

Using NoSPA-RDF-Data-Cube-Validator

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Validating RDF data cube use NoSPA-RDF-Data-Cube-Validator

The NoSPA-RDF-Data-Cube-Validator is a standalone java implementation available at (<https://github.com/yyz1989/NoSPA-RDF-Data-Cube-Validator>). The jar file is available from (<https://github.com/yyz1989/NoSPA-RDF-Data-Cube-Validator/releases>).

The code below assumes the jar file is available at `/opt/NoSPA-RDF-Data-Cube-Validator-jar`.

The `cd` below in each code block is included because I could not find a quick way to get the code chunk executed in that directory. knitr is flexible enough to do it, I have not yet found the right way to do it. So, ignore the repeated `cd ..`

Integrity constraints check on DC-DM-sample.ttl

```
cd ../extdata/sample-rdf
java -jar /opt/NoSPA-RDF-Data-Cube-Validator-jar/nospa-rdf-data-cube-validator-0.9.9-jar-with-dependencies.jar
```

```
## ===NoSPA RDF Data Cube Validator===
## 2016-06-29 22:18:51,563 INFO - Loading cube file ...
## 2016-06-29 22:18:51,887 INFO - Normalizing cube at phase 1 ...
## 2016-06-29 22:18:51,894 INFO - Normalizing cube at phase 2 ...
## 2016-06-29 22:18:51,897 INFO - Validating all constraints ...
## 2016-06-29 22:18:51,897 INFO - Validating Integrity Constraint 1: Unique DataSet
## 2016-06-29 22:18:51,901 INFO - Validating Integrity Constraint 2: Unique DSD
## 2016-06-29 22:18:51,902 INFO - Validating Integrity Constraint 3: DSD Includes Measure
## 2016-06-29 22:18:51,903 INFO - Validating Integrity Constraint 4: Dimensions Have Range
## 2016-06-29 22:18:51,904 INFO - Validating Integrity Constraint 5: Concept Dimensions Have Code Lists
## 2016-06-29 22:18:51,905 INFO - Validating Integrity Constraint 6: Only Attributes May Be Optional
## 2016-06-29 22:18:51,906 INFO - Validating Integrity Constraint 7: Slice Keys Must Be Declared
## 2016-06-29 22:18:51,907 INFO - Validating Integrity Constraint 8: Slice Keys Consistent With DSD
## 2016-06-29 22:18:51,907 INFO - Validating Integrity Constraint 9: Unique Slice Structure
## 2016-06-29 22:18:51,908 INFO - Validating Integrity Constraint 10: Slice Dimensions Complete
## 2016-06-29 22:18:51,909 INFO - Validating Integrity Constraint 11: All Dimensions Required & Integrity
```

```
## 2016-06-29 22:18:51,910 INFO - Validating dataset http://www.example.org/dc/dm/ds/dataset-DM
## Validating observation 1 of 68
Validating observation 2 of 68
Validating observation 3 of 68
Validating observation 4 of 68
Validating observation 5 of 68
Validating observation 6 of 68
Validating observation 7 of 68
Validating observation 8 of 68
Validating observation 9 of 68
Validating observation 10 of 68
Validating observation 11 of 68
Validating observation 12 of 68
Validating observation 13 of 68
Validating observation 14 of 68
Validating observation 15 of 68
Validating observation 16 of 68
Validating observation 17 of 68
Validating observation 18 of 68
Validating observation 19 of 68
Validating observation 20 of 68
Validating observation 21 of 68
Validating observation 22 of 68
Validating observation 23 of 68
Validating observation 24 of 68
Validating observation 25 of 68
Validating observation 26 of 68
Validating observation 27 of 68
Validating observation 28 of 68
Validating observation 29 of 68
Validating observation 30 of 68
Validating observation 31 of 68
Validating observation 32 of 68
Validating observation 33 of 68
Validating observation 34 of 68
Validating observation 35 of 68
Validating observation 36 of 68
Validating observation 37 of 68
Validating observation 38 of 68
Validating observation 39 of 68
Validating observation 40 of 68
Validating observation 41 of 68
Validating observation 42 of 68
Validating observation 43 of 68
Validating observation 44 of 68
Validating observation 45 of 68
Validating observation 46 of 68
Validating observation 47 of 68
Validating observation 48 of 68
Validating observation 49 of 68
Validating observation 50 of 68
Validating observation 51 of 68
Validating observation 52 of 68
Validating observation 53 of 68
```

