HP IT Executive Scorecard

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Windows ® operating system

Content Reference Guide for the Integration with the HP Network Node Manager

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NNM Data Source - Integration, Associated Context, KPIs, Metrics, and Data Lineage

This document describes the integration, contexts, KPIs, Metrics, data lineage, and reports associated with the integration with the HP Network Node Manager data source.

HP Network Node Manager (NNM) is an HP software product designed to aid network administration and to consolidate network management activities. Activities include the ongoing discovery of network nodes, monitoring events, and providing network fault management.

The NNMi series software contains a toolset to help you maintain a healthy network across your organization. NNMi can discover network nodes (such as switches and routers) on an ongoing basis, providing an up-to-date representation of the network topology.

Note: Information about the ALT data source and more general content issues are detailed in the *IT Executive Scorecard Content Reference Guide for the Integration of Alternate Data Sources*.

Data Lineage

For details on how to understand the data lineage graph, see Data Lineage in the *IT Executive Scorecard Content Reference Guide*

NNM Data Source

The purpose of the integration of NNM as a data source is to bring quality management information into the Data Warehouse.

To access:

Select **Admin > Data Source Management** then click **Add data source** and select **NNM** to activate the integration processes for the **NNM** data source



Learn More

Content Packs and their functionality

To learn about Content Packs and their functionality, see Data Source Management in the *IT Executive Scorecard Administrator Guide*.

Important Information

Note: The NNMstream does not have an automatic run_steps interval configured by default (Upstream has a five minute interval by default). Therefore you must manually schedule the NNMstream execution using the DW ABC Streams Management UI. A one minute interval is the recommended schedule. For details, see Stream Scheduler Dialog Box in the *IT Executive Scorecard Administrator Guide*.

- The NNM Content Pack supports multiple instances.
- **FBI Integration:** An extractor using the File Based Integration mechanism that extracts entities from the source and generates corresponding flat files. For details see File Based Integration (FBI) in the *IT Executive Scorecard Administrator Guide*.
- All fields are case-sensitive.

Tasks

Activate the Integration

1. **Prerequisite:**
   a. Create the following directories for the NNM stream using the following commands:
      - **mkdir c:\nnm\share**
        The share directory can be any directory in the network that you define. It must be defined as share on the Data Warehouse machine.
      - **mkdir c:\nnm\temp**
        The temp directory can be any directory in the network but must be defined as share with write/read authority on the Data Warehouse machine. It is used for any manipulation on the file from the share. At the end of the activation, the files are deleted from this directory.
      - **mkdir c:\nnm\archive**
        The archive directory is the last destination of the files from the share. The definition of this directory is the same as the share directory. At the end of activation, the files are moved from the share to the archive. It is recommended to put the archive directory on another disk, in order to avoid full disk storage.

        Check the *IT Executive Scorecard Support Matrix* for supported versions.

        Note:
        - Make sure there are no spaces in the names of the directories.
        - To prevent loss of the share files in case of a restart, create a batch file to insert into the startup menu, so that the share is renewed when the server restarts.
        - Make sure that the three directories are not nested.

   b. Make sure that Performance iSPI is configured on the NNM server or is connected to the NNM server.
   c. Configure the Performance iSPI as follows:

NNM version	Commands to run
NNM 9.1	Configure the Performance iSPI to generate hourly statistical files on Interface_Health (representing the network ports) and Component_Health (representing the network devices themselves) by running the following commands on the iSPI machine: ◦ **configurecsvexport.ovpl –p Interface_Health –a "SUMMARY, <full path to directory>"** ◦ **configurecsvexport.ovpl –p Component_Health –a "SUMMARY, <full path to directory>"**
NNM 9.2	Configure the Perfomance iSPI to generate daily statistical files on Interface_Health (representing the network ports) and Component_Health (representing the network devices themselves) by running the following commands on the iSPI machine:

NNM version	Commands to run
	◦ **configurecsvexport.ovpl –p Interface_Health –a "Day, <full path to directory>"** ◦ **configurecsvexport.ovpl –p Component_Health –a "Day, <full path to directory>"**

Where:

- **<full path to directory>** is the path to the directory where the reports will be stored and corresponds to the **Share** directory configured in the Data source management for NNMi .
- **configurecsvexport.ovpl** is a Perl script that tells the Performance iSPI to generate hourly or daily reports (this is the "SUMMARY" section) on both the Interface_Health and the Component_Health.

