IBM

IBM Tivoli Monitoring for Network Performance, Version 2.1

Warehouse Enablement Pack, Version 1.1.0

Implementation Guide

For Tivoli Data Warehouse, Version 1.2

Note:

Before using this information and the product it supports, read the information in "Notices" on page 172.

Contents

1 About this guide

This document describes the warehouse enablement pack, version 1.1.0 for IBM® Tivoli® Monitoring for Network Performance, Version 2.1. This warehouse enablement pack (hereafter referred to as the warehouse pack) is created for Tivoli Data Warehouse, Version 1.2.

Tivoli Monitoring for Network Performance is an application that monitors the performance of systems and networks in your enterprise. Performance data from all monitored systems is stored in a central database. This data is displayed by the Tivoli Monitoring for Network Performance Web application and is also used as input for report generation using Tivoli Data Warehouse and Crystal Enterprise. Using this reporting function requires that you install and configure the Tivoli Data Warehouse product, the Tivoli Monitoring for Network Performance warehouse pack, and the Crystal Enterprise product.

Installing and Configuring Tivoli Data Warehouse provides the following information:

- Planning, installation, and configuration information for the Tivoli Data Warehouse
- General planning and installation information for warehouse packs
- Getting started information
- Viewing and scheduling reports

This document provides the following information specifically for the Tivoli Monitoring for Network Performance warehouse pack:

- Supplemental planning and installation information
- Configuration information
- User information such as problem diagnosis and database maintenance
- A description of the Tivoli Monitoring for Network Performance extract, transform, and load (ETL) processes
- Schema information to help you understand the sample reports that are provided and for creating your own reports

Note: This document only provides supplemental information that is specific to the Tivoli Monitoring for Network Performance warehouse pack. You must use this book in conjunction with the other books in the Tivoli Monitoring for Network Performance library and the books that are shipped with the Tivoli Data Warehouse product.

1.1 Who should read this guide

This guide is for people who do any of the following activities:

- Plan for and install the warehouse pack
- Use and maintain the warehouse pack
- Use the reports that are provided and create new reports
- Create additional warehouse packs that use data from this warehouse pack

Administrators and installers should have the following knowledge or experience:

- Basic system administration and file management of the operating systems on which the components of Tivoli Data Warehouse are installed
- An understanding of the basic concepts of relational database management
- Experience administering IBM DB2® Universal Database™

Additionally, report designers and warehouse pack creators should have the following knowledge or experience:

- An understanding of the source data and application
- Data warehouse information and design, extract, transform, and load (ETL) processes, and online analytical processing (OLAP)
- Crystal Reports 9 or another reporting application with the ability to query relational data from the DB2 product

1.2 Publications

This section lists publications in the IBM Tivoli Monitoring for Network Performance library, the Tivoli Data Warehouse library, and other related documents. It also describes how to access Tivoli publications online and how to order Tivoli publications.

The following sets of documentation are available to help you understand, install, and manage this warehouse pack:

- IBM Tivoli Monitoring for Network Performance
- Tivoli Data Warehouse
- IBM DB2, DB2 Data Warehouse Center, and DB2 Warehouse Manager
- IBM Redbooks ™

1.2.1 IBM Tivoli Monitoring for Network Performance library

The following documents are available in the IBM Tivoli Monitoring for Network Performance library:

- *IBM Tivoli Monitoring for Network Performance Planning, Installation, and Configuration*, SC31-6362
  Provides network systems administrators with the information they need to effectively plan for the introduction of the product into their enterprise. This book also provides the information necessary to install the product into a WebSphere Application Server environment and configure other components in your enterprise to work with the product.

- *IBM Tivoli Monitoring for Network Performance Operator Guide*, SC31-6365
  Contains information about tasks that operators commonly perform

- *IBM Tivoli Monitoring for Network Performance Administrator's Guide*, SC31-6364
  Contains information about tasks that administrators commonly perform.

- *IBM Tivoli Monitoring for Network Performance Messages and Troubleshooting*, SC31-6366
  Contains a catalogue of all messages and their explanations, plus additional troubleshooting information to help you diagnose problems.

- *Tuning for IBM Tivoli Monitoring for Network Performance*, SC31-6363
  Provides guidance for making IBM Tivoli Monitoring for Network Performance run at peak performance in your environment.

- *Tuning for IBM Tivoli Monitoring for Network Performance Readme*, GI10-3255
  Contains late-breaking information about installing and using the product. This information corrects and supersedes documentation in the product package.

- *IBM Tivoli Monitoring for Network Performance, Version 2.1, Warehouse Enablement Pack, Version 1.1.0.0, Implementation Guide*, SC31-6793-00. Describes the pre-defined reports that are provided, and how to install the Warehouse Enablement Pack. It also provides information needed for those customers who choose to design and construct custom reports.

1.2.2 Tivoli Data Warehouse library

The following documents are available in the Tivoli Data Warehouse library. The library is available on the Tivoli Data Warehouse Documentation CD as well as online, as described in "Accessing publications online" on page 5.

- *Tivoli Data Warehouse Release Notes*, SC32-1399

  Provides late-breaking information about Tivoli Data Warehouse and lists hardware requirements and software prerequisites.

- *Installing and Configuring Tivoli Data Warehouse*, GC32-0744

  Describes how Tivoli Data Warehouse fits into your enterprise, explains how to plan for its deployment, and gives installation and configuration instructions. It contains maintenance procedures and troubleshooting information.

- *Enabling an Application for Tivoli Data Warehouse*, GC32-0745

  Provides information about connecting an application to Tivoli Data Warehouse. This book is for application programmers who use Tivoli Data Warehouse to store and report on their application data, data warehousing experts who import Tivoli Data Warehouse data into business intelligence applications, and customers who put their local data in Tivoli Data Warehouse. This document is available only from the IBM Web site.

- *Tivoli Data Warehouse Messages*, SC09-7776

  Lists the messages generated by Tivoli Data Warehouse, and describes the corrective actions you should take.

1.2.3 Related publications

The following sections describe additional publications to help you understand and use Tivoli Data Warehouse.

1.2.3.1 IBM Redbooks

IBM Redbooks are developed and published by the IBM International Technical Support Organization, the ITSO. They explore integration, implementation, and operation of realistic customer scenarios. The following Redbooks contain information about Tivoli Data Warehouse:

- *Introduction to Tivoli Enterprise Data Warehouse*, SG24-6607-00

  Provides a broad understanding of Tivoli Data Warehouse. Some of the topics that are covered are concepts, architecture, writing your own extract, transform, and load processes (ETLs), and best practices in creating data marts.

- *Planning a Tivoli Enterprise Data Warehouse Project*, SG24-6608-00

  Describes the necessary planning you must complete before you can deploy Tivoli Data Warehouse. The guide shows how to apply these planning steps in a real-life deployment of a warehouse pack using IBM Tivoli Monitoring. It also contains frequently used Tivoli and DB2 commands and lists troubleshooting tips for Tivoli Data Warehouse.

1.2.3.2 IBM DB2, DB2 Data Warehouse Center, and DB2 Warehouse Manager library

The DB2 library contains important information about the database and data warehousing technology provided by IBM DB2, DB2 Data Warehouse Center, and DB2 Warehouse Manager. Refer to the DB2 library for help in installing, configuring, administering, and troubleshooting DB2, which is available on the IBM Web site:

http://www-3.ibm.com/software/data/db2/library/

After you install DB2, its library is also available on your system.

The following DB2 documents are particularly relevant for people working with Tivoli Data Warehouse:

- *IBM DB2 Universal Database for Windows Quick Beginnings*, GC09-2971

  Guides you through the planning, installation, migration (if necessary), and setup of a partitioned database system using the IBM DB2 product on Microsoft® Windows®.

- *IBM DB2 Universal Database for UNIX Quick Beginnings*, GC09-2970

  Guides you through the planning, installation, migration (if necessary), and setup of a partitioned database system using the IBM DB2 product on UNIX ®systems.

- *IBM DB2 Universal Database Administration Guide: Implementation*, SC09-2944

  Covers the details of implementing your database design. Topics include creating and altering a database, database security, database recovery, and administration using the Control Center, which is a DB2 graphical user interface.

- *IBM DB2 Universal Database Data Warehouse Center Administration Guide*, SC26-9993

  Provides information on how to build and maintain a data warehouse using the DB2 Data Warehouse Center.

- *IBM DB2 Warehouse Manager Installation Guide*, GC26-9998

  Provides information on how to install the following Warehouse Manager components: Information Catalog Manager, warehouse agents, and warehouse transformers.

- *IBM DB2 Universal Database and DB2 Connect Installation and Configuration Supplement*, GC09-2957

  Provides advanced installation considerations, and guides you through the planning, installation, migration (if necessary), and set up of a platform-specific DB2 client. This supplement also contains information on binding, setting up communications on the server, the DB2 GUI tools, DRDA® AS, distributed installation, the configuration of distributed requests, and accessing heterogeneous data sources.

- *IBM DB2 Universal Database Message Reference Volume 1*, GC09-2978 and *IBM DB2 Universal Database Message Reference Volume 2*, GC09-2979

  Lists the messages and codes issued by DB2, the Information Catalog Manager, and the DB2 Data Warehouse Center, and describes the actions you should take.

1.2.3.3 IBM Tivoli Monitoring for Network Performance information

You can find additional product information on the IBM Tivoli Monitoring for Network Performance Web site:

http://www.ibm.com/software/tivoli/products/monitor-net-performance/

1.2.3.4 IBM z/OS® operating systems publications

The IBM Tivoli Monitoring for Network Performance monitor component runs on UNIX System Services, which is part of the z/OS operating system. You can view the publications that support this product at the following Web site:

http://www.ibm.com/servers/eserver/zseries/zos/bkserv/

1.2.3.5 IBM z/OS Communications Server publications

Much of the information displayed by the IBM Tivoli Monitoring for Network Performance Web application is retrieved IBM z/OS Communications Server. You can view the publications that support this product at the following Web site:

http://www.ibm.com/servers/s390/os390/bkserv/

1.2.3.6 IBM WebSphere Application Server publications

WebSphere Application Server hosts the IBM Tivoli Monitoring for Network Performance Web application and provides SSL security for several components. Complete information about WebSphere Application Server is available from the InfoCenter installed with the product. You can also view the WebSphere Application Server InfoCenter at the following Web site:

http://www.ibm.com/software/webservers/appserv/library/

1.2.3.7 IBM DB2 publications

If you are running DB2 for zSeries Version 7, you can view the publications that support this product on the following Web site:

http://www.ibm.com/software/data/db2/os390/v7books.html

If you are running DB2 Universal Database Enterprise Server Edition Version 8 Release 1, you can view the publications that support this product on the following Web site:

http://www.ibm.com/software/data/db2/library/

1.2.3.8 Tivoli Data Warehouse publications

Tivoli Data Warehouse provides the long-term data repository for IBM Tivoli Monitoring for Network Performance. You can view the publications that support this product on the following Web site:

http://publib.boulder.ibm.com/tividd/td/TivoliDataWarehouse1.2.html

1.2.3.9 NetView® Integrated TCP/IP Services Component publications

IBM Tivoli Monitoring for Network Performance uses the NetView Integrated TCP/IP Services Component to perform autodiscovery of IP resources in your enterprise. You can view the publications that support this product on the following Web site:

http://publib.boulder.ibm.com/tividd/td/tdprodlist.html

1.2.3.10 Terminology

The *Tivoli Software Glossary* includes definitions for many of the technical terms related to Tivoli software. The *Tivoli Software Glossary* is available, in English only, at the following Tivoli software library Web site:

http://www.ibm.com/software/tivoli/library/

Access the glossary by clicking the **Glossary** link on the left pane of the Tivoli software library window.

1.2.4 Accessing publications online

The product media contains the publications that are in the product library. The formats of the publications are PDF and HTML. To access the publications using a Web browser, open the infocenter.html file. The file is in the appropriate publications directory on the product CD.

IBM posts publications for this and all other Tivoli products, as they become available and whenever they are updated, to the Tivoli software information center Web site. The Tivoli software information center is located at the following Web address:

http://www.ibm.com/software/tivoli/library/

Scroll down and click the **Product manuals** link. In the Tivoli Technical Product Documents Alphabetical Listing window, click the **IBM Tivoli Monitoring for Network Performance** link to access the product library at the Tivoli software information center.

Note: If you print PDF documents on other than letter-sized paper, set the option in the **File ➔ Print** window that allows Adobe Reader to print letter-sized pages on your local paper.

1.2.5 Ordering publications

You can order many Tivoli publications online at the following Web site:

http://www.elink.ibmlink.ibm.com/public/applications/publications/cgibin/pbi.cgi

You can also order by telephone by calling one of these numbers:

- In the United States: 800-879-2755
- In Canada: 800-426-4968
- In other countries, for a list of telephone numbers, see the following Web site:

  http://www.ibm.com/software/tivoli/order-lit/

1.3 Accessibility

Accessibility features help users with a physical disability, such as restricted mobility or limited vision, to use software products successfully. With this product, you can use assistive technologies to hear and navigate the interface. You can also use the keyboard instead of the mouse to operate all features of the graphical user interface.

For additional information, see the Accessibility appendix in IBM Tivoli Monitoring for Network Performance Planning, Installation, and Configuration.

For the warehouse pack, you use the interfaces of the IBM DB2 product and the reporting tool. See those documentation sets for accessibility information.

1.4 Contacting software support

If you have a problem with any Tivoli product, refer to the following IBM Software Support Web site:

http://www.ibm.com/software/sysmgmt/products/support/

If you want to contact customer support, see the *IBM Software Support Guide* at the following Web site:

http://techsupport.services.ibm.com/guides/handbook.html

The guide provides information about how to contact IBM Software Support, depending on the severity of your problem, and the following information:

- Registration and eligibility
- Telephone numbers, depending on the country in which you are located
- Information you must have before contacting IBM Software Support

1.5 Participating in newsgroups

User groups provide software professionals with a forum for communicating ideas, technical expertise, and experiences related to the product. They are located on the Internet, and are available using standard news reader programs. These groups are primarily intended for user-to-user communication, and are not a replacement for formal support. You can use Web browsers like Netscape Navigator or Microsoft Internet Explorer to view these newsgroups:

Tivoli Data Warehouse

news://news.software.ibm.com/ibm.software.tivoli.enterprise-data-warehouse

IBM Tivoli Enterprise Console®

news://news.software.ibm.com/ibm.software.tivoli.enterprise-console

1.6 Typeface conventions

This guide uses the following typeface conventions:

Bold

- Lowercase commands and mixed case commands that are otherwise difficult to distinguish from surrounding text
- Interface controls (check boxes, push buttons, radio buttons, spin buttons, fields, folders, icons, list boxes, items inside list boxes, multicolumn lists, containers, menu choices, menu names, tabs, property sheets), labels (such as **Tip** and **Operating system considerations**)
- Keywords and parameters in text

Italic

- Words defined in text
- Emphasis of words (words as words)
- New terms in text (except in a definition list)
- Variables and values you must provide

`Monospace`

- Examples and code examples
- File names, programming keywords, and other elements that are difficult to distinguish from surrounding text
- Message text and prompts addressed to the user
- Text that the user must type
- Values for arguments or command options

2 Overview

The following sections provide an overview of Tivoli Data Warehouse and the Tivoli Monitoring for Network Performance warehouse pack.

