

curl is a command-line tool for transferring data using various protocols like HTTP, HTTPS, FTP, and SFTP. It's widely used for API testing, downloading files, and debugging network requests.

Table of Contents



- [Basic Usage](#)
- [Sending HTTP Requests](#)
- [Authentication](#)
- [Uploading & Downloading Files](#)
- [Handling JSON Data](#)
- [Debugging & Logging](#)
- [Testing APIs](#)
- [Additional Useful Flags](#)
- [Summary](#)

Basic Usage

Command	Description
<code>curl https://example.com</code>	Fetch and display the webpage contents.
<code>curl -o file.html https://example.com</code>	Save output to a file.
<code>curl -O https://example.com/file.zip</code>	Download a file (keep original filename).
<code>curl -L https://example.com</code>	Follow redirects.
<code>curl -I https://example.com</code>	Fetch only HTTP headers.
<code>curl -s https://example.com</code>	Silent mode (no progress output).

Example: Download a file and rename it

```
curl -o myfile.zip https://example.com/file.zip
```

Sending HTTP Requests

Command	Description
<code>curl -X GET URL</code>	Send a GET request (default).
<code>curl -X POST URL</code>	Send a POST request.
<code>curl -X PUT URL</code>	Send a PUT request.
<code>curl -X DELETE URL</code>	Send a DELETE request.
<code>curl -d "param1=value1&param2=value2" -X POST URL</code>	Send form data.
<code>curl -H "Custom-Header: value" URL</code>	Add custom HTTP headers.

Example: Send a POST request with data

```
curl -X POST -d "username=admin&password=1234"
https://example.com/login
```

Authentication

Command	Description
<code>curl -user username:password URL</code>	Basic authentication.
<code>curl -u user:pass URL</code>	Alternative basic authentication.
<code>curl -H "Authorization: Bearer <token>" URL</code>	Bearer token authentication.

Example: API request with a Bearer Token

```
curl -H "Authorization: Bearer mysecrettoken"
https://api.example.com/data
```

Uploading & Downloading Files

Command	Description
<code>curl -T myfile.txt ftp://example.com</code>	Upload a file via FTP.
<code>curl -T myfile.txt -u user:pass ftp://example.com</code>	FTP upload with authentication.
<code>curl -o file.zip URL</code>	Download a file and save it.

Example: Upload a file to an FTP server

```
curl -T myfile.txt -u user:pass ftp://example.com/uploads/
```

Handling JSON Data

Command	Description
<code>curl -H "Content-Type: application/json" URL</code>	Set JSON content type.
<code>curl -d '{"key":"value"}' -H "Content-Type: application/json" -X POST URL</code>	Send JSON payload.

Example: Send JSON data in a POST request

```
curl -X POST -H "Content-Type: application/json" -d '{"name":"Alice","age":25}' https://api.example.com/users
```

Debugging & Logging

Command	Description
<code>curl -v URL</code>	Verbose mode (detailed output).
<code>curl -trace trace.txt URL</code>	Save detailed trace to a file.
<code>curl -trace-ascii trace.log URL</code>	Save ASCII trace logs.

Example: Debug a request

```
curl -v https://example.com
```

Testing APIs

Command	Description
<code>curl -X GET https://api.example.com/data</code>	Fetch API data.
<code>curl -X DELETE https://api.example.com/users/1</code>	Delete user ID 1.

Example: GET request with query parameters

```
curl "https://api.example.com/data?user=Alice&age=25"
```

Additional Useful Flags

Command	Description
<code>curl -limit-rate 100k URL</code>	Limit download speed.
<code>curl -max-time 10 URL</code>	Timeout after 10 seconds.
<code>curl -C - URL</code>	Resume a paused download.

Example: Limit speed to 200KB/s

```
curl --limit-rate 200k -O https://example.com/file.zip
```

Summary

Feature	Command Example
Basic Request	<code>curl https://example.com</code>
Download File	<code>curl -O URL</code>
Follow Redirects	<code>curl -L URL</code>
Send POST Request	<code>curl -X POST -d "param=value" URL</code>
Add Headers	<code>curl -H "Header: value" URL</code>
Upload File	<code>curl -T file.txt ftp://example.com</code>
Use Authentication	<code>curl -u user:pass URL</code>
Debug Request	<code>curl -v URL</code>

This Linux curl Cheat Sheet will help you download files, send API requests, authenticate, and debug HTTP traffic!