What's New in Java 10: Local-variable Type Inference

JAVA 10 INTRODUCTION

Sander Mak

FELLOW & SOFTWARE ARCHITECT

@Sander_Mak

Course Overview

Java 10 Introduction

Local-variable Type Inference

Performance Improvements

Follow Along

Download JDK 10

IDE: IntelliJ Community Edition

jdk.java.net/10/

jetbrains.com/idea/download/

Java 9

Modular JDK
New APIs

What's New in Java 9

by Sander Mak

It is time to get up to speed with the release of Java 9 and its developments. In this course, you'll learn about the new features, such as the module system, newly introduced APIs, and changes to the language.

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Table of contents   Description   Transcript   Exercise files   Discussion   Learning Check

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▶ Course Overview	✓ 🔖	1m 35s	⌄
▶ The Java Platform Module System	🔖	39m 45s	⌄
▶ Introducing JShell	🔖	24m 41s	⌄

Course author

Sander Mak

Sander is a Fellow at Luminis in The Netherlands, where he crafts modular and scalable software, most often on the JVM, but with a touch of TypeScript when needed. He also is a Java Champion and...

Course info

Level	Intermediate
Rating	★★★★★ (27)
My rating	★★★★★
Duration	3h 33m
Released	14 Sep 2017

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Traditional Java Release Cadence
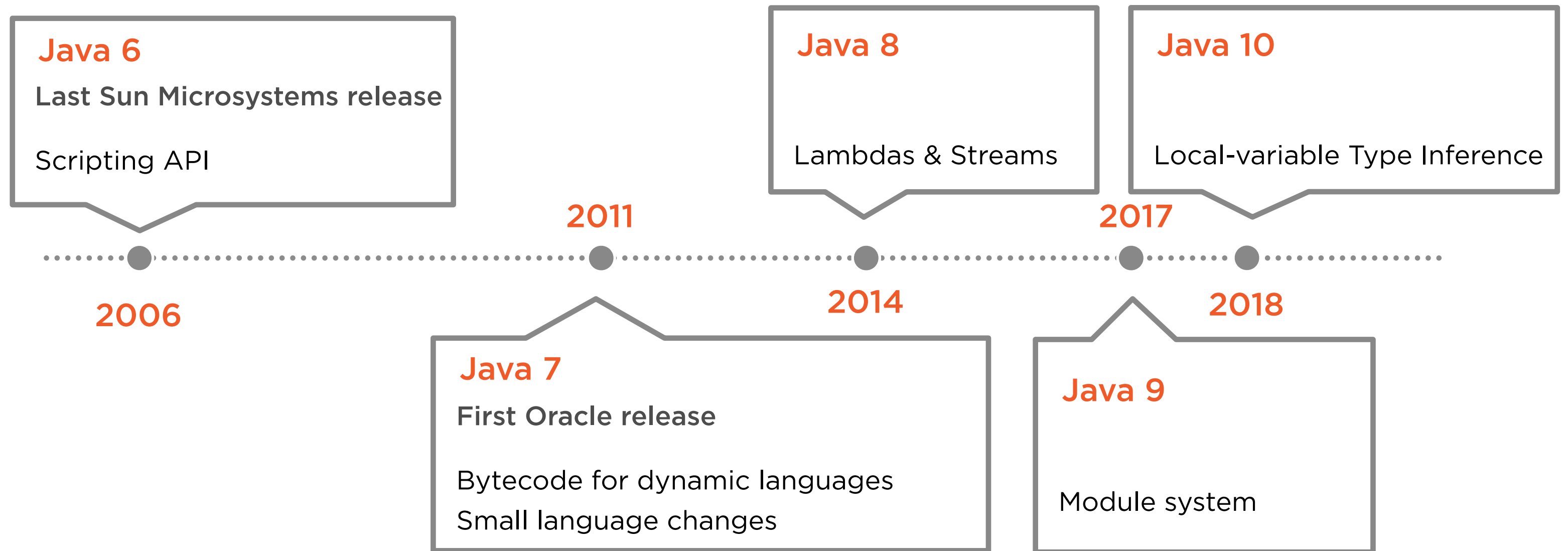
Big, **feature-driven** releases

Shifting release dates & **frequent delays**

"In order to increase the predictability of all future Java SE releases, I further propose to aim explicitly for a regular **two-year** release cycle going forward."