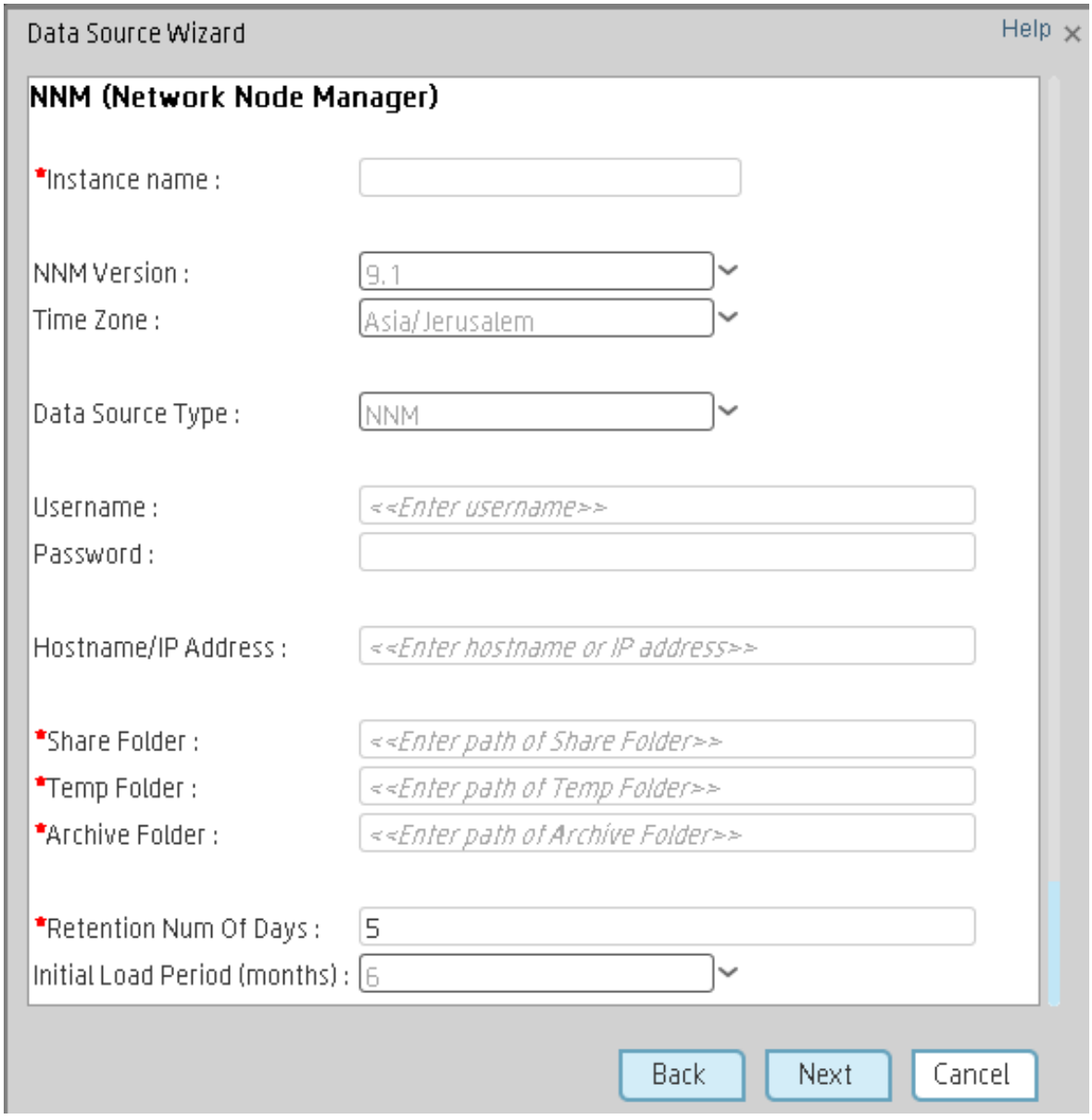
2. Select **Admin** > **Data Source Management** then click **Add data source**.
3. The Add Data Source page opens. Select the **NNM** data source type.
4. Select or enter the configuration parameters.
5. Click **Next** to proceed to the validation page.

