Creation of the NIST Big Data Reference Architecture

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Agenda

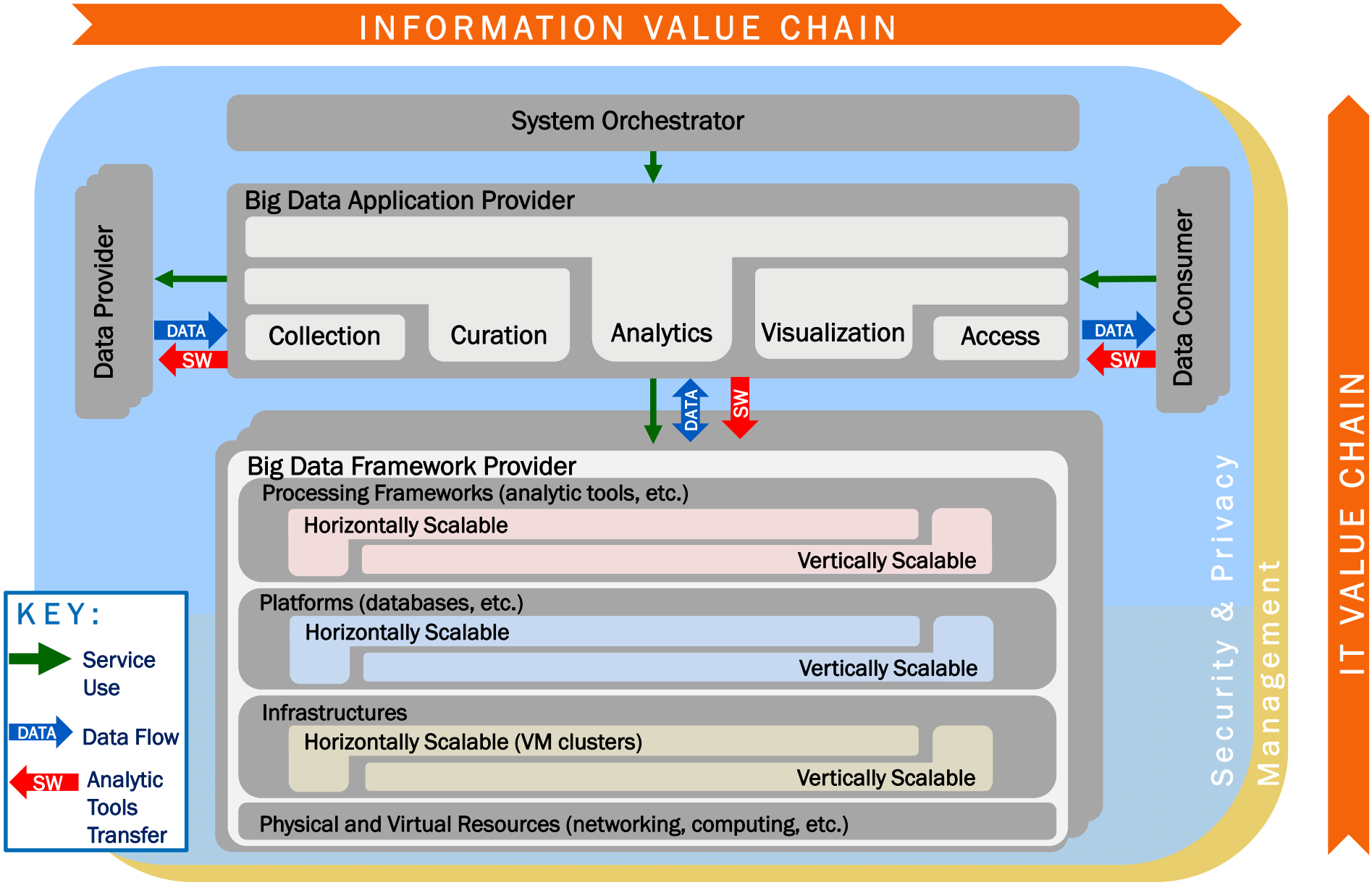
- Objectives & Challenges
- Approach & Progress
- Resultant RA
- Next Steps

Objectives & Challenges

- Objectives
  - Applicable to different business models
  - Specific technologies and products agnostic
  - Broad audience (users, operators, developers, regulators, etc.)
- Challenges
  - See all of the above
  - Big Data in relation to “Cloud Computing RA”
  - Big Data in relation to “traditional data”
    - Revolution vs. evolution
    - Superset vs. delta only
  - Data centric view vs. IT centric view
    - Data providence vs. data processing

Approach & Progress

- Approach
  - Use Cases & Requirements
  - Existing Big Data RAs
- Progress
  - No change in the Objectives
  - Components and high level interfaces
  - Big Data is a superset and an evolution
  - RA represents a Big Data Ecosystem
  - The intersection of Data Value chain and IT Value Chain



Ref: http://bigdatawg.nist.gov/_uploadfiles/M0226_v10_1554566513.docx

Next Steps

- Keep the RA on high level
- Prove the RA concept by illustration
  - Map multiple academic projects into the RA
  - Provide examples of the RA interfaces using the technologies and products used in the projects
- Develop comprehensive description of the RA components; for each
  - Provide an overview of the current technologies and practices
  - Outline the possible roadmap for the next 2 – 5 years

Thank You