



MetaMask Snaps

Plugins in Plugins

Getting Started →

Author: Mark Tang

What is MetaMask Snaps?

Snaps is a system that allows anyone to safely extend the capabilities of MetaMask.(Plugins In Plugins)

-  **Extensibility** - It will give MetaMask more possibilities
-  **Safety** - EIP-2255 wallet permissions specification and a “fully virtualizable” execution environment
-  **Custom UI** - Display a custom confirmation screen in MetaMask
-  **Notice** - Notify users in MetaMask
-  **Store** - Store and manage data on users' device
-  **Assets** - Control non-EVM accounts and assets in MetaMask
-  **Insights** - Populate MetaMask’s pre-transaction window with custom transaction insights
-  **Cron** - Schedule actions with cron jobs

Extend the functionality of MetaMask

A snap is a program that we run in an isolated environment that can customize the wallet experience.

For example, a snap can add new APIs to MetaMask, add support for different blockchain protocols, or modify existing functionality using internal APIs. Snaps is a new way to create web3 end user experiences, by modifying MetaMask in ways that were impossible before.

Focus

- add new APIs to MetaMask
- add support for different blockchain protocols
- modify existing functionality

Execution environment

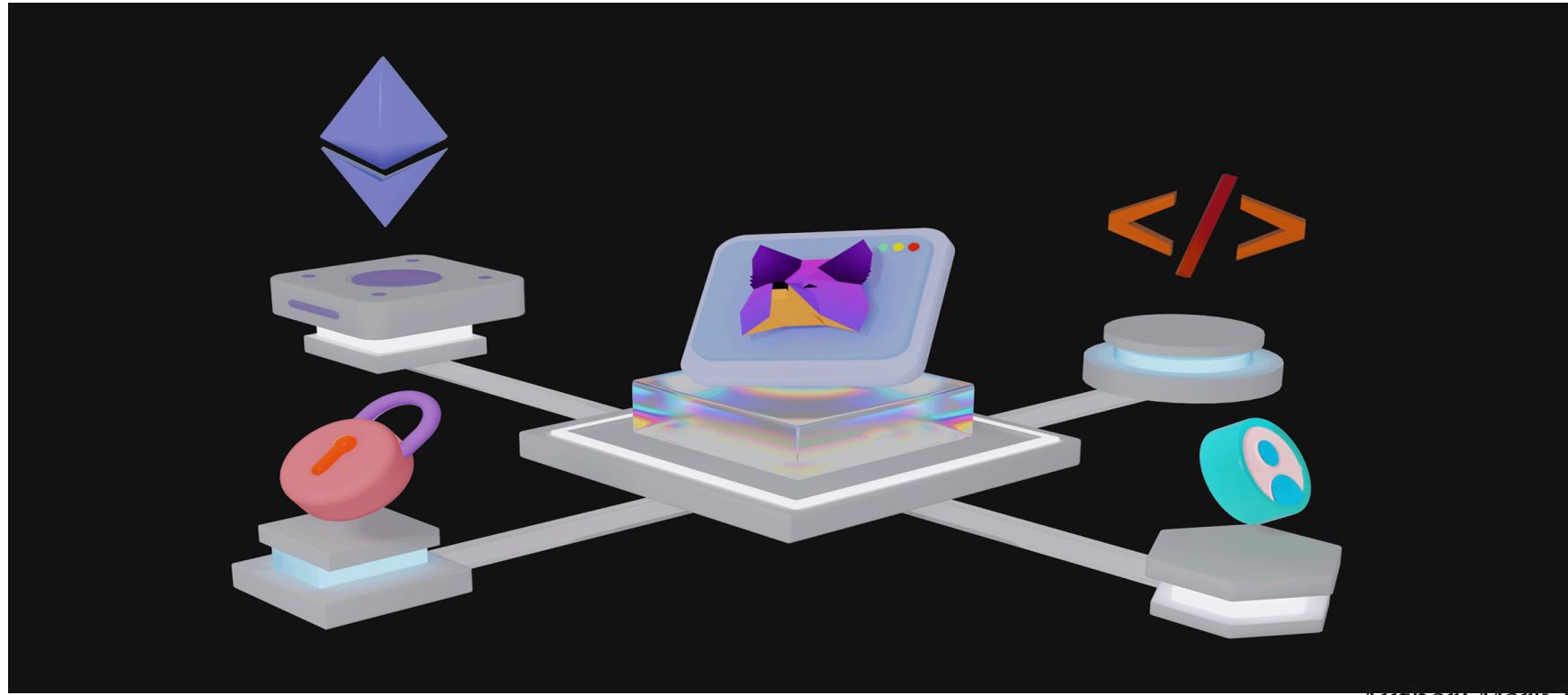
Snaps are untrusted JavaScript programs that execute safely inside the MetaMask application. To isolate snaps from the rest of the application and to provide a "Fully virtualizable" execution environment, MetaMask uses Secure ECMAScript(SES), a subset of JavaScript developed by Agoric.