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Validating observation 54 of 68
Validating observation 55 of 68
Validating observation 56 of 68
Validating observation 57 of 68
Validating observation 58 of 68
Validating observation 59 of 68
Validating observation 60 of 68
Validating observation 61 of 68
Validating observation 62 of 68
Validating observation 63 of 68
Validating observation 64 of 68
Validating observation 65 of 68
Validating observation 66 of 68
Validating observation 67 of 68
Validating observation 68 of 68
2016-06-29 22:18:51,921 INFO - Validating Integrity Constraint 13: Required Attributes
## 2016-06-29 22:18:51,923 INFO - Validating Integrity Constraint 14: All Measures Present
## 2016-06-29 22:18:51,925 INFO - Validating Integrity Constraint 15: Measure Dimension Consistent & In
## 2016-06-29 22:18:51,926 INFO - Validating Integrity Constraint 17: All Measures Present In Measures I
## 2016-06-29 22:18:51,927 INFO - Validating Integrity Constraint 18: Consistent Dataset Links
## 2016-06-29 22:18:51,928 INFO - Validating Integrity Constraint 19: Codes From Code List
## 2016-06-29 22:18:51,941 INFO - Validating Integrity Constraint 20: Codes From Hierarchy & Integrity C
## 2016-06-29 22:18:51,943 INFO - The validation task completed in 386ms

```

Integrity constraints check on DC-AE-sample.ttl

```

cd ../extdata/sample-rdf
java -jar /opt/NoSPA-RDF-Data-Cube-Validator-jar/nospa-rdf-data-cube-validator-0.9.9-jar-with-dependencies.jar

## ===NoSPA RDF Data Cube Validator===
## 2016-06-29 22:18:52,247 INFO - Loading cube file ...
## 2016-06-29 22:18:52,901 INFO - Normalizing cube at phase 1 ...
## 2016-06-29 22:18:52,914 INFO - Normalizing cube at phase 2 ...
## 2016-06-29 22:18:52,921 INFO - Validating all constraints ...
## 2016-06-29 22:18:52,921 INFO - Validating Integrity Constraint 1: Unique DataSet
## 2016-06-29 22:18:52,942 INFO - Validating Integrity Constraint 2: Unique DSD
## 2016-06-29 22:18:52,943 INFO - Validating Integrity Constraint 3: DSD Includes Measure
## 2016-06-29 22:18:52,944 INFO - Validating Integrity Constraint 4: Dimensions Have Range
## 2016-06-29 22:18:52,945 INFO - Validating Integrity Constraint 5: Concept Dimensions Have Code Lists
## 2016-06-29 22:18:52,945 INFO - Validating Integrity Constraint 6: Only Attributes May Be Optional
## 2016-06-29 22:18:52,946 INFO - Validating Integrity Constraint 7: Slice Keys Must Be Declared
## 2016-06-29 22:18:52,947 INFO - Validating Integrity Constraint 8: Slice Keys Consistent With DSD
## 2016-06-29 22:18:52,948 INFO - Validating Integrity Constraint 9: Unique Slice Structure
## 2016-06-29 22:18:52,948 INFO - Validating Integrity Constraint 10: Slice Dimensions Complete
## 2016-06-29 22:18:52,949 INFO - Validating Integrity Constraint 11: All Dimensions Required & Integrity
## 2016-06-29 22:18:52,952 INFO - Validating dataset http://www.example.org/dc/ae/ds/dataset-AE
## Validating observation 1 of 1406
Validating observation 2 of 1406
Validating observation 3 of 1406
Validating observation 4 of 1406
Validating observation 5 of 1406
Validating observation 6 of 1406

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Validating observation 7 of 1406
Validating observation 8 of 1406
Validating observation 9 of 1406
Validating observation 10 of 1406
Validating observation 11 of 1406
Validating observation 12 of 1406
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Validating observation 14 of 1406
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2016-06-29 22:18:53,020 INFO - Validating Integrity Constraint 13: Required Attributes

