

Asking TourMIS

AI example

Holger Sicking

Austria Tourism / Tourism Research

MCP

Model Context Protocol

The missing standard for AI integration

by Anthropic 

What is MCP?

MCP is an open source protocol that enables the seamless integration of AI apps and agents with tools and data services

What is MCP?

MCP is an open source protocol that enables the seamless integration of AI apps and agents with tools and data services

REST API in Web Development

Connects web applications to data and services

=

MCP in AI Ecosystem

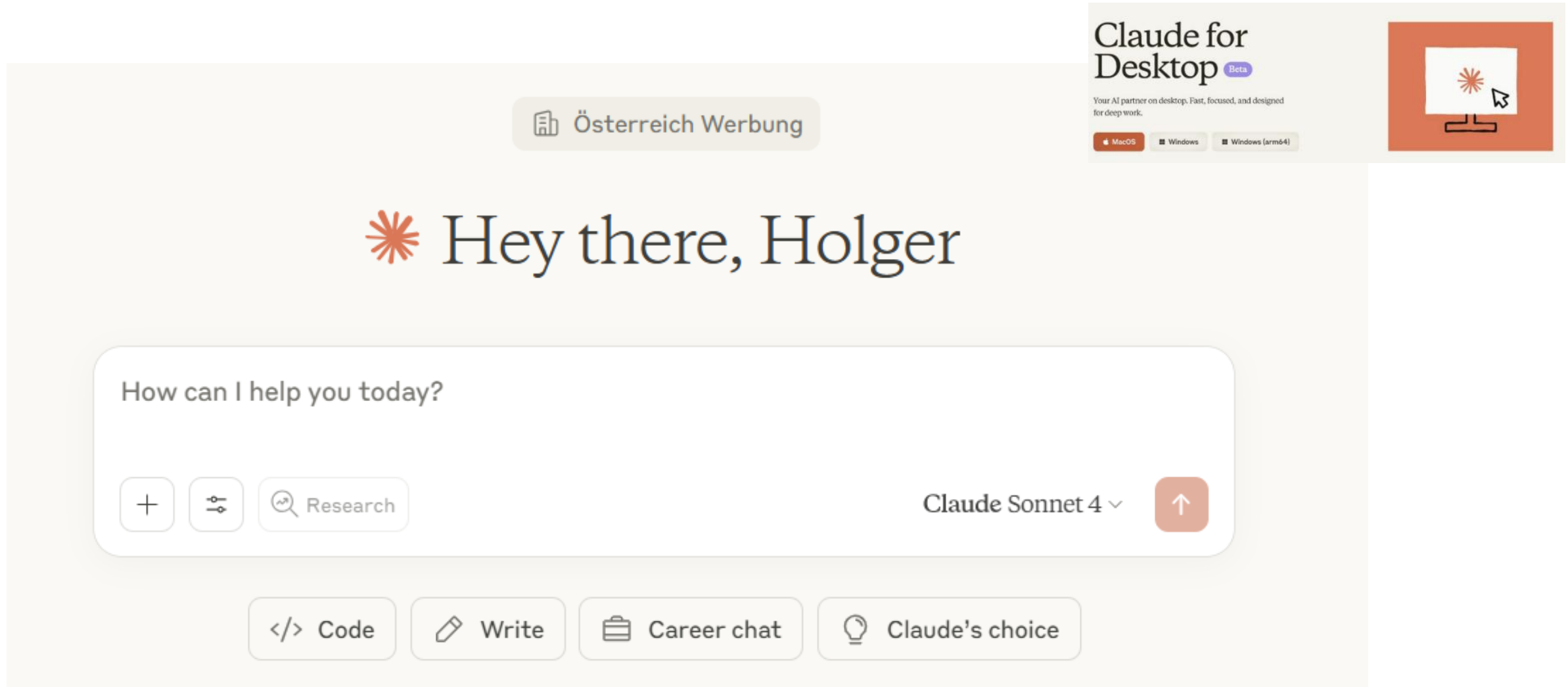
Connects AI applications to data and services

What is MCP?

You probably tried it already maybe without knowing

The image shows a screenshot of the ChatGPT web interface. On the left is a sidebar with navigation options: 'New chat', 'Search chats' (with a 'Ctrl + K' shortcut), 'Library', and a list of recent chats/projects including 'Codex', 'Sora', 'GPTs', 'Österreich Werbung Resear...', 'Data Analyst', 'Azure Synapse Assistant', 'New project', and 'DNA Innovationstool'. The main chat area is titled 'ChatGPT 5' and contains the prompt 'What can I help with?'. Below the prompt is a search bar for 'connected sources' with a '+ Connectors' button and an 'Add sources' dropdown. A blue arrow points from the 'Connectors' button in the search bar to the 'Connectors' section in the right-hand sidebar. This sidebar also contains links for 'General', 'Notifications', 'Personalization', 'Schedules', 'Data controls', 'Security', and 'Account'. The 'Connectors' section is active and displays a grid of 12 app tiles: Box, Canva, Dropbox, GitHub, Gmail, Google Calendar, Google Drive, HubSpot, Linear, Notion, Outlook Calendar, Outlook Email, SharePoint, and Teams. A 'Create' button is located at the top right of the connectors list.

What have I been doing?



