Reverse Android malware like a Jedi

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Who am I?

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ph0wn

Advanced tools for Android reverse engineering

Dexcalibur - 2019

https://github.com/FrenchYeti/dexcalibur

House

House - 2018

https://github.com/nccgroup/house

MobSF - 2015

https://github.com/MobSF/Mobile-Security-Framework-MobSF

QUARK

Quark - 2019

https://github.com/quark-engine/quark-engine

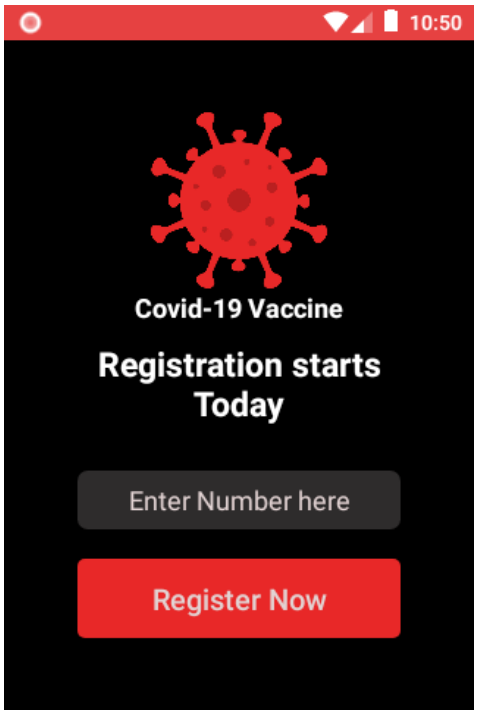
You need this for Dynamic Analysis

Emulator

FRIDA

Frida server `https://github.com/frida/frida/releases/`

and client!



Sample of Android/Oji.G!worm

Malware (APK)

From user point of view...

	Dexcalibur	House	MobSF	Quark
Setup	★	★★	★★★	★★★
Use	★★★	★	★☆	★★☆

personal opinion - all tools are actually awesome!

Which tool? (preferred choices only)

- Unpacking
- Network monitoring
- De-obfuscate
- File or shared prefs monitoring
- General API monitoring
- Bypass debugger / rooting detection
- Specific hook
- Static analysis

