

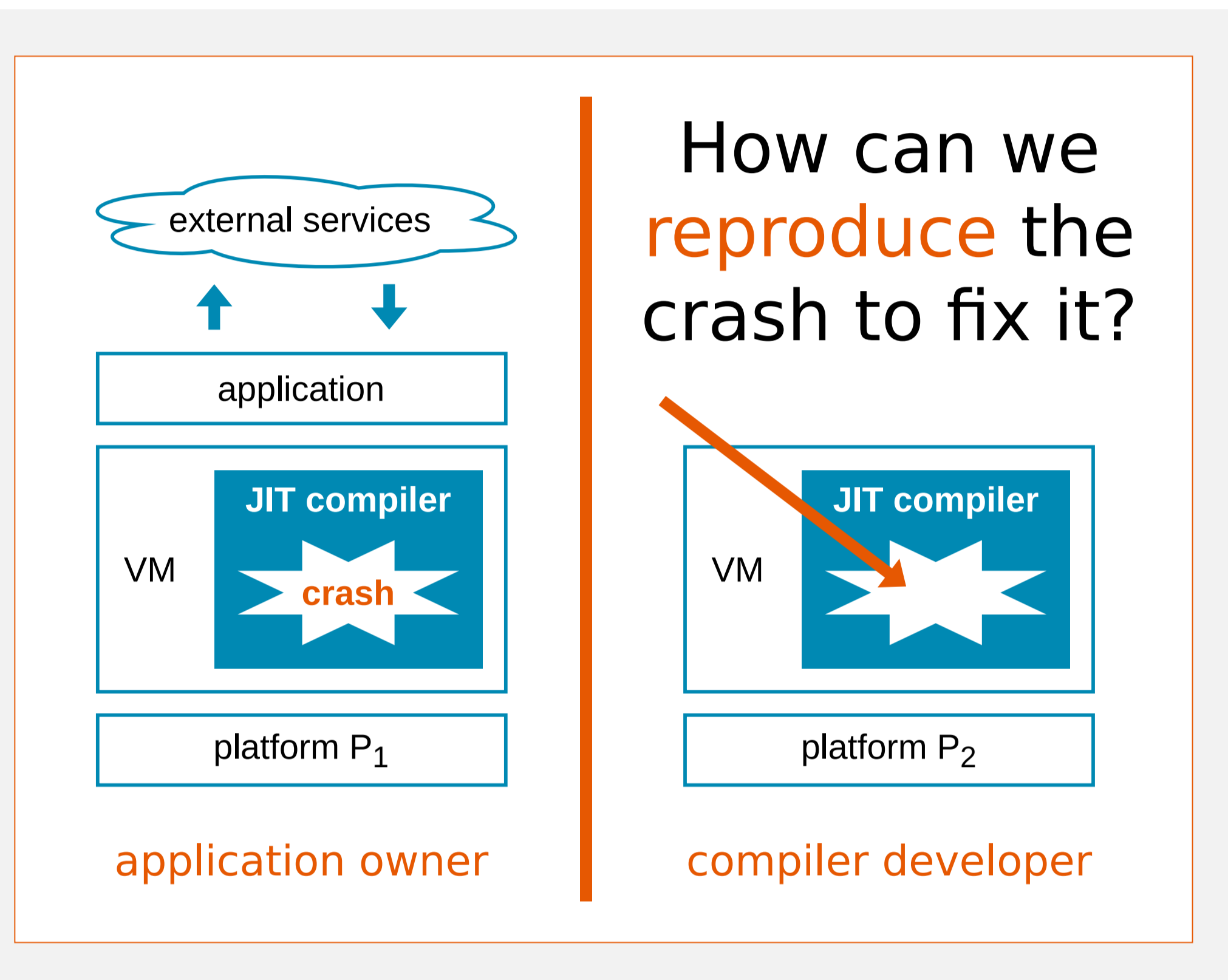
ACCURATE COMPILATION REPLAY VIA REMOTE JIT COMPILATION

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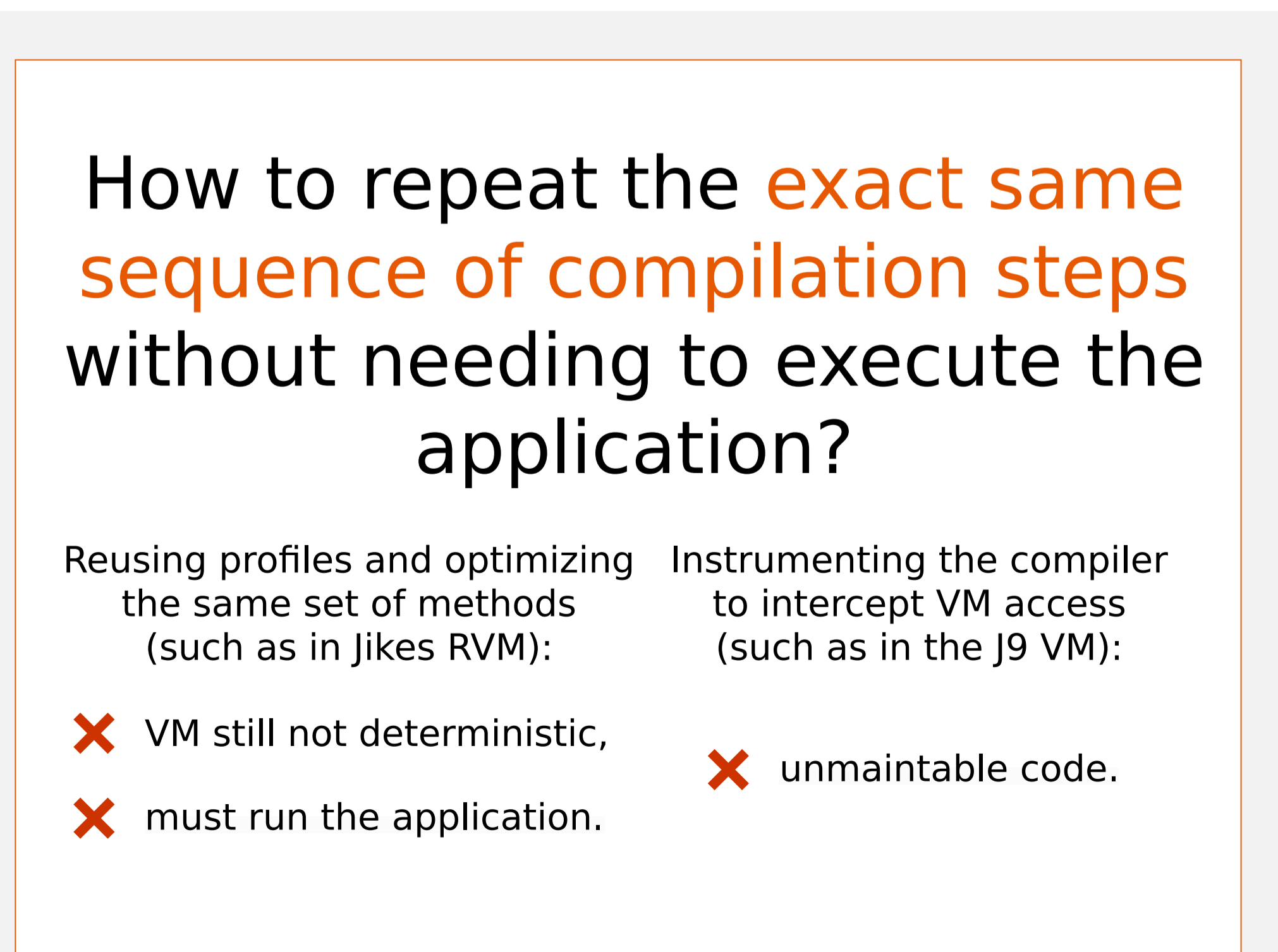
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MOTIVATION



PROBLEM



1

To enable replay, we record the **configuration** and all transmitted **runtime data**.

CONCEPT

2

Using the **recorded data**, a compiler developer can **rerun just the compilation**.

- Without needing to run the application.
- Replays the same steps even on a different platform.
- Pass extra diagnostic options to the compiler to resolve a problem.
- Compiler developers can run it with debugging tools they already know.

Remote JIT Compilation

- Decouples the compiler from the VM.
- All inputs to the compiler are serializable.
- Already supported by many runtimes.
- Therefore, we can build replay compilation on top of it.
- For efficiency, we can run the remote compiler even on the same machine or VM.

