

MCP'fication of SAP

How the Model•Context Protocol is Transforming SAP

by Hendrik Neumann with Claude & Codex

Agenda

1. **What is MCP?** - Quick introduction
2. **SAP TechEd 2025** - The turning point
3. **MCP Server Ecosystem** - SAP official & community
4. **What's Possible Today** - Real-world use cases
5. **Outlook** - What's coming next



What is MCP?

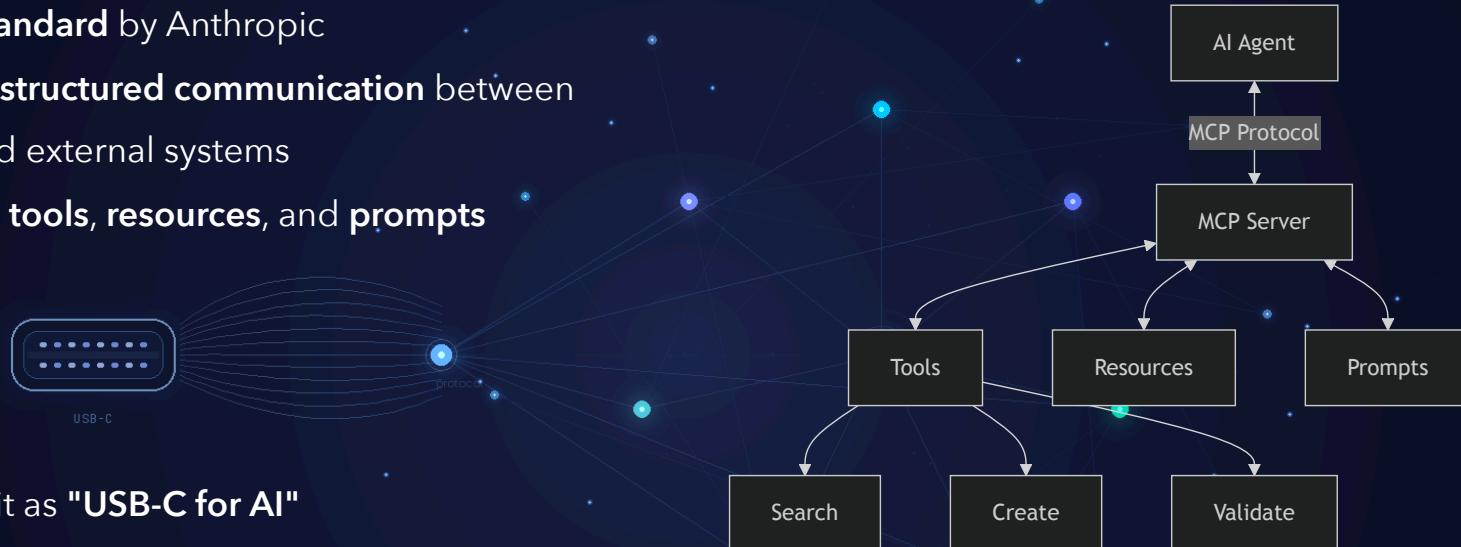
Model Context Protocol - The Universal AI Connector

Model Context Protocol (MCP)

- Open standard by Anthropic
- Enables **structured communication** between LLMs and external systems
- Provides **tools, resources, and prompts**



→ Think of it as "**USB-C for AI**"



SAP TechEd 2025

The MCP'fication of SAP started

SAP TechEd 2025 Announcements

SAP positioned MCP as the key standard for the "**Agentic Enterprise**"

- **Open-sourced MCP Servers** for CAP, UI5, Fiori, MDK
- **HANA Cloud MCP** Generally Available (Vector, Spatial, Knowledge Graph)
- **Integration Suite MCP Gateway** for centralized governance
- **Joule Studio** extensible with external MCP tools