2.1 Overview of Tivoli Data Warehouse

Tivoli Data Warehouse provides the infrastructure for the following:

- Extract, transform, and load (ETL) processes through the IBM DB2 Data Warehouse Center tool
- Schema generation of the central data warehouse
- Historical reports

As shown in Figure 1, Tivoli Data Warehouse consists of a centralized data store where historical data from many management applications can be stored, aggregated, and correlated.
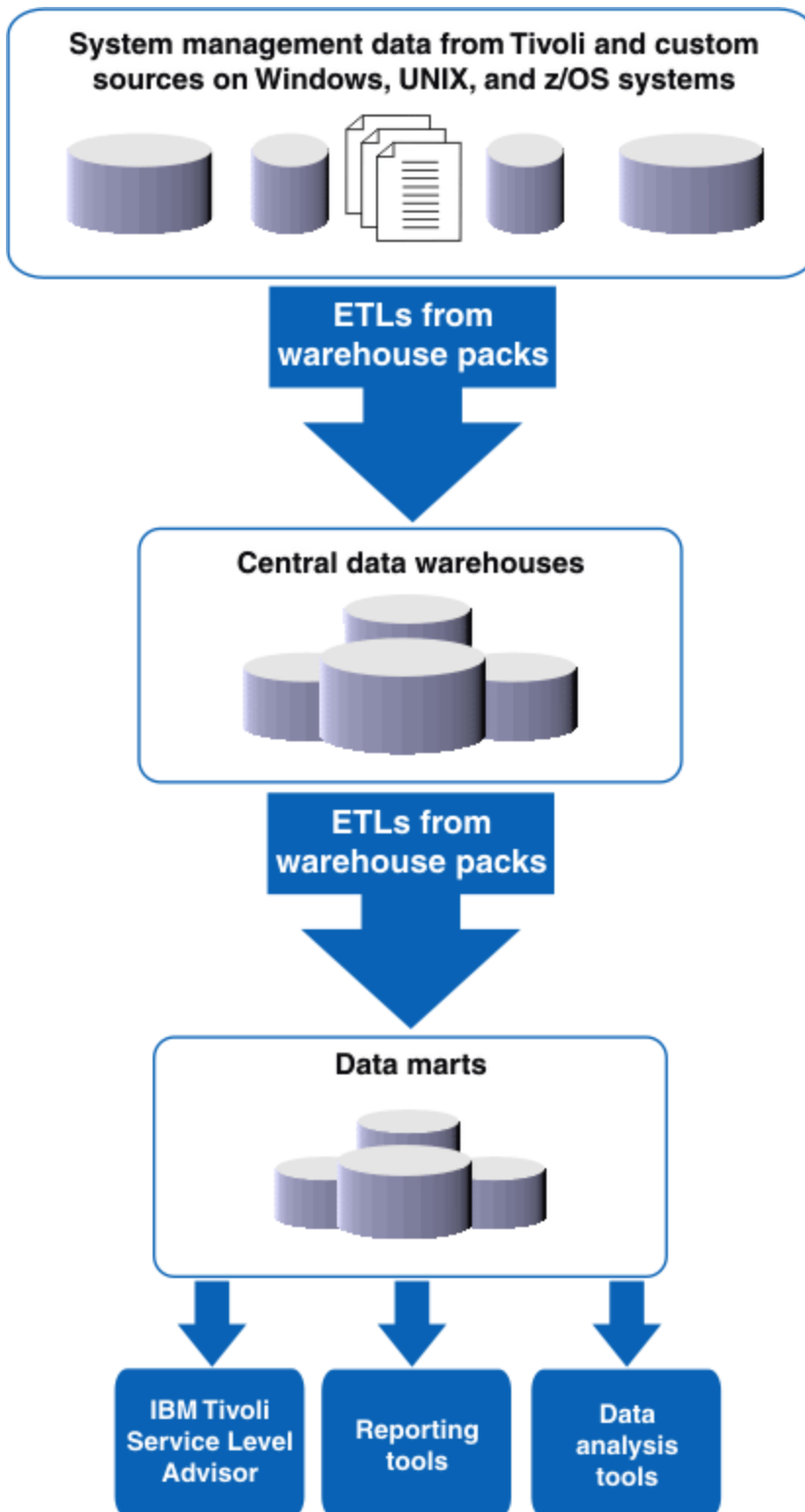
Figure 1. Tivoli Data Warehouse basic architecture

The *central data warehouse* uses a generic schema that is the same for all applications. As new components or new applications are added, more data is added to the database; however, no new database objects are added in the schema.

A *data mart* is a subset of a data warehouse that contains data that is tailored and optimized for the specific reporting needs of a department or team.

The *central data warehouse ETL* reads the data from the operational data stores of the application that collects it, verifies the data, makes the data conform to the schema, and places the data into the central data warehouse.

The *data mart ETL* extracts a subset of data from the central data warehouse, transforms it, and loads it into one or more star schemas, which can be included in data marts to answer specific business questions.

A program that provides these ETLs is called a *warehouse enablement pack* or simply *warehouse pack*. The ETLs are typically scheduled to run periodically, usually during non-peak hours.

2.2 Overview of IBM Tivoli Monitoring for Network Performance warehouse pack

Tivoli Monitoring for Network Performance is an application that monitors the performance of systems and networks in your enterprise. Performance data from all monitored systems is stored in a central database. This data is displayed by the Tivoli Monitoring for Network Performance Web application and is also used as input for report generation using the Tivoli Data Warehouse product and Crystal Enterprise reports server.

Tivoli Monitoring for Network Performance provides for the timely analysis of performance related metrics such as response time, traffic flow, and system workload. Using the Tivoli Monitoring for Network Performance Web application, operators can monitor the performance of the network in an effort to anticipate problems and resolve them before they occur. The performance data can be used to detect bottlenecks and other potential problems, which eliminates the need for network systems programmers to manually scan through extensive amounts of performance data.

The Tivoli Monitoring for Network Performance warehouse pack consists of the following components:

- Extract, transform, and load (ETL) processes that copy and transform the performance data into the Tivoli Data Warehouse central data warehouse and into the Tivoli Monitoring for Network Performance data mart. For information about the ETL processes, see ETL processes on page 51. For information about the central data warehouse, see "Central data warehouse information" on page 55.

- Tivoli Monitoring for Network Performance data mart to store the performance data. The performance data contains measurements for hourly, daily, weekly, monthly, quarterly, and yearly periods. For information about the data mart, see "Data mart schema information" on page 124.

- Crystal Reports enables you to create customized reports with historical data. Reports are provided for all of the measurement sources shown in the Tivoli Monitoring for Network Performance Web application. The reports are organized into 22 categories with more than 100 subreports and you can display more than 1000 different views. For information about the reports provided in the warehouse pack, see "Reports" on page 11.

Reports that use the SNMP measurements are not provided; however, the information can be displayed by the Web application. These measurements can be used to solve network problems and understand network usage. These measurements include the following information:

- Cisco router performance statistics

- Cisco switch performance statistics and interface statistics

- Ethernet performance octet counts.

For information on creating reports for the SNMP measurements, see "Considerations for Creating Reports" on page 39.

3 Reports

This section provides information about the predefined reports that are provided by the warehouse pack.

Tivoli Monitoring for Network Performance generates reports for 22 categories of collected data. Subreports of each category can be generated. There are over 100 subreports that can be generated and approximately 10 configurable parameters can be specified for each subreport. You can also use the default values for all parameters except measurement data start and stop date.

All reports can be generated for hourly, daily, weekly, monthly, quarterly and yearly time frames. Reports are generated for all monitored resources. Resources are displayed as lines in a time-series graph. Alternatively, you can generate top 10 subreports that use a bar graph to compare the top 10 monitored resources.

The following is an example of a report.

Selected TCP Applications Based On Application Server Idle Time (Hourly Data)

Report Criteria

Date Printed	4/29/2004
Time Printed	1:59:42PM
Reporting Period	From 4/8/2004 12:00:00AM To 4/10/2004 12:00:00AM
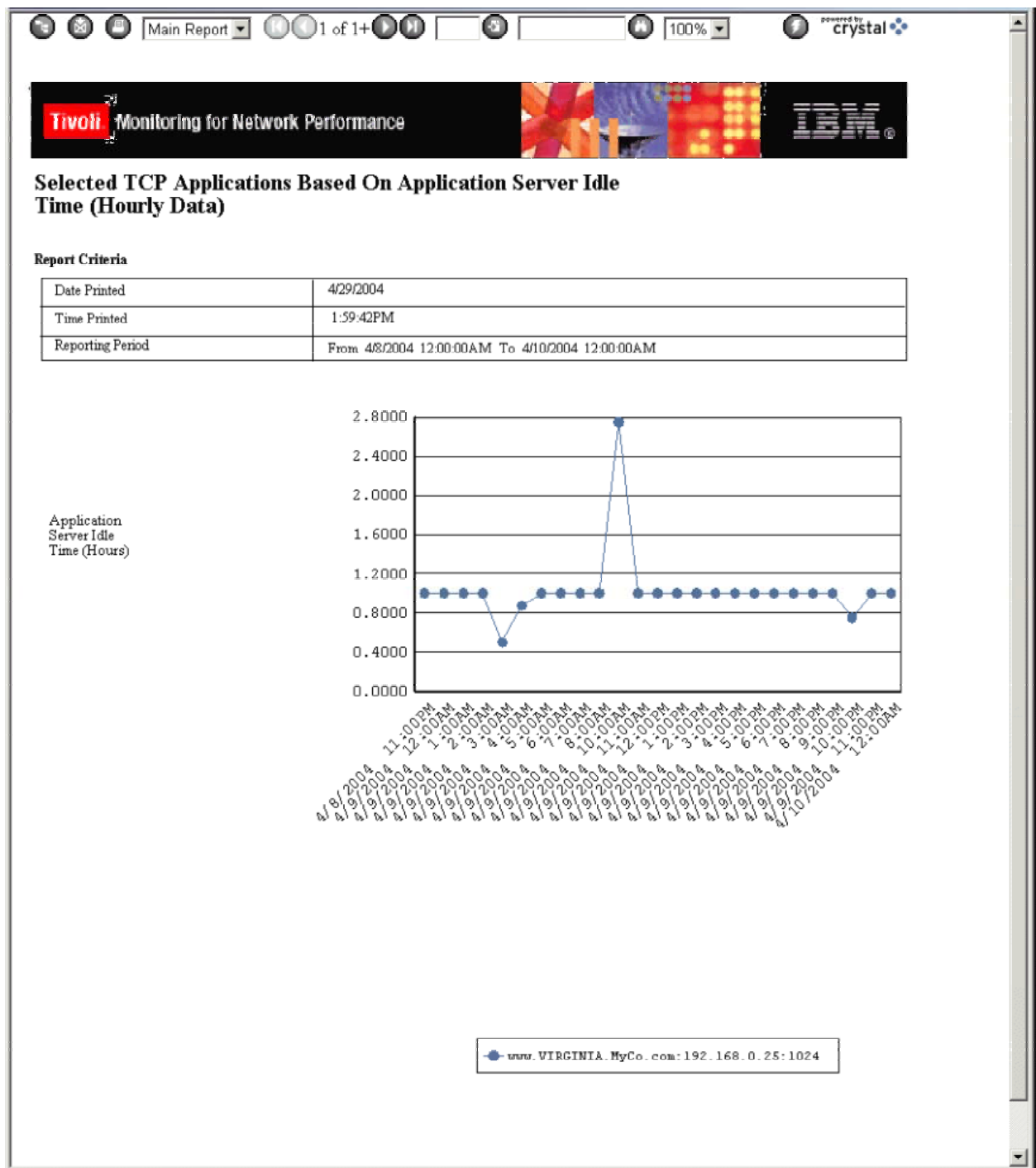
Crystal Reports Viewer - Microsoft Internet Explorer

Main Report ▼ | 2 of 2 | 100% ▼ | powered by crystal

Application Name (Host Name:Listener IP:Port)	Sysplex Name	System Name	Application Job Name	Application Server Idle Time	Collected Time
www.VIRGINIA.MyCo.com:192.168.0.25:1024					
	NETVIEW	TVT2017	TCPIP	1.0003	4/8/2004 11:00:00PM
	NETVIEW	TVT2017	TCPIP	1.0000	4/9/2004 12:00:00AM
	NETVIEW	TVT2017	TCPIP	1.0000	4/9/2004 1:00:00AM
	NETVIEW	TVT2017	TCPIP	1.0000	4/9/2004 2:00:00AM
	NETVIEW	TVT2017	TCPIP	0.5000	4/9/2004 3:00:00AM
	NETVIEW	TVT2017	TCPIP	0.8683	4/9/2004 4:00:00AM
	NETVIEW	TVT2017	TCPIP	1.0000	4/9/2004 5:00:00AM
	NETVIEW	TVT2017	TCPIP	1.0000	4/9/2004 6:00:00AM
	NETVIEW	TVT2017	TCPIP	1.0000	4/9/2004 7:00:00AM
	NETVIEW	TVT2017	TCPIP	1.0000	4/9/2004 8:00:00AM
	NETVIEW	TVT2017	TCPIP	2.7497	4/9/2004 10:00:00AM
	NETVIEW	TVT2017	TCPIP	1.0000	4/9/2004 11:00:00AM
	NETVIEW	TVT2017	TCPIP	1.0000	4/9/2004 12:00:00PM
	NETVIEW	TVT2017	TCPIP	1.0000	4/9/2004 1:00:00PM
	NETVIEW	TVT2017	TCPIP	1.0000	4/9/2004 2:00:00PM
	NETVIEW	TVT2017	TCPIP	1.0003	4/9/2004 3:00:00PM
	NETVIEW	TVT2017	TCPIP	0.9997	4/9/2004 4:00:00PM
	NETVIEW	TVT2017	TCPIP	1.0000	4/9/2004 5:00:00PM
	NETVIEW	TVT2017	TCPIP	1.0003	4/9/2004 6:00:00PM
	NETVIEW	TVT2017	TCPIP	1.0000	4/9/2004 7:00:00PM
	NETVIEW	TVT2017	TCPIP	1.0000	4/9/2004 8:00:00PM
	NETVIEW	TVT2017	TCPIP	1.0000	4/9/2004 9:00:00PM
	NETVIEW	TVT2017	TCPIP	0.7508	4/9/2004 10:00:00PM
	NETVIEW	TVT2017	TCPIP	0.9994	4/9/2004 11:00:00PM
	NETVIEW	TVT2017	TCPIP	1.0000	4/10/2004 12:00:00AM

powered by crystal

The following information is provided:

- A list of the report categories
- A list of the subreports that are available for each report category
- The names of the data mart tables that are used to create the reports
- The SQL queries that are used to create this report

Report name	Description	Table names	SQL queries

TCP Application Workload Reports	This report provides the following subreports:
	
	• Top and Selected TCP Applications based on the total number of accepted connections
	• Top and Selected TCP Applications based on application server up time
	• Top and Selected TCP Applications based on backlog connections that have been rejected
	• Top and Selected TCP Applications based on connection rate
	• Top and Selected TCP Applications based on application server idle time
		FNP.D_TAAM
		
		FNP.D_TAAM_METRIC
		
		FNP.F_TAAM_HOUR
		
		FNP.F_TAAM_DAY
		
		FNP.F_TAAM_WEEK
		
		FNP.F_TAAM_MONTH
		
		FNP.F_TAAM_QUARTER
		
		FNP.F_TAAM_YEAR
			SELECT
			 D1.SYSPLEX_NAME,
			 D1.SYSTEM_NAME,
			 D1.HOSTNAME,
			 D1.LISTENER_PORT,
			 D1.LISTENER_IP,
			 D1.APPL_JOB_NAME,
			(F1_{?Period}.AVG_VALUE+F1_{?Period}.TOTAL_VALUE) AS fvalue,
			 F1_{?Period}.MEAS_DATE,
			 DATE(F1_{?Period}.MEAS_DATE) AS fdate,
			 DM1.MET_NAME,
			 DM1.MET_UNITS
			FROM
			 FNP.D_TAAM_METRIC DM1,
			 FNP.D_TAAM D1,
			 FNP.FV_TAAM_{?Period} F1_{?Period}
			WHERE
			 F1_{?Period}.TAAM_ID=D1.TAAM_ID AND
			 F1_{?Period}.METRIC_ID=DM1.METRIC_ID AND
			 DM1.MET_NAME=
			  (CASE WHEN '{?ReportBasedOnVal}' = 'Total Accepted Connections'
			    THEN 'Accepted Connection Count'
			    WHEN '{?ReportBasedOnVal}' = 'Application Server Up Time'
			    THEN 'Total Server Active Time'
			    WHEN '{?ReportBasedOnVal}' = 'Backlog Connections Rejected'
			    THEN 'Connections Dropped Due to Backlog Exceeded'
			    WHEN '{?ReportBasedOnVal}' = 'Connection Rate'
			    THEN 'Connection Rate'
			    WHEN '{?ReportBasedOnVal}' = 'Application Server Idle Time'
			    THEN 'Total Server Idle Time'

			ELSE '{?ReportBasedOnVal}' END) AND
			D1.LISTENER_PORT=(CASE WHEN '{?Port}' <> 'ALL' THEN LTRIM(RTRIM('{?Port}')) else D1.LISTENER_PORT END) AND
			D1.LISTENER_IP=(CASE WHEN '{?ListenerIPAddress}' <> 'ALL' THEN LTRIM(RTRIM('{?ListenerIPAddress}')) else D1.LISTENER_IP END) AND
			(('{?HostName}' = 'ALL')
			OR
			('{?HostName}' <> 'ALL'
			AND
			(LOCATE('.','{?HostName}') = 0
			AND UPPER(D1.hostname) like UPPER(LTRIM(RTRIM('{?HostName}'))) || '.%')
			OR
			(LOCATE('.','{?HostName}') > 0
			AND UPPER(D1.hostname) = UPPER(LTRIM(RTRIM('{?HostName}'))))
			))
TCP Connections Workload Reports	This report provides the Top and Selected TCP Applications subreport that is based on the total transferred (transmit and received) bytes rate.	FNP.D_TCNM FNP.D_ TCNM _METRIC FNP.F_ TCNM _HOUR FNP.F_ TCNM _DAY FNP.F_ TCNM _WEEK FNP.F_ TCNM _MONTH FNP.F_ TCNM _QUARTER FNP.F_ TCNM _YEAR	SELECT D1.SYSPLEX_NAME, D1.SYSTEM_NAME, D1.HOSTNAME, D1.LOCAL_PORT, D1.LOCAL_IP_ADDR, D1.APPL_JOB_NAME, (F1_{?Period}.AVG_VALUE+F1_{?Period}.TOTAL_VALUE+ F2_{?Period}.AVG_VALUE+F2_{?Period}.TOTAL_VALUE) AS fvalue, F1_{?Period}.MEAS_DATE, F1_{?Period}.MEAS_DATE=F2_{?Period}.MEAS_DATE AND DATE(F1_{?Period}.MEAS_DATE) AS fdate, DM1.MET_NAME, DM1.MET_UNITS FROM FNP.D_TCNM_METRIC DM1, FNP.D_TCNM D1, FNP.FV_TCNM_{?Period} F1_{?Period}, FNP.D_TCNM_METRIC DM2, FNP.D_TCNM D2, FNP.FV_TCNM_{?Period} F2_{?Period}

			WHERE
			F1_{?Period}.TCNM_ID=D1.TCNM_ID AND
			F1_{?Period}.METRIC_ID=DM1.METRIC_ID AND
			DM1.MET_NAME= 'Number of Bytes Transmitted Rate' AND
			DM2.MET_NAME= 'Number of Bytes Received Rate' AND
			F2_{?Period}.METRIC_ID=DM2.METRIC_ID AND
			F2_{?Period}.TCNM_ID=D2.TCNM_ID AND
			F1_{?Period}.TCNM_ID = F2_{?Period}.TCNM_ID AND
			D1.LOCAL_PORT=(CASE WHEN '{?Port}' <> 'ALL' THEN LTRIM(RTRIM('{?Port}')) else D1.LOCAL_PORT END) AND
			D1.LOCAL_IP_ADDR=(CASE WHEN '{?LocalIPAddress}' <> 'ALL' THEN LTRIM(RTRIM('{?LocalIPAddress}'))) ELSE D1.LOCAL_IP_ADDR END) AND
			(('{?HostName}' = 'ALL')
			OR
			('{?HostName}' <> 'ALL'
			AND
			(LOCATE('.','{?HostName}') = 0
			AND UPPER(D1.hostname) like UPPER(LTRIM(RTRIM('{?HostName}'))) || '.%')
			OR
			(LOCATE('.','{?HostName}') > 0
			AND UPPER(D1.hostname) = UPPER(LTRIM(RTRIM('{?HostName}'))))
			))
UDP Applications Workload Reports	This report provides the following subreports: • Top and Selected UDP Endpoints based on total transferred (transmit and received) bytes rate. • Top and Selected UDP Endpoints based on total transferred (transmit and received) datagrams rate • Top and Selected UDP Endpoints based on datagrams discarded • Top and Selected UDP Endpoints based on datagrams queued • Top and Selected UDP Endpoints based on percent datagrams discarded	FNP.D_UETM FNP.D_UETM_METRIC FNP.F_UETM_HOUR FNP.F_UETM_DAY FNP.F_UETM_WEEK FNP.F_UETM_MONTH FNP.F_UETM_QUARTER FNP.F_UETM_YEAR	SELECT D1.SYSPLEX_NAME, D1.SYSTEM_NAME, D1.HOSTNAME, D1.LOCAL_PORT, D1.LOCAL_IP_ADDR, D1.APPL_JOB_NAME, (CASE WHEN DM1.MET_NAME <> DM2.MET_NAME THEN (F1_{?Period}.AVG_VALUE+F1_{?Period}.TOTAL_VALUE+ F2_{?Period}.AVG_VALUE+F2_{?Period}.TOTAL_VALUE) ELSE (F1_{?Period}.AVG_VALUE+F1_{?Period}.TOTAL_VALUE) END) AS fvalue,

			F1_{?Period}.MEAS_DATE, DATE(F1_{?Period}.MEAS_DATE) AS fdate, DM1.MET_NAME, DM1.MET_UNITS FROM FNP.D_UETM_METRIC DM1, FNP.D_UETM D1, FNP.FV_UETM_{?Period} F1_{?Period}, FNP.D_UETM_METRIC DM2, FNP.D_UETM D2, FNP.FV_UETM_{?Period} F2_{?Period} WHERE F1_{?Period}.UETM_ID=D1.UETM_ID AND F1_{?Period}.METRIC_ID=DM1.METRIC_ID AND DM1.MET_NAME= (CASE WHEN '{?ReportBasedOnVal}' = 'Total Transferred Bytes Rate' THEN 'User Datagram Protocol Transmit Byte Rate' WHEN '{?ReportBasedOnVal}' = 'Total Transferred Datagrams Rate' THEN 'User Datagram Protocol Endpoint Transmit Datagram Rate' WHEN '{?ReportBasedOnVal}' = 'Datagrams Discarded' THEN 'User Datagram Protocol Number of Datagrams Discarded' WHEN '{?ReportBasedOnVal}' = 'Datagrams Queued' THEN 'User Datagram Protocol Number of Datagrams Queued' WHEN '{?ReportBasedOnVal}' = 'Percent Datagrams Discarded' THEN 'User Datagram Protocol Percent of Datagrams Discarded' ELSE '{?ReportBasedOnVal}' END) AND DM2.MET_NAME = (CASE WHEN '{?ReportBasedOnVal}' = 'Total Transferred Bytes Rate' THEN 'User Datagram Protocol Receive Byte Rate' WHEN '{?ReportBasedOnVal}' = 'Total Transferred Datagrams Rate' THEN 'User Datagram Protocol Endpoint Receive Datagram Rate' ELSE DM1.MET_NAME END) AND F2_{?Period}.METRIC_ID=DM2.METRIC_ID AND F2_{?Period}.UETM_ID=D2.UETM_ID AND F1_{?Period}.MEAS_DATE=F2_{?Period}.MEAS_DATE

			AND
			F1_{?Period}.UETM_ID = F2_{?Period}.UETM_ID AND
			D1.LOCAL_PORT=(CASE WHEN '{?Port}' <> 'ALL' THEN LTRIM(RTRIM('{?Port}')) else D1.LOCAL_PORT END) AND
			D1.LOCAL_IP_ADDR=(CASE WHEN '{?LocalIPAddress}' <> 'ALL' THEN LTRIM(RTRIM('{?LocalIPAddress}')) else D1.LOCAL_IP_ADDR END) AND
			(('{?HostName}' = 'ALL')
			OR
			('{?HostName}' <> 'ALL'
			AND
			(LOCATE('.','{?HostName}') = 0
			AND UPPER(D1.hostname) like UPPER(LTRIM(RTRIM('{?HostName}'))) || '.%')
			OR
			(LOCATE('.','{?HostName}') > 0
			AND UPPER(D1.hostname) = UPPER(LTRIM(RTRIM('{?HostName}'))))
			))
Response Time Reports	This report provides the Top and Selected Target Resources based on Average Round Trip Time subreport. Response time reports are generated from the data collected by the availability and response time polling engine. You can define a set of target resources to be monitored for availability using ping commands. The round trip response time that is returned as the response to the ping is collected and stored as the network response time for the target resource.	FNP.D_ICMP FNP.D_ICMP_METRIC FNP.F_ICMP_HOUR FNP.F_ICMP_DAY FNP.F_ICMP_WEEK FNP.F_ICMP_MONTH FNP.F_ICMP_QUARTER FNP.F_ICMP_YEAR	SELECT D1.SRC_HOSTNAME, D1.SRC_IP_ADDR, D1.DEST_HOST_OR_IP, D1.DEST_HOSTNAME, D1.DEST_IP_ADDR, (F1_{?Period}.AVG_VALUE+F1_{?Period}.TOTAL_VALUE) AS fvalue, F1_{?Period}.MEAS_DATE, DATE(F1_{?Period}.MEAS_DATE) AS fdate, DM1.MET_NAME, DM1.MET_UNITS FROM FNP.D_ICMP D1, FNP.D_ICMP_METRIC DM1, FNP.FV_ICMP_{?Period} F1_{?Period} WHERE F1_{?Period}.ICMP_ID = D1.ICMP_ID AND F1_{?Period}.METRIC_ID = DM1.METRIC_ID AND DM1.MET_NAME = 'Response Time' AND ((

			'{?HostOrIPAddress}' = 'ALL') OR ('{?HostOrIPAddress}' <> 'ALL' AND (LOCATE('.','{?HostOrIPAddress}') = 0 AND UPPER(D1.DEST_HOST_OR_IP) like UPPER(LTRIM(RTRIM('{?HostOrIP Address}'))) || '.%') OR (LOCATE('.','{?HostOrIPAddress}') > 0 AND UPPER(D1.DEST_HOST_OR_IP) = UPPER(LTRIM(RTRIM('{?HostOrIP Address}'))))))
TN3270 Client Reports	This report provides the following subreports: • Total Telnet Usage - Sessions • Top and Selected Telnet client users– Total response time • Top and Selected Telnet client users– Total IP response time • Top and Selected Telnet client users– Total SNA response time • Top and Selected Telnet client users– Sliding window average response time • Top and Selected Telnet client users– Sliding window average IP response time • Top and Selected Telnet client users– Sliding window average SNA response time	FNP.D_TN32C FNP.D_TN32C_METRIC FNP.F_TN32C_HOUR FNP.F_TN32C_DAY FNP.F_TN32C_WEEK FNP.F_TN32C_MONTH FNP.F_TN32C_QUARTER FNP.F_TN32C_YEAR	SELECT D1.REMOTE_IP_ADDR, D1.LU_NAME, (CASE WHEN DM1.MET_NAME <> DM2.MET_NAME THEN (F1_{?Period}.AVG_VALUE+F1_{?Period}.TOTAL_VA LUE+ F2_{?Period}.AVG_VALUE+F2_{?Period}.TOTAL_VA LUE) ELSE (F1_{?Period}.AVG_VALUE+F1_{?Period}.TOTAL_VA LUE) END) AS fvalue, F1_{?Period}.MEAS_DATE, DATE(F1_{?Period}.MEAS_DATE) AS fdate, DM1.MET_NAME, DM1.MET_UNITS FROM FNP.D_TN32C_METRIC DM1, FNP.D_TN32C D1, FNP.FV_TN32C_{?Period} F1_{?Period}, FNP.D_TN32C_METRIC DM2, FNP.D_TN32C D2, FNP.FV_TN32C_{?Period} F2_{?Period} WHERE F1_{?Period}.TN32C_ID=D1.TN32C_ID AND F1_{?Period}.METRIC_ID=DM1.METRIC_ID AND DM1.MET_NAME= (CASE WHEN '{?ReportBasedOnVal}' = 'Telnet Usage in Sessions' THEN 'Total Number of Transactions Detected' WHEN '{?ReportBasedOnVal}' = 'Sliding Window Average Response Time' THEN 'Sliding Window Average Total Response