Started Simple: accessing local files

1. Installing Node.js on computer as it is needed for most MCP Servers => nodejs.org (JavaScript Environment)

2. Under Settings => Under Developer => Edit Config

The image shows the Claude Desktop application interface. On the left, the 'Settings' sidebar is open, with 'Developer' selected. An arrow points from 'Developer' to the 'Edit Config' button in the 'Local MCP servers' panel. Below this, a file explorer shows a list of files. An arrow points from the 'claude_desktop_config' file in the explorer to the code editor on the left.

Settings

- Profile
- Account
- Members
- Features
- Connectors
- Claude Code
- Desktop app
- General
- Extensions
- Developer**

Local MCP servers
Add and manage MCP servers that you're working on.

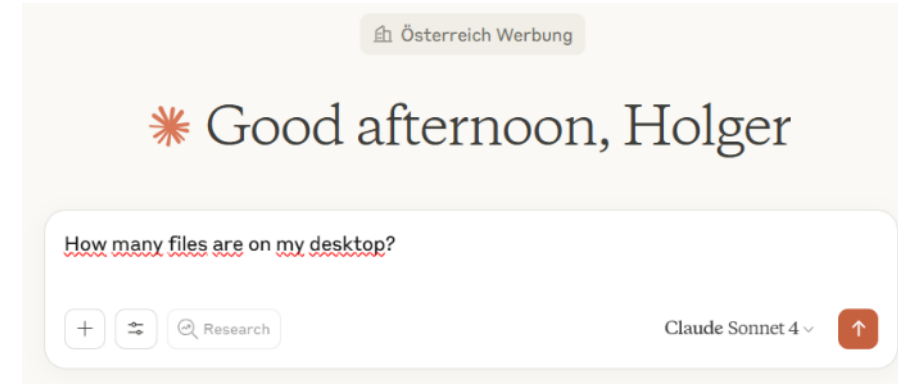
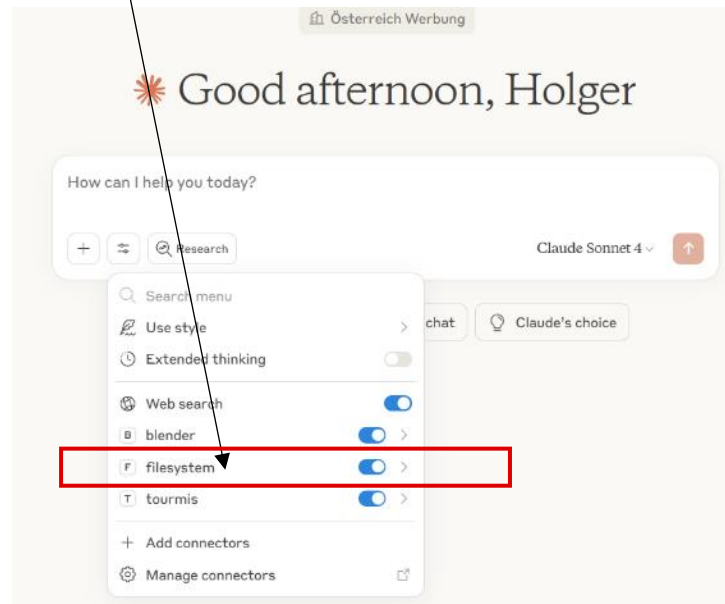
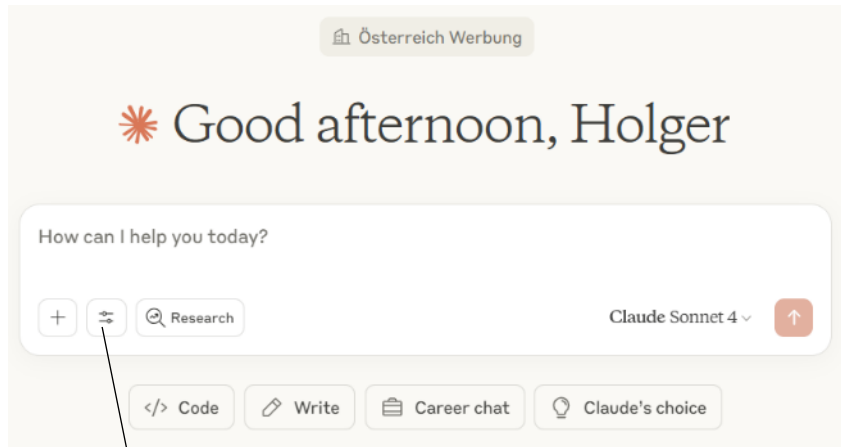
Edit Config

File Name	Modified	Type	Size
Shared Dictionary	27.05.2025 22:24	Dateiordner	
WebStorage	27.05.2025 22:24	Dateiordner	
claude_desktop_config	12.06.2025 17:49	JSON-Datei	1 KB
config	02.09.2025 12:40	JSON-Datei	2 KB
DIPS	26.08.2025 07:16	Datei	36 KB
DIPS.chm	02.09.2025 07:46	Datei	32 KB

```
*claude_desktop_config - Editor
Datei Bearbeiten Format Ansicht Hilfe

{
  "mcpServers": {
    "filesystem": {
      "command": "npx",
      "args": [
        "-y",
        "@modelcontextprotocol/server-filesystem",
        "C:/Users/holger.sicking/Desktop",
        "C:\\Users\\holger.sicking\\Documents\\Zwischenspeicher"
      ]
    }
  }
}
```

Started Simple: accessing local files



I'll help you check how many files are on your desktop. Let me start by seeing what directories I have access to, then look at your desktop.