- For an application upgrade: If NNM does not require a password to connect to the shared directory, (for example, when the shared directory resides on the local machine), you must edit the configuration settings after the upgrade and before NNM activation, as follows. In the Data Source Management page click **Edit Settings** and delete the value in the **Password** field. For details, see Data Source Management in the *IT Executive Scorecard Administrator Guide*.
- Upstream and NNM stream cannot be scheduled to run in parallel. The NNM stream can be scheduled to run every hour on the hour, and the Upstream to run on the half hour. For example, if the Upstream was scheduled to run at 00:00, reschedule it to run at 00:30.
- For advanced configuration of FBI Properties, File Based Integration (FBI) in the *IT Executive Scorecard Administrator Guide*.
- To perform configuration and activation tasks using the Automation tool, see The Automation Toolin the *IT Executive Scorecard Administrator Guide*.

UI Description

NNM Activation Page

Mandatory fields are marked with a red asterisk.



User interface elements are described below:

UI Element	Description
Instance	Enter a name for the data source instance you are activating.

UI Element	Description
name	
NNM Version	Select the relevant NNM version. For details, see the *IT Executive Scorecard Support Matrix*.
Time Zone	Select the time zone for the data source.
Data Source Type	NNM This parameter is read only.
Username	Enter your username used to log on to the NNM server.
Password	Enter your password used to log on to the NNM server.
Hostname/IP Address	The remote server on which the NNM server resides.
Share Folder	Where NNMi generates the NNM stream gzip files.
Temp Folder	Where the stream files are stored temporarily.
Archive Folder	Where the gzip files are archived after the data was extracted from them. It is recommended that this directory is stored on a separate machine because of the large file size.
Retention Num of Days	Select the number of days to save the data of the files in the temp tables of the database.
Initial Load Period (months)	Select the number of months from which you want the initial data loaded.

Permissions

NNMi activation requires at least Read-Only permissions on the shared directory between the NNMi and DWH.

Reference

List of Entities

List of Entities in Excel format

This document is available in the PDFs directory in the Installation DVD, is accessible from the Help Center page in the online Help Center (documentation library), or from the HP Software Product Manual Site (http://h20230.www2.hp.com/selfsolve/manuals).

NetworkNodeManager Context

HP Network Node Manager (NNM) is an HP software product designed to aid network administration and to consolidate network management activities. Activities include the ongoing discovery of network nodes, monitoring events, and providing network fault management.

The NNMi series software contains a toolset to help you maintain a healthy network across your organization. NNMi can discover network nodes (such as switches and routers) on an ongoing basis, providing an up-to-date representation of the network topology.

HP Network Node Manager is the data source used by this Context (universe).

This Context enables the creation of Breakdowns from Nodes to Services and from Nodes to Applications (but not from Services to Applications and vice versa).

To access:

In Executive Scorecard, click **Admin > Semantic Layer > Semantic Layer**. In the Context Management page, click **Launch Context Designer**. In the Context Designer page, click **Open an existing context**, and select the Context.



Tasks

"Display the Context" below

"Create a KPI based on the Node entity and break it down by service and/or application" below

Display the Context

1. In Executive Scorecard, click **Admin > Semantic Layer > Semantic Layer**. The Context Management page opens.
2. The list of out-of-the-box Contexts is displayed.
3. Click **Launch Context Designer**.
4. In the Context Designer page that opens, click **Open an existing context**.
5. Select the relevant Context.

   The structure of the Context is displayed.

For additional details about Context Designer, see Semantic Layer - Context Designer in the *IT Executive Scorecard Administrator Guide*.