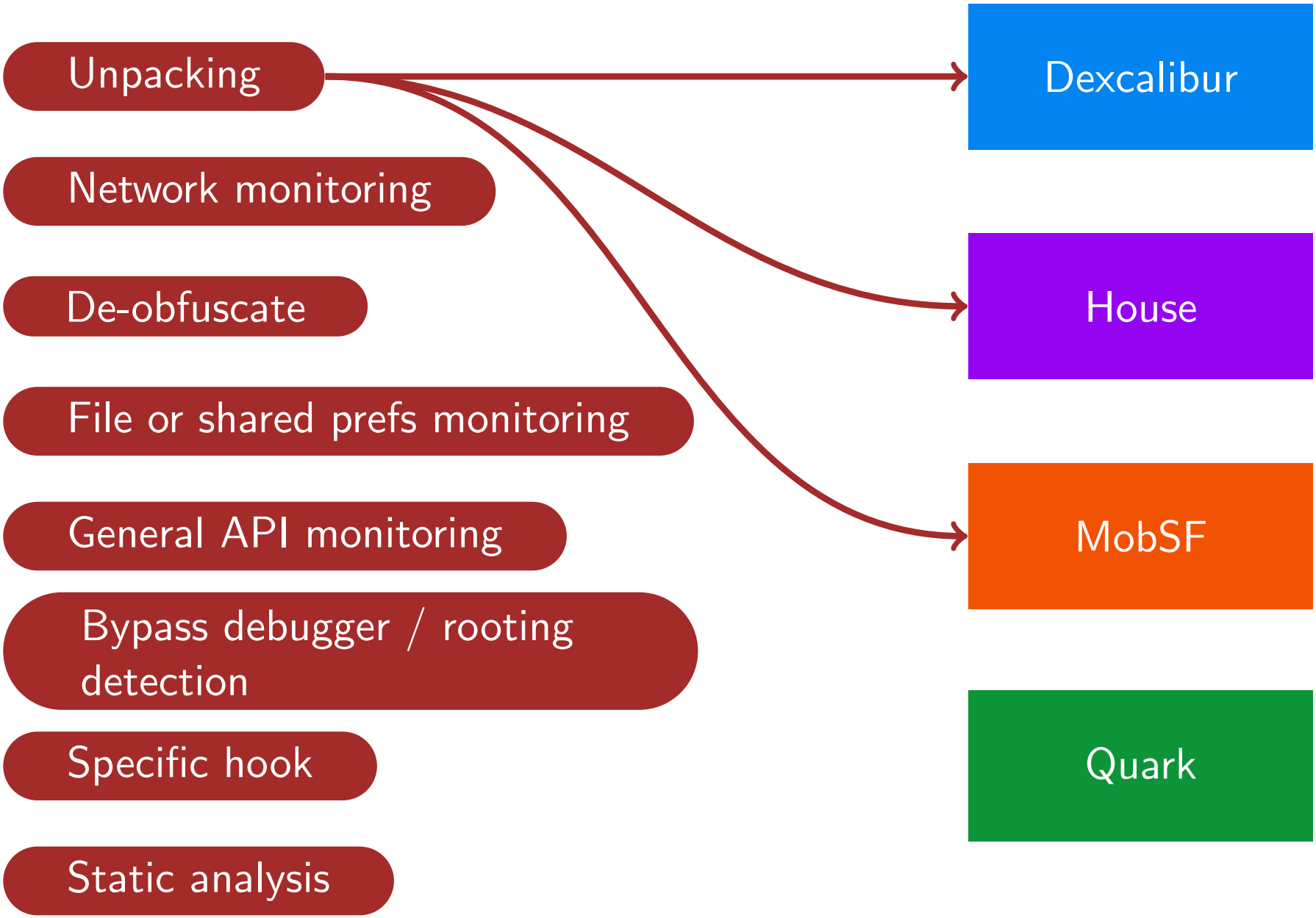
Dexcalibur

House

MobSF

Quark

Which tool? (preferred choices only)



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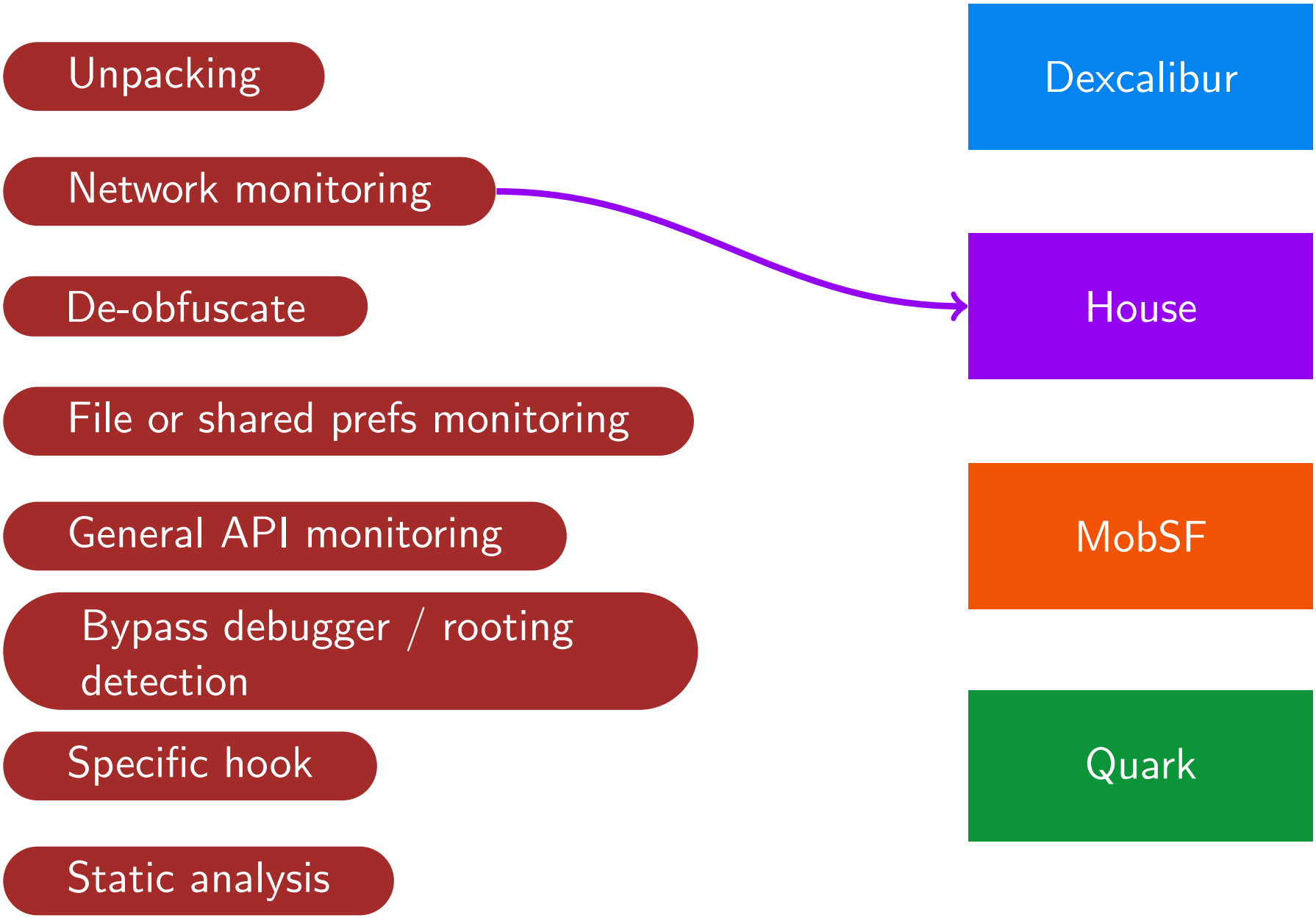