2016-06-29 22:18:53,023 INFO - Validating Integrity Constraint 14: All Measures Present

2016-06-29 22:18:53,033 INFO - Validating Integrity Constraint 15: Measure Dimension Consistent & In

2016-06-29 22:18:53,034 INFO - Validating Integrity Constraint 17: All Measures Present In Measures I

```
## 2016-06-29 22:18:53,037 INFO - Validating Integrity Constraint 18: Consistent Dataset Links
## 2016-06-29 22:18:53,038 INFO - Validating Integrity Constraint 19: Codes From Code List
## 2016-06-29 22:18:53,105 INFO - Validating Integrity Constraint 20: Codes From Hierarchy & Integrity
## 2016-06-29 22:18:53,109 INFO - The validation task completed in 867ms
```

Integrity constraints check on DC-DEMO-sample.ttl

```
cd ../extdata/sample-rdf
java -jar /opt/NoSPA-RDF-Data-Cube-Validator-jar/nospa-rdf-data-cube-validator-0.9.9-jar-with-dependencies.jar
```

```
## ===NoSPA RDF Data Cube Validator===
## 2016-06-29 22:18:53,512 INFO - Loading cube file ...
## 2016-06-29 22:18:53,880 INFO - Normalizing cube at phase 1 ...
## 2016-06-29 22:18:53,887 INFO - Normalizing cube at phase 2 ...
## 2016-06-29 22:18:53,891 INFO - Validating all constraints ...
## 2016-06-29 22:18:53,891 INFO - Validating Integrity Constraint 1: Unique DataSet
## 2016-06-29 22:18:53,897 INFO - Validating Integrity Constraint 2: Unique DSD
## 2016-06-29 22:18:53,897 INFO - Validating Integrity Constraint 3: DSD Includes Measure
## 2016-06-29 22:18:53,898 INFO - Validating Integrity Constraint 4: Dimensions Have Range
## 2016-06-29 22:18:53,899 INFO - Validating Integrity Constraint 5: Concept Dimensions Have Code Lists
## 2016-06-29 22:18:53,900 INFO - Validating Integrity Constraint 6: Only Attributes May Be Optional
## 2016-06-29 22:18:53,901 INFO - Validating Integrity Constraint 7: Slice Keys Must Be Declared
## 2016-06-29 22:18:53,902 INFO - Validating Integrity Constraint 8: Slice Keys Consistent With DSD
## 2016-06-29 22:18:53,902 INFO - Validating Integrity Constraint 9: Unique Slice Structure
## 2016-06-29 22:18:53,903 INFO - Validating Integrity Constraint 10: Slice Dimensions Complete
## 2016-06-29 22:18:53,904 INFO - Validating Integrity Constraint 11: All Dimensions Required & Integrity
## 2016-06-29 22:18:53,905 INFO - Validating dataset http://www.example.org/dc/demo/ds/dataset-DEMO
## Validating observation 1 of 132
Validating observation 2 of 132
Validating observation 3 of 132
Validating observation 4 of 132
Validating observation 5 of 132
Validating observation 6 of 132
Validating observation 7 of 132
Validating observation 8 of 132
Validating observation 9 of 132
Validating observation 10 of 132
Validating observation 11 of 132
Validating observation 12 of 132
Validating observation 13 of 132
Validating observation 14 of 132
Validating observation 15 of 132
Validating observation 16 of 132
Validating observation 17 of 132
Validating observation 18 of 132
Validating observation 19 of 132
Validating observation 20 of 132
Validating observation 21 of 132
Validating observation 22 of 132
Validating observation 23 of 132
Validating observation 24 of 132
Validating observation 25 of 132
```