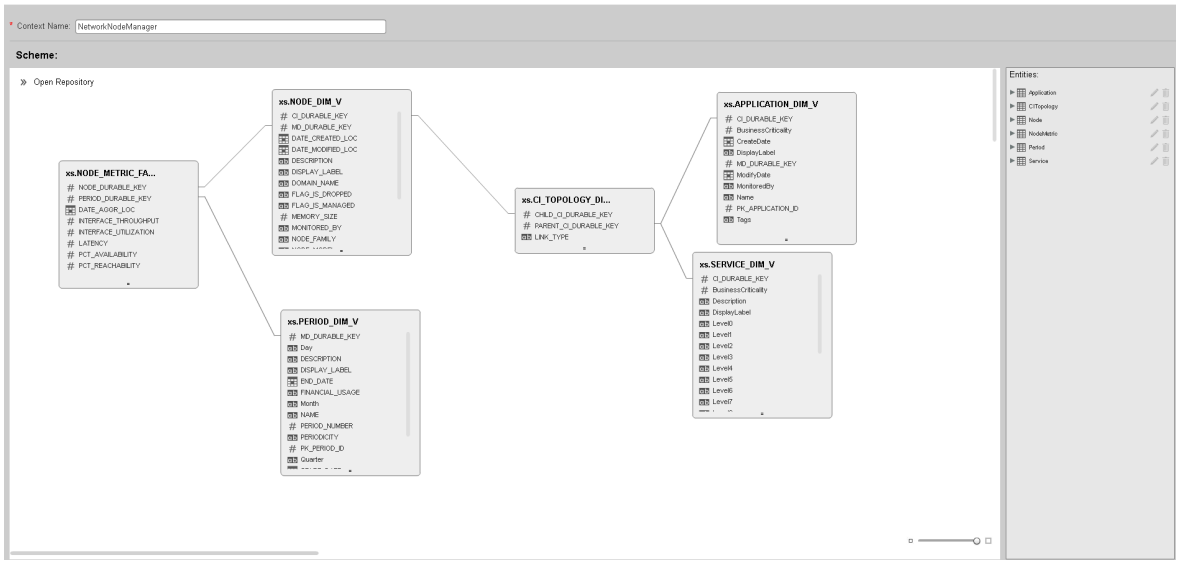
Create a KPI based on the Node entity and break it down by service and/or application

The Context includes the Node entity, so you can create a KPI based on that entity and then break it down by service and/or application.
Do not create a Service to Application drill down or an Application to Service drill down.

Reference

Context Tables and Structure

The context includes the following tables and relationships:



Statistics

Entity Count	Field Count	Table Count	Alias Count	Join Count
6	57	6		5

Model Structure

The table lists all the views and fields included in the model even when the corresponding objects have not been selected to be part of the corresponding Context.

Table Name	Name	Type
xs.APPLICATION_DIM_V	ApplicationID	numeric
xs.APPLICATION_DIM_V	CI_DURABLE_KEY	numeric
xs.APPLICATION_DIM_V	MD_DURABLE_KEY	numeric
xs.APPLICATION_DIM_V	MonitoredBy	nvarchar
xs.APPLICATION_DIM_V	Name	nvarchar
xs.CI_TOPOLOGY_DIM_V	CHILD_CI_DURABLE_KEY	numeric

Table Name	Name	Type
xs.CI_TOPOLOGY_DIM_V	LINK_TYPE	nvarchar
xs.CI_TOPOLOGY_DIM_V	PARENT_CI_DURABLE_KEY	numeric
XS.NODE_DIM_V	CI_DURABLE_KEY	numeric
XS.NODE_DIM_V	DATE_CREATED_LOC	datetime
XS.NODE_DIM_V	DATE_MODIFIED_LOC	datetime
XS.NODE_DIM_V	DESCRIPTION	nvarchar
XS.NODE_DIM_V	DISPLAY_LABEL	nvarchar
XS.NODE_DIM_V	DOMAIN_NAME	nvarchar
XS.NODE_DIM_V	FLAG_IS_DROPPED	nvarchar
XS.NODE_DIM_V	FLAG_IS_MANAGED	nvarchar
XS.NODE_DIM_V	MD_DURABLE_KEY	numeric
XS.NODE_DIM_V	MEMORY_SIZE	numeric
XS.NODE_DIM_V	MONITORED_BY	nvarchar
XS.NODE_DIM_V	NODE_FAMILY	nvarchar
XS.NODE_DIM_V	NODE_MODEL	nvarchar
XS.NODE_DIM_V	NODE_NAME	nvarchar
XS.NODE_DIM_V	NODE_ROLE	nvarchar
XS.NODE_DIM_V	OS	nvarchar
XS.NODE_DIM_V	OS_VENDOR	nvarchar
XS.NODE_DIM_V	TIME_ZONE	nvarchar
XS.NODE_DIM_V	VENDOR	nvarchar
XS.NODE_METRIC_FACT_V	DATE_AGGR_LOC	datetime
XS.NODE_METRIC_FACT_V	INTERFACE_THROUGHPUT	float
XS.NODE_METRIC_FACT_V	INTERFACE_UTILIZATION	float
XS.NODE_METRIC_FACT_V	LATENCY	float
XS.NODE_METRIC_FACT_V	NODE_DURABLE_KEY	numeric
XS.NODE_METRIC_FACT_V	PCT_AVAILABILITY	float

