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# Building a Mesos Framework using the HTTP API

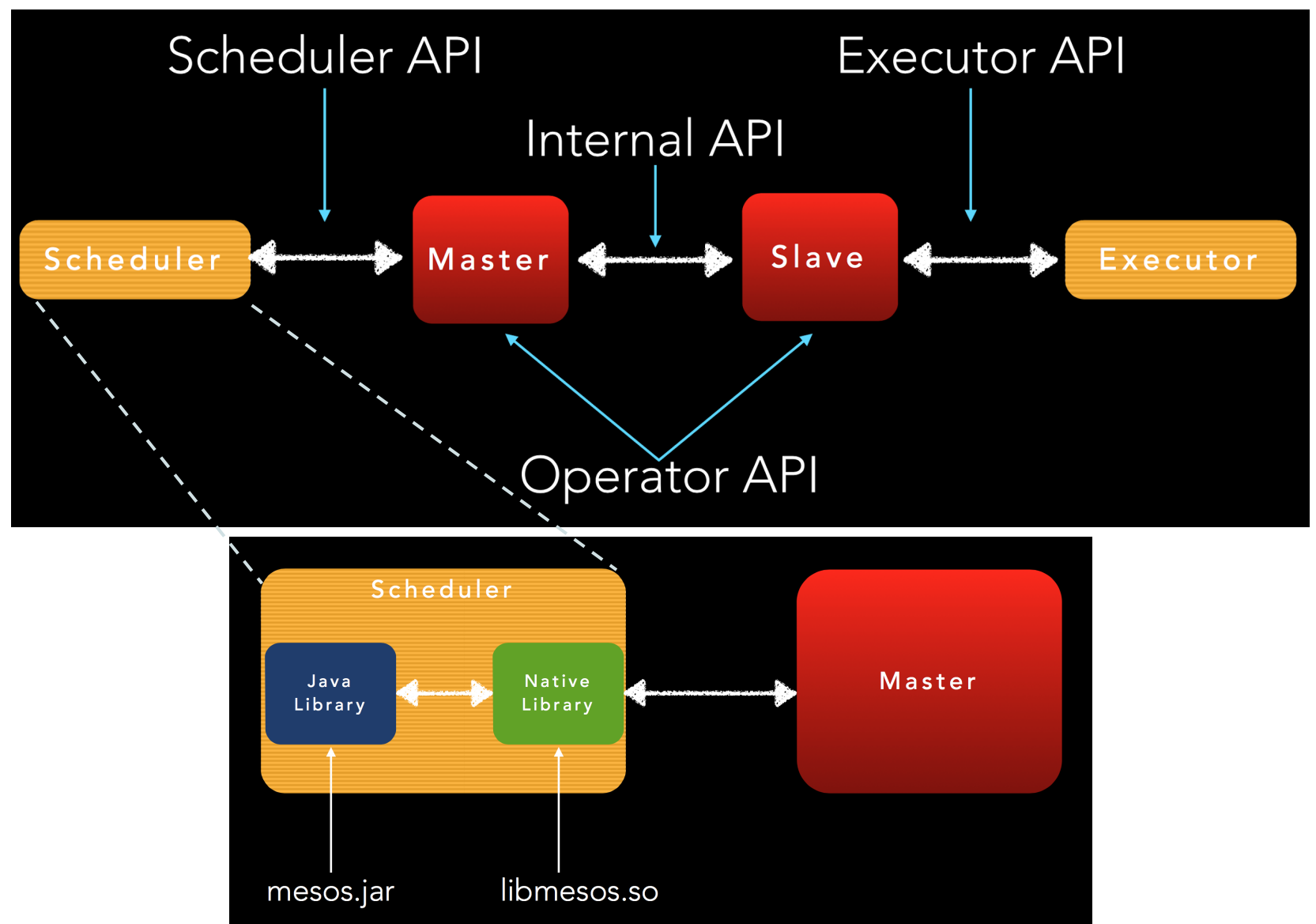
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# HTTP API Overview

In the beginning, there was libmesos...