			Time'
			WHEN '{?ReportBasedOnVal}' = 'Sliding Window Average IP Response Time'
			THEN 'Sliding Window Average IP Response Time'
			WHEN '{?ReportBasedOnVal}' = 'Sliding Window Average SNA Response Time'
			THEN 'Sliding Window Average Systems Network Architecture Response Time'
			WHEN '{?ReportBasedOnVal}' = 'Telnet Client Users in Bytes'
			THEN 'Number of Bytes Sent'
			ELSE '{?ReportBasedOnVal}' END) AND
			DM2.MET_NAME =
			(CASE WHEN '{?ReportBasedOnVal}' = 'Telnet Client Users in Bytes'
			THEN 'Number of Bytes Received'
			ELSE DM1.MET_NAME END) AND
			F2_{?Period}.METRIC_ID=DM2.METRIC_ID AND
			F2_{?Period}.TN32C_ID=D2.TN32C_ID AND
			F1_{?Period}.MEAS_DATE=F2_{?Period}.MEAS_DATE AND
			F1_{?Period}.TN32C_ID = F2_{?Period}.TN32C_ID AND
			UPPER(D1.LU_NAME)=(CASE WHEN '{?LUName}' <> 'ALL' THEN UPPER(LTRIM(RTRIM('{?LUName}'))) else UPPER(D1.LU_NAME) END)
TN3270 Server Reports	This report provides the Total Telnet Usage – Bytes subreport.	FNP.D_TN32S FNP.D_TN32S_METRIC FNP.F_TN32S_HOUR FNP.F_TN32S_DAY FNP.F_TN32S_WEEK FNP.F_TN32S_MONTH FNP.F_TN32S_QUARTER FNP.F_TN32S_YEAR	SELECT D1.SYSPLEX_NAME, D1.SYSTEM_NAME, D1.LOCAL_IP_ADDR, D1.LOCAL_PORT, (F1_{?Period}.AVG_VALUE+F1_{?Period}.TOTAL_VALUE+ F2_{?Period}.AVG_VALUE+F2_{?Period}.TOTAL_VALUE) AS fvalue, F1_{?Period}.MEAS_DATE, DATE(F1_{?Period}.MEAS_DATE) AS fdate, DM1.MET_NAME, DM1.MET_UNITS FROM FNP.D_TN32S_METRIC DM1, FNP.D_TN32S D1, FNP.FV_TN32S_{?Period} F1_{?Period}, FNP.D_TN32S_METRIC DM2, FNP.D_TN32S D2,

			FNP.FV_TN32S_{?Period} F2_{?Period}
			WHERE
			F1_{?Period}.TN32S_ID=D1.TN32S_ID AND
			F1_{?Period}.METRIC_ID=DM1.METRIC_ID AND
			DM1.MET_NAME='Number of Bytes Sent' AND
			DM2.MET_NAME='Number of Bytes Received' AND
			F2_{?Period}.METRIC_ID=DM2.METRIC_ID AND
			F2_{?Period}.TN32S_ID=D2.TN32S_ID AND
			F1_{?Period}.MEAS_DATE=F2_{?Period}.MEAS_DATE AND
			F1_{?Period}.TN32S_ID = F2_{?Period}.TN32S_ID AND
			D1.LOCAL_IP_ADDR=(CASE WHEN '{?LocalIPAddress}' <> 'ALL' THEN LTRIM(RTRIM('{?LocalIPAddress}')) else D1.LOCAL_IP_ADDR END) AND
			D1.LOCAL_PORT=(CASE WHEN '{?Port}' <> 'ALL' THEN LTRIM(RTRIM('{?Port}')) else D1.LOCAL_PORT END)
TN3270 Applications Reports	This report provides the Top and Selected Telnet Applications – Bytes subreport.	FNP.D_TN32A FNP.D_TN32A_METRIC FNP.F_TN32A_HOUR FNP.F_TN32A_DAY FNP.F_TN32A_WEEK FNP.F_TN32A_MONTH FNP.F_TN32A_QUARTER FNP.F_TN32A_YEAR	SELECT D1.SNA_APPL_NM, (F2_{?Period}.AVG_VALUE+F2_{?Period}.TOTAL_VALUE) AS fin, (F1_{?Period}.AVG_VALUE+F1_{?Period}.TOTAL_VALUE) AS fout, (F1_{?Period}.AVG_VALUE+F1_{?Period}.TOTAL_VALUE+ F2_{?Period}.AVG_VALUE+F2_{?Period}.TOTAL_VALUE) AS fvalue, F1_{?Period}.MEAS_DATE, DATE(F1_{?Period}.MEAS_DATE) AS fdate, DM1.MET_NAME, DM1.MET_UNITS FROM FNP.D_TN32A_METRIC DM1, FNP.D_TN32A D1, FNP.FV_TN32A_{?Period} F1_{?Period}, FNP.D_TN32A_METRIC DM2, FNP.D_TN32A D2, FNP.FV_TN32A_{?Period} F2_{?Period} WHERE F1_{?Period}.TN32A_ID=D1.TN32A_ID AND F1_{?Period}.METRIC_ID=DM1.METRIC_ID AND

			DM1.MET_NAME='Number of Bytes Sent' AND
			DM2.MET_NAME='Number of Bytes Received' AND
			F2_{?Period}.METRIC_ID=DM2.METRIC_ID AND
			F2_{?Period}.TN32A_ID=D2.TN32A_ID AND
			F1_{?Period}.MEAS_DATE=F2_{?Period}.MEAS_DATE AND
			F1_{?Period}.TN32A_ID = F2_{?Period}.TN32A_ID AND
			UPPER(D1.SNA_APPL_NM)=(CASE WHEN '{?ApplicationName}' <> 'ALL' THEN UPPER(LTRIM(RTRIM('{?ApplicationName}'))) else UPPER(D1.SNA_APPL_NM) END)
OSA Adapter Port Status Reports	This report provides the Top and Selected Ethernet OSA adapter ports subreport that is based on average PCI Bus Utilization	FNP.D_OSA FNP.D_OSA_METRIC FNP.F_OSA_HOUR FNP.F_OSA_DAY FNP.F_OSA_WEEK FNP.F_OSA_MONTH FNP.F_OSA_QUARTER FNP.F_OSA_YEAR	SELECT D1.BURNT_MACADDR, D1.PORT_NAME, D1.CHANNEL_ID, (F1_{?Period}.AVG_VALUE+F1_{?Period}.TOTAL_VALUE) AS fvalue, F1_{?Period}.MEAS_DATE, DATE(F1_{?Period}.MEAS_DATE) AS fdate, DM1.MET_NAME, DM1.MET_UNITS FROM FNP.D_OSA_METRIC DM1, FNP.D_OSA D1, FNP.FV_OSA_{?Period} F1_{?Period} WHERE F1_{?Period}.OSA_ID=D1.OSA_ID AND F1_{?Period}.METRIC_ID=DM1.METRIC_ID AND DM1.MET_NAME='ibmOSAExpChannelPCIBusUtilHour' AND UPPER(D1.BURNT_MACADDR)=(CASE WHEN '{?MACAddress}' <> 'ALL' THEN UPPER(LTRIM(RTRIM('{?MACAddress}'))) else UPPER(D1.BURNT_MACADDR) END)
OSA Adapter Processor Utilization and Throughput Reports	This report provides the following subreports: • Top and Selected Ethernet OSA adapter ports based on processor utilization • Top and Selected Ethernet OSA adapter ports based on inbound kilobytes. • Top and Selected Ethernet OSA adapter ports based on outbound kilobytes	FNP.D_LOSA FNP.D_LOSA_METRIC FNP.F_LOSA_HOUR FNP.F_LOSA_DAY FNP.F_LOSA_WEEK FNP.F_LOSA_MONTH FNP.F_LOSA_QUARTER	SELECT D1.BURNT_MACADDR, D1.PORT_NAME, D1.CHANNEL_ID, D1.IMAGE_NUMBER, (F1_{?Period}.AVG_VALUE+F1_{?Period}.TOTAL_VALUE) AS fvalue, F1_{?Period}.MEAS_DATE,

		FNP.F_LOSA_YEAR	DATE(F1_{?Period}.MEAS_DATE) AS fdate,
			DM1.MET_NAME,
			DM1.MET_UNITS
			FROM
			FNP.D_LOSA_METRIC DM1,
			FNP.D_LOSA D1,
			FNP.FV_LOSA_{?Period} F1_{?Period}
			WHERE
			F1_{?Period}.LOSA_ID=D1.LOSA_ID AND
			F1_{?Period}.METRIC_ID=DM1.METRIC_ID AND
			DM1.MET_NAME=
			(CASE WHEN '{?ReportBasedOnVal}' = 'Processor Utilization'
			THEN 'Processor Utilization Over 60 Minutes'
			WHEN '{?ReportBasedOnVal}' = 'Inbound Kilobytes'
			THEN 'Inbound Kilobytes Over 60 Minutes'
			WHEN '{?ReportBasedOnVal}' = 'Outbound Kilobytes'
			THEN 'Outbound Kilobytes Over 60 Minutes'
			ELSE '{?ReportBasedOnVal}' END) AND
			UPPER(D1.BURNT_MACADDR)=(CASE WHEN '{?MACAddress}' <> 'ALL' THEN UPPER(LTRIM(RTRIM('{?MACAddress}'))) else UPPER(D1.BURNT_MACADDR) END) AND
			UPPER(D1.IMAGE_NUMBER)=(CASE WHEN '{?ImageNumber}' <> 'ALL' THEN UPPER(LTRIM(RTRIM('{?ImageNumber}'))) else UPPER(D1.IMAGE_NUMBER) END)
OSA Ethernet Throughput Reports	This report provides the following subreports: • Top and Selected Ethernet OSA adapter ports based on inbound packets • Top and Selected Ethernet OSA adapter ports based on outbound packets • Top and Selected Ethernet OSA adapter ports based on multicast frames received • Top and Selected Ethernet OSA adapter ports based on broadcast frames received • Top and Selected Ethernet OSA adapter ports based on non-IP frames received	FNP.D_OSAC FNP.D_OSAC_METRIC FNP.F_OSAC_HOUR FNP.F_OSAC_DAY FNP.F_OSAC_WEEK FNP.F_OSAC_MONTH FNP.F_OSAC_QUARTER FNP.F_OSAC_YEAR	SELECT D1.BURNT_MACADDR, D1.PORT_NAME, D1.CHANNEL_ID, (F1_{?Period}.AVG_VALUE+F1_{?Period}.TOTAL_VALUE) AS fvalue, F1_{?Period}.MEAS_DATE, DATE(F1_{?Period}.MEAS_DATE) AS fdate, DM1.MET_NAME, DM1.MET_UNITS FROM FNP.D_OSAC_METRIC DM1, FNP.D_OSAC D1, FNP.FV_OSAC_{?Period} F1_{?Period}

			WHERE
			F1_{?Period}.OSAC_ID=D1.OSAC_ID AND
			F1_{?Period}.METRIC_ID=DM1.METRIC_ID AND
			DM1.MET_NAME=
			(CASE WHEN '{?ReportBasedOnVal}' = 'Inbound Packets'
			THEN 'ibmOsaExpEthInPackets'
			WHEN '{?ReportBasedOnVal}' = 'Outbound Packets'
			THEN 'ibmOsaExpEthOutPackets'
			WHEN '{?ReportBasedOnVal}' = 'Multicast Frames Received'
			THEN 'ibmOsaExpEthInGroupFrames'
			WHEN '{?ReportBasedOnVal}' = 'Broadcast Frames Received'
			THEN 'ibmOsaExpEthInBroadcastFrames'
			WHEN '{?ReportBasedOnVal}' = 'Non IP Frames Received'
			THEN 'ibmOsaExpEthInUnknownIPFrames'
			ELSE '{?ReportBasedOnVal}' END) AND
			UPPER(D1.BURNT_MACADDR)=(CASE WHEN '{?MACAddress}' <> 'ALL' THEN UPPER(LTRIM(RTRIM('{?MACAddress}'))) else UPPER(D1.BURNT_MACADDR) END)
Interface Reports	This report provides the following subreports: • Top and Selected interfaces - Octets Transmitted • Top and Selected interfaces -Octets Received • Top and Selected interfaces -Transmit Bandwidth Utilization • Top and Selected interfaces -Receive Bandwidth Utilization • Top and Selected interfaces -Unicast Packet Transmit Rate • Top and Selected interfaces -Unicast Packets Receive Rate • Top and Selected interfaces - Broadcast/Multicast Packets Transmit Rate • Top and Selected interfaces - Broadcast/Multicast	FNP.D_IF FNP.D_IF_METRIC FNP.F_IF_HOUR FNP.F_IF_DAY FNP.F_IF_WEEK FNP.F_IF_MONTH FNP.F_IF_QUARTER FNP.F_IF_YEAR	SELECT D1.SYSPLEX_NAME, D1.SYSTEM_NAME, D1.TCPIP_JOB_NM, D1.HOSTNAME, D1.IF_NAME, (F1_{?Period}.AVG_VALUE+F1_{?Period}.TOTAL_VALUE) AS fvalue, F1_{?Period}.MEAS_DATE, DATE(F1_{?Period}.MEAS_DATE) AS fdate, DM1.MET_NAME, DM1.MET_UNITS FROM FNP.D_IF_METRIC DM1, FNP.D_IF D1, FNP.FV_IF_{?Period} F1_{?Period} WHERE F1_{?Period}.IF_ID=D1.IF_ID AND F1_{?Period}.METRIC_ID=DM1.METRIC_ID AND DM1.MET_NAME= (CASE WHEN '{?ReportBasedOnVal}' = 'Octets

	Packets Receive Rate • Top and Selected interfaces -Transmission Error Rate • Top and Selected interfaces -Receive Error Rate • Top and Selected interfaces -Transmit Packet Discard Rate • Top and Selected interfaces -Receive Packet Discard Rate • Top and Selected interfaces – Inbound packets discarded • Top and Selected interfaces – Outbound packets discarded. • Top and Selected interfaces – Percent packets discarded • Top and Selected interfaces – Outbound packets in error • Top and Selected interfaces – Percent outbound packets in error • Top and Selected interfaces – Inbound packets in error • Top and Selected interfaces – Percent inbound packets in error • Top and Selected interfaces – Percent packets in error		Transmitted' THEN 'Octets Transmitted' WHEN '{?ReportBasedOnVal}' = 'Octets Received' THEN 'Octets Received' WHEN '{?ReportBasedOnVal}' = 'Transmit Bandwidth Utilization' THEN 'Transmit Utilization' WHEN '{?ReportBasedOnVal}' = 'Receive Bandwidth Utilization' THEN 'Receive Utilization' WHEN '{?ReportBasedOnVal}' = 'Unicast Packet Transmit Rate' THEN 'Transmit Packet Rate' WHEN '{?ReportBasedOnVal}' = 'Unicast Packet Receive Rate' THEN 'Receive Packet Rate' WHEN '{?ReportBasedOnVal}' = 'Broadcast/Multicast Packets Transmit Rate' THEN 'Transmit Broadcast/Multicast Packet Rate' WHEN '{?ReportBasedOnVal}' = 'Broadcast/Multicast Packets Receive Rate' THEN 'Receive Broadcast/Multicast Packet Rate' WHEN '{?ReportBasedOnVal}' = 'Transmission Error Rate' THEN 'Transmit Error Rate' WHEN '{?ReportBasedOnVal}' = 'Receive Error Rate' THEN 'Receive Error Rate' WHEN '{?ReportBasedOnVal}' = 'Transmit Packet Discard Rate' THEN 'Outbound Discard Rate' WHEN '{?ReportBasedOnVal}' = 'Receive Packet Discard Rate' THEN 'Inbound Discard Rate' WHEN '{?ReportBasedOnVal}' = 'Inbound Packet Discarded' THEN 'Inbound Packets Discarded' WHEN '{?ReportBasedOnVal}' = 'Outbound Packets Discarded' THEN 'Outbound Packets Discarded' WHEN '{?ReportBasedOnVal}' = 'Percent Packets Discarded' THEN 'Percent of Packets Discarded' WHEN '{?ReportBasedOnVal}' = 'Outbound Packets In Error' THEN 'Outbound Packets in Error' WHEN '{?ReportBasedOnVal}' = 'Percent Outbound