Table Name	Name	Type
XS.NODE_METRIC_FACT_V	PCT_REACHABILITY	float
XS.NODE_METRIC_FACT_V	PERIOD_DURABLE_KEY	numeric
XS.PERIOD_DIM_V	Day	nvarchar
XS.PERIOD_DIM_V	DESCRIPTION	nvarchar
XS.PERIOD_DIM_V	DISPLAY_LABEL	nvarchar
XS.PERIOD_DIM_V	END_DATE	datetime
XS.PERIOD_DIM_V	FINANCIAL_USAGE	nvarchar
XS.PERIOD_DIM_V	MD_DURABLE_KEY	numeric
XS.PERIOD_DIM_V	Month	nvarchar
XS.PERIOD_DIM_V	NAME	nvarchar
XS.PERIOD_DIM_V	PERIODICITY	nvarchar
XS.PERIOD_DIM_V	PERIOD_NUMBER	numeric
XS.PERIOD_DIM_V	Quarter	nvarchar
XS.PERIOD_DIM_V	START_DATE	datetime
XS.PERIOD_DIM_V	Week	nvarchar
XS.PERIOD_DIM_V	Year	nvarchar
XS.PERIOD_DIM_V	Year_Number	numeric
xs.SERVICE_DIM_V	BusinessCriticality	numeric
xs.SERVICE_DIM_V	CI_DURABLE_KEY	numeric
xs.SERVICE_DIM_V	Description	nvarchar
xs.SERVICE_DIM_V	DisplayLabel	nvarchar
xs.SERVICE_DIM_V	Level0	nvarchar
xs.SERVICE_DIM_V	Level1	nvarchar
xs.SERVICE_DIM_V	Level2	nvarchar
xs.SERVICE_DIM_V	Level3	nvarchar
xs.SERVICE_DIM_V	Level4	nvarchar
xs.SERVICE_DIM_V	Level5	nvarchar

Table Name	Name	Type
xs.SERVICE_DIM_V	Level6	nvarchar
xs.SERVICE_DIM_V	Level7	nvarchar
xs.SERVICE_DIM_V	Level8	nvarchar
xs.SERVICE_DIM_V	Level9	nvarchar
xs.SERVICE_DIM_V	MANAGER_DURABLE_KEY	numeric
xs.SERVICE_DIM_V	MD_DURABLE_KEY	numeric
xs.SERVICE_DIM_V	Name	nvarchar
xs.SERVICE_DIM_V	State	nvarchar
xs.SERVICE_DIM_V	Type	nvarchar

Object List

The table lists all the entities and fields of the model that were selected to be part of the Context.

Entity Name	Field Name	Source Table Name	Alias Table Name	DB Column Name	Field Type
Application	ApplicationID	xs.APPLICATION_DIM_V		ApplicationID	NUMERIC
Application	MonitoredBy	xs.APPLICATION_DIM_V		MonitoredBy	STRING
Application	Name	xs.APPLICATION_DIM_V		Name	STRING
CITopology	LINK_TYPE	xs.CI_TOPOLOGY_DIM_V		LINK_TYPE	STRING
Node	CreateTime	XS.NODE_DIM_V		DATE_CREATED_LOC	DATE
Node	Description	XS.NODE_DIM_V		DESCRIPTION	STRING
Node	DisplayLabel	XS.NODE_DIM_V		DISPLAY_LABEL	STRING
Node	DomainName	XS.NODE_DIM_V		DOMAIN_NAME	STRING
Node	Family	XS.NODE_DIM_V		NODE_FAMILY	STRING
Node	IsDropped	XS.NODE_DIM_V		FLAG_IS_	STRING