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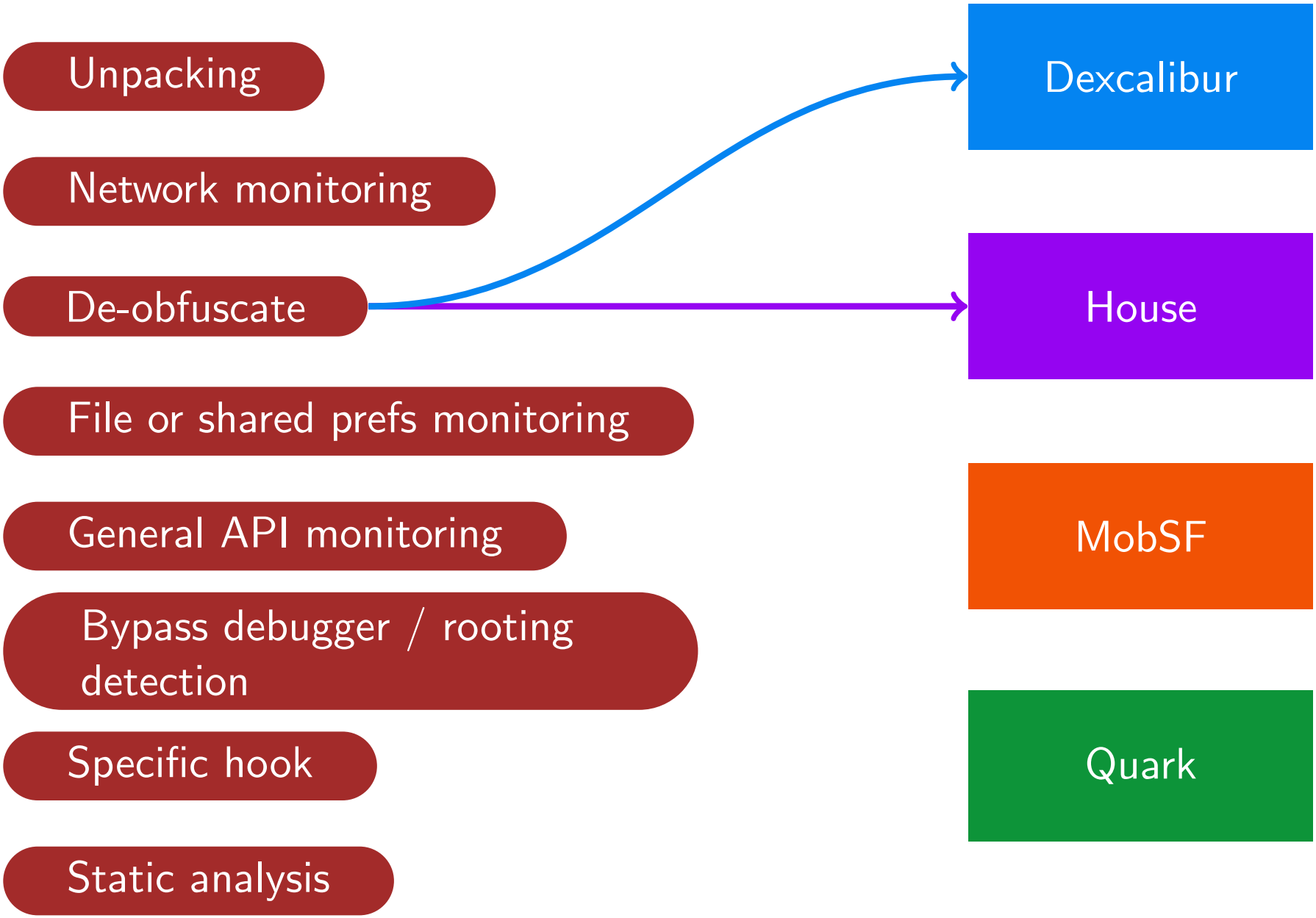

