



Scaling Challenges at Two Sigma

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Abstract

Two Sigma is a quantitative investment manager with a heavy dependence on data-driven methodologies. The variety and sheer quantity of data, together with the rapid pace at which new sources of data become available, have placed increased demand on Two Sigma's infrastructure to scale quickly, efficiently and securely. In this talk, we will give a short overview of the unique scalability challenges Two Sigma now faces, as well as some of the technology we have created to address these challenges. In particular, we will discuss how our participation in the Massachusetts Open Cloud (MOC) fits into our larger scalable technology strategy. We will also briefly review highlights of the engagement as well as hopes for the future.

Speaker Bio

Mark Astley is Head of Reliability Engineering at Two Sigma Investments. The Reliability Engineering team manages Two Sigma's physical infrastructure, has operational responsibility for various aspects of trading and modeling, and provides DevOps tools for engineering. Mark has been at Two Sigma since 2007, and has served as both a developer and manager in a variety of roles including market data processing, trading system operation, storage services, and compute services. Prior to Two Sigma, Mark was a Research Staff Member at IBM Research from 1999 to 2007. Mark holds a PhD in Computer Science from the University of Illinois at Urbana-Champaign.