Entity Name	Field Name	Source Table Name	Alias Table Name	DB Column Name	Field Type
				DROPPED	
Node	IsManaged	XS.NODE_DIM_V		FLAG_IS_ MANAGED	STRING
Node	LastModifiedTime	XS.NODE_DIM_V		DATE_ MODIFIED_LOC	DATE
Node	MemorySize	XS.NODE_DIM_V		MEMORY_SIZE	NUMERIC
Node	Model	XS.NODE_DIM_V		NODE_MODEL	STRING
Node	MonitoredBy	XS.NODE_DIM_V		MONITORED_BY	STRING
Node	Name	XS.NODE_DIM_V		NODE_NAME	STRING
Node	Os	XS.NODE_DIM_V		OS	STRING
Node	OsVendor	XS.NODE_DIM_V		OS_VENDOR	STRING
Node	Role	XS.NODE_DIM_V		NODE_ROLE	STRING
Node	TimeZone	XS.NODE_DIM_V		TIME_ZONE	STRING
Node	Vendor	XS.NODE_DIM_V		VENDOR	STRING
NodeMetric	AggregationDate	XS.NODE_ METRIC_FACT_V		DATE_AGGR_ LOC	DATE
NodeMetric	Availability	XS.NODE_ METRIC_FACT_V		PCT_ AVAILABILITY	NUMERIC
NodeMetric	InterfaceThroughput	XS.NODE_ METRIC_FACT_V		INTERFACE_ THROUGHPUT	NUMERIC
NodeMetric	InterfaceUtilization	XS.NODE_ METRIC_FACT_V		INTERFACE_ UTILIZATION	NUMERIC
NodeMetric	Latency	XS.NODE_ METRIC_FACT_V		LATENCY	NUMERIC
NodeMetric	Reachability	XS.NODE_ METRIC_FACT_V		PCT_ REACHABILITY	NUMERIC
Period	Day	XS.PERIOD_DIM_ V		Day	STRING
Period	Description	XS.PERIOD_DIM_ V		DESCRIPTION	STRING

Entity Name	Field Name	Source Table Name	Alias Table Name	DB Column Name	Field Type
Period	DisplayLabel	XS.PERIOD_DIM_V		DISPLAY_LABEL	STRING
Period	EndDate	XS.PERIOD_DIM_V		END_DATE	DATE
Period	FinancialUsage	XS.PERIOD_DIM_V		FINANCIAL_USAGE	STRING
Period	Month	XS.PERIOD_DIM_V		Month	STRING
Period	Name	XS.PERIOD_DIM_V		NAME	STRING
Period	Periodicity	XS.PERIOD_DIM_V		PERIODICITY	STRING
Period	PeriodNumber	XS.PERIOD_DIM_V		PERIOD_NUMBER	NUMERIC
Period	Quarter	XS.PERIOD_DIM_V		Quarter	STRING
Period	StartDate	XS.PERIOD_DIM_V		START_DATE	DATE
Period	Week	XS.PERIOD_DIM_V		Week	STRING
Period	Year	XS.PERIOD_DIM_V		Year	STRING
Period	YearNumber	XS.PERIOD_DIM_V		Year_Number	NUMERIC
Service	BusinessCriticality	xs.SERVICE_DIM_V		BusinessCriticality	NUMERIC
Service	Description	xs.SERVICE_DIM_V		Description	STRING
Service	DisplayLabel	xs.SERVICE_DIM_V		DisplayLabel	STRING
Service	Level0	xs.SERVICE_DIM_V		Level0	STRING
Service	Level1	xs.SERVICE_		Level1	STRING

Entity Name	Field Name	Source Table Name	Alias Table Name	DB Column Name	Field Type
		DIM_V			
Service	Level2	xs.SERVICE_ DIM_V		Level2	STRING
Service	Level3	xs.SERVICE_ DIM_V		Level3	STRING
Service	Level4	xs.SERVICE_ DIM_V		Level4	STRING
Service	Level5	xs.SERVICE_ DIM_V		Level5	STRING
Service	Level6	xs.SERVICE_ DIM_V		Level6	STRING
Service	Level7	xs.SERVICE_ DIM_V		Level7	STRING
Service	Level8	xs.SERVICE_ DIM_V		Level8	STRING
Service	Level9	xs.SERVICE_ DIM_V		Level9	STRING
Service	Name	xs.SERVICE_ DIM_V		Name	STRING
Service	State	xs.SERVICE_ DIM_V		State	STRING
Service	Type	xs.SERVICE_ DIM_V		Type	STRING