Mark Reinhold, 2012

Java 10 in Perspective

Java 6
Last Sun Microsystems release

Scripting API

2006

2011

Java 7
First Oracle release

Bytecode for dynamic languages
Small language changes

Java 8

Lambdas & Streams

2014

2017

Java 10

Local-variable Type Inference

2018

Java 9

Module system

"I propose that after Java 9 we adopt a strict, **time-based** model with a new feature release **every six months**."
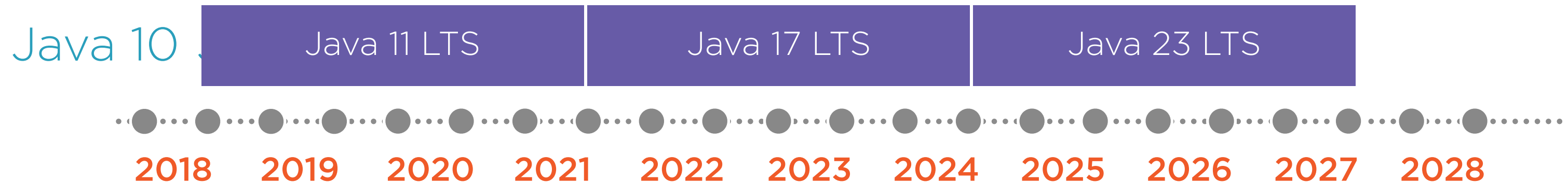
Mark Reinhold, 2017

New Java Release Schedule

Java 18.3 Java 18.9

Java 10 Java 11   Java 31

2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028

What about **support**?

New Java Release Schedule

Java 10

| Java 11 LTS | Java 17 LTS | Java 23 LTS |

2018   2019   2020   2021   2022   2023   2024   2025   2026   2027   2028

Long-term support (**LTS**) release every 3 years

New Java Release Schedule: Impact

Increased frequency
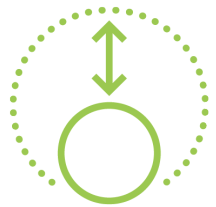
Smaller & incremental

Non-LTS releases are **not** experimental

Deprecations/removals between LTS

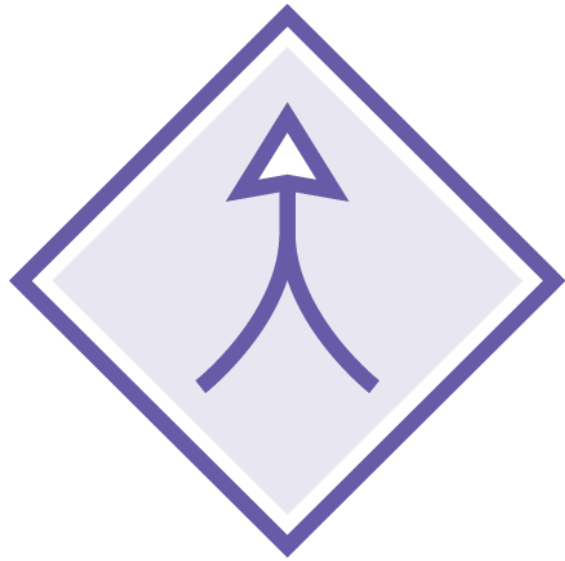# New Java Release Schedule: Adoption

"Should we only adopt LTS releases?"

Security & Performance

--release

Oracle JDK & OpenJDK

Goal: convergence of Oracle & OpenJDK codebases

Open-source commercial features

Oracle JDK & OpenJDK

Java Flight Recorder

Java Mission Control

Z Garbage Collector

Application Class Data Sharing
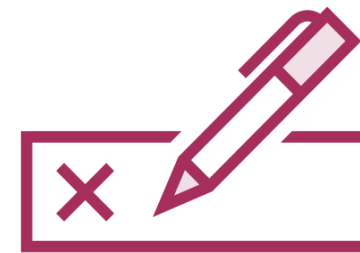
Platforms
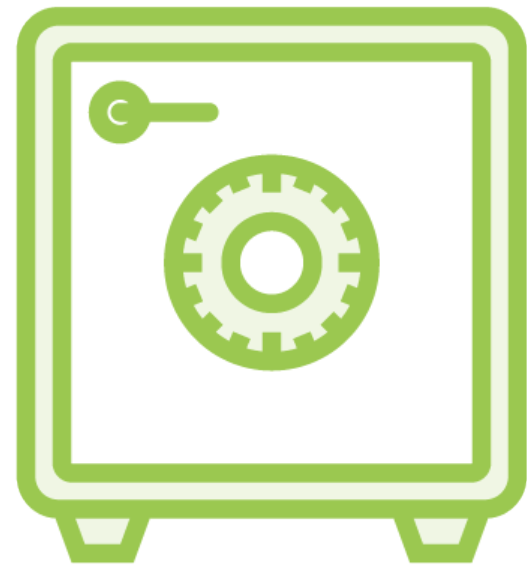
Binary builds for:

Linux   **macOS**   **Windows**

64-bit Only   **GPL 2**

Azul   **IBM**   **AdoptOpenJDK**

Root Certificates

Oracle's Root CA program to be ported to OpenJDK

openjdk.java.net/jeps/319

cacerts

Deprecations & Removals
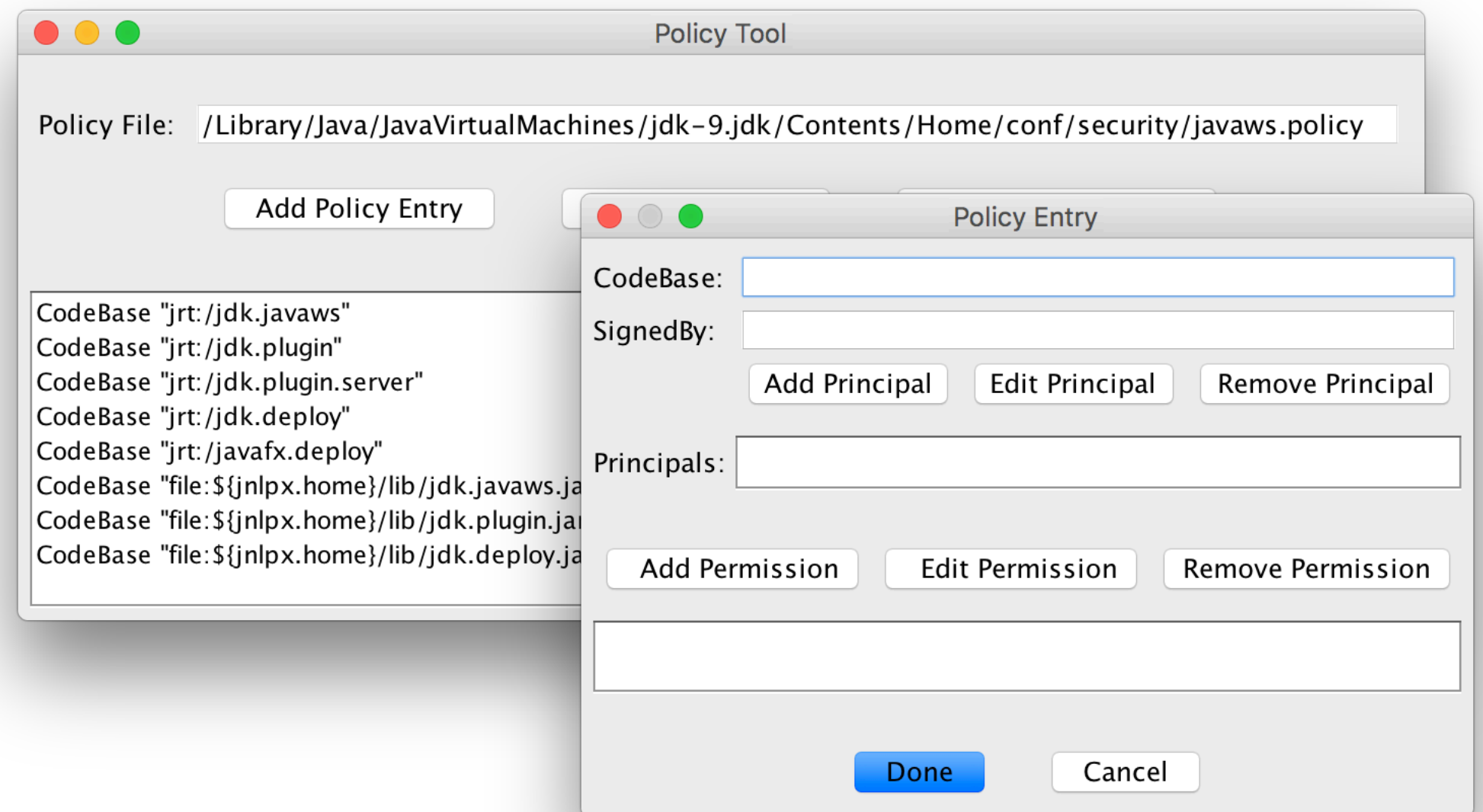
Removed command-line tools/options

javah ⟶ javac -h <dir>

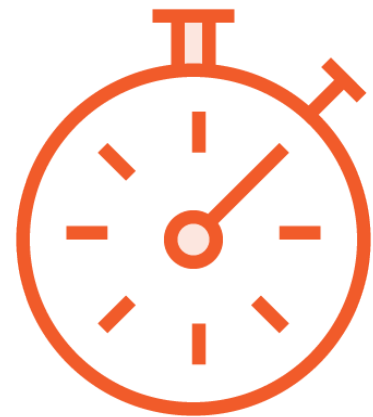# Deprecations & Removals

Removed command-line tools/options

policytool

Deprecations & Removals

Removed command-line tools/options

-X:prof   ⟶   jmap

⟶   3rd party profilers

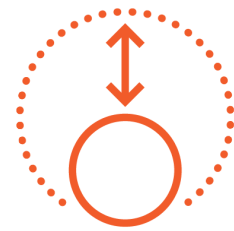# Deprecations: APIs

`java.security.acl` ⟶ `java.security`

`java.security.{Certificate,Identity,IdentityScope,Signer}`

`javax.security.auth.Policy` ⟶ `java.security.Policy`

Summary

Smaller, more frequent Java releases

Convergence Oracle JDK & OpenJDK

Deprecations & removals in JDK 10