List allowed directories

Now let me check what's on your desktop:

List directory

You have **35 files** and **4 directories** on your desktop, for a total of **39 items**.

The files include various PowerPoint presentations, Excel spreadsheets, PDFs, application shortcuts, and data files related to Austrian tourism, analytics, and other work materials.

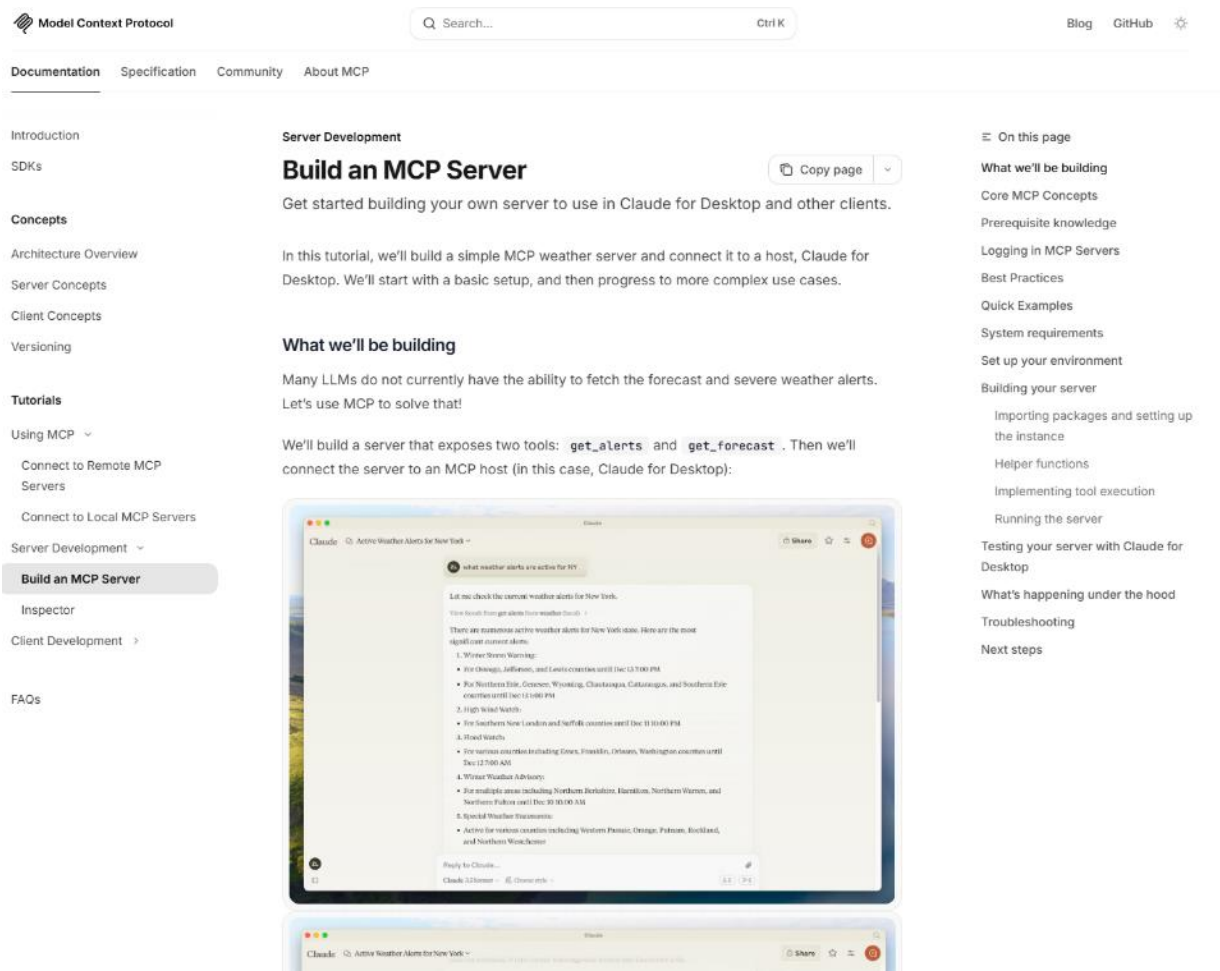


Retry

Claude can make mistakes. Please double-check responses.

And now: TourMIS – Build your own MCP Server

Anthropic has a good documentation, you could also just ask Claude:




HS Kannst du mir helfen einen MCP Server aufzusetzen?

Gerne helfe ich dir beim Aufsetzen eines MCP (Model Context Protocol) Servers!