% of Managed Nodes KPI

Component Type	KPI
Business Questions	Reduce the risk by increasing the percentage of managed Devices. Breakdown by Node Role: servers, network devices and storage devices.
Business Objective	Increase Compliance
Description	The number of managed nodes relative to the total number of nodes.
Context	PolicyCompliance
Data source	SA, NA, UCMDB, DP, IC, NNM
Formula	PERCENTAGE(Node,Node.IsManaged='Y', Node.Name <> 'INVALID' And Node.Name <> 'UNKNOWN')
KPI Formula Filter	N/A
Unit Type	%
Time Period	Monthly
Direction	Maximize
Thresholds	0 to 50 | 50 to 75 | 75 to 100
Release	9.03

% of Network Devices with Availability Issues

Component Type	KPI
Business Questions	The motivation for measuring this KPI is to get better insight into the overall availability of the network devices. It is required to measure the availability by planned and unplanned downtime. Need to be measured by: • Organization, Location, Provider. • Network service provider\Vendors, DataCenter LAN, Application, Services. • Infra services modeled in NMC.
Business Objective	Improve Customer Satisfaction
Description	The number of network devices with availability issues during the measurement period, relative to the total number of devices.
Context	NetworkNodeManager
Data source	NNM
Formula	PERCENTAGE_MATH(COUNT_DISTINCT(Node.Name, NodeMetric.Availability <1 And Node.IsDropped='N' And PERIOD_ENTITY=Period), COUNT_DISTINCT (Node.Name,Node.IsDropped='N' And PERIOD_ENTITY=Period),0)
KPI Formula Filter	N/A
Unit Type	%
Time Period	Monthly

Direction	Minimize
Thresholds	0 to 10 | 10 to 30 | 30 to 100
Release	9.02

% of Network Devices with Reachability Issues KPI

Component Type	KPI
Business Questions	The motivation for measuring this KPI is to get better insight into the overall reachability of the network devices. The assumption is that there is no tolerance for any network reachability outages as they might impact more than one service or application. Counts all unreachable network devices. Need to be measured by: • Organization, Location, Provider • Network service provider\Vendors (A NSP can deliver network monitoring to several tenants), DataCenter LAN, Application, Services • Infra services modeled in NMC.
Business Objective	Improve Customer Satisfaction
Description	The number of network devices with reachability issues during the measurement period, relative to the total number of network devices.
Context	NetworkNodeManager
Data source	NNM
Formula	PERCENTAGE_MATH(COUNT_DISTINCT(Node.Name,NodeMetric.Reachability<1 And Node.IsDropped='N' And PERIOD_ENTITY=Period), COUNT_DISTINCT (Node.Name,Node.IsDropped='N' And PERIOD_ENTITY=Period),0)
KPI Formula Filter	N/A
Unit Type	%
Time Period	Monthly

Direction	Minimize
Thresholds	0 to 5 | 5 to 50 | 50 to 100
Release	9.02

% of Nodes with Compliance Issues KPI

Component Type	KPI
Business Questions	Make sure our node compliance procedures are efficient.
Business Objective	Increase Compliance
Description	The number of nodes that were not compliant during the KPI Period relative to the total number of nodes.
Context	PolicyCompliance
Data source	SA, NA, DP, UCMDB, NNM, IC
Formula	PERCENTAGE_MATH(COUNT_DISTINCT(Node.Name, PolicyResult.ComplianceStatus='In_breach' AND Node.IsDropped ='N' AND PolicyResult.ComputedResultDate IN_PERIOD), COUNT_DISTINCT (Node.Name,Node.IsDropped ='N' AND PolicyResult.ComputedResultDate IN_PERIOD),0)
KPI Formula Filter	N/A
Unit Type	%
Time Period	Monthly
Direction	Minimize
Thresholds	0 to 10 | 10 to 25 | 25 to 100
Release	9.03