			Packets In Error'
			THEN 'Percent of Outbound Packets in Error'
			WHEN '{?ReportBasedOnVal}' = 'Inbound Packets In Error'
			THEN 'Inbound Packets in Error'
			WHEN '{?ReportBasedOnVal}' = 'Percent Inbound Packets In Error'
			THEN 'Percent of Inbound Packets in Error'
			WHEN '{?ReportBasedOnVal}' = 'Percent Packets In Error'
			THEN 'Percent of Packets in Error'
			ELSE '{?ReportBasedOnVal}' END) AND
			UPPER(D1.IF_NAME)=(CASE WHEN '{?InterfaceName}' <> 'ALL' THEN UPPER(LTRIM(RTRIM('{?Interface Name}'))) else UPPER(D1.IF_NAME) END) AND
			(('{?HostName}' = 'ALL')
			OR
			('{?HostName}' <> 'ALL'
			AND
			(LOCATE('.','{?HostName}') = 0
			AND UPPER(D1.hostname) like UPPER(LTRIM(RTRIM('{?HostNam e}'))) || '.%')
			OR
			(LOCATE('.','{?HostName}') > 0
			AND UPPER(D1.hostname) = UPPER(LTRIM(RTRIM('{?HostNam e}'))))
			))
Enterprise Extender Availability Reports	This report provides the following subreports: • Top and Selected EE links based on percent packets retransmitted • Top and Selected EE links based on retransmission rate • Top and Selected EE links based on number of RTP pipes flowing over EE connection • Top and Selected EE links based on number of sessions flowing over EE connection	FNP.D_EECS FNP.D_EECS_METRIC FNP.F_EECS_HOUR FNP.F_EECS_DAY FNP.F_EECS_WEEK FNP.F_EECS_MONTH FNP.F_EECS_QUARTER FNP.F_EECS_YEAR	SELECT D1.SYSPLEX_NAME, D1.SYSTEM_NAME, D1.LOCAL_IP_ADDR, D1.REMOTE_IP_ADDR, (F1_{?Period}.AVG_VALUE+F1_{?Period}.TOTAL_VA LUE) AS fvalue, F1_{?Period}.MEAS_DATE, DATE(F1_{?Period}.MEAS_DATE) AS fdate, DM1.MET_NAME, DM1.MET_UNITS FROM FNP.D_EECS_METRIC DM1, FNP.D_EECS D1, FNP.FV_EECS_{?Period} F1_{?Period}

			WHERE
			F1_{?Period}.EECS_ID=D1.EECS_ID AND
			F1_{?Period}.METRIC_ID=DM1.METRIC_ID AND
			DM1.MET_NAME =
			(CASE WHEN '{?ReportBasedOnVal}' = 'Percent Packets Retransmitted'
			THEN 'Percent of High-Performance Routing Network Layer Packets Retransmitted'
			WHEN '{?ReportBasedOnVal}' = 'Retransmission Rate'
			THEN 'Rate of High-Performance Routing Network Layer Packets Retransmission'
			WHEN '{?ReportBasedOnVal}' = 'RTP Pipes Over EE Connection'
			THEN 'Number of Rapid Transport Protocol Pipes Flowing Over Enterprise Extender Link'
			WHEN '{?ReportBasedOnVal}' = 'Sessions Over EE Connection'
			THEN 'Number of Sessions Flowing Over Enterprise Extender Link'
			ELSE '{?ReportBasedOnVal}' END) AND
			D1.LOCAL_IP_ADDR=(CASE WHEN '{?LocalIPAddress}' <> 'ALL' THEN LTRIM(RTRIM('{?LocalIPAddress}')) else D1.LOCAL_IP_ADDR END) AND
			D1.REMOTE_IP_ADDR=(CASE WHEN '{?RemoteIPAddress}' <> 'ALL' THEN LTRIM(RTRIM('{?RemoteIPAddress}')) else D1.REMOTE_IP_ADDR END)
Enterprise Extender Throughput and Traffic Reports	This report provides the following subreports: • Top and Selected EE links based on transmit byte rate • Segment by TOS value • Top and Selected EE links based on received byte rate • Segment by TOS value • Top and Selected EE links based on total byte rates (transmit and received) Segment by TOS value • Top and Selected EE links based on transmit packet rate Segment by TOS value • Top and Selected EE links based on received packet rate Segment by TOS value • Top and Selected EE links based on total packet rates (transmit and received) • Segment by TOS value	FNP.D_EE FNP.D_EE_METRIC FNP.F_EE_HOUR FNP.F_EE_DAY FNP.F_EE_WEEK FNP.F_EE_MONTH FNP.F_EE_QUARTER FNP.F_EE_YEAR	SELECT D1.SYSPLEX_NAME, D1.SYSTEM_NAME, D1.LOCAL_IP_ADDR, D1.REMOTE_IP_ADDR, D1.LOCAL_PORT, (CASE WHEN DM1.MET_NAME <> DM2.MET_NAME THEN (F1_{?Period}.AVG_VALUE+F1_{?Period}.TOTAL_VALUE+ F2_{?Period}.AVG_VALUE+F2_{?Period}.TOTAL_VALUE) ELSE (F1_{?Period}.AVG_VALUE+F1_{?Period}.TOTAL_VALUE) END) AS fvalue, F1_{?Period}.MEAS_DATE, DATE(F1_{?Period}.MEAS_DATE) AS fdate,

			DM1.MET_NAME,
			DM1.MET_UNITS
			FROM
			FNP.D_EE_METRIC DM1,
			FNP.D_EE D1,
			FNP.FV_EE_{?Period} F1_{?Period},
			FNP.D_EE_METRIC DM2,
			FNP.D_EE D2,
			FNP.FV_EE_{?Period} F2_{?Period}
			WHERE
			F1_{?Period}.EE_ID=D1.EE_ID AND
			F1_{?Period}.METRIC_ID=DM1.METRIC_ID AND
			DM1.MET_NAME=
			(CASE WHEN '{?ReportBasedOnVal}' = 'Transmit Byte Rate'
			THEN 'Enterprise Extender Transmit Bytes Rate'
			WHEN '{?ReportBasedOnVal}' = 'Received Byte Rate'
			THEN 'Enterprise Extender Receive Bytes Rate'
			WHEN '{?ReportBasedOnVal}' = 'Total Byte Rates'
			THEN 'Enterprise Extender Transmit Bytes Rate'
			WHEN '{?ReportBasedOnVal}' = 'Transmit Packet Rate'
			THEN 'Enterprise Extender Transmit Packet Rate'
			WHEN '{?ReportBasedOnVal}' = 'Received Packet Rate'
			THEN 'Enterprise Extender Receive Packet Rate'
			WHEN '{?ReportBasedOnVal}' = 'Total Packet Rates'
			THEN 'Enterprise Extender Transmit Packet Rate'
			ELSE '{?ReportBasedOnVal}' END) AND
			DM2.MET_NAME =
			(CASE WHEN '{?ReportBasedOnVal}' = 'Total Byte Rates'
			THEN 'Enterprise Extender Receive Bytes Rate'
			WHEN '{?ReportBasedOnVal}' = 'Total Packet Rates'
			THEN 'Enterprise Extender Receive Packet Rate'
			ELSE DM1.MET_NAME END) AND
			F2_{?Period}.METRIC_ID=DM2.METRIC_ID AND
			F2_{?Period}.EE_ID=D2.EE_ID AND
			F1_{?Period}.MEAS_DATE=F2_{?Period}.MEAS_DATE AND
			F1_{?Period}.EE_ID = F2_{?Period}.EE_ID AND
			D1.LOCAL_IP_ADDR=(CASE WHEN '{?LocalIPAddress}' <> 'ALL' THEN LTRIM(RTRIM('{?LocalIPAddress}')) else D1.LOCAL_IP_ADDR END)

			AND
			D1.REMOTE_IP_ADDR=(CASE WHEN '{?RemoteIPAddress}' <> 'ALL' THEN LTRIM(RTRIM('{?RemoteIPAddress}')) else D1.REMOTE_IP_ADDR END) AND
			D1.LOCAL_PORT=(CASE WHEN '{?Port}' <> 'ALL' THEN LTRIM(RTRIM('{?Port}')) else D1.LOCAL_PORT END)
TCP Layer Stack Reports	This report provides the following subreports: • Top and Selected TCP/IP stacks based on transmit segment rate • Top and Selected TCP/IP stacks based on received segment rate • Top and Selected TCP/IP stacks based on total segment rates (transmit and received) • Top and Selected TCP/IP stacks based on accepted connections • Top and Selected TCP/IP stacks based on connection rate • Top and Selected TCP/IP stacks based on connections dropped • Segment by reason code • Top and Selected TCP/IP stacks based on window probes sent • Top and Selected TCP/IP stacks based on percent segments retransmitted • Top and Selected TCP/IP stacks based on retransmission rate • Top and Selected TCP/IP stacks based on segments in error • Top and Selected TCP/IP stacks based on out-of-order segments received • Top and Selected TCP/IP stacks based on percent out-of-order segments	FNP.D_TCP FNP.D_TCP_METRIC FNP.F_TCP_HOUR FNP.F_TCP_DAY FNP.F_TCP_WEEK FNP.F_TCP_MONTH FNP.F_TCP_QUARTER FNP.F_TCP_YEAR	SELECT D1.SYSPLEX_NAME, D1.SYSTEM_NAME, D1.IP_NET_ADDRESS, D1.TCPIP_JOB_NM, D1.HOSTNAME, (CASE WHEN DM1.MET_NAME <> DM2.MET_NAME THEN (F1_{?Period}.AVG_VALUE+F1_{?Period}.TOTAL_VALUE+ F2_{?Period}.AVG_VALUE+F2_{?Period}.TOTAL_VALUE) ELSE (F1_{?Period}.AVG_VALUE+F1_{?Period}.TOTAL_VALUE) END) AS fvalue, F1_{?Period}.MEAS_DATE, DATE(F1_{?Period}.MEAS_DATE) AS fdate, DM1.MET_NAME, DM1.MET_UNITS FROM FNP.D_TCP D1, FNP.D_TCP_METRIC DM1, FNP.FV_TCP_{?Period} F1_{?Period}, FNP.D_TCP D2, FNP.D_TCP_METRIC DM2, FNP.FV_TCP_{?Period} F2_{?Period} WHERE F1_{?Period}.TCP_ID = D1.TCP_ID AND F1_{?Period}.METRIC_ID = DM1.METRIC_ID AND DM1.MET_NAME = (CASE WHEN '{?ReportBasedOnVal}' = 'Transmit Segment Rate' THEN 'Transmit Segment Rate' WHEN '{?ReportBasedOnVal}' = 'Received Segment Rate' THEN 'Receive Segment Rate' WHEN '{?ReportBasedOnVal}' = 'Total Segment

			Rates'
			THEN 'Transmit Segment Rate'
			WHEN '{?ReportBasedOnVal}' = 'Accepted Connections'
			THEN 'ibmMvsTcpListenerAcceptCount'
			WHEN '{?ReportBasedOnVal}' = 'Connection Rate'
			THEN 'TCPIP Connection Rate'
			WHEN '{?ReportBasedOnVal}' = 'Connections Dropped Segment'
			THEN 'TCPIP Connections Dropped'
			WHEN '{?ReportBasedOnVal}' = 'Window Probes Sent'
			THEN 'ibmMvsTcpOutWinProbes'
			WHEN '{?ReportBasedOnVal}' = 'Percent Segments Retransmitted'
			THEN 'Percent Segment Retransmitted'
			WHEN '{?ReportBasedOnVal}' = 'Retransmission Rate'
			THEN 'TCP Stack Retransmission Rate'
			WHEN '{?ReportBasedOnVal}' = 'Segments Received In Error'
			THEN 'tcpInErrs'
			WHEN '{?ReportBasedOnVal}' = 'Out-Of-Order Segments Received'
			THEN 'ibmMvsTcpInOutOfOrder'
			WHEN '{?ReportBasedOnVal}' = 'Percent Out-Of-Order Segments'
			THEN 'Percent Out-of-Order Segments for TCP Stack'
			ELSE '{?ReportBasedOnVal}' END) AND
			DM2.MET_NAME =
			(CASE WHEN '{?ReportBasedOnVal}' = 'Total Segment Rates'
			THEN 'Receive Segment Rate'
			ELSE DM1.MET_NAME END) AND
			F2_{?Period}.METRIC_ID=DM2.METRIC_ID AND
			F2_{?Period}.TCP_ID=D2.TCP_ID AND
			F1_{?Period}.MEAS_DATE=F2_{?Period}.MEAS_DATE AND
			F1_{?Period}.TCP_ID = F2_{?Period}.TCP_ID AND
			(('{?HostName}' = 'ALL')
			OR
			('{?HostName}' <> 'ALL'
			AND
			(LOCATE('.','{?HostName}') = 0
			AND UPPER(D1.hostname) like UPPER(LTRIM(RTRIM('{?HostNam

			e}'))) || '.%')
			
			OR
			
			(LOCATE('.','{?HostName}') > 0
			
			AND UPPER(D1.hostname) =
			    UPPER(LTRIM(RTRIM('{?HostNam
			    e}'))))
			
			))

IP Layer Stack Reports	This report provides the following subreports:
	
	• Top and Selected IP stacks based on transmit datagram rate
	• Top and Selected IP stacks based on received datagram rate.
	• Top and Selected IP stacks based on total datagram rates (transmit and received)
	• Top and Selected IP stacks based on datagrams discarded (input and output)
	• Top and Selected IP stacks based on datagrams not delivered
	• Top and Selected IP stacks based on datagrams with fragments to be reassembled
	• Top and Selected IP stacks based on percent input datagrams discarded
		FNP.D_IP
		