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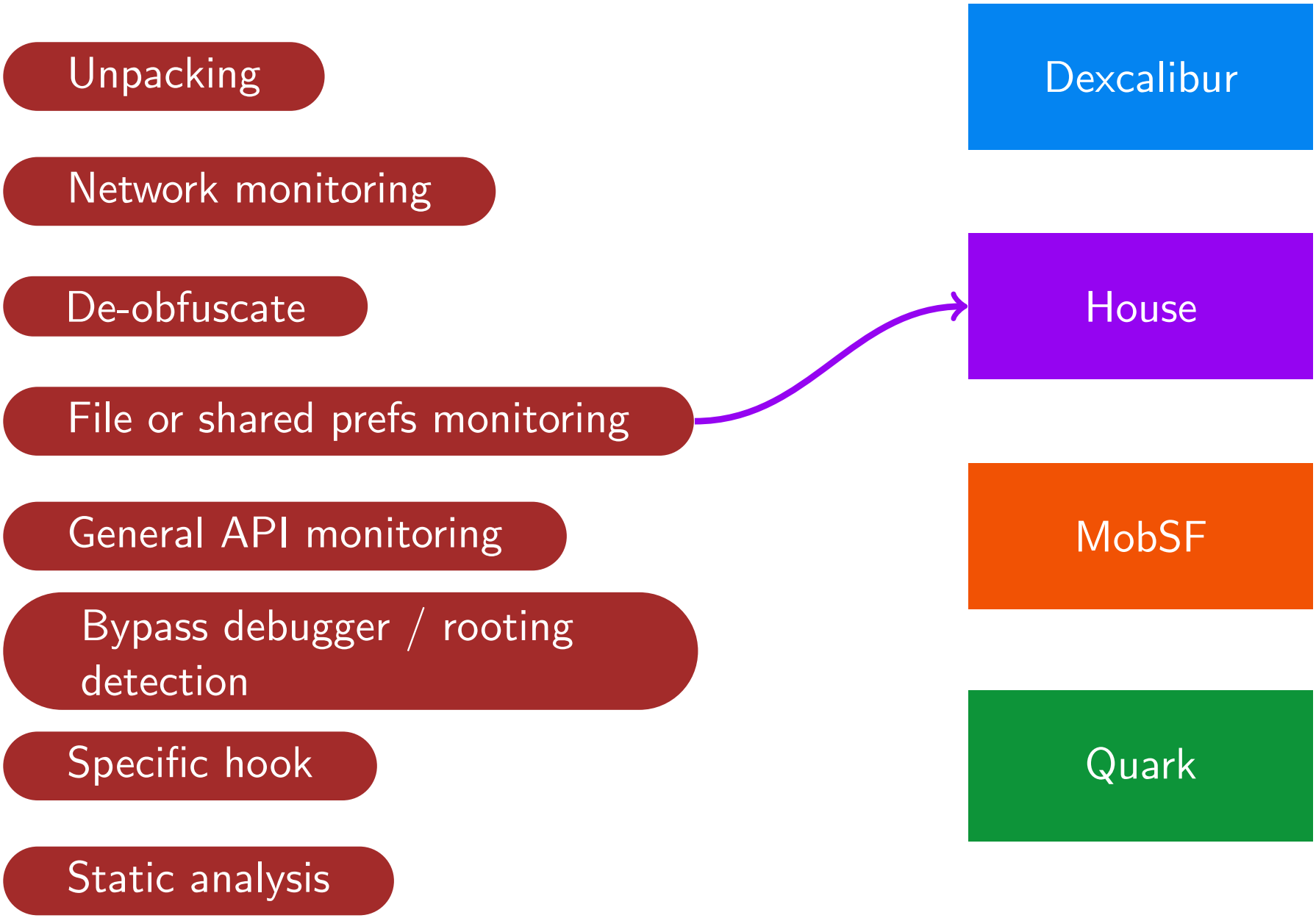

