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Distributed Computing with Everest

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The ability to effortlessly reuse and combine existing computational tools and computing resources is an important factor influencing research productivity. Everest is a new distributed computing platform that addresses this problem by supporting publication, execution and composition of applications running across distributed computing resources.

In contrast to traditional software, Everest follows the Platform as a Service cloud delivery model by providing all its functionality via remote web and programming interfaces. An application ported to Everest can be accessed via web user interface or unified REST API. The latter enables integration with external systems and composition of applications.

Another distinct feature of Everest is the ability to run applications on arbitrary sets of external computing resources. A computing resource can be attached to the platform by any user. An application developer can bind one or multiple resources to an application. It is also possible to manually specify resources for a single application run.

The tutorial will provide first-hand practical information about Everest, including:

1. General introduction
2. Adding (porting) applications to Everest
3. Running applications via web user interface
4. Attaching computing resources to Everest
5. Binding resources to applications
6. Using Python API to run and combine applications from Python programs
7. Running parameter sweep applications with Everest

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