NIST Reusable Analytics Service Framework
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Abstract

This document summarizes the NIST Analytics Service Framework that targets to analytics functionalities to be hosted on computational resources including Clouds, Containers, and High Performance Computing (HPC). Although we use the RE presentational State Transfer (REST) to formulate some details of the architecture, it is independent from REST and can be formulated in other frameworks. While using REST we use a familiar pattern for architect, implementers, and strategists. Due to the many frameworks, programming languages and services supporting REST the architecture can easily be enhanced and implemented with various technical solutions. The analytics framework also targets big data. Big data is a term used to describe extensive datasets, primarily in the characteristics of volume, variety, velocity, and veracity. While opportunities exist with Big Data analytics, the data characteristics can overwhelm traditional technical approaches, and the growth of data is outpacing scientific and technological advances in data analytics. To advance progress in Big Data analytics, the NIST Big Data Public Working Group (NBD-PWG) is working to develop consensus on important fundamental concepts related to Big Data. The results are reported in the NIST Big Data Interoperability Framework (NBDIF) series of volumes.

Key words

Adoption; barriers; implementation; interfaces; market maturity; organizational maturity; project maturity; system modernization.

Contents

List of Tables

List of Figures