributes": {...},  
    "relationships": {  
      "betaTesters": {  
        "links": {  
          "self": "/v1/betaGroups/55099ada-d790-4db1-bea5/relationships/betaTesters",  
          "related": "/v1/betaGroups/55099ada-d790-4db1-bea5/betaTesters"  
        },  
        "data": [  
          { "type": "betaTesters", "id": "3789c90b-f697-4157-8983" },  
          { "type": "betaTesters", "id": "4277b871-ce4e-4fc7-9e34" }  
        ]  
      }  
    }  
  ]  
}
```

```
> GET /v1/betaGroups?include=betaTesters
```

```
  "relationships": {
    "betaTesters": {
      "data": [
        { "type": "betaTesters", "id": "3789c90b-f697-4157-8983" },
        { "type": "betaTesters", "id": "4277b871-ce4e-4fc7-9e34" }
      ]
    }
  }
}],
"include": [{
  "type": "betaTesters",
  "id": "4277b871-ce4e-4fc7-9e34",
  "attributes": {
    "firstName": "John",
    "lastName": "Appleseed",
    "email": "john-appleseed@mac.com",
    "inviteType": "EMAIL"
  }
}]
```

```
> GET /v1/betaGroups?include=betaTesters
```

```
  "relationships": {
    "betaTesters": {
      "data": [
        { "type": "betaTesters", "id": "3789c90b-f697-4157-8983" },
        { "type": "betaTesters", "id": "4277b871-ce4e-4fc7-9e34" }
      ]
    }
  }
}],
"include": [{
  "type": "betaTesters",
  "id": "4277b871-ce4e-4fc7-9e34",
  "attributes": {
    "firstName": "John",
    "lastName": "Appleseed",
    "email": "john-appleseed@mac.com",
    "inviteType": "EMAIL"
  }
}
```



Demo

Sehoon Shon, TestFlight Engineer

Getting data

Changing data

Relationships

Errors

Access and authentication

Best practices

Getting data

Changing data

Relationships

Errors

Access and authentication

Best practices

```
> GET /v1/betaTesters?filter[emai11]=kate-bell%22mac.com
```

```
HTTP/1.1 400 Bad Request
```

```
{  
  "errors": [  
    {  
      "status": "400",  
      "id": "5becf2db-2f12-4d6a-9dc2-6ceb33c683b4",  
      "title": "A parameter has an invalid value",  
      "detail": "'emai11' is not a valid filter type",  
      "code": "PARAMETER_ERROR.INVALID",  
      "source": {  
        "parameter": "filter[emai11]"  
      }  
    }  
  ]  
}
```



```
> GET /v1/betaTesters?filter[emai11]=kate-bell%22mac.com
```

```
HTTP/1.1 400 Bad Request
```

```
{
  "errors": [
    {
      "status": "400",
      "id": "5becf2db-2f12-4d6a-9dc2-6ceb33c683b4",
      "title": "A parameter has an invalid value",
      "detail": "'emai11' is not a valid filter type",
      "code": "PARAMETER_ERROR.INVALID",
      "source": {
        "parameter": "filter[emai11]"
      }
    }
  ]
}
```

```
> GET /v1/betaTesters?filter[emai11]=kate-bell%22mac.com
```

```
HTTP/1.1 400 Bad Request
```

```
{
```

```
  "errors": [
```

```
    {
```

```
      "status": "400",
```

```
      "id": "5becf2db-2f12-4d6a-9dc2-6ceb33c683b4",
```

```
      "title": "A parameter has an invalid value",
```

```
      "detail": "'emai11' is not a valid filter type",
```

```
      "code": "PARAMETER_ERROR.INVALID",
```

```
      "source": {
```

```
        "parameter": "filter[emai11]"
```

```
      }
```

```
    }
```

```
  ]
```

```
}
```

```
> GET /v1/betaTesters?filter[emai11]=kate-bell%22mac.com
```

```
HTTP/1.1 400 Bad Request
```

```
{  
  "errors": [  
    {  
      "status": "400",  
      "id": "5becf2db-2f12-4d6a-9dc2-6ceb33c683b4",  
      "title": "A parameter has an invalid value",  
      "detail": "'emai11' is not a valid filter type",  
      "code": "PARAMETER_ERROR.INVALID",  
      "source": {  
        "parameter": "filter[emai11]"  
      }  
    }  
  ]  
}
```

