Microsoft integrates Model Context Protocol (MCP) into Windows 11, turning the operating system into an autonomous AI platform

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Microsoft has announced plans to integrate the Model Context Protocol (MCP) into Windows 11 as part of its efforts to develop the operating system into an autonomous OS. The Redmond company says MCP will serve as a foundational layer that provides "secure, interoperable autonomous computing."

MCP is a universal standard developed by the AI ??company Anthropic. The protocol is designed to connect AI models to external data sources. It solves a major problem that AI models often face: knowledge is limited to training data and cannot access real-time information on their own.

Specifically, MCP is a universal standard designed to connect AI models, especially large language models (LLMs), to external data sources and tools in a seamless, secure, and efficient manner. This protocol addresses the common problem of AI models having limited knowledge of training data and not being able to access real-time or personalized information on their own.

In MCP architecture:

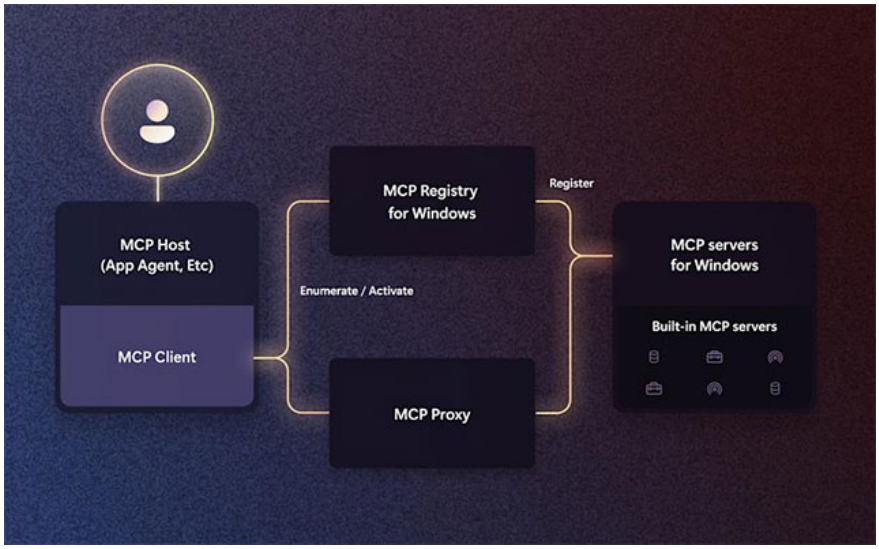
1. AI assistants act as MCP clients
2. Various data sources (such as email, calendar, cloud storage, source code repositories, or databases) act as MCP servers.
3. MCP standardizes the way clients and servers communicate, allowing AI models to receive real-time information in a standard way.

Microsoft emphasizes that MCP opens up many new possibilities, but also introduces security issues. Therefore, they built the MCP Security Architecture into Windows 11 protocols to ensure security.

Specifically on security measures:

1. Microsoft will ensure all MCP server developers meet a set of baseline security requirements to protect users

2. Microsoft will ensure users have full control over all security-sensitive operations performed on their behalf
3. The principle of least privilege will be applied by Microsoft to limit the impact of potential attacks on MCP servers.



Microsoft will provide an early preview of MCP server support after the Microsoft Build event, allowing developers access to provide feedback. The company says the preview may include security capabilities that are not enabled during the preview phase, but will be enabled before general release.

Additionally, developers who want to test it will need to enable developer mode on their devices to ensure that only authorized developers can use it. When the feature is officially released, Microsoft plans to implement a secure-by-default security mode to protect users.

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