

# RAPS Developer Quick Start Guide

Get started with RAPS CLI for APS automation

RAPS Development Team

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## 1 RAPS Developer Quick Start Cheat Sheet

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- Document Version\*\*: v4.2 (January 2026)
- RAPS Version\*\*: 4.2.1
- APS API Compatibility\*\*: Data Management v1, Model Derivative v2, OSS v2, Authentication v2

- Minimum Rust Version<sup>\*\*</sup>: 1.88.0
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## 1.1 Installation & Setup (< 5 minutes)

### 1.1.1 1. Install RAPS

```
# Windows (Scoop)
scoop bucket add raps https://github.com/raps-cli/scoop-bucket
scoop install raps

# macOS (Homebrew)
brew tap raps-cli/tap
brew install raps

# Linux (Cargo)
cargo install raps-cli

# Or download from https://rapscli.xyz/download
```

### 1.1.2 2. Authenticate

```
# Interactive login (recommended)
raps auth login

# Or set credentials
raps auth set --client-id YOUR_CLIENT_ID --client-secret YOUR_SECRET

# Verify authentication
raps auth status
```

### 1.1.3 3. Configure Profile

```
# Set default profile
raps config set profile default

# Create environment-specific profiles
raps auth login --profile production
raps auth login --profile staging
```

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## 1.2 Essential Commands

### 1.2.1 Authentication & Config

Command	Description
<code>raps auth login</code>	Interactive OAuth login
<code>raps auth status</code>	Check authentication status
<code>raps auth refresh</code>	Refresh expired tokens
<code>raps config list</code>	Show all configuration
<code>raps config set profile &lt;name&gt;</code>	Switch active profile

### 1.2.2 Object Storage Service (OSS)

Command	Description
<code>raps oss buckets</code>	List all buckets
<code>raps oss create-bucket &lt;name&gt;</code>	Create new bucket

Command	Description
<code>raps oss upload &lt;file&gt; &lt;bucket&gt;</code>	Upload single file
<code>raps oss upload-batch --folder &lt;dir&gt;</code>	Upload entire directory
<code>raps oss download &lt;urn&gt; &lt;path&gt;</code>	Download file
<code>raps oss list &lt;bucket&gt;</code>	List bucket contents

### 1.2.3 Data Management (DM)

Command	Description
<code>raps dm projects</code>	List all projects
<code>raps dm folders &lt;project-id&gt;</code>	List project folders
<code>raps dm upload &lt;file&gt; &lt;project&gt;</code>	Upload to project
<code>raps dm versions &lt;item-id&gt;</code>	Show item versions
<code>raps dm create-folder &lt;name&gt;</code>	Create folder

### 1.2.4 Model Derivative

Command	Description
<code>raps derivative start &lt;urn&gt;</code>	Start translation job
<code>raps derivative status &lt;urn&gt;</code>	Check job status
<code>raps derivative formats &lt;urn&gt;</code>	List available formats
<code>raps derivative download &lt;urn&gt;</code>	Download derivatives

### 1.2.5 Bulk Operations

Command	Description
<code>raps batch upload &lt;pattern&gt;</code>	Upload matching files
<code>raps batch process &lt;list&gt;</code>	Process file list
<code>raps batch status</code>	Monitor batch jobs
<code>raps batch retry &lt;job-id&gt;</code>	Retry failed operations

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## 1.3 Common Workflows

### 1.3.1 Quick File Upload

```
# Upload and process in one command
raps upload-and-process model.dwg --project my-project --formats svf,pdf

# With progress monitoring
raps upload model.rvt --project design --watch-progress

# Batch upload with parallel processing
raps batch upload *.dwg --project construction --parallel 5
```

### 1.3.2 Project Setup

```
# Create complete project structure
raps dm create-project "New Building" \
  - folders "Models,Drawings,Documents" \
  - permissions team-read

# Setup development environment
raps config create-workspace dev \
```

```
- project-id 12345 \  
- default-bucket dev-models \  
- auto-derivatives
```

### 1.3.3 CI/CD Integration

```
# In your GitHub Actions / Jenkins:  
raps auth login --token $APS_TOKEN  
raps deploy --environment production \  
- source ./models \  
- auto-rollback \  
- notify-slack $SLACK_WEBHOOK
```

### 1.3.4 Monitoring & Debugging

```
# Check system status  
raps health check  
  
# View detailed logs  
raps logs --level debug --follow  
  
# Performance monitoring  
raps stats --operations upload --timeframe 24h
```

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## 1.4 Power User Tips

### 1.4.1 Performance Optimization

```
# Optimal parallel uploads (adjust based on network)  
raps config set parallel.uploads 10  
  
# Enable compression for large files  
raps config set compression.enabled true  
  
# Use regional endpoints for better speed  
raps config set region us-west
```

