
Stream processing is a distributed computing paradigm that supports the gathering, processing, and analysis of high-volume, heterogeneous, continuous data streams to extract insights and actionable results in real time. This comprehensive, hands-on guide, combining the fundamental building blocks and emerging research in stream processing, is ideal for application designers, system builders, analytic developers, as well as for students and researchers in the field. This book introduces the key components of the stream processing computing paradigm, including the distributed system infrastructure, the programming model, design patterns, and streaming analytics. The explanation of the underlying theoretical principles, illustrative examples, and implementations using the IBM InfoSphere Streams SPL language and real-world case studies provide students and practitioners with a comprehensive understanding of stream processing applications and the middleware that supports them.

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