```
> GET /v1/betaTesters?filter[emai11]=kate-bell%22mac.com
```

```
HTTP/1.1 400 Bad Request
```

```
{  
  "errors": [  
    {  
      "status": "400",  
      "id": "5becf2db-2f12-4d6a-9dc2-6ceb33c683b4",  
      "title": "A parameter has an invalid value",  
      "detail": "'emai11' is not a valid filter type",  
      "code": "PARAMETER_ERROR.INVALID",  
      "source": {  
        "parameter": "filter[emai11]"  
      }  
    }  
  ]  
}
```

```
> GET /v1/betaTesters?filter[emai11]=kate-bell%22mac.com
```

```
HTTP/1.1 400 Bad Request
```

```
{  
  "errors": [  
    {  
      "status": "400",  
      "id": "5becf2db-2f12-4d6a-9dc2-6ceb33c683b4",  
      "title": "A parameter has an invalid value",  
      "detail": "'emai11' is not a valid filter type",  
      "code": "PARAMETER_ERROR.INVALID",  
      "source": {  
        "parameter": "filter[emai11]"  
      }  
    }  
  ]  
}
```

```
> GET /v1/betaTesters?filter[emai11]=kate-bell%22mac.com
```

```
HTTP/1.1 400 Bad Request
```

```
{  
  "errors": [  
    {  
      "status": "400",  
      "id": "5becf2db-2f12-4d6a-9dc2-6ceb33c683b4",  
      "title": "A parameter has an invalid value",  
      "detail": "'emai11' is not a valid filter type",  
      "code": "PARAMETER_ERROR.INVALID",  
      "source": {  
        "parameter": "filter[emai11]"  
      }  
    }  
  ]  
}
```

Getting data

Changing data

Relationships

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Access and authentication

Best practices

Getting data

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Access and Authentication

Julie Richards, App Store Connect Engineer

api.appstoreconnect.apple.com/v1/apps

.../users

.../userInvitations

.../betaTesters

.../builds

```
> GET api.appstoreconnect.apple.com/v1/apps
```

```
> GET api.appstoreconnect.apple.com/v1/apps
```

```
HTTP/1.1 401 UNAUTHORIZED
```

```
{  
  "errors": [  
    {  
      "status": "401",  
      "code": "NOT_AUTHORIZED",  
      "title": "The authentication credentials are missing or invalid.",  
      "detail": "Provide a bearer token that is properly configured and has not expired."  
    }  
  ]  
}
```