MCP ist ein Protokoll, das es ermöglicht, Claude und andere KI-Assistenten mit externen Datenquellen und Tools zu verbinden. Hier ist eine Schritt-für-Schritt-Anleitung:

Grundlegende Schritte

- 1. Entwicklungsumgebung vorbereiten** Du benötigst Node.js (Version 18 oder höher) und npm/yarn installiert.
- 2. MCP Server erstellen**

```
bash
mkdir mein-mcp-server
cd mein-mcp-server
npm init -y
npm install @modelcontextprotocol/sdk
```

- 3. Grundgerüst des Servers** Erstelle eine `server.js` Datei:

```
javascript
import { Server } from '@modelcontextprotocol/sdk/server/index.js';
import { StdioServerTransport } from '@modelcontextprotocol/sdk/server/stdio.js';

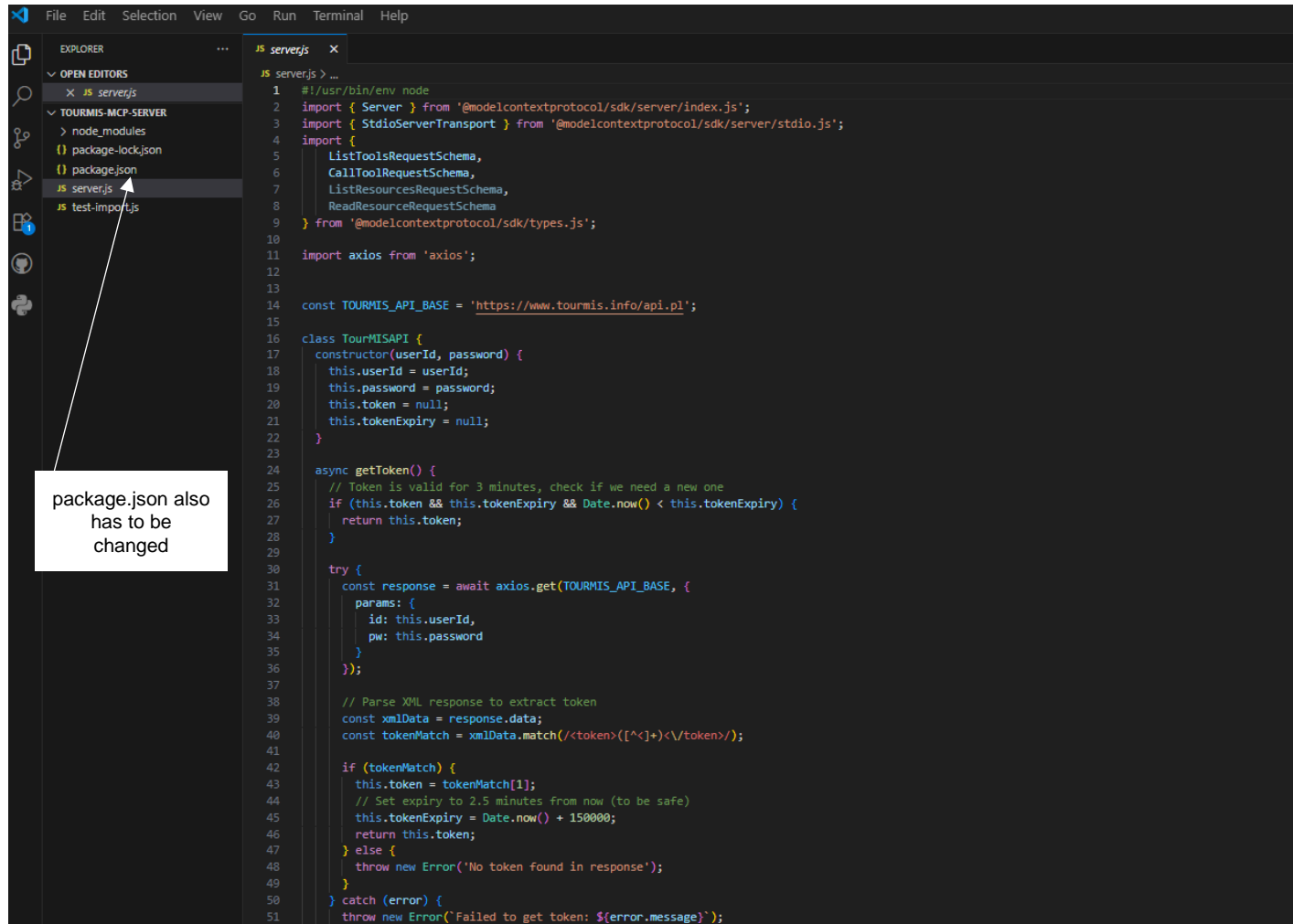
const server = new Server({
  name: 'mein-mcp-server',
  version: '1.0.0',
}, {
  capabilities: {
    resources: {},
    tools: {},
  },
});

// Hier würdest du deine Tools und Ressourcen definieren

const transport = new StdioServerTransport();
await server.connect(transport);
```

