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Achieve Scalable, High Performance, and Economical Application Deployment through Cloud Computing Oriented System Architecture Design: Case Study of NJDOT Traffic Monitoring System Web 2.0

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Many public-facing Web applications that require intense attribute and spatial queries have traditionally been limited by the scalability and performance issues. The deployment infrastructure is one of the biggest bottlenecks. Many state agencies deploy their applications in a shared infrastructure and any attempt to create a dedicated environment usually requires significant investments.

One innovative approach is to create a technology stack and deployment package that can benefit from commercial hosting services, including some elements from leading cloud computing service vendors. The challenge is that most ISP/Cloud service vendors do not offer some key technologies traditionally used in GIS and mapping applications. This presentation will discuss how we designed a system architecture that utilized a technology stack that most ISP/Cloud service vendors can support out of box.