Validating observation 26 of 132
Validating observation 27 of 132
Validating observation 28 of 132
Validating observation 29 of 132
Validating observation 30 of 132
Validating observation 31 of 132
Validating observation 32 of 132
Validating observation 33 of 132
Validating observation 34 of 132
Validating observation 35 of 132
Validating observation 36 of 132
Validating observation 37 of 132
Validating observation 38 of 132
Validating observation 39 of 132
Validating observation 40 of 132
Validating observation 41 of 132
Validating observation 42 of 132
Validating observation 43 of 132
Validating observation 44 of 132
Validating observation 45 of 132
Validating observation 46 of 132
Validating observation 47 of 132
Validating observation 48 of 132
Validating observation 49 of 132
Validating observation 50 of 132
Validating observation 51 of 132
Validating observation 52 of 132
Validating observation 53 of 132
Validating observation 54 of 132
Validating observation 55 of 132
Validating observation 56 of 132
Validating observation 57 of 132
Validating observation 58 of 132
Validating observation 59 of 132
Validating observation 60 of 132
Validating observation 61 of 132
Validating observation 62 of 132
Validating observation 63 of 132
Validating observation 64 of 132
Validating observation 65 of 132
Validating observation 66 of 132
Validating observation 67 of 132
Validating observation 68 of 132
Validating observation 69 of 132
Validating observation 70 of 132
Validating observation 71 of 132
Validating observation 72 of 132
Validating observation 73 of 132
Validating observation 74 of 132
Validating observation 75 of 132
Validating observation 76 of 132
Validating observation 77 of 132
Validating observation 78 of 132
Validating observation 79 of 132

Validating observation 80 of 132
Validating observation 81 of 132
Validating observation 82 of 132
Validating observation 83 of 132
Validating observation 84 of 132
Validating observation 85 of 132
Validating observation 86 of 132
Validating observation 87 of 132
Validating observation 88 of 132
Validating observation 89 of 132
Validating observation 90 of 132
Validating observation 91 of 132
Validating observation 92 of 132
Validating observation 93 of 132
Validating observation 94 of 132
Validating observation 95 of 132
Validating observation 96 of 132
Validating observation 97 of 132
Validating observation 98 of 132
Validating observation 99 of 132
Validating observation 100 of 132
Validating observation 101 of 132
Validating observation 102 of 132
Validating observation 103 of 132
Validating observation 104 of 132
Validating observation 105 of 132
Validating observation 106 of 132
Validating observation 107 of 132
Validating observation 108 of 132
Validating observation 109 of 132
Validating observation 110 of 132
Validating observation 111 of 132
Validating observation 112 of 132
Validating observation 113 of 132
Validating observation 114 of 132
Validating observation 115 of 132
Validating observation 116 of 132
Validating observation 117 of 132
Validating observation 118 of 132
Validating observation 119 of 132
Validating observation 120 of 132
Validating observation 121 of 132
Validating observation 122 of 132
Validating observation 123 of 132
Validating observation 124 of 132
Validating observation 125 of 132
Validating observation 126 of 132
Validating observation 127 of 132
Validating observation 128 of 132
Validating observation 129 of 132
Validating observation 130 of 132
Validating observation 131 of 132
Validating observation 132 of 132

2016-06-29 22:18:53,921 INFO - Validating Integrity Constraint 13: Required Attributes


```
## 2016-06-29 22:18:53,922 INFO - Validating Integrity Constraint 14: All Measures Present
## 2016-06-29 22:18:53,924 INFO - Validating Integrity Constraint 15: Measure Dimension Consistent & In
## 2016-06-29 22:18:53,926 INFO - Validating Integrity Constraint 17: All Measures Present In Measures I
## 2016-06-29 22:18:53,927 INFO - Validating Integrity Constraint 18: Consistent Dataset Links
## 2016-06-29 22:18:53,927 INFO - Validating Integrity Constraint 19: Codes From Code List
## 2016-06-29 22:18:53,943 INFO - Validating Integrity Constraint 20: Codes From Hierarchy & Integrity C
## 2016-06-29 22:18:53,945 INFO - The validation task completed in 439ms
```