TourMIS – Building my own MCP Server

Programming a server.js Code:



```

1  #!/usr/bin/env node
2  import { Server } from '@modelcontextprotocol/sdk/server/index.js';
3  import { StdioServerTransport } from '@modelcontextprotocol/sdk/server/stdio.js';
4  import {
5    ListToolsRequestSchema,
6    CallToolRequestSchema,
7    ListResourcesRequestSchema,
8    ReadResourceRequestSchema
9  } from '@modelcontextprotocol/sdk/types.js';
10
11 import axios from 'axios';
12
13
14 const TOURMIS_API_BASE = 'https://www.tourmis.info/api.pl';
15
16 class TourMISAPI {
17   constructor(userId, password) {
18     this.userId = userId;
19     this.password = password;
20     this.token = null;
21     this.tokenExpiry = null;
22   }
23
24   async getToken() {
25     // Token is valid for 3 minutes, check if we need a new one
26     if (this.token && this.tokenExpiry && Date.now() < this.tokenExpiry) {
27       return this.token;
28     }
29
30     try {
31       const response = await axios.get(TOURMIS_API_BASE, {
32         params: {
33           id: this.userId,
34           pw: this.password
35         }
36       });
37
38       // Parse XML response to extract token
39       const xmlData = response.data;
40       const tokenMatch = xmlData.match(/<token>([^\<]+)<\</token>/);
41
42       if (tokenMatch) {
43         this.token = tokenMatch[1];
44         // Set expiry to 2.5 minutes from now (to be safe)
45         this.tokenExpiry = Date.now() + 150000;
46         return this.token;
47       } else {
48         throw new Error('No token found in response');
49       }
50     } catch (error) {
51       throw new Error(`Failed to get token: ${error.message}`);
52     }
53   }
54 }
55
56 const server = new Server({
57   name: 'TourMIS MCP Server',
58   version: '1.0.0'
59 }, {
60   transport: new StdioServerTransport()
61 });
62
63 const api = new TourMISAPI('user', 'password');
64
65 server.on('initialize', async () => {
66   // Initialize server logic
67 });
68
69 server.on('listTools', async () => {
70   // List available tools
71 });
72
73 server.on('callTool', async ({ name, arguments: args }) => {
74   // Implement tool logic
75 });
76
77 server.on('listResources', async () => {
78   // List available resources
79 });
80
81 server.on('readResource', async ({ uri }) => {
82   // Implement resource logic
83 });
84
85 (async () => {
86   const transport = new StdioServerTransport();
87   await server.connect(transport);
88   console.log('MCP Server is running');
89 })();

```

TourMIS API Integration

- Handles authentication with TourMIS using user credentials
- Manages API tokens (which expire every 3 minutes) with automatic renewal
- Makes HTTP requests to retrieve tourism data in XML format

MCP Server Implementation

- Exposes four main tools that can be called by MCP clients:
 - set_credentials
 - get_tourism_data
 - get_labels
 - get_multiple_destinations

Data Query Capabilities

- Retrieve tourism statistics by destination (cities/regions)
- Filter by content type (bed nights, arrivals, etc.)
- Specify market/country of origin for tourists
- Choose time periods (annual, monthly, seasonal)
- Support multiple years and year ranges

Connect it to Claude

The image illustrates the steps to connect a local MCP server to Claude Desktop. It shows the 'Settings' menu with the 'Developer' tab selected, leading to the 'Local MCP servers' section. An arrow points to the 'Edit Config' button. Another arrow points to the 'claude_desktop_config' file in the file explorer. A third arrow points to the 'tourmis' server configuration in the code editor.

Settings

- Profile
- Account
- Members
- Features
- Connectors
- Claude Code
- Desktop app
- General
- Extensions
- Developer**

Local MCP servers
Add and manage MCP servers that you're working on.

Edit Config

File Name	Created	Type	Size
Shared Dictionary	27.05.2025 22:24	Dateiordner	
WebStorage	27.05.2025 22:24	Dateiordner	
claude_desktop_config	12.06.2025 17:49	JSON-Datei	1 KB
config	02.09.2025 12:40	JSON-Datei	2 KB
DIPS	26.08.2025 07:16	Datei	36 KB
DIPS_schem	02.09.2025 07:46	Datei	32 KB

```

*claude_desktop_config - Editor
Datei Bearbeiten Format Ansicht Hilfe
{
  "mcpServers": {
    "tourmis": {
      "command": "node",
      "args": ["C:/Users/holger.sicking/Documents/Python/MCPs/MCP_Tourmis/tourmis-mcp-server/server.js"]
    }
  }
}
  
```

Done

☀ Good afternoon, Holger

What is the total number of overnights and arrivals in Austria in the calendar year 2024?

+ ↕ Research

Claude Sonnet 4



HS What is the total number of overnights and arrivals in Austria in the calendar year 2024?

I'll help you get the tourism data for Austria in 2024. Let me query the TourMIS database to find the total number of overnights (bednights) and arrivals.

T Get tourism data

I need to set up the TourMIS credentials first to access the tourism data. However, I don't have access to the login credentials for the TourMIS database.

To get the total number of overnights and arrivals in Austria for 2024, you would need to:

1. Provide TourMIS login credentials (user ID and password)
2. Then I can query the database for:
 - **NG** (bednights/overnights in hotels)
 - **AG** (arrivals in hotels)
 - For destination **AT** (Austria)
 - For year **2024**

If you have TourMIS access credentials, please share them and I'll retrieve the data for you. Alternatively, if you're looking for this information from other sources, I'd recommend checking Austria's official tourism statistics from Statistics Austria (Statistik Austria) or the Austrian National Tourist Office.



📄 👍 💬 Retry

Claude can make mistakes. Please double-check responses.

Thank you! Let me set up the TourMIS credentials and then retrieve the tourism data for Austria in 2024.

