**NBD-PWG Next Milestone: Making Analytics as Services**

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[Executive Summary 1](#_Toc43719251)

[1 Introduction 2](#_Toc43719252)

[2 Use Cases for Analytic Services 2](#_Toc43719253)

[2.1 Use Case #1: <title> 2](#_Toc43719254)

[2.2 Use Case #2: <title> 2](#_Toc43719255)

[3 Package Analytic Algorithms as Service Payloads 2](#_Toc43719256)

[4 Analytic Services Interfaces 2](#_Toc43719257)

[5 Resources Management 2](#_Toc43719258)

# Executive Summary

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# Introduction

With Big Data’s compound annual growth rate at 61 percent and its ever-increasing deluge of information in the mainstream, the collective sum of world data will grow from [33 zettabytes (ZB, 1021) in 2018 to 175 ZB by 2025](https://lnks.gd/l/eyJhbGciOiJIUzI1NiJ9.eyJidWxsZXRpbl9saW5rX2lkIjoxMDIsInVyaSI6ImJwMjpjbGljayIsImJ1bGxldGluX2lkIjoiMjAyMDAzMDkuMTg0NDg5NjEiLCJ1cmwiOiJodHRwczovL3d3dy5mb3JiZXMuY29tL3NpdGVzL3RvbWNvdWdobGluLzIwMTgvMTEvMjcvMTc1LXpldHRhYnl0ZXMtYnktMjAyNS8jNTg3MzcwMDU1NDU5In0.dQO0LjdGPe9UcKNiKydUShmMbl3R59cKH_3GnNchaCk/br/75898682858-l). The presence of such a rich source of information requires a massive analysis that can effectively bring about much insight and knowledge discovery.

NBD-PWG would like to explore with the public on how to extend NBDIF for packaging scalable analytics as services to meet the challenges of so much information. These services would be reusable, deployable, and operational for Big Data, High Performance Computing, and AI machine learning (ML) and deep learning (DL) applications, regardless of the underlying computing environment.

This paper tries to explore key focus areas and document level of interest from industry, government, and academia in extending the NBDIF to develop scalable analytics as services that are reusable, deployable, and operational, regardless of the underlying computing environment.

# Use Cases for Analytic Services

Compile and organize use cases, analytic services from traditional statistical, AI/ML/DL, and emerging analytics application domains; identify and document technical requirements.

## Use Case #1: <title>

<text>

## Use Case #2: <title>

<text>

# Package Analytic Algorithms as Service Payloads

Package analytic algorithms with well-defined input and output parameters as service payloads that can be reusable, deployable, and operational across multi-cores, CPUs, and GPU computing platforms.

# Analytic Services Interfaces

Encapsulate service payload with well-defined format, interface, and end-to-end access control for open and secure computing environment.

# Resources Management

Provide resource management for application orchestration and workflow between processes.