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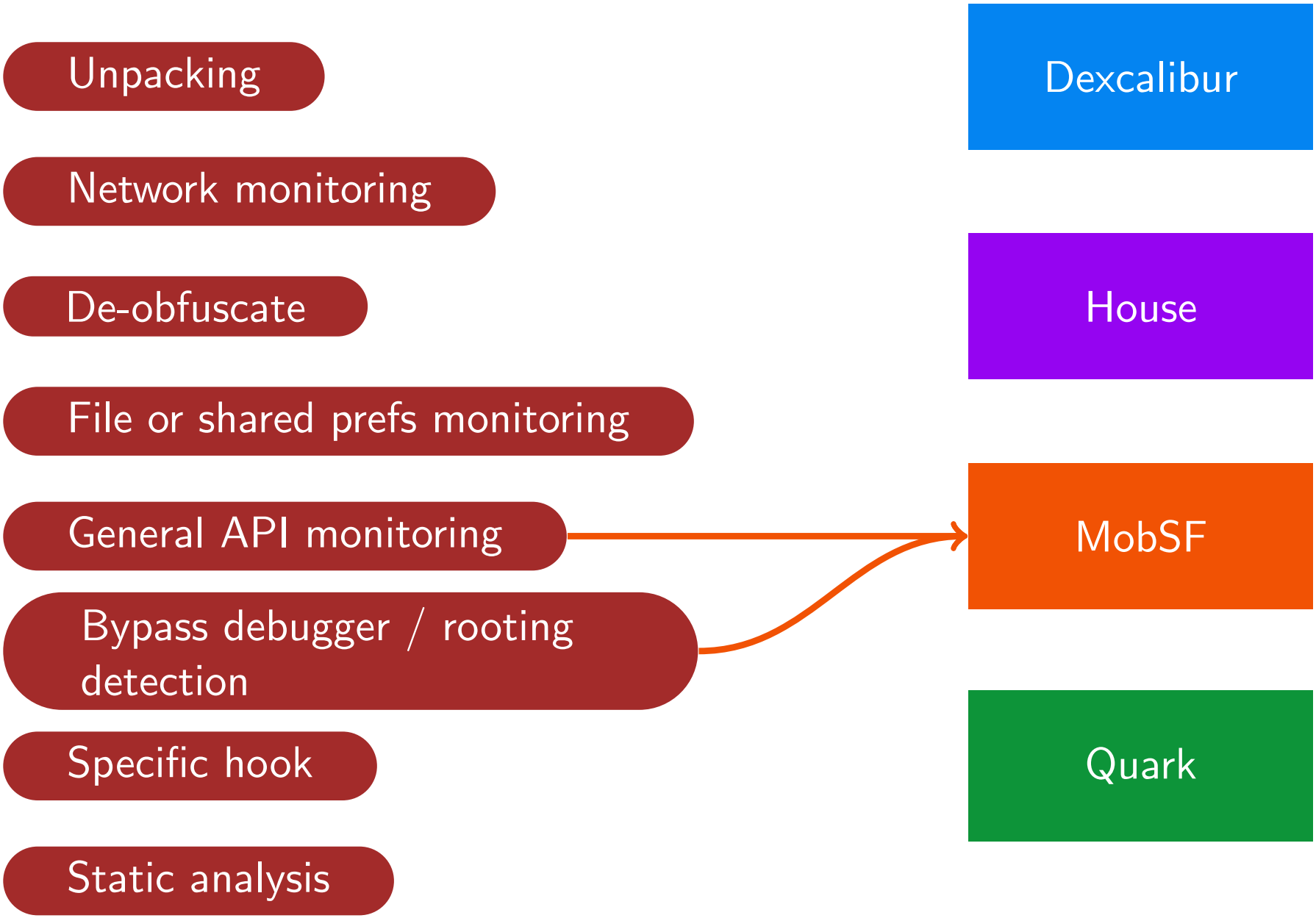