T Set credentials

Now let me query the data for overnights (bednights) in Austria for 2024:

T Get tourism data

Now let me get the arrivals data for Austria in 2024:

T Get tourism data

I notice the responses show "values:13" but don't contain the actual data values in the XML. Let me try requesting the data with labels included to get more detailed information:

T Get tourism data

The response is showing labels but not the actual data values. Let me check what labels are available and try a different approach to get the actual numerical data:

T Get labels

I notice that only Vienna (VIE) appears in the destination list from the labels query, but when I queried Austria (AT) earlier, it seemed to accept it. Let me try specifying a market parameter to get total figures for Austria. I'll use "ZZ" which represents "Total foreign and domestic":

T Get tourism data

Excellent! Now let me get the arrivals data with the same parameters:

T Get tourism data

Perfect! Here are the total tourism figures for Austria in calendar year 2024:



Austria Tourism Statistics 2024

Total Overnights (Bednights): 92,004,899

- This represents stays in hotels and similar establishments

Total Arrivals: 32,960,729

- This represents guest arrivals at hotels and similar establishments

These figures include both domestic and international tourists (market code "ZZ" = Total foreign and domestic). The data shows Austria had a very strong tourism year in 2024, with nearly 92 million overnight stays and almost 33 million arrivals.

The monthly breakdown shows typical seasonal patterns, with peak tourism months being July and August for both overnights and arrivals, and lower activity in the winter months (November through April).



Make a table with the development of overnights from Germany at hotels and similar establishments in Tyrol in summer season (May to October) from summer 2019 to summer 2024. Compare it to Salzburg.

+ 🔗 🔍 Research

Claude Sonnet 4 ⬆

I'll help you create a table comparing overnight stays from Germany at hotels and similar establishments in Tyrol vs Salzburg for the summer seasons (May-October) from 2019 to 2024. Let me gather this tourism data for you.

First, I need to set up access to the TourMIS database and then retrieve the data for both regions.

T Get labels

Now let me get the overnight data for Germany (DE) in Tyrol (TI) and Salzburg (SA) for the summer seasons from 2019-2024. I'll need to retrieve the data for the May-October period for each year.

T Get tourism data
T Get tourism data

Now let me calculate the summer season totals (May-October) for both regions and create the comparison table:

📄 Analyzed data View analysis

German Overnight Stays: Tyrol vs Salzburg Summer Seasons 2019-2024
Document

I've created a comprehensive comparison table showing the development of overnight stays from Germany at hotels and similar establishments in Tyrol versus Salzburg for the summer seasons (May-October) from 2019 to 2024.

Key findings:

- 1. **Tyrol dominates:** Consistently attracts about twice as many German overnight stays as Salzburg, with an advantage ranging from 2.3 to 3.9 million additional stays.
- 2. **COVID-19 impact:** Both regions were heavily affected in 2020, with Tyrol experiencing a sharper decline (-30.6%) compared to Salzburg (-22.6%).
- 3. **Strong recovery:** 2021 saw remarkable rebounds for both regions, with Tyrol showing particularly strong growth (+45.3%).
- 4. **Peak performance:** Both regions reached their peak in 2022, followed by slight declines in 2023 and 2024.

German Overnight Stays in Hotels and Similar Establishments

Summer Season Comparison: Tyrol vs Salzburg (May - October)

Year	Tyrol	YoY Growth	Salzburg	YoY Growth	Tyrol Advantage
2019	7,187,022	-	3,463,191	-	+3,723,831
2020	4,987,185	-30.6%	2,679,876	-22.6%	+2,307,309
2021	7,247,268	+45.3%	3,454,581	+28.9%	+3,792,687
2022	7,596,033	+4.8%	3,662,636	+6.0%	+3,933,397
2023	7,253,725	-4.5%	3,638,604	-0.7%	+3,615,121
2024	7,237,138	-0.2%	3,562,747	-2.1%	+3,674,391

Key Insights

Volume Comparison:

- Tyrol consistently attracts approximately **twice as many German overnight stays** as Salzburg during summer seasons
- Tyrol's advantage ranges from 2.3 million (2020) to 3.9 million (2022) additional overnight stays

COVID-19 Impact (2020):

- Both regions experienced significant declines: Tyrol (-30.6%), Salzburg (-22.6%)
- Salzburg showed more resilience during the pandemic year

Recovery Pattern (2021-2022):

- Both regions showed strong recovery in 2021, with Tyrol bouncing back more dramatically (+45.3% vs +28.9%)
- 2022 showed continued growth for both regions

Recent Trends (2023-2024):

- Both regions have experienced slight declines in recent years
- Tyrol: -4.5% (2023), -0.2% (2024)
- Salzburg: -0.7% (2023), -2.1% (2024)

Peak Performance:

- **Tyrol:** Peak in 2022 with 7.6 million overnight stays
- **Salzburg:** Peak in 2022 with 3.7 million overnight stays

Source: TourMIS Database - Overnight stays from Germany in hotels and similar establishments during summer season (May-October)

1000 0.0%

Austria - Nights and arrivals - Seasonal data		
SA-S4: 1 destination and 1 market		
Content: Bednights		
Accommodation: Hotels and similar establishments		
Destination: Tyrol		
Market/origin: Germany		
Period: Summer 2019 - 2024		
Period	Bednights	
	absolute	% p.y.
Summer 2019	7.187.022	2,6
Summer 2020	4.987.185	-30,6
Summer 2021	7.247.268	45,3
Summer 2022	7.596.033	4,8
Summer 2023	7.253.725	-4,5
Summer 2024	7.237.138	-0,2
Source: STATcube - Statistical database of STATISTIK AUSTRIA		
Table: SA-S4 (tab_sa4b)		
Generated 2025-09-02 11:49:02		
(c) MU Vienna (www.mu-wien.at)		

CHECK

Now visit the austriatourism.com Website and take a look at the colour scheme. Than build an interactive dashboard with this colour scheme with the data of Tyrol and Salzburg.