Display of the validation files

```
cd ../extdata/sample-rdf
cat validation_result_*.md
```

```
## RDF Cube Validation Result
## =====
##
## Validator: NoSPA
## Wed Jun 29 22:18:48 CEST 2016
## DC-DM-sample.ttl
##
## Integrity Constraint 1: Unique DataSet
## -----
##
## Pass.
##
## Integrity Constraint 2: Unique DSD
## -----
##
## Pass.
##
## Integrity Constraint 3: DSD Includes Measure
## -----
##
## Pass.
##
## Integrity Constraint 4: Dimensions Have Range
## -----
##
## Pass.
##
## Integrity Constraint 5: Concept Dimensions Have Code Lists
## -----
##
## Pass.
##
## Integrity Constraint 6: Only Attributes May Be Optional
## -----
##
## Pass.
##
## Integrity Constraint 7: Slice Keys Must Be Declared
## -----
```

```

##
## Pass.
##
## Integrity Constraint 8: Slice Keys Consistent With DSD
## -----
##
## Pass.
##
## Integrity Constraint 9: Unique Slice Structure
## -----
##
## Pass.
##
## Integrity Constraint 10: Slice Dimensions Complete
## -----
##
## Pass.
##
## Integrity Constraint 11: All Dimensions Required
## -----
##
## Pass.
##
## Integrity Constraint 12: No Duplicate Observations
## -----
##
## Pass.
##
## Integrity Constraint 13: Required Attributes
## -----
##
## Pass.
##
## Integrity Constraint 14: All Measures Present
## -----
##
## Pass.
##
## Integrity Constraint 15: Measure Dimension Consistent
## -----
##
## Pass.
##
## Integrity Constraint 16: Single Measure On Measure Dimension Observation
## -----
##
## Pass.
##
## Integrity Constraint 17: All Measures Present In Measures Dimension Cube
## -----
##
## Pass.
##
## Integrity Constraint 18: Consistent Dataset Links

```

```

## -----
##
## Pass.
##
## Integrity Constraint 19: Codes From Code List
## -----
##
## Pass.
##
## Integrity Constraint 20: Codes From Hierarchy
## -----
##
## Pass.
##
## Integrity Constraint 21: Codes From Hierarchy (Inverse)
## -----
##
## Pass.
##
## RDF Cube Validation Result
## =====
##
## Validator: NoSPA
## Wed Jun 29 22:18:49 CEST 2016
## DC-AE-sample.ttl
##
## Integrity Constraint 1: Unique DataSet
## -----
##
## Pass.
##
## Integrity Constraint 2: Unique DSD
## -----
##
## Pass.
##
## Integrity Constraint 3: DSD Includes Measure
## -----
##
## Pass.
##
## Integrity Constraint 4: Dimensions Have Range
## -----
##
## Pass.
##
## Integrity Constraint 5: Concept Dimensions Have Code Lists
## -----
##
## Pass.
##
## Integrity Constraint 6: Only Attributes May Be Optional
## -----
##

```

```

## Pass.
##
## Integrity Constraint 7: Slice Keys Must Be Declared
## -----
##
## Pass.
##
## Integrity Constraint 8: Slice Keys Consistent With DSD
## -----
##
## Pass.
##
## Integrity Constraint 9: Unique Slice Structure
## -----
##
## Pass.
##
## Integrity Constraint 10: Slice Dimensions Complete
## -----
##
## Pass.
##
## Integrity Constraint 11: All Dimensions Required
## -----
##
## Pass.
##
## Integrity Constraint 12: No Duplicate Observations
## -----
##
## Pass.
##
## Integrity Constraint 13: Required Attributes
## -----
##
## Pass.
##
## Integrity Constraint 14: All Measures Present
## -----
##
## Pass.
##
## Integrity Constraint 15: Measure Dimension Consistent
## -----
##
## Pass.
##
## Integrity Constraint 16: Single Measure On Measure Dimension Observation
## -----
##
## Pass.
##
## Integrity Constraint 17: All Measures Present In Measures Dimension Cube
## -----

```

```

##
## Pass.
##
## Integrity Constraint 18: Consistent Dataset Links
## -----
##
## Pass.
##
## Integrity Constraint 19: Codes From Code List
## -----
##
## Pass.
##
## Integrity Constraint 20: Codes From Hierarchy
## -----
##
## Pass.
##
## Integrity Constraint 21: Codes From Hierarchy (Inverse)
## -----
##
## Pass.
##
## RDF Cube Validation Result
## =====
##
## Validator: NoSPA
## Wed Jun 29 22:18:50 CEST 2016
## DC-DEMO-sample.ttl
##
## Integrity Constraint 1: Unique DataSet
## -----
##
## Pass.
##
## Integrity Constraint 2: Unique DSD
## -----
##
## Pass.
##
## Integrity Constraint 3: DSD Includes Measure
## -----
##
## Pass.
##
## Integrity Constraint 4: Dimensions Have Range
## -----
##
## Pass.
##
## Integrity Constraint 5: Concept Dimensions Have Code Lists
## -----
##
## Pass.