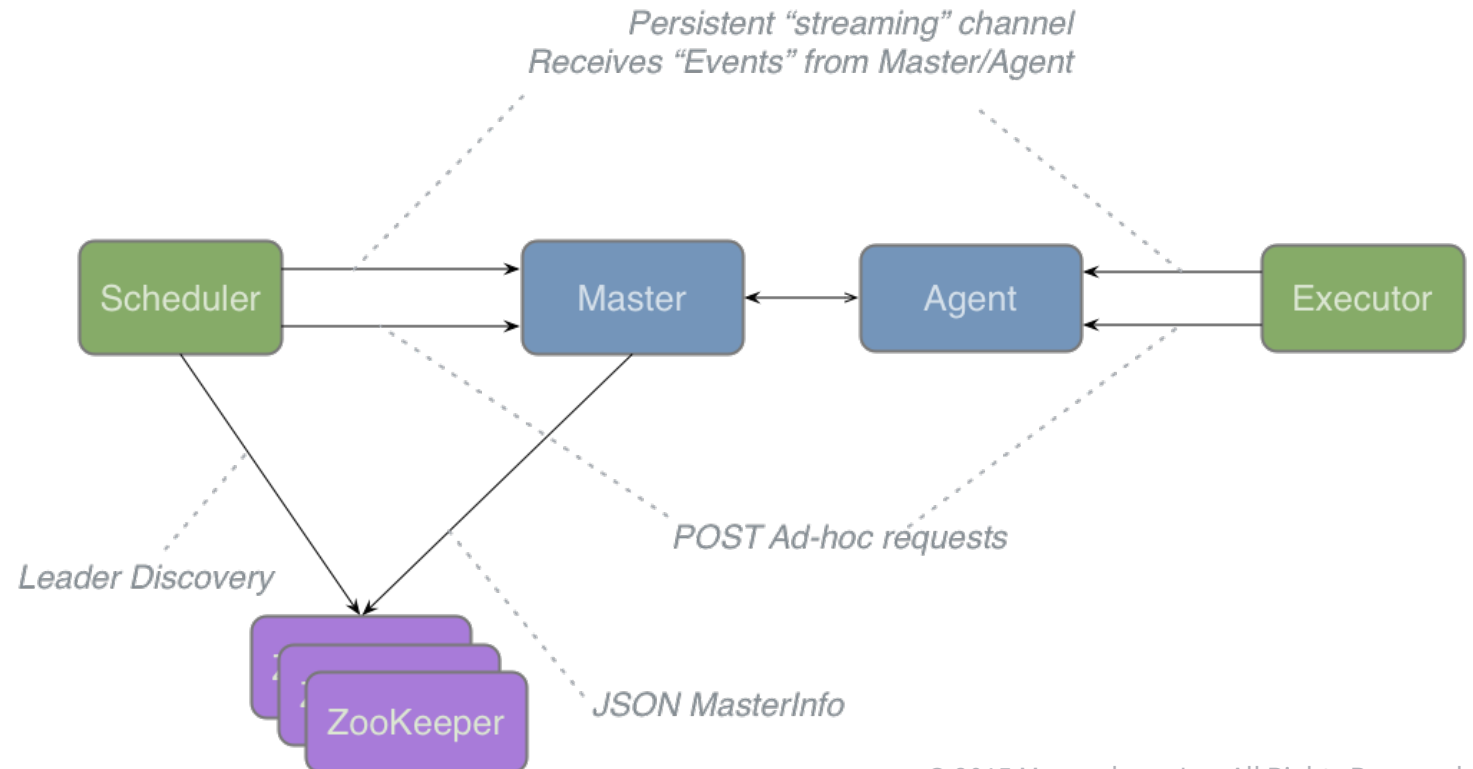
Courtesy @vinodkone, @ijimenez, "Mesos HTTP API," MesosCon 2015 [http://events.linuxfoundation.org/sites/events/files/slides/Mesos\\_HTTP\\_API.pdf](http://events.linuxfoundation.org/sites/events/files/slides/Mesos_HTTP_API.pdf)

... but now,  
libmesos no  
more!

## Mesos 0.24

Executor API  
available as of 0.26

Endpoint	API	Served by
/api/v1/scheduler	Scheduler API	Master
/api/v1/executor	Executor API	Agent
/api/v1/internal	Internal API	Master
/api/v1/admin	Operator API	both



# Calls & Events

Scheduler API v1	C++ API
SUBSCRIBE	<code>start()</code>
TEARDOWN	<code>stop()</code>
ACCEPT	<code>acceptOffers()</code>
DECLINE	<code>declineOffer()</code>
REVIVE	<code>reviveOffers()</code>
KILL	<code>killTask()</code>
SHUTDOWN	Shutdown executor
ACKNOWLEDGE	Ack status update
RECONCILE	<code>reconcileTasks()</code>
MESSAGE	<code>sendFrameworkMessage()</code>
REQUEST	<code>requestResources()</code>

# Calls & Events (cont.)

Event	C++ Callbacks API
SUBSCRIBED	<code>(re)registered()</code>
OFFERS	<code>resourceOffers()</code>
RESCIND	<code>offerRescinded()</code>
UPDATE	<code>statusUpdate()</code>
MESSAGE	<code>frameworkMessage()</code>
FAILURE	<code>{slave,executor}Lost()</code>
ERROR	<code>error()</code>
HEARTBEAT	NEW - keep alive h/beats

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Demo

# Who likes code?

Let's see some code!

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# References

- HTTP API User Doc, aka *RTFM*  
[https://github.com/apache/mesos/blob/master/docs/scheduler\\_http\\_api.md](https://github.com/apache/mesos/blob/master/docs/scheduler_http_api.md)
- Vinod Kone and Isabel Jimenez, “Mesos HTTP API,” MesosCon 2015 [http://events.linuxfoundation.org/sites/events/files/slides/Mesos\\_HTTP\\_API.pdf](http://events.linuxfoundation.org/sites/events/files/slides/Mesos_HTTP_API.pdf)
- Mesos HTTP API design documentation, <https://goo.gl/X1IHij>
- zk-mesos (the IPython notebook & other stuff)  
<http://github.com/massenz/zk-mesos>