

## Service Lifecycle Management

### Automated Infrastructure Lab

The HP Labs Service Lifecycle Management project (SLiM) is focused on creating a highly automated and flexible system within which future dynamic cloud services can flourish. It will enable service providers and independent software vendors (ISVs) to create and manage new services, for themselves or their customers.

Cloud computing technologies must scale massively to deliver a wide range of services globally. SLiM is investigating the “industrialized” hosting of thousands of types of services. Other research areas include issues of availability, security, scalability, performance, cost and system longevity.

In the IT stack, SLiM will sit above the cloud infrastructure, which provides virtualized compute resources including CPUs, storage and networking. Another HP Labs project, Cells as a Service, is a key enabling technology for SLiM.

SLiM will automatically manage the lifecycle of a service created for a customer – including system design, configuration, management and closure of the service – returning the resources to the cloud for immediate re-use.

The advantages of SLiM’s model-driven system are its ease of use and re-use, and the speed of deployment and adaptation. Software tools developed within SLiM will be used to create, modify, transform and add to the information in the service models.

The research team is developing prototypes based on consumer Internet services with hundreds, perhaps thousands, of individual service offerings – some of them very small applications. The intent is to develop this platform to the point where ISVs can easily transform their applications into services.

The SLiM team will use the cloud testbed, launched by HP, Intel and Yahoo!, to test its ideas. SLiM will create a “service fabric” by making use of virtualized infrastructure services, such as Cells as a Service, running on the testbed.

This project will be conducted by researchers in the Automated Infrastructure Lab at HP Labs Bristol.