

MCP Inc. – API Documentation (v2.0)

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Owner: Development Department – API Platform Team

Confidentiality: Internal Use Only

1. Overview

The MCP Cloud REST API v2.0 enables developers to programmatically interact with MCP Inc.'s core services:

- **Resource Management:** View, create, update, and delete cloud resources.
- **Billing & Cost Analytics:** Access detailed billing data broken down by service, project, and region.
- **User Management:** Manage accounts, permissions, and roles.
- **Monitoring & Alerts:** Retrieve system metrics and setup notifications.

The API follows **RESTful design principles**, communicates over **HTTPS**, and uses **JSON** for request and response bodies.

2. Getting Started

1. Obtain API Credentials

Contact api-support@mcp.com to request an API key and client credentials.

2. Base URL

Production: `https://api.mcp.com/v2`

Staging: `https://staging-api.mcp.com/v2`

3. Required Headers

`Content-Type: application/json`

`Authorization: Bearer {access_token}`

3. Authentication & Security

- **Protocol:** HTTPS only (TLS 1.2+ mandatory)
- **Method:** OAuth 2.0 Client Credentials Flow
- **Token Lifespan:** 3600 seconds (1 hour)
- **Scopes:** Control API access to specific modules

Get Token Example

```
POST /auth/token
Host: api.mcp.com
Content-Type: application/json

{
  "client_id": "your_client_id",
  "client_secret": "your_client_secret",
  "grant_type": "client_credentials"
}
```

Response

```
{
  "access_token": "eyJhbGciOiJIUzI1NiIsInR...",
  "token_type": "Bearer",
  "expires_in": 3600
}
```

4. Endpoints

4.1 Resource Management API

GET /resources

Retrieve a paginated list of resources in your account.

Parameter	Type	Required	Description
page	int	No	Page index (default 1)
size	int	No	Items per page (default 50)

Parameter	Type	Required	Description
status	enum	No	Filter by status: running, stopped

Sample Request

```
GET /resources?page=1&size=10&status=running
Authorization: Bearer {token}
```

Sample Response

```
{
  "total": 122,
  "resources": [
    {
      "id": "vm-8891",
      "type": "VM",
      "cpu": 8,
      "memory": "32GB",
      "region": "us-west-1",
      "status": "running"
    }
  ]
}
```

POST /resources

Create a new resource.

```
POST /resources
Authorization: Bearer {token}
```

```
{
  "type": "VM",
  "cpu": 4,
  "memory": "16GB",
  "region": "ap-southeast-1"
}
```

201 Created

```
{
  "id": "vm-9903",
  "status": "provisioning"
}
```

4.2 Billing API

GET /billing/summary

Retrieve monthly cost summary.

Parameter	Type	Required	Description
month	YYYY-MM	Yes	Billing month

Sample

```
GET /billing/summary?month=2024-05
Authorization: Bearer {token}
```

Response

```
{
  "month": "2024-05",
  "total_cost": 5423.15,
  "currency": "USD",
  "breakdown": {
    "compute": 3120.50,
    "storage": 1500.00,
    "network": 802.65
  }
}
```

4.3 User Management API

POST /users

Create a new user within your organization.

PATCH /users/{id}

4.4 Monitoring API

GET /monitoring/metrics

Retrieve performance metrics for a resource.

Parameter	Type	Required
id	string	Yes

5. Error Handling

Standard Error Response

```
{
  "error": {
    "code": "RESOURCE_NOT_FOUND",
    "message": "The requested resource could not be found."
  }
}
```

HTTP Code	Code Name	Description
400	BAD_REQUEST	Invalid parameters
401	UNAUTHORIZED	Missing/invalid token
403	FORBIDDEN	Insufficient permissions
404	RESOURCE_NOT_FOUND	Resource does not exist
429	RATE_LIMIT_EXCEEDED	Too many requests
500	INTERNAL_SERVER_ERROR	Server error

6. Rate Limits

- **Standard Tier:** 1000 requests/minute, 50 concurrent
- **Enterprise Tier:** 5000 requests/minute, 200 concurrent

Headers Returned

```
X-RateLimit-Limit: 1000  
X-RateLimit-Remaining: 653  
X-RateLimit-Reset: 1685893200
```

7. Best Practices

- Cache GET results to avoid hitting rate limits
 - Always handle 429 responses by retrying after `X-RateLimit-Reset`
 - Use pagination for large datasets
 - Make incremental changes to resources instead of full replacements
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8. Changelog

- **2.0.2 (2024-06-01):** Added `status` filter to GET /resources
- **2.0.1 (2024-04-15):** Expanded cost breakdown in billing API
- **2.0.0 (2024-02-01):** Major release – new Monitoring API, enhanced security