% of Utilization of Network Devices KPI

Component Type	KPI
Business Questions	The motivation for measuring this KPI is to receive an accurate measurement of the utilization rate of network devices. If the network devices are not utilized enough, it can provide a cost reduction opportunity. If they are over-utilized, it can imply that further investment is required. Need to be measured by: • Organization, Location, Provider. • Network service provider\Vendors (A NSP can deliver network monitoring to several tenants), DataCenter LAN, Application, Services. • Infra services modeled in NMC.
Business Objective	Reduce Cost
Description	The rate of utilization of network devices.
Context	NetworkNodeManager
Data source	NNM
Formula	AVG(NodeMetric.InterfaceUtilization , Node.IsDropped='N' And PERIOD_ENTITY=Period And NodeMetric.InterfaceUtilization >=0) *100
KPI Formula Filter	N/A
Unit Type	%
Time Period	Monthly

Direction	Centralize
Thresholds	0 - 5 | 5 -10 | 10-35 | 35-70 | 70 - 100
Release	9.02

Average Throughput of Network Devices KPI

Component Type	KPI
Business Questions	The motivation for measuring this KPI is to receive an average measurement of the throughput of network devices. If the network devices are not utilized enough, it can provide a cost reduction opportunity. The best utilization of the network devices is represented by a KPI value that is as high as possible. Need to be measured by: • Organization, Location, Provider • Network service provider\Vendors (A NSP can deliver network monitoring to several tenants), DataCenter LAN, Application, Services • Infra services modeled in NMC.
Business Objective	Reduce Cost
Description	The average rate of the throughput of network devices.
Context	NetworkNodeManager
Data source	NNM
Formula	AVG(NodeMetric.InterfaceThroughput ,Node.IsDropped='N' And PERIOD_ENTITY=Period and NodeMetric.InterfaceThroughput>=0)
KPI Formula Filter	N/A
Unit Type	BPS
Time Period	Monthly

Direction	Maximize
Thresholds	0 to 100 | 100 to 300 | >300
Release	9.02

Network Latency KPI

Component Type	KPI
Business Questions	The motivation for measuring this KPI is to get a high level reporting on the latency of the network by measuring the network baseline performance anomalies. Network latency should be in the context of location or data center. The trend of anomalies to be measured is: Time to anomaly (days/hours until breach).This KPI needs to be measured by: • Organization, Location, Provider • Network service provider\Vendors, Data Center LAN, Application, Services • Infra services modeled in NMC.
Business Objective	Improve Customer Satisfaction
Description	The latency of the network represents delays typically incurred in the processing of network data. A low latency network connection is one that generally experiences small delay times, while a high latency connection generally suffers from long delays.
Context	NetworkNodeManager
Data source	NNM
Formula	AVG(NodeMetric.Latency ,Node.IsDropped='N' And PERIOD_ENTITY=Period)
KPI Formula Filter	N/A
Unit Type	MS
Time Period	Monthly
Direction	Minimize

Thresholds	0 to 1 | 1 to 2 | 2 to 10
Release	9.02

Number of Servers Being Backed Up KPI

Component Type	KPI
Business Questions	Make sure our backup procedures are efficient.
Business Objective	Reduce Risk
Description	The number of servers being backed up
Context	DataProtection
Data source	DP, NA, UCMDB, NNM, IC, SA
Formula	COUNT_DISTINCT(Node.Name, Backup.Status = 'success')
KPI Formula Filter	N/A
Unit Type	Number
Time Period	Monthly
Direction	Maximize
Thresholds	0 to 50 | 50 to 75 | 75 to 100
Release	9.03

Number of Servers with Non-Encrypted Backup Data KPI

Component Type	KPI
Business Questions	Make sure our backup procedures are efficient.
Business Objective	Reduce Risk
Description	The total number of servers in the organization that have non-encrypted backup data.
Context	DataProtection
Data source	DP, UCMDB, NNM, NA
Formula	COUNT_DISTINCT(Backup.Node, Backup.Status = 'success' and BackupPolicy.IsEncrypted = 'N')
KPI Formula Filter	N/A
Unit Type	Numbers
Time Period	Monthly
Direction	Maximize
Thresholds	
Release	9.03

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