+ ⚙️ 🔍 Research

Claude Sonnet 4 ▾



HS Now visit the austriatourism.com Website and take a look at the colour scheme. Than build an interactive dashboard with this colour scheme with the data of Tyrol and Salzburg.

I'll first visit the Austria Tourism website to examine their color scheme, then create an interactive dashboard using those colors with the Tyrol and Salzburg data.

 Failed to fetch https://www.austriatourism.com 

Let me search for the Austria Tourism website first to get the correct URL:

 austria tourism official website


10 results ▾

Now let me fetch the official Austria tourism website:

 Fetched Holidays in Austria: Tips and Information

austria.info 

Let me get more detailed information about the Austria tourism website's design and colors by examining the full page:

 Analyzed data

View analysis ▾

Now I'll create an interactive dashboard using the Austria Tourism color scheme with the Tyrol and Salzburg data:

Austria Tourism Dashboard - German Overnight Stays
Interactive artifact



```
dark: '#2c3e50', // Dark blue-gray
success: '#2ca02c', // Green
text: '#333333', // Dark gray text
lightGray: '#ecf0f1', // Very light gray
white: '#ffffff' // Pure white
};

// Data
const data = [
  { year: '2019', tyrol: 7187022, salzburg: 3463191, tyrolGrowth: 0, salzburgGrowth: 0 },
  { year: '2020', tyrol: 4987185, salzburg: 2679876, tyrolGrowth: -30.6, salzburgGrowth: -22.6 },
  { year: '2021', tyrol: 7247268, salzburg: 3454581, tyrolGrowth: 45.3, salzburgGrowth: 28.9 },
  { year: '2022', tyrol: 7596033, salzburg: 3662636, tyrolGrowth: 4.8, salzburgGrowth: 6.0 },
  { year: '2023', tyrol: 7253725, salzburg: 3638604, tyrolGrowth: -4.5, salzburgGrowth: -0.7 },
  { year: '2024', tyrol: 7237138, salzburg: 3562747, tyrolGrowth: -0.2, salzburgGrowth: -2.1 }
];

const monthlyData = {
  '2024': [
    { month: 'May', tyrol: 759408, salzburg: 388945 },
    { month: 'Jun', tyrol: 985870, salzburg: 476050 },
    { month: 'Jul', tyrol: 1459194, salzburg: 738692 },
    { month: 'Aug', tyrol: 1837365, salzburg: 953307 },
    { month: 'Sep', tyrol: 1273482, salzburg: 573482 },
    { month: 'Oct', tyrol: 921819, salzburg: 432271 }
  ],
  '2023': [
    { month: 'May', tyrol: 602749, salzburg: 314883 },
    { month: 'Jun', tyrol: 1161948, salzburg: 595010 },
    { month: 'Jul', tyrol: 1491107, salzburg: 765321 },
    { month: 'Aug', tyrol: 1809406, salzburg: 934048 },
    { month: 'Sep', tyrol: 1327542, salzburg: 615347 },
    { month: 'Oct', tyrol: 860973, salzburg: 413995 }
  ]
};

const formatNumber = (num) => {
  return num.toLocaleString('en-US');
};
```


Austria Tourism Analytics

German Overnight Stays • Summer Season (May-October) • Hotels & Similar Establishments