		FNP.D_IP_METRIC
		
		FNP.F_IP_HOUR
		
		FNP.F_IP_DAY
		
		FNP.F_IP_WEEK
		
		FNP.F_IP_MONTH
		
		FNP.F_IP_QUARTER
		
		FNP.F_IP_YEAR
			SELECT
			
			 D1.SYSPLEX_NAME,
			
			 D1.SYSTEM_NAME,
			
			 D1.HOSTNAME,
			
			 D1.TCPIP_JOB_NM,
			
			 D1.IP_NET_ADDRESS,
			
			 (CASE WHEN DM1.MET_NAME <> DM2.MET_NAME
			    THEN
			
			 (F1_{?Period}.AVG_VALUE+F1_{?Period}.TOTAL_VA
			    LUE) END) AS fvalue,
			
			 F2_{?Period}.AVG_VALUE+F2_{?Period}.TOTAL_VA
			    LUE)
			    ELSE
			
			 (F1_{?Period}.AVG_VALUE+F1_{?Period}.TOTAL_VA
			    LUE) END) AS fvalue,
			
			 F1_{?Period}.MEAS_DATE,
			
			 DATE(F1_{?Period}.MEAS_DATE) AS fdate,
			
			 DM1.MET_NAME,
			
			 DM1.MET_UNITS
			
			FROM
			
			 FNP.D_IP_METRIC DM1,
			
			 FNP.D_IP D2,
			
			 FNP.FV_IP_{?Period} F1_{?Period},
			
			 FNP.D_IP_METRIC DM2,
			
			 FNP.D_IP D1,
			
			 FNP.FV_IP_{?Period} F2_{?Period}
			
			WHERE
			
			 F1_{?Period}.IP_ID = D1.IP_ID AND
			
			 F1_{?Period}.METRIC_ID = DM1.METRIC_ID AND
			
			 DM1.met_name =
			
			 (CASE WHEN '{?ReportBasedOnVal}' = 'Transmit
			    Datagram Rate'
			
			    THEN 'IP Transmit Datagram Rate'
			
			    WHEN '{?ReportBasedOnVal}' = 'Received Datagram
			    Rate'
			
			    THEN 'IP Receive Datagram Rate'
			
			    WHEN '{?ReportBasedOnVal}' = 'Total Datagram

			Rates'
			THEN 'IP Transmit Datagram Rate'
			WHEN '{?ReportBasedOnVal}' = 'Datagrams Discarded'
			THEN 'IP Number of Input Datagrams Discarded'
			WHEN '{?ReportBasedOnVal}' = 'Datagrams Not Delivered'
			THEN 'ipInDelivers'
			WHEN '{?ReportBasedOnVal}' = 'Datagrams With Fragments To Be Reassembled'
			THEN 'ipReasmReqds'
			WHEN '{?ReportBasedOnVal}' = 'Percent Input Datagrams Discarded'
			THEN 'IP Percent of Input Datagrams Discarded'
			ELSE '{?ReportBasedOnVal}' END) AND
			DM2.MET_NAME =
			(CASE WHEN '{?ReportBasedOnVal}' = 'Total Datagram Rates'
			THEN 'IP Receive Datagram Rate'
			WHEN '{?ReportBasedOnVal}' = 'Datagrams Discarded'
			THEN 'IP Number of Output Datagrams Discarded'
			ELSE DM1.MET_NAME END) AND
			F2_{?Period}.METRIC_ID=DM2.METRIC_ID AND
			F2_{?Period}.IP_ID=D2.IP_ID AND
			F1_{?Period}.MEAS_DATE=F2_{?Period}.MEAS_DATE AND
			F1_{?Period}.IP_ID = F2_{?Period}.IP_ID AND
			(('{?HostName}' = 'ALL')
			OR
			('{?HostName}' <> 'ALL'
			AND
			(LOCATE('.','{?HostName}') = 0
			AND UPPER(D1.hostname) like UPPER(LTRIM(RTRIM('{?HostName}'))) || '.%')
			OR
			(LOCATE('.','{?HostName}') > 0
			AND UPPER(D1.hostname) = UPPER(LTRIM(RTRIM('{?HostName}'))))
			))
UDP Layer Stack Reports	This report provides the following subreports: • Top and Selected UDP stacks based on transmit datagram rate • Top and Selected UDP	FNP.D_UDP FNP.D_UDP_METRIC FNP.F_UDP_HOUR FNP.F_UDP_DAY	SELECT D1.SYSPLEX_NAME, D1.SYSTEM_NAME, D1.IP_NET_ADDRESS, D1.TCPIP_JOB_NM, D1.HOSTNAME, (CASE WHEN DM1.MET_NAME <> DM2.MET_NAME THEN

		stacks based on received datagram rate
		• Top and Selected UDP stacks based on total datagram rates (transmit and received)
		• Top and Selected UDP stacks based on datagrams delivered
		• Top and Selected UDP stacks based on datagrams not delivered
		• Top and Selected UDP stacks based on percent datagrams not delivered
			FNP.F_UDP_WEEK
			
			FNP.F_UDP_MONTH
			
			FNP.F_UDP_QUARTER
			
			FNP.F_UDP_YEAR
				(F1_{?Period}.AVG_VALUE+F1_{?Period}.TOTAL_VALUE+
				
				F2_{?Period}.AVG_VALUE+F2_{?Period}.TOTAL_VALUE)
				    ELSE
				(F1_{?Period}.AVG_VALUE+F1_{?Period}.TOTAL_VALUE) END) AS fvalue,
				 F1_{?Period}.MEAS_DATE,
				 DATE(F1_{?Period}.MEAS_DATE) AS fdate,
				 DM1.MET_NAME,
				 DM1.MET_UNITS
				FROM
				 FNP.D_UDP D1,
				 FNP.D_UDP_METRIC DM1,
				 FNP.FV_UDP_{?Period} F1_{?Period},
				 FNP.D_UDP D2,
				 FNP.D_UDP_METRIC DM2,
				 FNP.FV_UDP_{?Period} F2_{?Period}
				WHERE
				 F1_{?Period}.UDP_ID = D1.UDP_ID AND
				 F1_{?Period}.METRIC_ID = DM1.METRIC_ID AND
				 DM1.MET_NAME =
				   (CASE WHEN '{?ReportBasedOnVal}' = 'Transmit Datagram Rate'
				      THEN 'User Datagram Protocol Transmit Datagram Rate'
				      WHEN '{?ReportBasedOnVal}' = 'Receive Datagram Rate'
				       THEN 'User Datagram Protocol Receive Datagram Rate'
				      WHEN '{?ReportBasedOnVal}' = 'Total Datagram Rates'
				       THEN 'User Datagram Protocol Transmit Datagram Rate'
				      WHEN '{?ReportBasedOnVal}' = 'Datagrams Delivered'
				       THEN 'User Datagram Protocol In Datagrams'
				      WHEN '{?ReportBasedOnVal}' = 'Datagrams Not Delivered'
				       THEN 'User Datagram Protocol Number of Received Datagrams Unable to Deliver'
				      WHEN '{?ReportBasedOnVal}' = 'Percent Datagrams Not Delivered'
				       THEN 'User Datagram Protocol Percent of Received Datagrams Unable to Deliver'
				      ELSE '{?ReportBasedOnVal}' END) AND
				 DM2.MET_NAME =
				   (CASE WHEN '{?ReportBasedOnVal}' = 'Total Datagram Rates'
				       THEN 'User Datagram Protocol Receive Datagram Rate'
				      ELSE DM1.MET_NAME END) AND
				 F2_{?Period}.METRIC_ID=DM2.METRIC_ID AND
				 F2_{?Period}.UDP_ID=D2.UDP_ID AND
				
				F1_{?Period}.MEAS_DATE=F2_{?Period}.MEAS_DATE AND
				 F1_{?Period}.UDP_ID = F2_{?Period}.UDP_ID AND
				 (('{?HostName}' = 'ALL')
				 OR
				 ('{?HostName}' <> 'ALL'
				   AND
				   (LOCATE('.','{?HostName}') = 0
				    AND UPPER(D1.hostname) like UPPER(LTRIM(RTRIM('{?HostName}'))) || '.%')
				   OR
				   (LOCATE('.','{?HostName}') > 0
				    AND UPPER(D1.hostname) = UPPER(LTRIM(RTRIM('{?HostName}'))))

			))

TCP/IP Stack Memory Reports	This report provides the following subreports:
	
	• Top and Selected TCP/IP stack memory based on average ECSA storage allocated
	• Top and Selected TCP/IP stack memory based on percent ECSA allocated storage
	• Top and Selected TCP/IP stack memory based on average authorized private storage allocated.
	• Top and Selected TCP/IP Stack memory based on percent authorized private allocated storage
		FNP.D_TCPIP
		
		FNP.D_TCPIP_METRIC
		
		FNP.F_TCPIP_HOUR
		
		FNP.F_TCPIP_DAY
		
		FNP.F_TCPIP_WEEK
		
		FNP.F_TCPIP_MONTH
		
		FNP.F_TCPIP_QUARTER
		
		FNP.F_TCPIP_YEAR
			SELECT
			
			 D1.SYSPLEX_NAME,
			
			 D1.SYSTEM_NAME,
			
			 D1.HOSTNAME,
			
			 D1.TCPIP_JOB_NM,
			
			 D1.IP_NET_ADDRESS,
			
			 (F1_{?Period}.AVG_VALUE+F1_{?Period}.TOTAL_VALUE) AS fvalue,
			
			 F1_{?Period}.MEAS_DATE,
			
			 DATE(F1_{?Period}.MEAS_DATE) AS fdate,
			
			 DM1.MET_NAME,
			
			 DM1.MET_UNITS
			
			FROM
			
			 FNP.D_TCPIP D1,
			
			 FNP.D_TCPIP_METRIC DM1,
			
			 FNP.FV_TCPIP_{?Period} F1_{?Period}
			
			WHERE
			
			 F1_{?Period}.TCPIP_ID = D1.TCPIP_ID AND
			
			 F1_{?Period}.METRIC_ID = DM1.METRIC_ID AND
			
			 DM1.MET_NAME =
			
			  (CASE WHEN '{?ReportBasedOnVal}' = 'Current ECSA Storage Allocated'
			
			    THEN 'Current Extended Common Storage Address Space Storage Bytes'
			
			   WHEN '{?ReportBasedOnVal}' = 'Percent ECSA Allocated Storage'
			
			    THEN 'Percent Extended Common Storage Address Space Pool Storage Allocated'
			
			   WHEN '{?ReportBasedOnVal}' = 'Avg Authorized Private Storage Allocated'
			
			    THEN 'Number of Private Subpool Storage Bytes Allowed'
			
			   WHEN '{?ReportBasedOnVal}' = 'Percent Authorized Private Allocated Storage'
			
			    THEN 'Percent Authorized Private Allocated Storage'
			
			    ELSE '{?ReportBasedOnVal}' END) AND
			
			(('{?HostName}' = 'ALL')
			
			OR
			
			('{?HostName}' <> 'ALL'
			
			 AND
			
			 (LOCATE('.','{?HostName}') = 0
			
			  AND UPPER(D1.hostname) like UPPER(LTRIM(RTRIM('{?HostName}'))) || '.%')

			OR (LOCATE('.','{?HostName}') > 0 AND UPPER(D1.hostname) = UPPER(LTRIM(RTRIM('{?HostName}'))))))

CSM Storage Reports	This report provides the following subreports:
	
	• Top and selected z/OS system CSM storage based on cumulative storage allocated across all pools (ECSA and DSP)
	• Top and selected z/OS system CSM storage based on cumulative storage allocated across all ECSA pools
	• Top and Selected z/OS system CSM storage based on percent ECSA allocated storage
	• Top and selected z/OS system CSM storage based on cumulative storage allocated across all DSP pools
		FNP.D_CSM
		
		FNP.D_CSM_METRIC
		
		FNP.F_CSM_HOUR
		
		FNP.F_CSM_DAY
		
		FNP.F_CSM_WEEK
		
		FNP.F_CSM_MONTH
		
		FNP.F_CSM_QUARTER
		
		FNP.F_CSM_YEAR
			SELECT
			
			D1.SYSPLEX_NAME,
			
			D1.SYSTEM_NAME,
			
			(F1_{?Period}.AVG_VALUE+F1_{?Period}.TOTAL_VALUE) AS fvalue,
			
			F1_{?Period}.MEAS_DATE,
			
			DATE(F1_{?Period}.MEAS_DATE) AS fdate,
			
			DM1.MET_NAME,
			
			DM1.MET_UNITS
			
			FROM
			
			FNP.D_CSM D1,
			
			FNP.FV_CSM_{?Period} F1_{?Period},
			
			FNP.D_CSM_METRIC DM1
			
			WHERE
			
			F1_{?Period}.CSM_ID=D1.CSM_ID and
			
			F1_{?Period}.METRIC_ID=DM1.METRIC_ID AND
			
			DM1.MET_NAME=
			
			(CASE WHEN '{?ReportBasedOnVal}' = 'Total ECSA and DSP Pools'
			
			    THEN 'Cumulative All Pool Storage'
			
			    WHEN '{?ReportBasedOnVal}' = 'Total ECSA Pools'
			
			    THEN 'Cumulative Extended Common Storage Address Space Pool Storage'
			
			    WHEN '{?ReportBasedOnVal}' = 'Percent ECSA Allocated Storage'
			
			    THEN 'Percent Extended Common Storage Address Space Pool Storage'
			
			    WHEN '{?ReportBasedOnVal}' = 'Total DSP pools'
			
			    THEN 'Cumulative Data Space Pool Storage'
			
			    ELSE '{?ReportBasedOnVal}' END) AND
			
			UPPER(D1.SYSTEM_NAME)=(CASE WHEN '{?SystemName}' <> 'ALL' THEN UPPER(LTRIM(RTRIM('{?SystemName}'))) else UPPER(D1.SYSTEM_NAME) END)

FTP Client Reports	This report provides the following subreports: • FTP Clients Based On Total Bytes Transferred • FTP Clients Based On Number of Sessions	FNP.D_FTPC FNP.D_FTPC_METRIC FNP.F_FTPC_HOUR FNP.F_FTPC_DAY FNP.F_FTPC_WEEK	SELECT D1.SYSPLEX_NAME, D1.SYSTEM_NAME, D1.LOCAL_IP_ADDR, (F1_{?Period}.AVG_VALUE+F1_{?Period}.TOTAL_VAL

