IBM
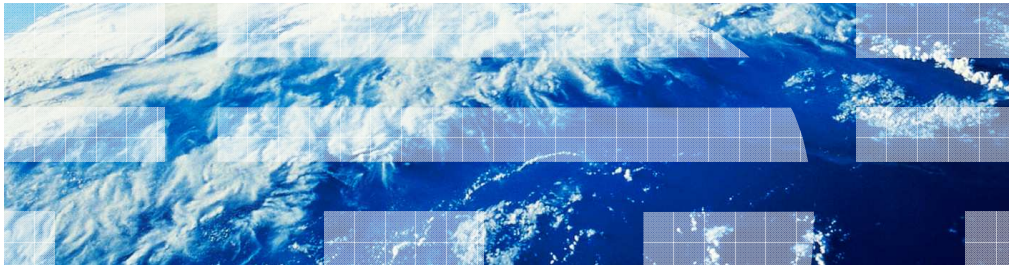
IBM Tivoli Netcool Performance Manager for Wireless 9.2.1

Terminology

Tivoli software

IBM Tivoli® Netcool® Performance Manager for Wireless version 9.2.1

Terminology

Assumptions

You have basic knowledge of the wireless telecommunications industry.

Objectives

- Upon completion of this module, you should be able to define the following terms:
  - Entity and metric terms
    - Entities
    - Network configuration
    - Attribute
    - Perspective
    - Peg counter
    - Primitive calculations
    - User-defined calculations
    - Stored summaries
    - Busy hours
    - Sliding busy hour

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Objectives

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Busy hours

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Objectives (continued)

TNPMW component terms

Gateway

Loader

Loader Input File (LIF)

Global Object Model (GOM)

Technology Pack

Report types

Non-stored busy hour reports

Stored busy hour (SBH) reports

Roll-up reports

Trending and forecasting reports

Module outline

- Overview
- IBM Tivoli Netcool Performance Manager for Wireless 9.2.1 Terminology
- Summary

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Module outline

Overview

IBM Tivoli Netcool Performance Manager for Wireless (ITNPMW) version 9.2.1 Terminology

Summary

Overview

- This IBM Tivoli Netcool Performance Manager for Wireless 9.2.1 Module defines terminology that system users should become very familiar with.
- The terms defined in this module are grouped in three categories
    – Entity and metric terms
    – IBM Tivoli Netcool Performance Manager for Wireless component terms
    – Report types

Terminology

Overview

This IBM Tivoli Netcool Performance Manager for Wireless (ITNPMW) 9.2.1 Module defines terminology that system users should become very familiar with.

The terms defined in this module are grouped in three categories

Entity and metric terms

ITNPMW component terms

Report types

Entities

- IBM Tivoli Netcool Performance Manager for Wireless *entities* are network elements such as cells, MSCs, and BSCs
- Report output displays entity information based on the **Group By** selection
- Report output can display metrics based on the focal entity selection (for example, cell) or grouped to a parent entity of the focal entity (for example, the BSC over a cell)

Terminology

Entities

IBM Tivoli Netcool Performance Manager for Wireless (ITNPMW) entities are network elements such as cells, MSCs, and BSCs.

ITNPMW report output displays entity information based on the **Group By** selection.

ITNPMW report output can display metrics based on the focal entity selection (for example, cell) or grouped to a parent entity of the focal entity (for example, the BSC over a cell).

Network configuration (NC)

- **Network configuration** (NC) data represents information about the network elements (BSCs, cells, and so on) found in the service provider's wireless network
- IBM Tivoli Netcool Performance Manager for Wireless refers to NC data as attributes in the user interface
- Database tables store the NC data

Terminology

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Network configuration (NC) data represents information about the network elements (BSCs, cells, and so on) found in the service provider's wireless network.

ITNPMW refers to NC data as attributes in the user interface.

Database tables store the NC data.

Attributes

Attributes are key characteristics of a network entity.

