Jython
--a powerful scripting language
for workflow and rules engines

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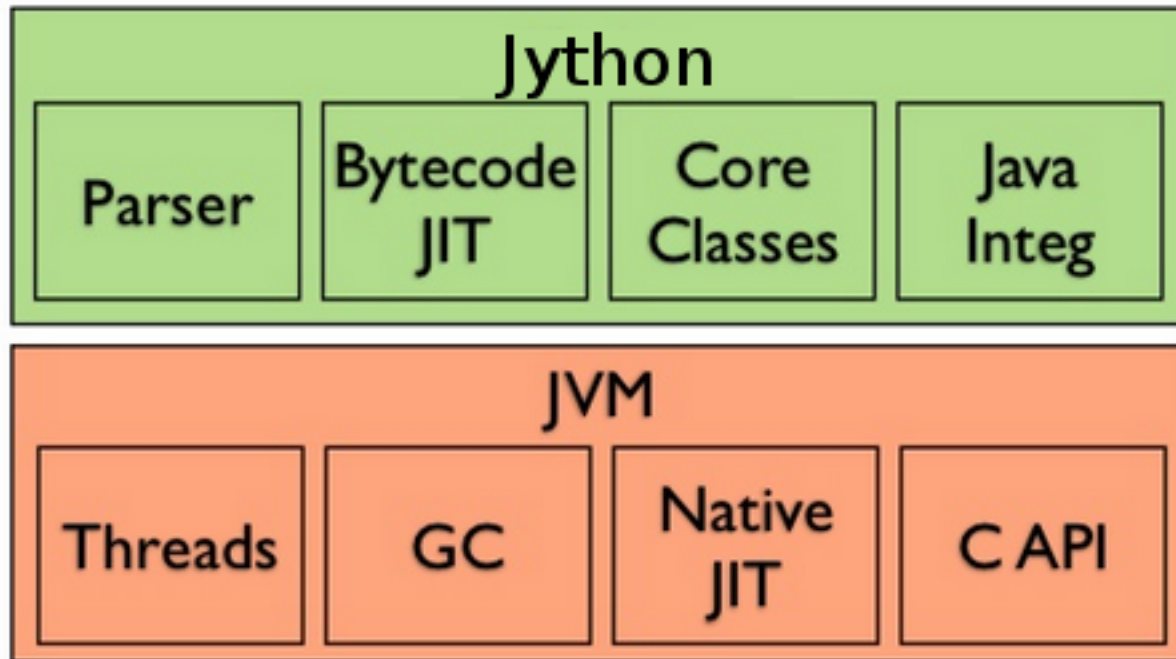# Is JVM an unusual place?

Why Jython?

No Global Interpreter Lock => true parallelism and concurrency.

Why Jython?

Why Jython?

- Usage of the best Garbage Collectors including several concurrent GCs.

- Native access to Java API.

- Access to Java Concurrency libraries with support for concurrent collections.

- Polyglot JVM – use the best tools for the job eg. Clojure for functional programming, Jython for scripting, etc.

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Monitoring and profiling

- VisualVM, jprofiler, NetBeans, and other JVM tools enabling:
    - CPU, memory and thread monitoring.
    - Heap analysis,
    - Etc.

- Need to have minimal memory consumption in Cloud -> JVM tools might help.

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A long time ago in a galaxy far, far away.....

Long time ago, in a galaxy..

- I used to work as a core developer on unnamed "dark-side" closed source platform:
  - ITIL compatible ERP platform with support for workflow and rules engine.
  - Written in Java, Jython used as scripting language for the workflow and rules engine.
  - Nice data integration solution.

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Workflow engines

- Similar to state machines: defined states, transition rules, inputs & outputs etc.

- Standardization process in place, mainly BPMN standard in 2.0 release.

- Can be used for easy creation of Information systems & UI dialogs based on simple process definition.

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Jython in Worflow engines

- Used to script custom tasks mainly because:
  - Python is easily readable,
  - Forces users to format their code properly,
  - Dynamic typing & better scripting capabilities than Java,
  - Runs on multiple platforms inside JVM.

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Rules engines

- Provide a declarative way to solve various repeating rule based tasks including NP problems, eg. Travelling salesman.

- You declaratively define rules, for example in Jython.

- The rules engine provides the resolution for you automatically.

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Questions?

On unrelated note - Project Odd

- Project by Red Hat that aims to support dynamic languages running on JBoss Application Server for better asynchronous programming & concurrency support etc..

- Provides native API for dynamic languages.

- Currently: TorqueBox for Ruby, Dyn.JS for Javascript, Immutant for Closure.

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Image References

- Slide 7 image Courtesy of project presentations
- Jython logo – slide 2: jython.org
- PyVo community logo, courtesy of python.cz
- Lock image from slide 3
- Python image from slide 1 Courtesy of Michael Cvet

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