The Road to Cyberinfrastructure at the Federal Reserve Bank of Kansas City

by: BJ Lougee, Timothy R. Morley and Mark Watson

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Technical Briefing

As economic models grow in computational complexity and researchers increase their data needs, the staff at the Center for the Advancement of Data and Research in Economics (CADRE) at the Federal Reserve Bank of Kansas City needed to develop an environment that could facilitate better research accommodating these new factors. Staff have worked through multiple technological changes to design and deliver the right infrastructure to meet researchers' needs, from the development of the first high-performance computing (HPC) environment at the Bank, to the research and coincident development of better data warehousing techniques, to the current state of technology and staffing. We describe the cyberinfrastructure that allows researchers with different levels of computational knowledge and experience to access and receive support for a wide range of familiar or specialized software packages. The result is a well received, flexible cyberinfrastructure, including trained technical staff, that provides access to and support for computation, data, and training.

Keywords: HPC, data warehousing, cyberinfrastructure, economic research.

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Mark Watson is a vice president in, and the director of, the Center for the Advancement of Data and Research in Economics (CADRE) at the Federal Reserve Bank of Kansas City. He joined the Bank in 1997 and assumed management roles starting 1999. He provides direction for designing and delivering computing environments and analytical data warehousing services for research economists and researchers in the Federal Reserve System. Mark has led the Federal Reserve Bank of Kansas City's efforts to develop expertise in High-Performance Computing, parallel data warehousing technologies, and big data initiatives.

Prior to joining the Federal Reserve Bank of Kansas City Mark spent 15 years working in the Department of Energy's nuclear weapons complex as a technical programmer, administrator of databases and Unix environments, and precision measurement inspection.

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