		FNP.F_FTPC_MONTH	UE) AS fvalue,
		FNP.F_FTPC_QUARTER	F1_{?Period}.MEAS_DATE,
		FNP.F_FTPC_YEAR	DATE(F1_{?Period}.MEAS_DATE) AS fdate,
			DM1.MET_NAME,
			DM1.MET_UNITS
			FROM
			FNP.D_FTPC_METRIC DM1,
			FNP.D_FTPC D1,
			FNP.FV_FTPC_{?Period} F1_{?Period}
			WHERE
			F1_{?Period}.FTPC_ID=D1.FTPC_ID AND
			F1_{?Period}.METRIC_ID=DM1.METRIC_ID AND
			DM1.MET_NAME=
			(CASE WHEN '{?ReportBasedOnVal}' = 'Total Bytes Transferred'
			THEN 'FTP Transmission Byte Count'
			WHEN '{?ReportBasedOnVal}' = 'Number of Sessions'
			THEN 'Number of FTP Sessions'
			ELSE '{?ReportBasedOnVal}' END) AND
			D1.LOCAL_IP_ADDR=(CASE WHEN '{?LocalIPAddress}' <> 'ALL' THEN LTRIM(RTRIM('{?LocalIPAddress}')) else D1.LOCAL_IP_ADDR END)
FTP Server Reports	This report provides the following subreports: • FTP Servers Based On Total Bytes Transferred • FTP Servers Based On Number of Sessions • FTP Servers Based On Number of Login Failures	FNP.D_FTPS FNP.D_FTPS_METRIC FNP.F_FTPS_HOUR FNP.F_FTPS_DAY FNP.F_FTPS_WEEK FNP.F_FTPS_MONTH FNP.F_FTPS_QUARTER FNP.F_FTPS_YEAR	SELECT D1.SYSPLEX_NAME, D1.SYSTEM_NAME, D1.LOCAL_IP_ADDR, D1.LOCAL_PORT, (F1_{?Period}.AVG_VALUE+F1_{?Period}.TOTAL_ VALUE) AS fvalue, F1_{?Period}.MEAS_DATE, DATE(F1_{?Period}.MEAS_DATE) AS fdate, DM1.MET_NAME, DM1.MET_UNITS FROM FNP.D_FTPS_METRIC DM1, FNP.D_FTPS D1, FNP.FV_FTPS_{?Period} F1_{?Period} WHERE F1_{?Period}.FTPS_ID=D1.FTPS_ID AND F1_{?Period}.METRIC_ID=DM1.METRIC_ID AND DM1.MET_NAME=

			(CASE WHEN '{?ReportBasedOnVal}' = 'Number of Login Failures'
			THEN 'Number of FTP Login Failures'
			WHEN '{?ReportBasedOnVal}' = 'Total Bytes Transferred'
			THEN 'FTP Transmission Byte Count'
			WHEN '{?ReportBasedOnVal}' = 'Number of Sessions'
			THEN 'Number of FTP Sessions'
			ELSE '{?ReportBasedOnVal}' END) AND
			D1.LOCAL_IP_ADDR=(CASE WHEN '{?LocalIPAddress}' <> 'ALL' THEN LTRIM(RTRIM('{?LocalIPAddress}'))) else D1.LOCAL_IP_ADDR END) AND
			D1.LOCAL_PORT=(CASE WHEN '{?Port}' <> 'ALL' THEN LTRIM(RTRIM('{?Port}')) else D1.LOCAL_PORT END)

FTP Client User Reports	This report provides the following subreports:
	
	• FTP Client Users Based On Total Bytes Transferred
	• FTP Client Users Based On Number of Sessions
		FNP.D_FTPCU
		
		FNP.D_FTPCU_METRIC
		
		FNP.F_FTPCU_HOUR
		
		FNP.F_FTPCU_DAY
		
		FNP.F_FTPCU_WEEK
		
		FNP.F_FTPCU_MONTH
		
		FNP.F_FTPCU_QUARTER
		
		FNP.F_FTPCU_YEAR
			SELECT
			 D1.SYSPLEX_NAME,
			 D1.SYSTEM_NAME,
			 D1.LOCAL_IP_ADDR,
			 D1.SRV_USERID,
			 D1.APPL_JOB_NAME,
			 (F1_{?Period}.AVG_VALUE+F1_{?Period}.TOTAL_
			 VALUE) AS fvalue,
			  F1_{?Period}.MEAS_DATE,
			 DATE(F1_{?Period}.MEAS_DATE) AS fdate,
			 DM1.MET_NAME,
			 DM1.MET_UNITS
			FROM
			 FNP.D_FTPCU_METRIC DM1,
			 FNP.D_FTPCU D1,
			 FNP.FV_FTPCU_{?Period} F1_{?Period}
			WHERE
			 F1_{?Period}.FTPCU_ID=D1.FTPCU_ID AND
			 F1_{?Period}.METRIC_ID=DM1.METRIC_ID AND
			 DM1.MET_NAME=
			  (CASE WHEN '{?ReportBasedOnVal}' = 'Total Bytes Transferred'
			    THEN 'FTP Transmission Byte Count'
			    WHEN '{?ReportBasedOnVal}' = 'Total Duration of Transfers'
			    THEN 'FTP Transmission Duration'
			    ELSE '{?ReportBasedOnVal}' END) AND
			 D1.LOCAL_IP_ADDR=(CASE WHEN '{?LocalIPAddress}' <> 'ALL' THEN

			LTRIM(RTRIM('{?LocalIPAddress}')) else D1.LOCAL_IP_ADDR END) AND
			D1.SRV_USERID=(CASE WHEN '{?ServerUserid}' <> 'ALL' THEN UPPER(LTRIM(RTRIM('{?ServerUs erid}'))) else D1.SRV_USERID END)
FTP Server User Reports	This report provides the following subreports: • FTP Server Users Based On Number of Login Failures. • FTP Server Users Based On Total Bytes Transferred • FTP Server Users Based On Number of Sessions	FNP.D_FTPSU FNP.D_FTPSU_METRIC FNP.F_FTPSU_HOUR FNP.F_FTPSU_DAY FNP.F_FTPSU_WEEK FNP.F_FTPSU_MONTH FNP.F_FTPSU_QUARTER FNP.F_FTPSU_YEAR	SELECT D1.SYSPLEX_NAME, D1.SYSTEM_NAME, D1.LOCAL_IP_ADDR, D1.LOCAL_PORT, D1.SRV_USERID, D1.APPL_JOB_NAME, (F1_{?Period}.AVG_VALUE+F1_{?Period}.TOTAL_ VALUE) AS fvalue, F1_{?Period}.MEAS_DATE, DATE(F1_{?Period}.MEAS_DATE) AS fdate, DM1.MET_NAME, DM1.MET_UNITS FROM FNP.D_FTPSU_METRIC DM1, FNP.D_FTPSU D1, FNP.FV_FTPSU_{?Period} F1_{?Period} WHERE F1_{?Period}.FTPSU_ID=D1.FTPSU_ID AND F1_{?Period}.METRIC_ID=DM1.METRIC_ID AND DM1.MET_NAME= (CASE WHEN '{?ReportBasedOnVal}' = 'Number of Login Failures' THEN 'Number of FTP Login Failures' WHEN '{?ReportBasedOnVal}' = 'Total Bytes Transferred' THEN 'FTP Transmission Byte Count' WHEN '{?ReportBasedOnVal}' = 'Total Duration of Transfers' THEN 'FTP Transmission Duration' ELSE '{?ReportBasedOnVal}' END) AND D1.LOCAL_IP_ADDR=(CASE WHEN '{?LocalIPAddress}' <> 'ALL' THEN LTRIM(RTRIM('{?LocalIPAddress}')) else D1.LOCAL_IP_ADDR END) AND D1.LOCAL_PORT=(CASE WHEN '{?Port}' <> 'ALL' THEN LTRIM(RTRIM('{?Port}')) else D1.LOCAL_PORT END) AND D1.SRV_USERID=(CASE WHEN '{?ServerUserid}' <> 'ALL' THEN

			UPPER(LTRIM(RTRIM('{?ServerUs erid}'))) else D1.SRV_USERID END)

3.1 Considerations for Creating Reports

The reports that are provided in the Tivoli Monitoring for Network Performance warehouse pack were defined to meet many of your requirements. Tivoli Monitoring for Network Performance has summarized a significant amount of additional measurement data and stored it into the data mart. If you need to create additional reports, the data is available for you to create reports using Structured Query Language (SQL) to query the data mart or create graphical reports using a report creation application.

You might want to design and create reports for the following reasons:
- You need more information or additional formatting for a report that is provided in this warehouse pack
- You want to combine data from Tivoli Monitoring for Network Performance with data from other Tivoli products (for example, the Tivoli Storage Manager or Tivoli Decision Support products) that aggregate data to the Tivoli Data Warehouse
- You want to create reports that use the SNMP measurements that are stored in the data mart.

Consider the following information before you begin to design and create your own reports:
- An understanding of the data mart data model is required. See "Data mart schema information" on page 124.
- You must join at least 3 database tables to create a report.
- A report building application that can retrieve data from the data mart and format the results is required. Crystal Enterprise 9 is provided to view reports; however, it cannot be used for report creation. You can either use another application, such as Crystal Reports, to create the reports, or you can draw simple reports using DB2 interactive or the DB2 Query Management Facility (QMF).

  If you purchase Crystal Reports, you can create new reports based on Tivoli Monitoring for Network Performance reports and you can base your database queries on the SQL that is provided with these reports. For more information, see "Reports" on page 11.

4 Installing and configuring the warehouse pack

This section provides supplemental information about installing and configuring the Tivoli Monitoring for Network Performance warehouse pack. The warehouse pack is provided on the Tivoli Monitoring for Network Performance product CD and it is installed on the Tivoli Data Warehouse control server.

Note: This document only provides supplemental installation information that is specific to the Tivoli Monitoring for Network Performance warehouse pack. This information must be used in conjunction with the information that is provided in *Installing and Configuring Tivoli Data Warehouse*.

Installation and configuration of the warehouse pack is a multi-step process that is described in multiple documents as follows:

- Perform the pre-installation tasks that are described in "Pre-installation procedures" on page 41 and in *Installing and Configuring Tivoli Data Warehouse*.

- Review the installation information that is provided in this document and then install the Tivoli Monitoring for Network Performance warehouse pack using the procedures provided in *Installing and Configuring Tivoli Warehouse*t.

- Perform the post-installation tasks that are described in "Post-installation procedures" on page 42.

- Begin to use the Tivoli Monitoring for Network Performance warehouse function as described in *Installing and Configuring Tivoli Data Warehouse*. Change the configuration values to meet the needs of your installation.

4.1 Prerequisite hardware and software

See Appendix A of *IBM Tivoli Monitoring for Network Performance: Planning, Installation, and Configuration* for a list of prerequisite hardware and software.

This warehouse pack supports central data warehouses on DB2 UDB for z/OS and OS/390 and DB2 UDB for Windows and UNIX systems. Also, this warehouse pack supports data marts on DB2 UDB for z/OS and OS/390 and DB2 UDB for Windows and UNIX systems.

See the *Tivoli Data Warehouse Release Notes* for specific information about hardware prerequisites, database and operating system support, and product prerequisites. For late-breaking news about prerequisites, refer to the Tivoli Monitoring for Network Performance Readme and the following IBM Software Support Web site:

http://www.ibm.com/software/sysmgmt/products/support/

4.2 Product notes and limitations

Review the information in this section before you install the Tivoli Monitoring for Network Performance warehouse pack.

- If an ETL fails when it is run. Correct the problem and rerun the ETL starting with the step that failed. Do not rerun the ETL from the beginning, because an error will occur.

- All data that comes from a source database on a z/OS system must be placed into a central data warehouse and then a data mart on z/OS system. Do not place the data from a source database on a z/OS system into a central data warehouse and data mart on a Windows or UNIX system.

4.3 Database-sizing considerations

Ensure that you have sufficient space in the central data warehouse for the historical data collected by the warehouse pack. See the following books to estimate how much space is required for the warehouse pack:

- *Installing and Configuring Tivoli Data Warehouse*

- *IBM Tivoli Monitoring for Network Performance Planning, Installation, and Configuration*

4.4 Pre-installation procedures

Perform the following tasks in the order specified prior to installing the Tivoli Monitoring for Network Performance warehouse pack:

1. Read the first three chapters of this Enablement Guide.

2. Read *Installing and Configuring Tivoli Data Warehouse*. This document is available on the Tivoli Data Warehouse documentation CD.

3. Ensure that the correct version of all prerequisite software is installed.

4. Record the information that is listed in the following table for your Tivoli Monitoring for Network Performance database (source) database. You need to specify this information during the warehouse pack installation.

ODBC source	User ID	Password	Database type	Host name and database name or alias name	Port number
FNP_SOURCE			DB2 UDB, DB2 for z/OS and OS/390®		
	This is the instance name for the ITMNP source database.	This is the password for the ITMNP source database			

5. Review the database prune parameters to ensure that they meet the needs of your installation.

6. Determine what time of day you would want to schedule the ETLs to run. You might need to discuss this with your database administrator and network systems programmer. Consider your DB2 maintenance schedule, the Tivoli Monitoring for Network Performance Purge Utility schedule, and the monitor configuration schedules when you choose a time for the ETLs to run. All of these things are using the database and will affect each other and system performance.

7. Go to "Installation of the warehouse pack" on page 41.

4.5 Installation of the warehouse pack

Install the warehouse pack as described in *Installing and Configuring Tivoli Data Warehouse*. Review the following information before you begin*:*

- The warehouse pack installation media is available in the \tedw_apps_etl directory of the product CD.

- Use the the twh_install_props.cfg installation properties file that is located in the tedw_apps_etl\fnp directory of the product CD.

- You are prompted during the installation process to select and configure the ODBC data source. Use the information that was recorded in "Pre-installation procedures" on page 41.

- You are prompted during the installation process to specify if you want to schedule the ETLs to run.

  o If you choose to schedule the ETLs, you must specify the time that you want the ETLs to run.

  o If you chose to schedule the ETLs at a later time, see *Installing and Configuring Tivoli Data Warehouse* for the procedure.

4.6 Post-installation procedures

Perform the following tasks after you have installed the warehouse pack:

- If you did not schedule the FNP_c05_ETL1_Process process to run when you installed the Tivoli Monitoring for Network Performance warehouse pack, schedule it to run. For information about scheduling the ETL to run, see *Installing and Configuring Tivoli Data Warehouse*.

- After the ETLs are run, see the IBM Tivoli Monitoring for Network Performance Readme file for information about manually configuring the data mart in Crystal Management Console before viewing the reports.

4.7 Uninstallation of the warehouse pack

See *Installing and Configuring Tivoli Data Warehouse* for the procedures that are used to uninstall warehouse packs. This warehouse pack does not require any additional uninstallation procedures.

4.8 Multiple data centers

This warehouse pack does not support multiple data centers.

4.9 Multiple customer environments

This warehouse pack does not support multiple customer environments.

5 Maintenance and problem determination

This section describes maintenance tasks for the warehouse pack.

5.1 Backing up and restoring

See *Installing and Configuring Tivoli Data Warehouse* for information about backing up and restoring your databases. The Tivoli Monitoring for Network Performance warehouse pack requires no additional procedures.

5.2 Pruning data

Parameters are provided to control how often the databases are pruned. The following sections provide procedures for changing the parameters either before or after you install the Tivoli Monitoring for Network Performance warehouse pack.

5.3 Central data warehouse

Data that is older than 6 months is pruned when the CDW_c05_Prune_and_Mark_Active process runs. This process is within the CDW_Tivoli_Data_Warehouse_v1.2.0_Subject_Area. This process runs daily at 6:00 a.m.

The prune_msmt_control parameter controls when the central data warehouse database is pruned. Change the values specified by this parameter if you do not want to use the default values of 6 months and 6:00 a.m.

