

Developing for a Services Layer At The Edge (SLATE)

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Modern software development workflow patterns often involve the use of a developer's local machine as the first platform for testing code. SLATE mimics this paradigm with an implementation of a light-weight version, called MiniSLATE, that runs completely contained on the developer local machine (laptop, virtual machine, or another physical server). MiniSLATE resolves many development environment issues by providing an isolated and local configuration for the developer. Application developers are able to download MiniSLATE which provides a fully orchestrated set of containers on top of a production SLATE platform, complete with central information service, API server, and a local Kubernetes cluster. This approach mitigates the overhead of a hypervisor but still provides the requisite isolated environment. They are able to create the environment, iterate, destroy it, and repeat at will. A local MiniSLATE environment also allows the developer to explore the packaging of the edge service within a constrained security context in order to validate its full functionality within limited permissions. As a result, developers are able to test the functionality of their application with the complete complement of SLATE components local to their development environment without the overhead of building a cluster or virtual machine, registering a cluster, interacting with the production SLATE platform, etc.

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