```

```

##
## Integrity Constraint 6: Only Attributes May Be Optional
## -----
##
## Pass.
##
## Integrity Constraint 7: Slice Keys Must Be Declared
## -----
##
## Pass.
##
## Integrity Constraint 8: Slice Keys Consistent With DSD
## -----
##
## Pass.
##
## Integrity Constraint 9: Unique Slice Structure
## -----
##
## Pass.
##
## Integrity Constraint 10: Slice Dimensions Complete
## -----
##
## Pass.
##
## Integrity Constraint 11: All Dimensions Required
## -----
##
## Pass.
##
## Integrity Constraint 12: No Duplicate Observations
## -----
##
## Pass.
##
## Integrity Constraint 13: Required Attributes
## -----
##
## Pass.
##
## Integrity Constraint 14: All Measures Present
## -----
##
## Pass.
##
## Integrity Constraint 15: Measure Dimension Consistent
## -----
##
## Pass.
##
## Integrity Constraint 16: Single Measure On Measure Dimension Observation
## -----
##

```

```

## Pass.
##
## Integrity Constraint 17: All Measures Present In Measures Dimension Cube
## -----
##
## Pass.
##
## Integrity Constraint 18: Consistent Dataset Links
## -----
##
## Pass.
##
## Integrity Constraint 19: Codes From Code List
## -----
##
## Pass.
##
## Integrity Constraint 20: Codes From Hierarchy
## -----
##
## Pass.
##
## Integrity Constraint 21: Codes From Hierarchy (Inverse)
## -----
##
## Pass.
##
## RDF Cube Validation Result
## =====
##
## Validator: NoSPA
## Wed Jun 29 22:18:51 CEST 2016
## DC-DM-sample.ttl
##
## Integrity Constraint 1: Unique DataSet
## -----
##
## Pass.
##
## Integrity Constraint 2: Unique DSD
## -----
##
## Pass.
##
## Integrity Constraint 3: DSD Includes Measure
## -----
##
## Pass.
##
## Integrity Constraint 4: Dimensions Have Range
## -----
##
## Pass.
##

```

```

## Integrity Constraint 5: Concept Dimensions Have Code Lists
## -----
##
## Pass.
##
## Integrity Constraint 6: Only Attributes May Be Optional
## -----
##
## Pass.
##
## Integrity Constraint 7: Slice Keys Must Be Declared
## -----
##
## Pass.
##
## Integrity Constraint 8: Slice Keys Consistent With DSD
## -----
##
## Pass.
##
## Integrity Constraint 9: Unique Slice Structure
## -----
##
## Pass.
##
## Integrity Constraint 10: Slice Dimensions Complete
## -----
##
## Pass.
##
## Integrity Constraint 11: All Dimensions Required
## -----
##
## Pass.
##
## Integrity Constraint 12: No Duplicate Observations
## -----
##
## Pass.
##
## Integrity Constraint 13: Required Attributes
## -----
##
## Pass.
##
## Integrity Constraint 14: All Measures Present
## -----
##
## Pass.
##
## Integrity Constraint 15: Measure Dimension Consistent
## -----
##
## Pass.

```



```

##
## Integrity Constraint 16: Single Measure On Measure Dimension Observation
## -----
##
## Pass.
##
## Integrity Constraint 17: All Measures Present In Measures Dimension Cube
## -----
##
## Pass.
##
## Integrity Constraint 18: Consistent Dataset Links
## -----
##
## Pass.
##
## Integrity Constraint 19: Codes From Code List
## -----
##
## Pass.
##
## Integrity Constraint 20: Codes From Hierarchy
## -----
##
## Pass.
##
## Integrity Constraint 21: Codes From Hierarchy (Inverse)
## -----
##
## Pass.
##
## RDF Cube Validation Result
## =====
##
## Validator: NoSPA
## Wed Jun 29 22:18:52 CEST 2016
## DC-AE-sample.ttl
##
## Integrity Constraint 1: Unique DataSet
## -----
##
## Pass.
##
## Integrity Constraint 2: Unique DSD
## -----
##
## Pass.
##
## Integrity Constraint 3: DSD Includes Measure
## -----
##
## Pass.
##
## Integrity Constraint 4: Dimensions Have Range