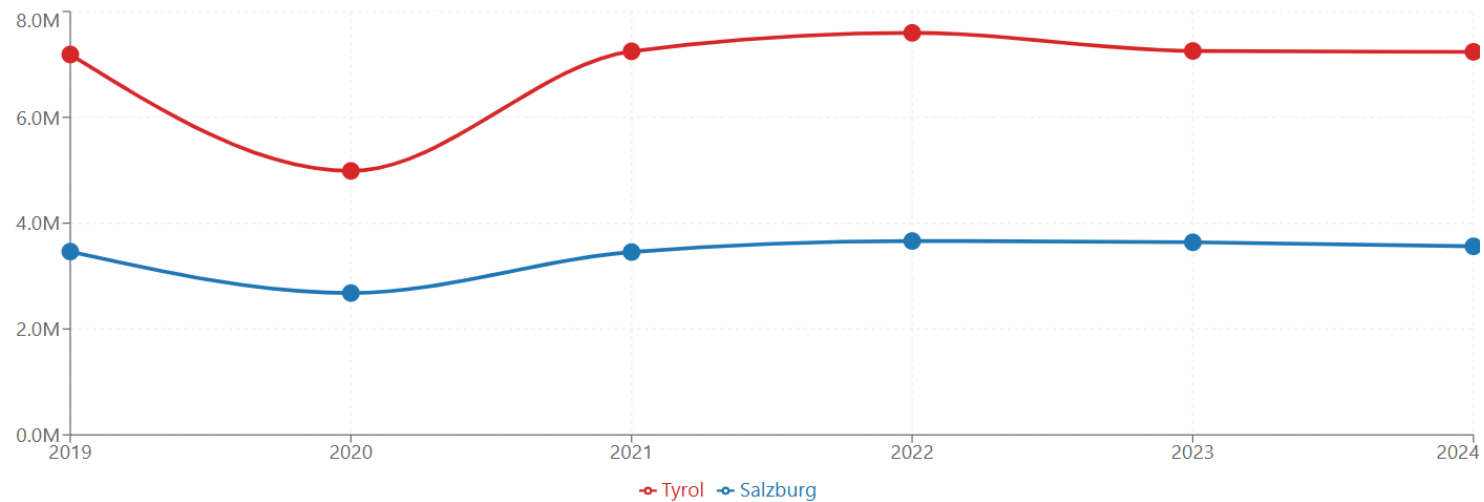
Overview

Trends

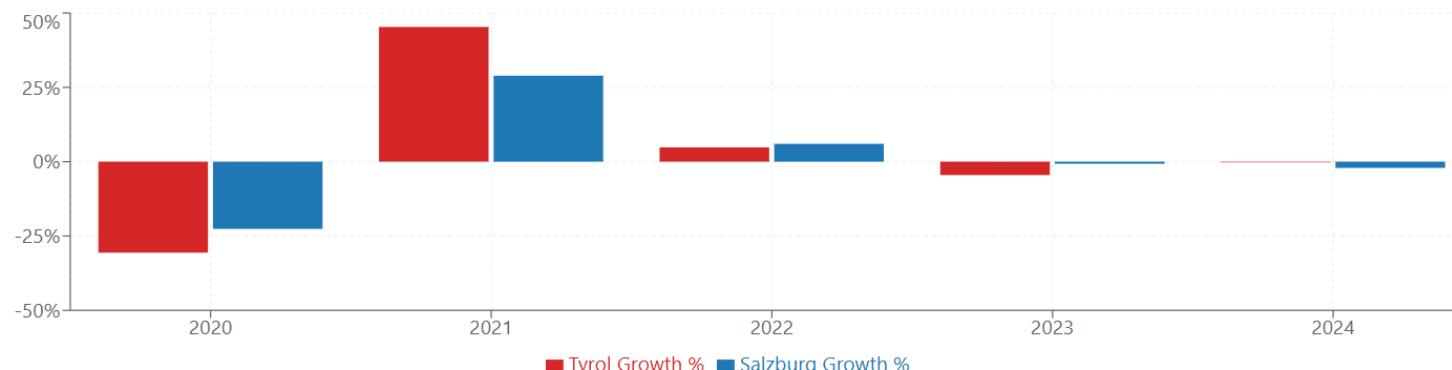
Monthly

Comparison

6-Year Overnight Stays Trend (2019-2024)



Year-over-Year Growth Rate



HS Give me a monthly time series of overnights in Berlin from foreign markets since January 2015. Make a SWOT Analysis based on the numbers and your knowledge.

HS Make the monthly data as a cool, futuristic line graph. The SWOT Analyse please visually appealing (only key points / phrases is sufficient).

Berlin Tourism Analytics

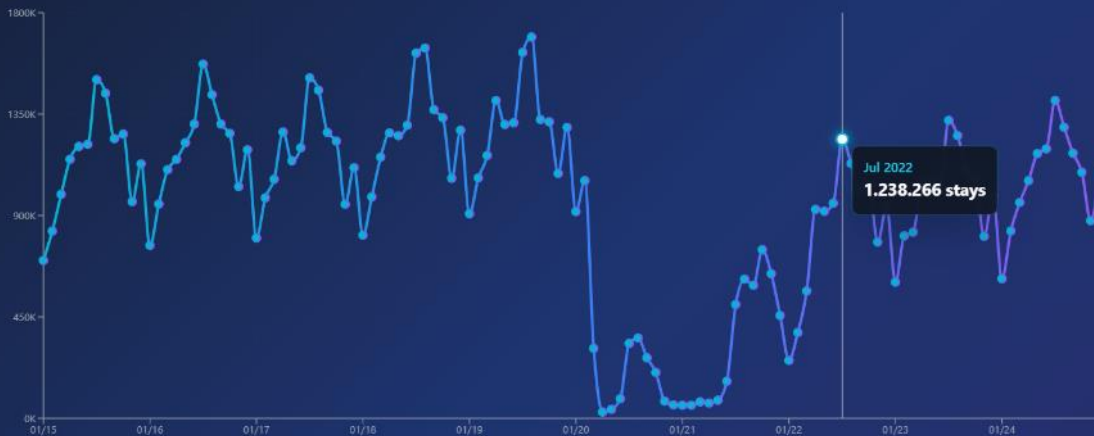
Foreign Overnight Stays Analysis 2015-2024

Time Series

SWOT Analysis

Monthly Foreign Overnight Stays

All forms of paid accommodation • Peak Aug 2019 (1.69M)



Peak Year
2019
15.5M stays

COVID Impact
-75.9%
2020 decline

Berlin Tourism Analytics

Foreign Overnight Stays Analysis 2015-2024

Time Series

SWOT Analysis

Strengths

Cultural Powerhouse

Vibrant Nightlife

Rich History

Transport Hub

Cost Competitive

Year-round Appeal

Weaknesses

Slow Recovery (82.5%)

Summer Dependency

Winter Softness

Language Barriers

Competition from Munich

Stagnant Growth

Opportunities

2.7M Stay Gap

Pent-up Demand

MICE Tourism

Alternative Accommodation

Sustainability Focus

Digital Nomads

Threats

Geopolitical Risks

Eastern EU Tensions

Economic Uncertainty

Prague/Vienna Competition

Climate Change

Over-tourism Risks

To be continued ...

If you want to program yourself:

my code

<https://github.com/holgersicking/tourmis-mcpserver-anto>

Notice: You will need to be accepted for API-Usage (Login + PW) bei TourMIS