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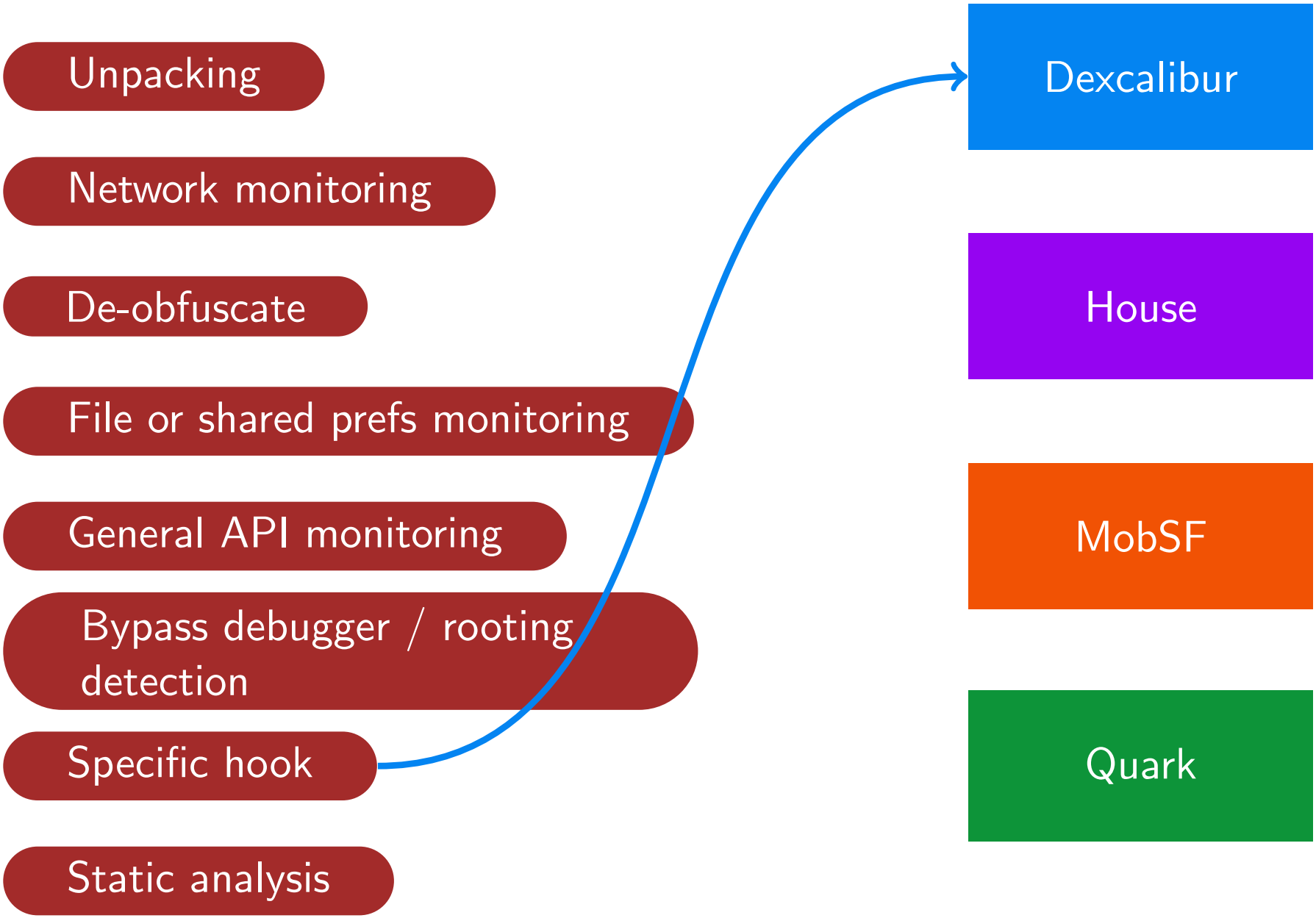