Note

- Agoric is a JavaScript Smart Contracts Platform built on Cosmos.
- At the moment, snaps must be distributed as npm packages on the official npm registry, but different distribution mechanisms will be supported in the future.

MetaMask Flask

Download URL: <https://metamask.io/flask/>



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Detecting Version

When developing a website/Dapp that depends on Snaps, it's important to know whether MetaMask Flask is installed.

```
import detectEthereumProvider from '@metamask/detect-provider';

// This resolves to the value of window.ethereum or null
const provider = await detectEthereumProvider();

// web3_clientVersion returns the installed MetaMask version as a string
const isFlask = (
  await provider?.request({ method: 'web3_clientVersion' })
)??.includes('flask');

if (provider && isFlask) {
  console.log('MetaMask Flask successfully detected!');

  // Now you can use Snaps!
} else {
  console.error('Please install MetaMask Flask!', error);
}
```



The way to install snap

Install a snap to MetaMask.

```
/**  
 * @param snapId - The ID of the snap.  
 * @param params - The params to pass with the snap to con  
 */  
export const installSnap = async (  
  snapId: string = defaultSnapOrigin,  
  params: Record<'version' | string, unknown> = {},  
) => {  
  await window.ethereum.request({  
    method: 'wallet_requestSnaps',  
    params: {  
      [snapId]: params,  
    },  
  });  
};
```



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Examples

Here are some examples, including an official example, an example written by me, and a third-party example.

- The official example
- Solana Snap (the example written by me)
- The third-party example (the example written by UniPass Wallet)

Note: UniPass Wallet is a smart contract wallet solution that supports on-chain Email social recovery.

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Twitter

Some news about MetaMask Snaps.



brucexu.eth ❤️ 🙌 🎧

@brucexu_eth

I checked out MetaMask Snaps and tried the demo with Flask. It's going to revolutionize MetaMask and elevate it beyond just a wallet. MetaMask's path is similar to WeChat's, evolving from a chat app to a comprehensive platform for daily life. Exciting to see what gonna happen!



Montoya @MidwitMilhouse · Feb 21

It's our wallet, let's build it together

Mar 01, 2023 09:00 - 09:20 MST

REGISTER TO SCHEDULE

More Information

...



Rami8612 Ⓜ️ @rami8612 · Feb 20

Launching in Q1 2023

@PureFi_Protocol a Developed in collaboration with the 🦊 #MetaMask team!! our @MetaMask Snap Plugin.

Will allow users to enjoy the benefits of PureFi's transaction monitoring system right from the comfort of their MetaMask wallet 🦊

#AML Risk Score

\$UFI



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MetaMask for Developers ✅

@MetaMaskDev

...

Hey builders!!!

🔊 It's that time of year - **#ETHDenver** is mere days away and we can't wait to get **#BUIDLing** with you.

The long-awaited bounty details from **@MetaMask** Snaps are here 🦊



Author: Mark Tang

ETH Denver 2023



MetaMask for Developers ⚡ @MetaMaskDev · Feb 21

...

Replies to [@MetaMaskDev](#)

👉 We are awarding a total of \$20K in bounties to bring your features and APIs to [@MetaMask](#) with Snaps.

We are looking for new and interesting use cases to modify MetaMask using Snaps 👉

ETH Denver 2023



Ziad Saab
@ziadmtl

...

At the #ETHDenver #BUIDLHub with @MetaMaskDev to help with your MetaMask 🦊 Snaps questions ❤️🔥

📸 @akeleher



Author: Mark Tang

ETH Denver 2023



Eric Bishard for MetaMask

Posted on Feb 25 • Updated on Feb 28



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✨ETH Denver 2023 Snaps Developer Guide✨

#webdev #web3 #ethereum

As you work on our bounties, we have prepared the following resources; you can also contact our Snaps team with the links below. 😊



[Ziad Saab - Snaps DevRel](#)



[Eric Bishard - MetaMask DevRel](#)



[Christian Montoya - Snaps Product](#)



[Francesco - MetaMask DevRel & Ambassador Director](#)

*As well you can join our MetaMask [Snaps Developer Discord](#)

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Thanks

Mark Tang's · [GitHub](#) · [Email](#)