"MCP is the new kid on the block" – SAP TechEd Keynote



Featured TechEd Sessions

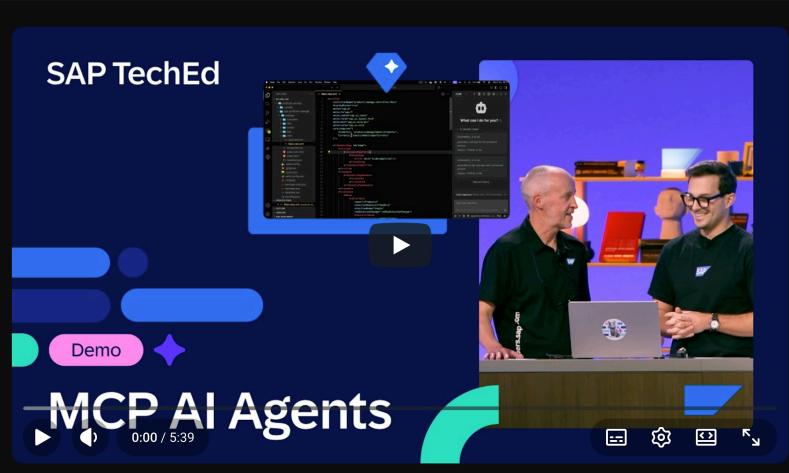
A selection from the session catalog

BTM260 Building AI Agents with SAP LeanIX & MCP

CA261 Create Great UX with AI, SAP Design System & MCP

Developer Keynote Live MCP AI Agents demo in VS Code

Agentic Coding Extending CAP and Fiori with MCP



MCP Server Ecosystem

SAP Official & Community Servers

SAP Official MCP Servers



CAP

@cap-js/mcp-server

CDS models & docs search



Fiori & UI5

@sap-ux/fiori-mcp-server

App generation & linting



MDK

@sap/mdk-mcp-server

Mobile app development



LeanIX

IT landscape & governance

Portfolio assessment



Datasphere

Spaces, assets & queries

Natural language SQL



HANA Cloud

Multi-model engine access

Vector, Spatial, Knowledge Graph

All open-source (Apache-2.0) · Also: **Automation Pilot** MCP for cloud ops

Example: CAP MCP Server

Transforms AI agents into **CAP development experts**

Tools:

- `search_model` - Fuzzy search across CDS models
- `search_docs` - Semantic search in CAP docs

Capabilities:

- Entity relationships
- Annotations & metadata
- HTTP endpoint info
- Handler implementation help

```
// AI can now understand your model
service CatalogService {
    entity Products {
        key ID : UUID;
        title : String;
        price : Decimal;
    }
    action order(quantity: Integer);
}
```

AI knows: entities, actions, relationships, best practices

Community Server Ecosystem

Documentation

- **mcp-sap-docs** - 50,000+ files
- Offline index + live Community API
- SAP Notes, Help Portal search

Development

- **mcp-abap-adt & vibing-steampunk** - ADT REST API bridges
- **ABAP FS** - 30+ language model tools
- **mcp-sap-gui** - GUI automation
- **Skybuffer** - ABAP Add-On (no middleware)

Data & Business

- **OData MCP Bridge** - BTP-hosted
- **SuccessFactors** - RBP audits & config
- **CData HANA** - Natural language SQL

Community heros - github user(name): [mariango](#) (Marian Zeis), [mario-andreschak](#) (Mario Andreschak), [serdarbeden](#) (Serdar Beden), [lemaiwo](#) (Wouter Lemaire), [marcellourbani](#) (Marcello Urbani), [oisee](#) (Alice V.), and many more...

SAP Docs MCP Server

Unified access to SAP documentation

Coverage:

- ABAP: 40,800+ files
- UI5: 12,000+ files
- CAP: 250+ files
- Cloud SDK: 500+ files
- Testing: 260+ files

Tools:

```
search      - Query all sources
fetch       - Get full documents
sap_community_search
sap_help_search
sap_help_get
```

```
{
  "mcpServers": {
    "sap-docs": {
      "url": "https://mcp-sap-docs.marianzeis.de/mcp"
    }
  }
}
```

ABAP MCP Servers

Bringing AI to on-premise ABAP development

Problem: Joule availability for on-premise ABAP not a given

Solution: Multiple community MCP servers bridging the gap

- **mcp-abap-adt** - ADT REST API: read source, analyze RAP objects, where-used analysis
- **ABAP FS** - VS Code extension with 30+ tools for unit testing, SQL, object management

Knowledge Sources:

- ABAP Keyword Documentation
- DSAG Development Guidelines
- ABAP Style Guide & Feature Matrix
- SAP Community & Help

Use case: Analyze classic ABAP and suggest modern **RAP** structures

OData MCP Bridge - Game Changer

"When 15,000+ services become AI-accessible overnight, MCP becomes the enterprise standard"