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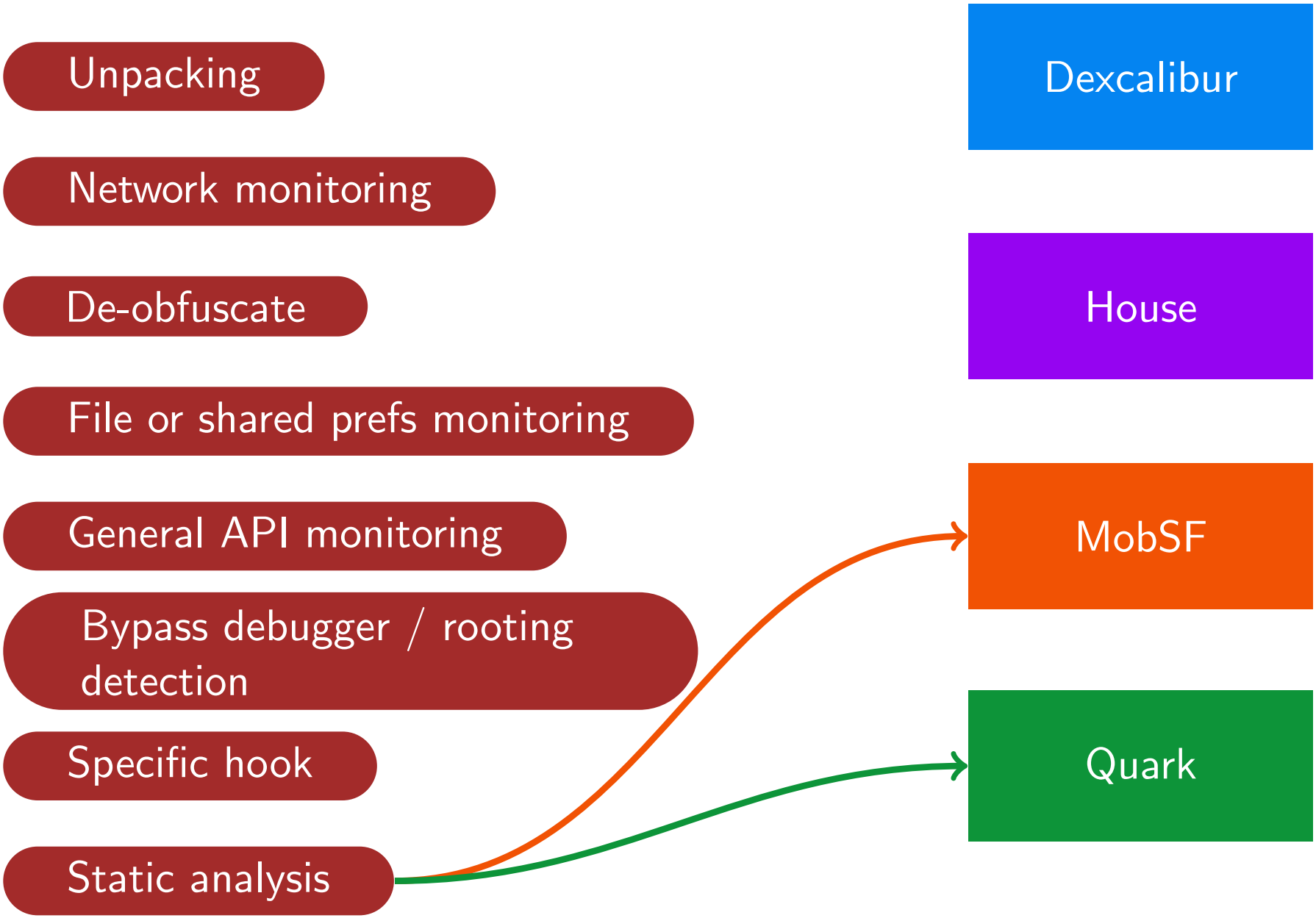