```

```

## -----
##
## Pass.
##
## Integrity Constraint 5: Concept Dimensions Have Code Lists
## -----
##
## Pass.
##
## Integrity Constraint 6: Only Attributes May Be Optional
## -----
##
## Pass.
##
## Integrity Constraint 7: Slice Keys Must Be Declared
## -----
##
## Pass.
##
## Integrity Constraint 8: Slice Keys Consistent With DSD
## -----
##
## Pass.
##
## Integrity Constraint 9: Unique Slice Structure
## -----
##
## Pass.
##
## Integrity Constraint 10: Slice Dimensions Complete
## -----
##
## Pass.
##
## Integrity Constraint 11: All Dimensions Required
## -----
##
## Pass.
##
## Integrity Constraint 12: No Duplicate Observations
## -----
##
## Pass.
##
## Integrity Constraint 13: Required Attributes
## -----
##
## Pass.
##
## Integrity Constraint 14: All Measures Present
## -----
##
## Pass.
##

```

```

## Integrity Constraint 15: Measure Dimension Consistent
## -----
##
## Pass.
##
## Integrity Constraint 16: Single Measure On Measure Dimension Observation
## -----
##
## Pass.
##
## Integrity Constraint 17: All Measures Present In Measures Dimension Cube
## -----
##
## Pass.
##
## Integrity Constraint 18: Consistent Dataset Links
## -----
##
## Pass.
##
## Integrity Constraint 19: Codes From Code List
## -----
##
## Pass.
##
## Integrity Constraint 20: Codes From Hierarchy
## -----
##
## Pass.
##
## Integrity Constraint 21: Codes From Hierarchy (Inverse)
## -----
##
## Pass.
##
## RDF Cube Validation Result
## =====
##
## Validator: NoSPA
## Wed Jun 29 22:18:53 CEST 2016
## DC-DEMO-sample.ttl
##
## Integrity Constraint 1: Unique DataSet
## -----
##
## Pass.
##
## Integrity Constraint 2: Unique DSD
## -----
##
## Pass.
##
## Integrity Constraint 3: DSD Includes Measure
## -----

```

```

##
## Pass.
##
## Integrity Constraint 4: Dimensions Have Range
## -----
##
## Pass.
##
## Integrity Constraint 5: Concept Dimensions Have Code Lists
## -----
##
## Pass.
##
## Integrity Constraint 6: Only Attributes May Be Optional
## -----
##
## Pass.
##
## Integrity Constraint 7: Slice Keys Must Be Declared
## -----
##
## Pass.
##
## Integrity Constraint 8: Slice Keys Consistent With DSD
## -----
##
## Pass.
##
## Integrity Constraint 9: Unique Slice Structure
## -----
##
## Pass.
##
## Integrity Constraint 10: Slice Dimensions Complete
## -----
##
## Pass.
##
## Integrity Constraint 11: All Dimensions Required
## -----
##
## Pass.
##
## Integrity Constraint 12: No Duplicate Observations
## -----
##
## Pass.
##
## Integrity Constraint 13: Required Attributes
## -----
##
## Pass.
##
## Integrity Constraint 14: All Measures Present

```

```

## -----
##
## Pass.
##
## Integrity Constraint 15: Measure Dimension Consistent
## -----
##
## Pass.
##
## Integrity Constraint 16: Single Measure On Measure Dimension Observation
## -----
##
## Pass.
##
## Integrity Constraint 17: All Measures Present In Measures Dimension Cube
## -----
##
## Pass.
##
## Integrity Constraint 18: Consistent Dataset Links
## -----
##
## Pass.
##
## Integrity Constraint 19: Codes From Code List
## -----
##
## Pass.
##
## Integrity Constraint 20: Codes From Hierarchy
## -----
##
## Pass.
##
## Integrity Constraint 21: Codes From Hierarchy (Inverse)
## -----
##
## Pass.

```

(This is not a very nice way to do it).