



# STREAM

## Project Overview

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- Stream aims at providing a highly scalable middleware platform able to process massive information flows in real-time.
- The goal is to increase 1-2 orders of magnitude the capacity of current technology.
- Elastic computing for changing workloads.
- This capacity will enable a new breed of applications & services in the upcoming Internet of Services.
- It has applications in a wide spectrum of domains: telco, financial, security, etc.

# What is Data Streaming

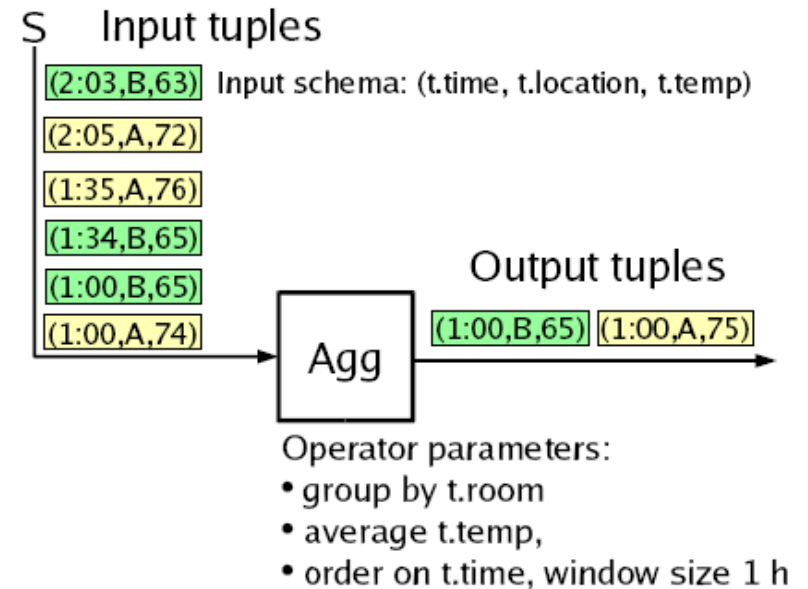
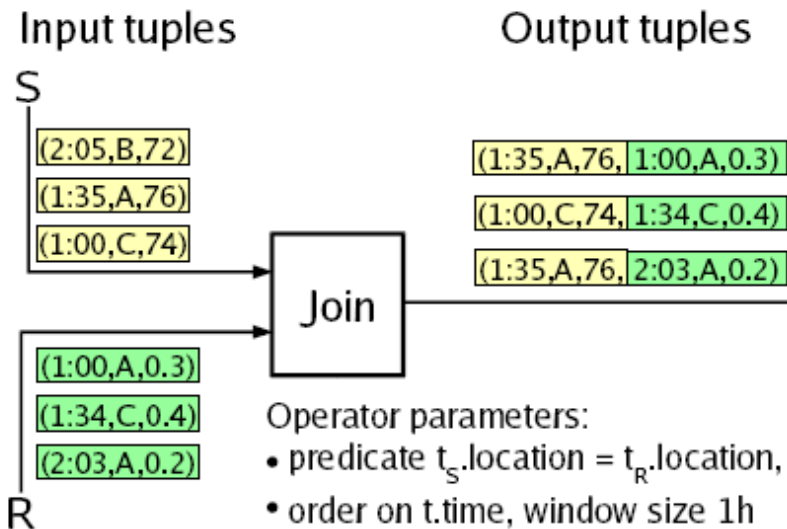
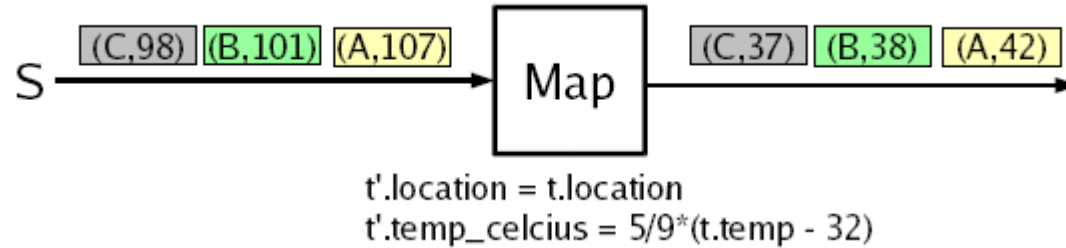
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- Data streaming is a new paradigm for online data processing.
- It enables the evaluation of continuous queries over data flows.
- It provides SQL-like operators to build queries adapted to the continuous domain.
- A lower layer provides high performance storage and networking required by the data streaming layer.
- An upper layer provides a programmable interface for performing online data mining.