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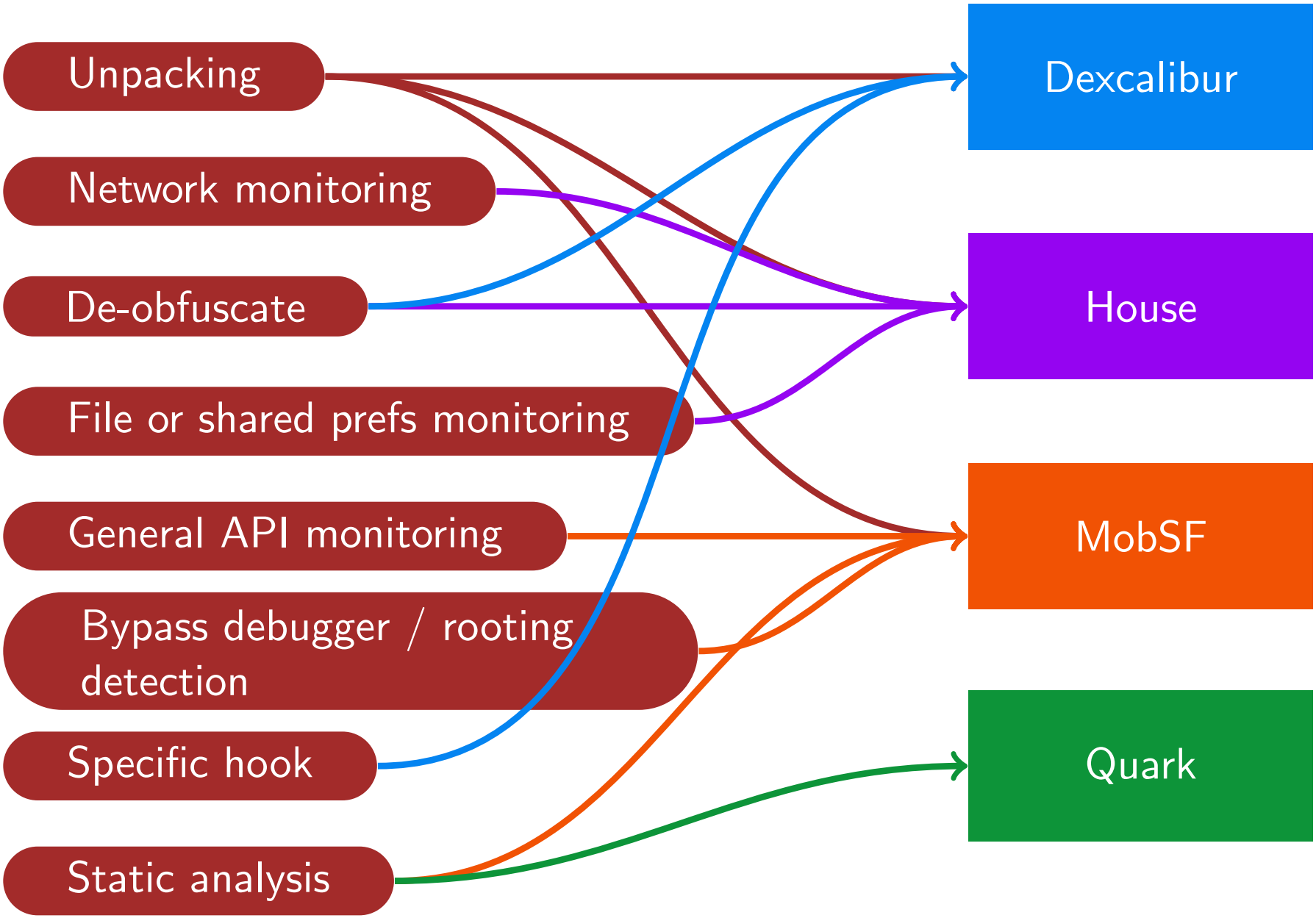

Advanced advanced features?

If you can do it with **Frida**,
you can *probably* do it with [`replace`]
`replace` = `Dexcalibur/House/MobSF`

- In memory DEX loading
- Native unpacking
- Native anti-reversing
- Native de-obfuscation
- ...

but it might be as easy to use Frida *directly*
If you can't do it with Frida.... unlucky!


Thanks for your attention!
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