```
> GET api.appstoreconnect.apple.com/v1/apps
```

```
HTTP/1.1 401 UNAUTHORIZED
```

```
{  
  "errors": [  
    {  
      "status": "401",  
      "code": "NOT_AUTHORIZED",  
      "title": "The authentication credentials are missing or invalid.",  
      "detail": "Provide a bearer token that is properly configured and has not expired."  
    }  
  ]  
}
```

Authentication Credentials

Authentication Credentials

Context



Authentication Credentials

Context

Security



Create API Key

Generate tokens

Send token with request

Create API Key

Generate tokens

Send token with request

API Key

Public Key

Private Key

API Key

Public Key

Private Key

Download once in App Store Connect

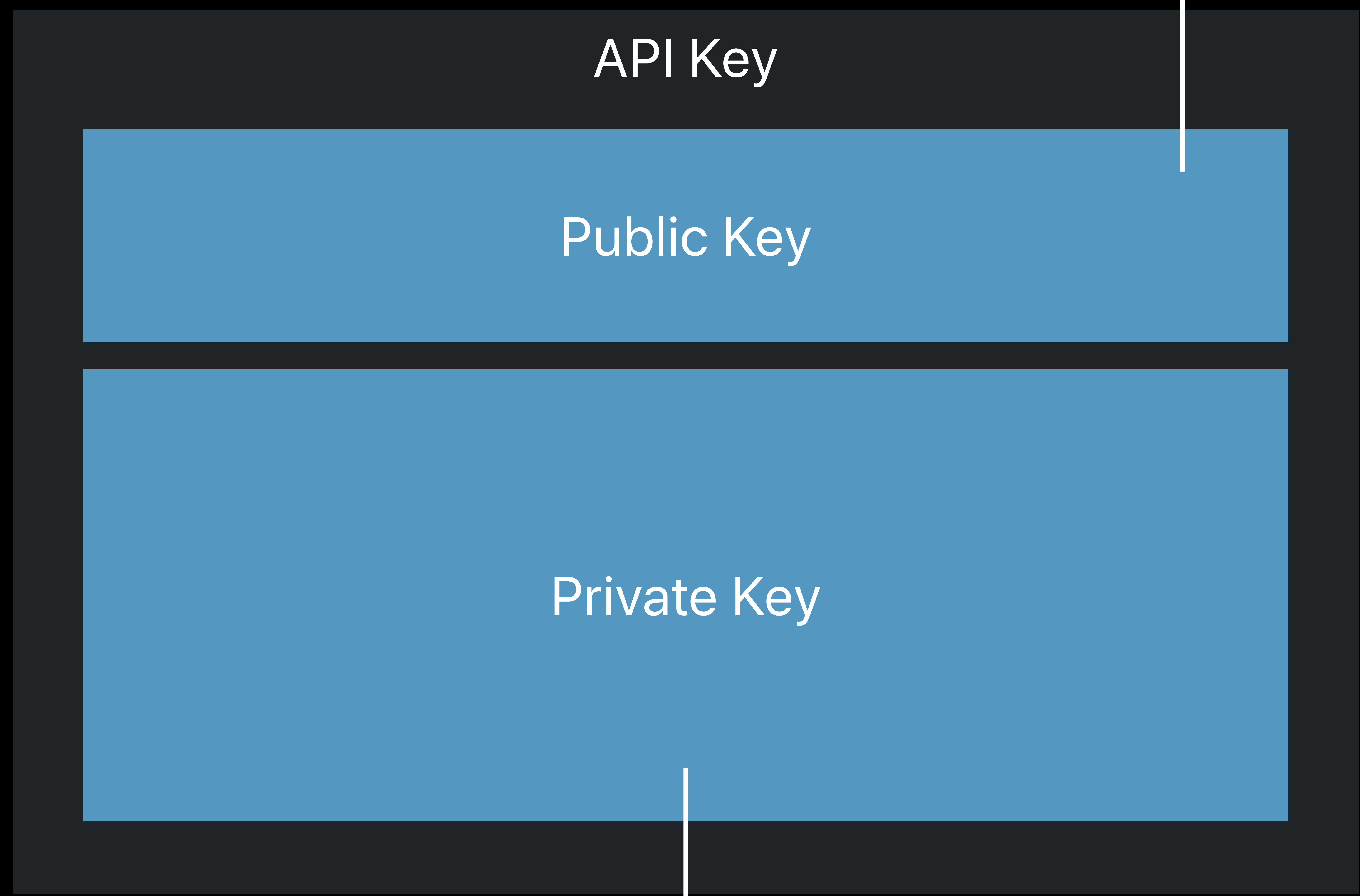
Stored on Apple Servers

API Key

Public Key

Private Key

Download once in App Store Connect



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Users and Access

[People](#) [API Keys](#)

Generating an API key allows you to configure, authenticate, and use one or more Apple services for that key. Keys don't expire, but can't be modified to access more services once created. [Learn More](#)

Issuer ID ?
b087a6f0-c60b-4430-a719-bd21a42c8cd6 [Copy](#)

Active (2) + Edit

NAME	GENERATED BY	KEY ID	LAST USED	ACCESS
Mobile Contractors	Cindy Cheung	2ZF2W6LYGK	Feb 11, 2018	Developer
Sale Team	Sarah Milos	03HJNTAZVQ	Jan 3, 2018	App Manager, Finance

Revoked (4)

Revoked keys are displayed for 30 days.

NAME	REVOKED BY	KEY ID	REVOKED ON	ACCESS
Legal	Stephanie Vidal	93YUIYH5YH	Jan 29, 2018	Sales and Reports
Dev Team	Sarah Milos	53JF8NTAJL8	Mar 3, 2018	Admin
Desktop Dev Team	Glan Thomas	8L3W4N9SLC	Jun 13, 2018	App Manager, Developer
Finance	Daisy Tinsley	2ZF2W6LYGK	May 28, 2018	Finance

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Private Keys

Downloaded only once

Not stored by Apple

Managed by you

Do not expire

Create API Key

Generate tokens

Send token with request

JSON Web Token

Field

Value

Usage