Examples are:

Primary ID

Location

Name

Label

Technology

Parent ID

Vendor

Perspectives

- **Perspectives** are used to hierarchically organize a subset of entity types based on a number of attributes:
  - Technology
  - Vendor
  - Subsystem
  - Qualifier

Terminology

Perspectives

Perspectives are used to hierarchically organize a subset of entity types based on a number of attributes:

Technology : Such as GSM or UMTS

Vendor: Such as Nokia or Ericsson

Subsystem: Such as Cell or BSC

and

Qualifier

The vendors, technologies, subsystems, and qualifiers that are available depend the network configurations used in your system. **Qualifiers** are attributes that are not necessarily linked to technologies, subsystems, or vendors. They are used to represent other aspects of a network, such as geographical organization.

Peg counter (PEG)

- A **peg counter** is the most basic type of field. *PEG* is used in IBM Tivoli Netcool Performance Manager for Wireless as an abbreviation for *peg counter*
- Service providers might refer to peg counters as fields, metrics, or key performance indicators (KPIs)
- Peg counters can be combined to create either a primitive calculation (PCalc) or a user-defined calculation (UDC)

Terminology

Peg counter (PEG)

A peg counter is the most basic type of ITNPMW field. *PEG* is used in ITNPMW as an abbreviation for *peg counter*.

Service providers might refer to peg counters as fields, metrics, or key performance indicators (KPIs).

ITNPMW peg counters can be combined to create either a primitive calculation (Pcalc) or a user-defined calculation (UDC).

Primitive calculation (PCalc)

- A primitive calculation is a mathematical expression that can be based on:
  - One or more peg counts
  - Other PCalcs available within IBM Tivoli Netcool Performance Manager for Wireless

Terminology

Primitive calculation (PCalc)

A ***primitive calculation*** is a mathematical expression that can be based on:

One or more peg counts

Other PCalcs available within ITNPMW

- A user-defined calculation is a user-created field made from any or all of the following items:
  – Peg counter
  – PCalc
  – Other UDC
  – Algebraic functions

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User-defined calculation (UDC)

A *user-defined calculation* is a user-created field made from any or all of the following items:

Peg counter

PCalc

Other UDC

Algebraic functions

Stored summary

A ***stored summary*** contains network performance data aggregated for a day, week, or month and stored in the database as a traffic field

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Busy hour

- A **busy hour** represents the hourly period with the greatest value for a performance metric for a defined period of time
- The defined period of time can be daily, weekly, monthly, or yearly, depending upon the report type and the selection from the **Group By** menu
- IBM Tivoli Netcool Performance Manager for Wireless can be configured to store busy hour information or compute busy hours (non-stored) during report generation

Terminology

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 ITNPMW can be configured to store busy hour information or compute busy hours (non-stored) during report generation.

Sliding busy hour

- A ***sliding busy hour*** is a busy hour that is calculated based on the busiest hour of the day across intervals other than hourly boundaries
- The default interval for sliding busy hours is 15 minutes. Using this interval, a sliding busy hour can start at any 15-minute interval of an hour and extend thereafter for 60 minutes. For example, from 10:15 to 11:15 or 10:30 to 11:30

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Gateway

- A *gateway* is the mediation component of an IBM Tivoli Netcool Performance Manager for Wireless system
- A gateway picks up raw performance data collected from the network, parses it, and produces Loader Input Files (LIFs)

Terminology

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Loader Input Files (LIFs)

- **Loader Input Files** (LIFs) are produced by a gateway; they contain raw performance data and hierarchy information in a standard text format
- The file extension is .lif

Terminology

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The loader is the component of the IBM Tivoli Netcool Performance Manager for Wireless that parses Loader Input Files (LIFs) and inserts the data into performance tables within the IBM Tivoli Netcool Performance Manager for Wireless database

Terminology

Loader

The loader is the component of the ITNPMW that parses Loader Input Files (LIFs) and inserts the data into performance tables within the ITNPMW database.

Global Object Model (GOM)

 The **Global Object Model** (GOM) is designed to define a base set of vendor-neutral objects that can be reused across technologies and vendors.

 A GOM Technology Pack is a small technology pack that contains only vendor-neutral objects.

