

APS Developer Cheat Sheet

Single-page reference for Autodesk Platform Services with RAPS CLI

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AUTHENTICATION

OAuth Flows

2-Legged

Server-to-server

App identity only

Limited BIM360

client_credentials

`raps auth login`

3-Legged

User-facing apps

User + app context

Full BIM360 access

authorization_code

```
# With RAPS (automatic)
raps urn encode "urn:adsk..."
```

Essential OAuth Scopes

Scope	Purpose
data:read	Read files/projects
data:write	Modify metadata
data:create	Upload files
bucket:read	List buckets
bucket:create	Create buckets
viewables:read	View models
code:all	Design Automation
account:read	BIM360/ACC info

DATA MANAGEMENT API

Operation	RAPS Command
List Hubs	<code>raps dm hubs</code>
List Projects	<code>raps dm projects</code>
List Folders	<code>raps dm folders <id></code>
Upload File	<code>raps dm upload <file></code>
Download	<code>raps dm download <id></code>

URN Encoding

```
# Manual (error-prone)
echo -n "urn:..." | base64
```

OBJECT STORAGE SERVICE

Bucket Operations

Action	Command
List	<code>raps bucket list</code>
Create	<code>raps bucket create <name></code>
Delete	<code>raps bucket delete <name></code>

Object Operations

Action	Command
Upload	<code>raps oss upload <file></code>
List	<code>raps oss list <bucket></code>
Download	<code>raps oss download <urn></code>

Bucket Naming Rules

- 3-128 chars, lowercase
- Start/end with letter or number
- No spaces, underscores, IPs

MODEL DERIVATIVE API

Translation Workflow

```
Upload <Translate> Poll Status <Download>
```

Translation Operations

Operation	RAPS Command
Start	<code>raps translate <urn></code>
Status	<code>raps translate status <urn></code>
Wait	<code>raps translate <urn> --wait</code>
Properties	<code>raps translate props <urn></code>

Output Formats

Format	Code	Use Case
SVF2	svf2	Web viewer (modern)
SVF	svf	Web viewer (legacy)
OBJ	obj	3D meshes
STL	stl	3D printing
PDF	pdf	2D drawings
DWG	dwg	AutoCAD format

DESIGN AUTOMATION API

Supported Engines

Engine	Files	RAPS Filter
AutoCAD	DWG, DXF	--filter autocad
Revit	RVT, RFA	--filter revit
Inventor	IPT, IAM	--filter inventor
3ds Max	MAX	--filter max

DA Components



COMMON ERROR CODES

Code	Cause	RAPS Solution
400	Invalid request	Built-in validation
401	Expired token	raps auth refresh
403	No permissions	raps auth status
404	URN not found	raps urn encode
409	Name conflict	raps bucket list
429	Rate limit	Auto rate limiting

QUICK COMMANDS

First-Time Setup

```
# Install  
brew install raps # macOS  
scoop install raps # Windows
```

```
# Authenticate  
raps auth login  
  
# Verify  
raps auth status
```

Common Workflow

```
# Upload -> Translate -> View  
raps oss upload model.rvt bucket  
raps translate $(raps urn encode \  
"urn:...") --wait  
raps view <urn>
```

Batch Operations

```
# Process multiple files  
raps oss upload-batch *.dwg \  
--bucket mybucket  
raps translate-batch --bucket \  
mybucket --formats svf2
```

PRO TIPS

- Use profiles: `--profile prod`
- Enable verbose: `--verbose`
- Health check: `raps health`
- View examples: `raps examples`

Resources

- [rapscli.xyz](#) | □ support@rapscli.xyz
- [Discord: discord.gg/raps](#)
- [Docs: aps.autodesk.com](#)