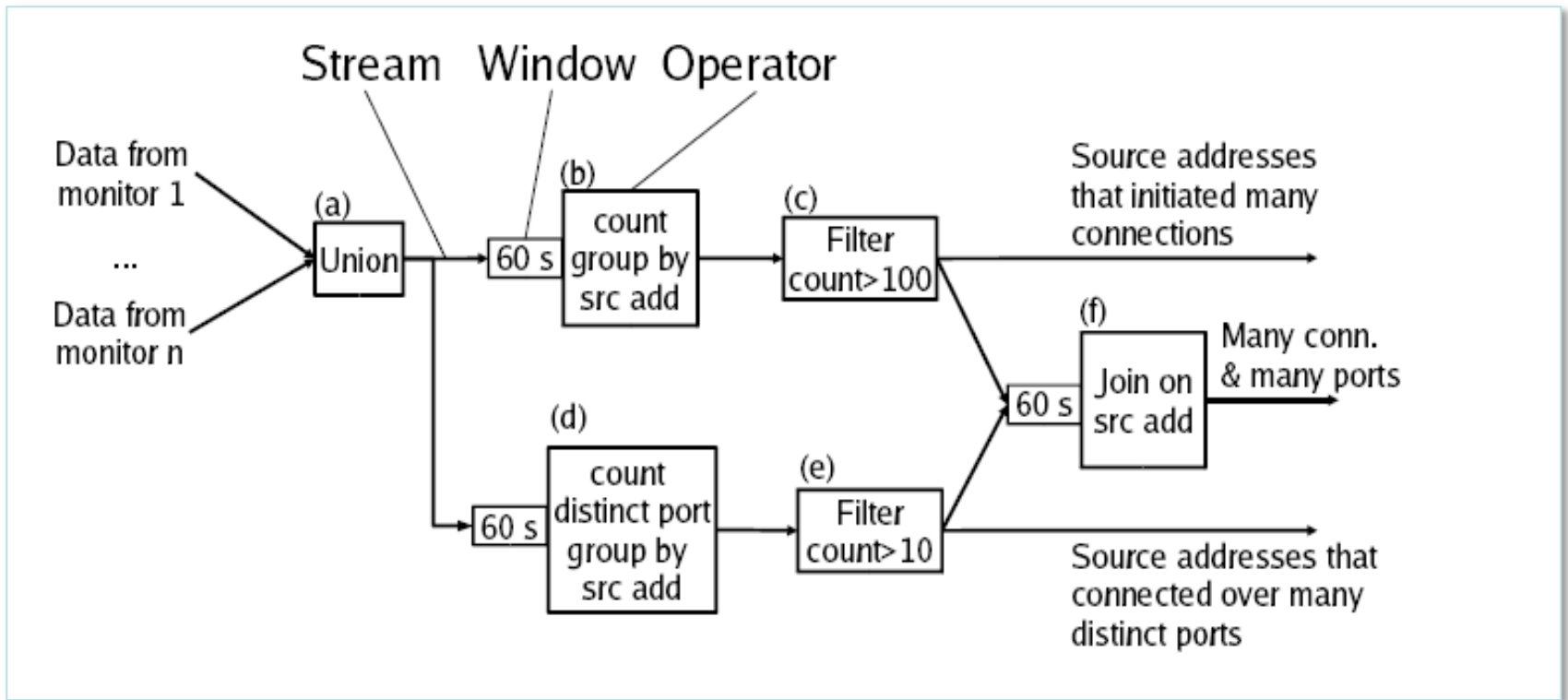
# What is Data Streaming: Data Streaming Operators

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# What is Data Streaming: Data Streaming Query

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# IoS Challenges: Stream Viewpoint

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- Real time services for massive data flows.
- Combining streaming data with persistent/materialized data.
- Providing cloud infrastructure for cloudifying applications on top of stream clouds.
- Which interfaces to provide between cloudified applications and cloudified streams?
- Storage at network speed.
- Integration with other paradigms such as publish-subscribe.