JSON Web Token

Field	Value	Usage
Issuer ID	Found in App Store Connect	Your team

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Users and Access

People API Keys

Generating an API key allows you to configure, authenticate, and use one or more Apple services for that key. Keys don't expire, but can't be modified to access more services once created. [Learn More](#)

Issuer ID ?
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Finance	Daisy Tinsley	2ZF2W6LYGK	May 28, 2018	Finance

JSON Web Token

Field	Value	Usage
Issuer ID	Found in App Store Connect	Your team

JSON Web Token

Field	Value	Usage
Issuer ID	Found in App Store Connect	Your team
Private Key ID	Found in App Store Connect	This key

App Store Connect [Users and Access](#) John Appleseed Nature Lab

Users and Access

[People](#) [API Keys](#)

Generating an API key allows you to configure, authenticate, and use one or more Apple services for that key. Keys don't expire, but can't be modified to access more services once created. [Learn More](#)

Issuer ID
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Active (2)

[Edit](#)

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JSON Web Token

Field	Value	Usage
Issuer ID	Found in App Store Connect	Your team
Private Key ID	Found in App Store Connect	This key

JSON Web Token

Field	Value	Usage
Issuer ID	Found in App Store Connect	Your team
Private Key ID	Found in App Store Connect	This key
Expiration time	Timestamp of expiration	$\leq 20\text{min}$

JSON Web Token

Field	Value	Usage
Issuer ID	Found in App Store Connect	Your team
Private Key ID	Found in App Store Connect	This key
Expiration time	Timestamp of expiration	$\leq 20\text{min}$
Audience	"appstoreconnect-v1"	Constant

JSON Web Token

Field	Value	Usage
Issuer ID	Found in App Store Connect	Your team
Private Key ID	Found in App Store Connect	This key
Expiration time	Timestamp of expiration	$\leq 20\text{min}$
Audience	"appstoreconnect-v1"	Constant
Algorithm	"ES256"	Constant