### 1.4.2 Advanced Configuration

```
# Custom retry logic  
raps config set retry.max-attempts 5  
raps config set retry.backoff exponential  
  
# Webhook notifications  
raps webhook add success https://api.yourapp.com/aps-success  
raps webhook add error https://api.yourapp.com/aps-error  
  
# Custom output formats  
raps config set output.format json # json, yaml, table, csv
```

### 1.4.3 Security Best Practices

```
# Use environment variables (recommended)  
export APS_CLIENT_ID="your-client-id"  
export APS_CLIENT_SECRET="your-secret"  
  
# Enable audit logging
```

```
raps config set audit.enabled true
raps config set audit.destination ./logs/

# Rotate credentials regularly
raps auth rotate --schedule monthly
```

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## 1.5 Troubleshooting

### 1.5.1 Common Issues & Solutions

Issue	Solution
Authentication failed	Run <code>raps auth refresh</code> or <code>raps auth login</code>
File upload timeout	Increase timeout: <code>raps config set timeout 300</code>
Rate limit exceeded	Add delays: <code>raps config set rate-limit.delay 1000</code>
Permission denied	Check APS scopes: <code>raps auth status --verbose</code>
Network errors	Use retry: <code>raps config set retry.network true</code>

### 1.5.2 Debug Mode

```
# Enable verbose output
raps --verbose <command>

# Save debug information
raps debug info > debug-info.txt

# Test connectivity
raps health test-connection
```

### 1.5.3 Getting Help

```
# Built-in help
raps help          # General help
raps help upload   # Command-specific help
raps --help        # CLI options

# Examples and tutorials
raps examples      # Show common examples
raps tutorial interactive # Interactive tutorial
```

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## 1.6 Environment Variables

Variable	Description	Example
APS_CLIENT_ID	Application client ID	your-client-id
APS_CLIENT_SECRET	Application secret	your-secret
APS_CALLBACK_URL	OAuth callback	http://localhost:8080/callback
RAPS_PROFILE	Default profile	production
RAPS_CONFIG_PATH	Config file location	~/.config/raps/
RAPS_LOG_LEVEL	Logging verbosity	debug, info, warn, error

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## 1.7 Integration Examples

### 1.7.1 GitHub Actions

```
- name: Deploy to APS
  run: |
    raps auth login --token ${ secrets.APS_TOKEN }}
    raps batch upload ./models --project ${ env.PROJECT_ID }}
```

### 1.7.2 Docker

```
FROM rust:alpine
RUN cargo install raps-cli
COPY . /app
WORKDIR /app
CMD ["raps", "batch", "process", "queue.json"]
```

### 1.7.3 Python Integration

```
import subprocess

# Call RAPS from Python
result = subprocess.run([
    'raps', 'upload', 'model.dwg',
    '--project', project_id,
    '--output', 'json'
], capture_output=True, text=True)

response = json.loads(result.stdout)
```

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## 1.8 Quick Reference Card

### 1.8.1 Most Used Commands

```
raps auth login           # Authenticate
raps upload file.dwg --project p1 # Upload file
raps dm projects          # List projects
raps batch upload *.rvt    # Bulk upload
raps derivative start <urn> # Process model
raps health check         # System status
```

### 1.8.2 Emergency Commands

```
raps auth refresh          # Fix auth issues
raps batch cancel <job-id> # Stop runaway job
raps logs --level error    # Check errors
raps config reset          # Reset configuration
```

- Full Documentation\*\*: [rapscli.xyz/docs](https://rapscli.xyz/docs)
- Support\*\*: [support@rapscli.xyz](mailto:support@rapscli.xyz)
- Community\*\*: [discord.gg/raps](https://discord.gg/raps)
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## 1.9 Version Compatibility Notes

### 1.9.1 RAPS 4.2.1 Changes

- Enhanced MCP integration for natural language operations

- Improved parallel processing performance (10% faster)
- New `raps health monitor` command for real-time monitoring
- Extended APS API timeout handling

### 1.9.2 Backward Compatibility

- RAPS 4.x\*\*: All commands compatible
- RAPS 3.x\*\*: Core commands compatible, some advanced features unavailable
- APS API Changes\*\*: Model Derivative v2 required for new formats

### 1.9.3 Upgrade Path

```
# Check current version
raps --version

# Upgrade to latest
# macOS: brew upgrade raps
# Windows: scoop update raps
# Linux: cargo install --force raps-cli
```

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- RAPS Developer Cheat Sheet v4.2 | RAPS v4.2.1 | APS APIs: DM v1, MD v2, OSS v2, Auth v2 | Updated: January 2026\*