Technology Pack

- A Technology Pack is an application package designed for use with Tivoli Netcool Performance Manager for Wireless
- A Technology pack delivers technology-related performance management functions
  – Example: Global Systems for Mobile Communications (GSM)
- A Technology Pack can be designed to deliver vendor-specific performance management metrics and objects
  – Example: Ericsson GSM
- A Technology Pack is deployed on the core IBM Tivoli Netcool Performance Manager for Wireless application platform. A Technology Pack can be configured to use essential core functions to collect and present wireless information specific to vendors and technology

Technology Pack

A **_Technology Pack_** is an application package designed for use with Tivoli Netcool Performance Manager for Wireless (TNPMW).

A Technology pack delivers technology-related performance management functions

Example: Global Systems for Mobile Communications (GSM)

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Example: Ericsson GSM

A Technology Pack is deployed on the core TNPMW application platform. A Technology Pack can be configured to use essential core functions to collect and present wireless information specific to vendors and technology.

Non-stored busy hour reports

- Non-stored busy hours are calculated at the time of report generation. They are recommended for instances when none of the available stored busy hour report information meets your specific requirements
- In contrast to non-stored busy hour reporting, a stored busy hour report is usually updated nightly for every 24-hour period. Upon generation, the stored busy hour report data is saved in a database table for future reference

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Stored busy hour (SBH) reports

- IBM Tivoli Netcool Performance Manager for Wireless stored busy hour reports are calculated for a day, week, or month based on a designated busy hour determiner
- The busy hour is computed by a busy hour agent on a daily basis for the previous daily, weekly, or monthly period
- Upon generation, the stored busy hour data is stored as traffic data values within stored busy hour database tables for use in reports

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ITNPMW stored busy hour reports are calculated for a day, week, or month based on a designated busy hour determiner.

The busy hour is computed by a busy hour agent on a daily basis for the previous daily, weekly, or monthly period.

Upon generation, the stored busy hour data is stored as traffic data values within stored busy hour database tables for use in reports.

Roll-up reports

Roll-up reports contain granular report information that has been aggregated based on the report definition **Group By** options.

The roll-ups can be defined in two dimensions: time and attribute.

Granular time period traffic data can be rolled up in reports to generate a report covering a larger unit of time.

Granular network element traffic data can also be rolled up in reports to generate a report covering network elements at a higher level of the system hierarchy.

Trending and forecasting reports

- Trending reports are used to forecast the value of a KPI at a specific point in the future based on a historical set of busy hour values. IBM Tivoli Netcool Performance Manager for Wireless can use historical stored busy hour values to create a regression line that forecasts future network performance and availability

- Trend (also referred to as forecast) reports use user-defined calculations (UDCs) based on trending functions

- Two kinds of trending analysis can be used:
  - Trend is used to predict what value a KPI will have at a period of time in the future.
  - projectTime is used to project when a KPI will reach a particular limit

Terminology

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Trend is used to predict what value a KPI will have at a period of time in the future.

projectTime is used to project when a KPI will reach a particular limit.

Summary

Now that you have completed this module, you should be able to define the following terms:

Entity and metric terms

Entities

Network configuration

Attribute

Perspectives

Peg counter

Primitive calculations

User-defined calculations

Stored summaries

Busy hour

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Summary (continued)

- Now that you have completed this module, you should be able to define the following terms:
  - IBM Tivoli Netcool Performance Manager for Wireless component terms
    - Gateway
    - Loader
    - Loader Input File (LIF)
    - Global Object Model (GOM)
    - Technology Pack
  - Report types
    - Non-stored busy hour reports
    - Stored busy hour (SBH) reports
    - Roll-up reports
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Training roadmap for IBM Tivoli Netcool Performance Manager for Wireless

- Click this link to go to the training page
  http://www-01.ibm.com/software/tivoli/education/edu_prd.html
- Click the link for the section on
  IBM Tivoli Netcool Performance Manager for Wireless

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Training roadmap for IBM Tivoli Netcool Performance Manager for Wireless

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