The Insight: OData already has machine-readable metadata

The Solution: BTP-hosted bridge with **3-level progressive discovery**

Scale:

- SAP Systems: ~10,000 services
- Microsoft Dynamics: ~1,500
- Salesforce: ~800
- Oracle Cloud: ~2,000

Impact: Natural language access to enterprise data

User: "Approve all POs under \$50k"
→ AI calls OData service → Done

What's Possible Today

Real-World Use Cases

Real-World Use Cases

"Vibe Coding"

- Generate full **CAP entities + Fiori List Reports** from a description
- Scaffold **MDK mobile apps** from a sketch
- AI understands your CDS model and generates matching handlers

Operations & Business

- **AI-Driven SRE:** Investigate ST22 dumps, trace call stacks, reference SAP Notes
- **Conversational ERP:** "Show me 10 banks" or "Update supplier status" via OData
- **Governance:** "List applications needing replacement by 2028" via LeanIX

ABAP Modernization: Analyze classic ABAP → suggest modern RAP business objects

Outlook

What's Coming Next

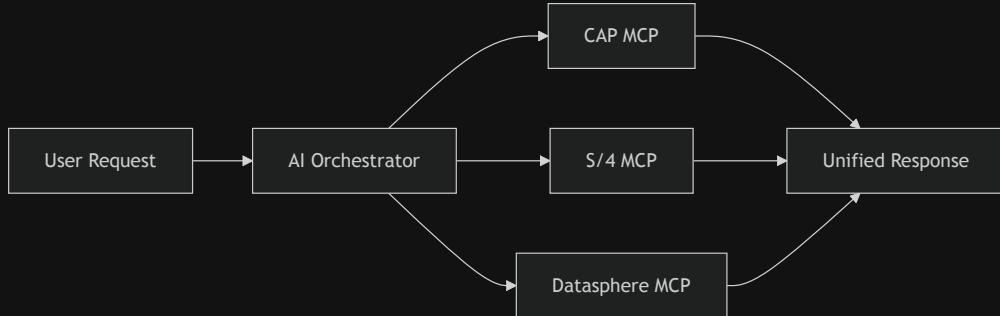
Roadmap 2026+

H1/H2 2026

- **Integration Suite** MCP Gateway GA - one-step MCP from existing APIs
- **ABAP Cloud in VS Code** (Q2) - file-based dev with native AI
- **Specialized Models:** SAP-ABAP-1, SAP-RPT-1 for specific use cases

The Horizon

- **A2A Protocol** - agent-to-agent collaboration (AWS, Microsoft, Google)
- **The "Post-App" Era** - central AI agent across the SAP landscape
- **Embodied AI** - Joule agents with autonomous devices & robotics



Challenges & Considerations

Technical

- Authentication complexity
- Large dataset handling
- Rate limiting & quotas
- Connection stability

Organizational

- Data governance
- Authorization mapping
- Audit requirements
- Change management



Best Practice: Start with read-only documentation access, then expand

Getting Started: Vibe coding

1. Install MCP Client

```
# Claude Desktop, Cline, or Cursor
```

2. Add SAP MCP Servers

```
{
  "mcpServers": {
    "cap": {
      "command": "npx",
      "args": ["@cap-js/mcp-server"]
    },
    "sap-docs": {
      "url": "https://mcp-sap-docs ... "
    }
  }
}
```

3. Start Developing

- Ask about CAP best practices
- Generate Fiori applications
- Search SAP documentation
- Validate UI5 code

Resources:

- github.com/cap-js/mcp-server
- github.com/SAP/open-ux-tools
- github.com/marianfoo/mcp-sap-docs

Key Resources

Category Resource

**SAP
Official**

github.com/cap-js/mcp-server

github.com/SAP/open-ux-tools

github.com/UI5/mcp-server

github.com/SAP/mdk-mcp-server

Protocol modelcontextprotocol.io

Category Resource

Community github.com/marianfoo/mcp-sap-docs

github.com/mario-andreschak/mcp-abap-adt

github.com/oisee/odata_mcp_go

github.com/oisee/vibing-steampunk

github.com/lemaiwo/btp-sap-odata-to-mcp-server

Thank You!

MCP'fication of SAP

Questions?

SAP TechEd 2025 marked the beginning of the Agentic Enterprise era.

MCP is the bridge between AI and SAP systems.