```
token = JWT.encode(  
    {  
        iss: ISSUER_ID,           //found on API Keys tab  
        exp: Time.now.to_i + 20 * 60, //up to 20 minutes in the future  
        aud: "appstoreconnect-v1"  
    },  
    private_key,  
    "ES256",  
    header_fields={  
        kid: KEY_ID           //found on API Keys tab  
    }  
)
```

Create API Key

Generate tokens

Send token with request

```
> GET api.appstoreconnect.apple.com/v1/apps
```

```
Host: api.appstoreconnect.apple.com
```

```
User-Agent: curl/7.54.0
```

```
Accept: */*
```

```
Authorization: Bearer <token_value>
```

Create API Key

Generate tokens

Send token with request

Demo

Getting data

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Getting data

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Best practices

Best Practices

Protect your private keys



Best Practices

Protect your private keys

Reuse tokens



Best Practices

Protect your private keys

Reuse tokens

Use the links



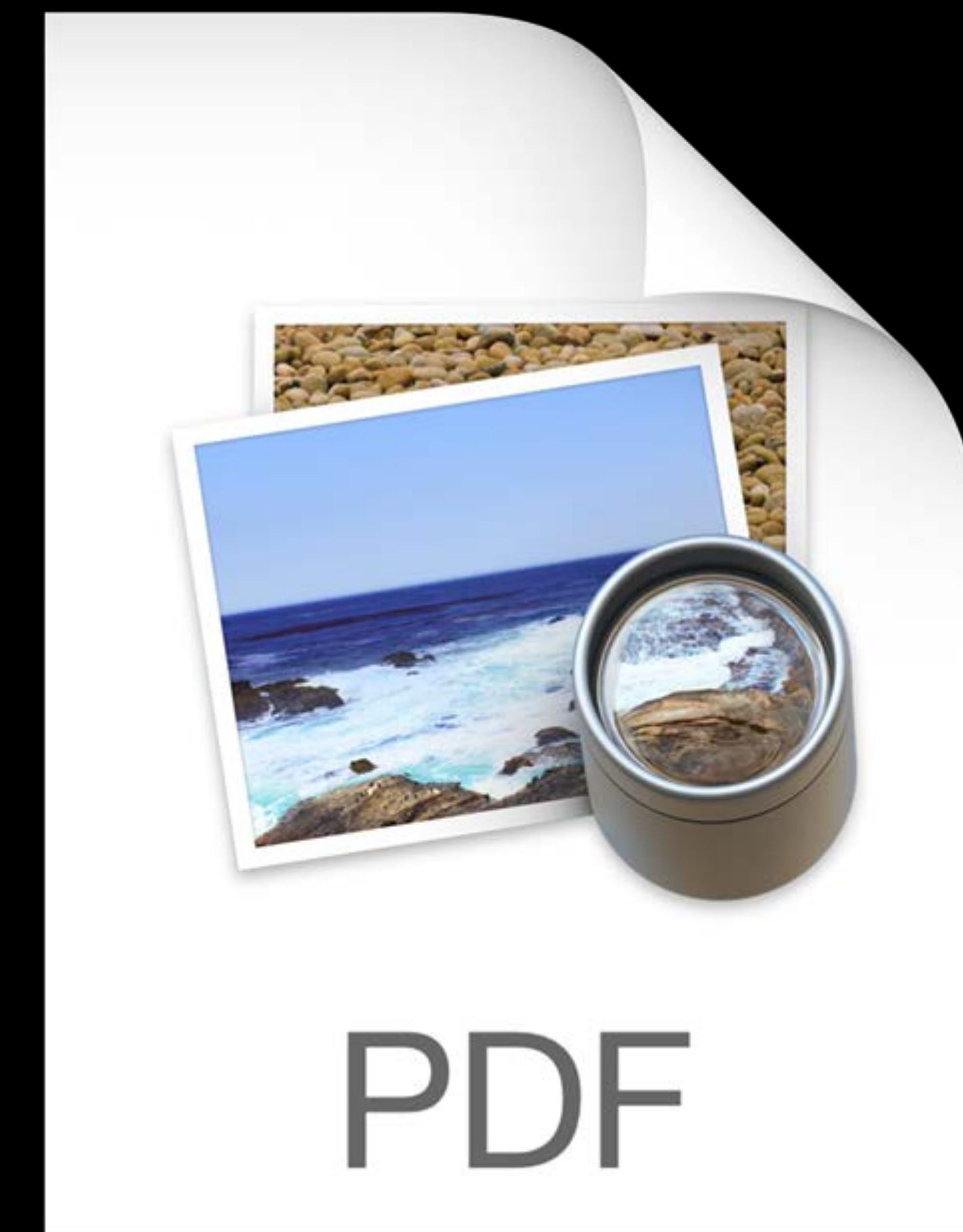
Best Practices

Protect your private keys

Reuse tokens

Use the links

Check the documentation





App Store Connect API

Available this summer

More Information

<https://developer.apple.com/wwdc18/303>

App Store and App Store Connect Lab

Technology Lab 2

Thursday, 3:30PM

App Store and App Store Connect Lab

Technology Lab 3

Friday, 1:00PM

 **WWDC18**