1. Product name / version: DMX-h (a.k.a. DMExpress Hadoop) v 9.0
2. Primary contact for questions on this questionnaire: Ambrish Gandhi (Email:agandhi@syncsort.com)
3. Which technologies governed by the ODPi Runtime Specification does this application interoperate with?
   1. HDFS
   2. YARN
   3. MAPREDUCE
4. Which ODPicompliant distributions and versions did you test with? Hortonworks Data Platform 2.4.2
5. Please describe your application deployment and configuration process (if any). If the application lends itself to be managed by a tool compatible with ODPi Operations specification please make sure to use the appropriate tool.

[DMX-h](mk:@MSITStore:C:\Program%20Files\DMExpress\Programs\dmexpress.chm::/html/DMX-h.htm) needs to be to be installed on all the nodes of the Hadoop cluster.

Install DMX-h in the cluster using one of the following methods:

* Managed Methods - recommended for large clusters
  + [Apachi Ambari Service](mk:@MSITStore:C:\Program%20Files\DMExpress\Programs\dmexpress.chm::/html/Step_by_step_installation_on_a_Hadoop_cluster.htm#ambari) - Deploy the DMX-h Service Definition Package to the Ambari repository, then install DMX-h on the nodes in the cluster using the Ambari web interface (requires root/sudo privileges). Available as of Ambari 1.7.
  + [Red Hat Package Manager (RPM)](mk:@MSITStore:C:\Program%20Files\DMExpress\Programs\dmexpress.chm::/html/Step_by_step_installation_on_a_Hadoop_cluster.htm#rpm) – Deploy the RPM on all nodes in the cluster, then use the RPM to install DMX-h on all nodes in the cluster (requires root/sudo privileges).
* [Manual/Silent](mk:@MSITStore:C:\Program%20Files\DMExpress\Programs\dmexpress.chm::/html/Step_by_step_installation_on_a_Hadoop_cluster.htm#manual) – Install DMX-H on one node and replicate on all remaining nodes

The DMX-h Service (dmxd) needs to be installed on the edge (ETL) node for DMX-h Graphical User Interface (GUI) to submit jobs. When installing DMX-h using any of the managed methods, the DMX-h Service is not installed. See [Installing/Upgrading the DMX-h Service](mk:@MSITStore:C:\Program%20Files\DMExpress\Programs\dmexpress.chm::/html/Step_by_step_installation_on_a_Hadoop_cluster.htm#install_dmxd) for more detailed instructions.

1. Please describe your testing procedure you use to demonstrate compatibility and what passing results will be.

We have overnight regression tests which run on HDP 2.3.4 cluster exercising various integration points. Below are the high level scenarios

* Test command line and UI invocations
* Test various DMX-h ETL log formats
* Test simple and complex DMX-h ETL job
* Test with various data sources
* Test with various data sizes for input and output
* Test with various character encoding options (ASCII, EBCDIC, etc)
* Test with compressed/uncompressed data
* Test with various record formats (LF-terminated, fixed-length positional, header)
* Test with combinations of delimited and fixed-length positional data layouts for sources/targets
* Test Map-only jobs and Map-Reduce jobs
* Tests for installation with RPM and Ambari service
* Test with various DMX-h licenses
* HDFS Connectivity tests:
  + Read/Write files to HDFS – single and multiple files
  + Test for Browsing the HDFS file system
  + Switch between various remote file connections
  + Use relative and absolute paths, use paths with environment variables
  + Test with customized HTTP port for browsing
  + Licensing tests
  + Test with wildcards
  + Data sampling at design-time, from UI
  + Test with parallel partitioned load into HDFS
  + Use-case tests: Test HDFS connectivity in combination with DMX-h ETL features
  + Ingestion of Avro/Parquet Files to HDFS, cover all data types
* Test customer use cases:
  + Change Data Capture (CDC) with single and multiple outputs
  + ETL Joins – small and large sides, map side / reduce side
  + HDFS File lookups
  + Web Log Aggregation
  + Wordcount

1. What modifications did you make to your software or underlying configurations for each distribution in order for them to pass? None
2. Did you test with any ODPicompliant distributions that did not pass your interoperability tests? None
3. Did you notice any different behavior in your software or the underlying distributions when you ran your tests, whether or not you deemed the tests as passing? No
4. Which ODPicompliant distributions and versions do you provide support for in the deployment of your software? All