5.3.1 Pruning measurement data (table Prune_Msmt_Control)

Measurement data is pruned from the Msmt table based on the age specified in the PMsmtC_Age_In_Days column of the Prune_Msmt_Control table.

5.3.1.1 Changing the session.prune_msmt_control parameter before installation

Use the following procedure to change the prune_msmt_control parameter before installation:

1. Follow the procedures for pruning the central data warehouse in *Installing and Configuring Tivoli Data Warehouse*.

2. Copy the tedw_apps_etl directory to the local system.

3. Edit the \fnp\cdw\dml\fnp_cdw_data.generic file.

4. Change the default value of 600 in the following line to the new value:

   insert into __TEMP_SCHEMA.prune_msmt_control values ('FNP', 'H', 600)

5. Save the file.

6. Leave the entire tedw_apps_etl directory on the local system, and point to this system when you install the Tivoli Monitoring for Network Performance ETL.

5.3.1.2 Changing the prune_msmt_control parameter after installation

See *Installing and Configuring Tivoli Data Warehouse* for the procedure to change this parameter.

5.3.2 Data mart

This section provides information about pruning the data mart databases.

5.3.2.1 Changing the data mart pruning schedule before installation

The values in the \fnp\mart\dml\fnp_mart_data.generic file represent a date duration whose format is *yyyymmdd*. Preceding zeros are not included in the date duration value. For example, the default value of 300 represents three months. The following other default values are used:

yyyymmdd	Example value
600	6 months
10000	1 year
50000	5 years

Use the following procedure to change the data mart pruning schedule before installation of the warehouse pack:

1. From the warehouse control server, copy the tedw_apps_etl directory to the local machine.

2. Edit the \fnp\mart\dml\fnp_mart_data.generic file.

3. Change the values as required. For example, change the default value 600 in the following example to 10000 if you want to prune the daily IP layer stack once a year rather than every 6 months:
   'FNP.F_IP_DAY', 600

4. Save the file.

5. Leave the entire tedw_apps_etl directory on the local machine and point to this machine when you install the Tivoli Monitoring for Network Performance warehouse packs.

5.3.2.2 Changing the data mart pruning schedule after installation

Specify the data to be pruned by setting the value of the DURATION column of the FNP.Prune_MART_CTL table. Modify the value using an SQL statement.

For example, run the following SQL command on the Tivoli Data Warehouse data mart database (TWH_MART) to change the prune values:

UPDATE FNP.PRUNE_MART_CTL
SET DURATION =10000
WHERE TABLE_NAME='FNP.F_IP_DAY'

5.4 Extraction control (table Extract_Control)

The extraction control table assists you in incrementally extracting data from a source database. For an example of incremental extraction, see the *Enabling an Application for Tivoli Data Warehouse* guide.

ExtCtl_Source VARCHAR (120)	ExtCtl_Target VARCHAR (120)	ExtCtl_From_Ra wSeq CHAR (10)	ExtCtl_to_RawS eq CHAR (10)	ExtCtl_From_Int Seq BIGINT	ExtCtl_To_IntSe q BIGINT	ExtCtl_From_Dt Tm TIMESTAMP	ExtCtl_To_DtTm TIMESTAMP	MSrc_Corr_Cd CHAR (6)
ITMNP.NODE_OBJ	FNP.stage_node_obj	0	0	0	0	2004-01-01-00.00.00.000000	2004-01-02-00.00.00.000000	FNP
ITMNP.OSA_TT_M SMT	FNP.stage_ottm_msmt	0	0	0	0	2004-01-01-00.00.00.000000	2004-01-02-00.00.00.000000	FNP
ITMNP.OSA_STAT US_MSMT	FNP.stage_ostm_msmt	0	0	0	0	2004-01-01-00.00.00.000000	2004-01-02-00.00.00.000000	FNP

ITMNP.OSA_ETH_TT_MSMT	FNP.stage_oetm_msmt	0	0	0	0	2004-01-01-00.00.00.000000	2004-01-02-00.00.00.000000	FNP
ITMNP.STK_TCP_AVL_MSMT	FNP.stage_stam_msmt	0	0	0	0	2004-01-01-00.00.00.000000	2004-01-02-00.00.00.000000	FNP
ITMNP.STK_TCP_TT_MSMT	FNP.stage_sttm_msmt	0	0	0	0	2004-01-01-00.00.00.000000	2004-01-02-00.00.00.000000	FNP
ITMNP.STK_UDP_TT_MSMT	FNP.stage_sutm_msmt	0	0	0	0	2004-01-01-00.00.00.000000	2004-01-02-00.00.00.000000	FNP
ITMNP.TCP_APP_AVL_MSMT	FNP.stage_taam_msmt	0	0	0	0	2004-01-01-00.00.00.000000	2004-01-02-00.00.00.000000	FNP
ITMNP.STK_IP_TT_MSMT	FNP.stage_sitm_msmt	0	0	0	0	2004-01-01-00.00.00.000000	2004-01-02-00.00.00.000000	FNP
ITMNP.TN3270_RESP_MSMT	FNP.stage_trpm_msmt	0	0	0	0	2004-01-01-00.00.00.000000	2004-01-02-00.00.00.000000	FNP
ITMNP.TN_RTT_BKT_MSMT	FNP.stage_trbm_msmt	0	0	0	0	2004-01-01-00.00.00.000000	2004-01-02-00.00.00.000000	FNP
ITMNP.TN_RTT_BND_MSMT	FNP.stage_trnm_msmt	0	0	0	0	2004-01-01-00.00.00.000000	2004-01-02-00.00.00.000000	FNP
ITMNP.TN3270_AVL_MSMT	FNP.stage_tavm_msmt	0	0	0	0	2004-01-01-00.00.00.000000	2004-01-02-00.00.00.000000	FNP
ITMNP.TCP_CONN_AVL_MSMT	FNP.stage_tcam_msmt	0	0	0	0	2004-01-01-00.00.00.000000	2004-01-02-00.00.00.000000	FNP
ITMNP.TCP_CONN_TT_MSMT	FNP.stage_tctm_msmt	0	0	0	0	2004-01-01-00.00.00.000000	2004-01-02-00.00.00.000000	FNP
ITMNP.FTP_SESS_MSMT	FNP.stage_fssm_msmt	0	0	0	0	2004-01-01-00.00.00.000000	2004-01-02-00.00.00.000000	FNP
ITMNP.FTP_CTRANS_MSMT	FNP.stage_fctm_msmt	0	0	0	0	2004-01-01-00.00.00.000000	2004-01-02-00.00.00.000000	FNP
ITMNP.FTP_STRANS_MSMT	FNP.stage_fstm_msmt	0	0	0	0	2004-01-01-00.00.00.000000	2004-01-02-00.00.00.000000	FNP
ITMNP.HPR_AVL_MSMT	FNP.stage_havm_msmt	0	0	0	0	2004-01-01-00.00.00.000000	2004-01-02-00.00.00.000000	FNP
ITMNP.HPR_PIPE_MSMT	FNP.stage_hppm_msmt	0	0	0	0	2004-01-01-00.00.00.000000	2004-01-02-00.00.00.000000	FNP
ITMNP.HPR_TT_MSMT	FNP.stage_httm_msmt	0	0	0	0	2004-01-01-00.00.00.000000	2004-01-02-00.00.00.000000	FNP
ITMNP.EE_AVL_MSMT	FNP.stage_eavm_msmt	0	0	0	0	2004-01-01-00.00.00.000000	2004-01-02-00.00.00.000000	FNP
ITMNP.EE_TT_MSMT	FNP.stage_ettm_msmt	0	0	0	0	2004-01-01-00.00.00.000000	2004-01-02-00.00.00.000000	FNP

ITMNP.EE_TT_DET_MSMT	FNP.stage_etdm_msmt	0	0	0	0	2004-01-01-00.00.00.000000	2004-01-02-00.00.00.000000	FNP
ITMNP.UDP_EP_TT_MSMT	FNP.stage_uetm_msmt	0	0	0	0	2004-01-01-00.00.00.000000	2004-01-02-00.00.00.000000	FNP
ITMNP.TCP_PRV_MEM_MSMT	FNP.stage_tpmm_msmt	0	0	0	0	2004-01-01-00.00.00.000000	2004-01-02-00.00.00.000000	FNP
ITMNP.CSM_SUMM_MSMT	FNP.stage_cssm_msmt	0	0	0	0	2004-01-01-00.00.00.000000	2004-01-02-00.00.00.000000	FNP
ITMNP.CSM_MON_MSMT	FNP.stage_csmm_msmt	0	0	0	0	2004-01-01-00.00.00.000000	2004-01-02-00.00.00.000000	FNP
ITMNP.IF_MULTI_MSMT	FNP.stage_ifmm_msmt	0	0	0	0	2004-01-01-00.00.00.000000	2004-01-02-00.00.00.000000	FNP
ITMNP.IF_STATUS_MSMT	FNP.stage_ifsm_msmt	0	0	0	0	2004-01-01-00.00.00.000000	2004-01-02-00.00.00.000000	FNP
ITMNP.IF_UNICAST_MSMT	FNP.stage_ifum_msmt	0	0	0	0	2004-01-01-00.00.00.000000	2004-01-02-00.00.00.000000	FNP
ITMNP.SNMP_EXPR_MSMT	FNP.stg_snmp_expr_msmt	0	0	0	0	2004-01-01-00.00.00.000000	2004-01-02-00.00.00.000000	FNP
ITMNP_ICMP_RTT_MSMT	FNP.stage_icmp_rtt_msmt	0	0	0	0	2004-01-01-00.00.00.000000	2004-01-02-00.00.00.000000	FNP
FNP.VD_TAAM_METRIC	FNP.STG_TAAM_METRIC	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP
FNP.VD_TAAM	FNP.T_TAAM	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP
FNP.VF_F_TAAM_HOUR	FNP.STG_.F_TAAM_HOUR	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP
FNP.VD_TCNM_METRIC	FNP.STG_TCNM_METRIC	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP
FNP.VD_TCNM	FNP.T_TCNM	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP
FNP.VF_F_TCNM_HOUR	FNP.STG_F_TCNM_HOUR	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP
FNP.VD_UETM_METRIC	FNP.STG_UETM_METRIC	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP
FNP.VD_UETM	FNP.T_UETM	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP
FNP.VF_F_UETM_HOUR	FNP.STG_F_UETM_HOUR	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP
FNP.VD_CSM_METRIC	FNP.STG_CSM_METRIC	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP

FNP.VD_CSM	FNP.T_CSM	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP
FNP.VF_F_CSM_HOUR	FNP.STG_F_CSM_HOUR	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP
FNP.VD_EECS_METRIC	FNP.STG_EECS_METRIC	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP
FNP.VD_EECS	FNP.T_EECS	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP
FNP.VF_F_EECS_HOUR	FNP.STG_F_EECS_HOUR	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP
FNP.VD_EE_METRIC	FNP.STG_EE_METRIC	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP
FNP.VD_EE	FNP.T_EE	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP
FNP.VF_F_EE_HOUR	FNP.STG_F_EE_HOUR	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP
FNP.VD_HPR_METRIC	FNP.STG_HPR_METRIC	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP
FNP.VD_HPR	FNP.T_HPR	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP
FNP.VF_F_HPR_HOUR	FNP.STG_F_HPR_HOUR	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP
FNP.VD_TCPIP_METRIC	FNP.STG_TCPIP_METRIC	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP
FNP.VD_TCPIP	FNP.T_TCPIP	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP
FNP.VF_F_TCPIP_HOUR	FNP.STG_F_TCPIP_HOUR	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP
FNP.VD_TCP_METRIC	FNP.STG_TCP_METRIC	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP
FNP.VD_TCP	FNP.T_TCP	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP
FNP.VF_F_TCP_HOUR	FNP.STG_F_TCP_HOUR	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP
FNP.VD_UDP_METRIC	FNP.STG_UDP_METRIC	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP
FNP.VD_UDP	FNP.T_UDP	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP
FNP.VF_F_UDP_HOUR	FNP.STG_F_UDP_HOUR	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP

FNP.VD_IP_METRIC	FNP.STG_IP_METRIC	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP
FNP.VD_IP	FNP.T_IP	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP
FNP.VF_F_IP_HOUR	FNP.STG_F_IP_HOUR	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP
FNP.VD_IF_METRIC	FNP.STG_IF_METRIC	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP
FNP.VD_IF	FNP.T_IF	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP
FNP.VF_F_IF_HOUR	FNP.STG_F_IF_HOUR	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP
FNP.VD_SNMP_METRIC	FNP.STG_SNMP_METRIC	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP
FNP.VD_SNMP	FNP.T_SNMP	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP
FNP.VF_F_SNMP_HOUR	FNP.STG_F_SNMP_HOU	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP
FNP.VD_ICMP_METRIC	FNP.STG_ICMP_METRIC	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP
FNP.VD_ICMP	FNP.T_ICMP	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP
FNP.VF_F_ICMP_HOUR	FNP.STG_F_ICMP_HOUR	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP
FNP.VD_FTPS_METRIC	FNP.STG_FTPS_METRIC	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP
FNP.VD_FTPS	FNP.T_FTPS	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP
FNP.VF_F_FTPS_HOUR	FNP.STG_F_FTPS_HOUR	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP
FNP.VD_FTPSU_METRIC	FNP.STG_FTPSU_METRIC	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP
FNP.VD_FTPSU	FNP.T_FTPSU	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP
FNP.VF_F_FTPSU_HOUR	FNP.STG_F_FTPSU_HOUR	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP
FNP.VD_FTPSS_METRIC	FNP.STG_FTPSS_METRIC	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP
FNP.VD_FTPSS	FNP.T_FTPSS	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP

FNP.VF_F_FTPSS_ HOUR	FNP.STG_F_FTPSS_H OUR	0	0	1	100	1900-01-01- 00.00.00.000000	1900-01-01- 00.00.00.000000	FNP
FNP.VD_FTPC_ME TRIC	FNP.STG_FTPC_METR IC	0	0	1	100	1900-01-01- 00.00.00.000000	1900-01-01- 00.00.00.000000	FNP
FNP.VD_FTPC	FNP.T_FTPC	0	0	1	100	1900-01-01- 00.00.00.000000	1900-01-01- 00.00.00.000000	FNP
FNP.VF_F_FTPC_H OUR	FNP.STG_F_FTPC_HO UR	0	0	1	100	1900-01-01- 00.00.00.000000	1900-01-01- 00.00.00.000000	FNP
FNP.VD_FTPCU_M ETRIC	FNP.STG_FTPCU_MET RIC	0	0	1	100	1900-01-01- 00.00.00.000000	1900-01-01- 00.00.00.000000	FNP
FNP.VD_FTPCU	FNP.T_FTPCU	0	0	1	100	1900-01-01- 00.00.00.000000	1900-01-01- 00.00.00.000000	FNP
FNP.VF_F_FTPCU_ HOUR	FNP.STG_F_FTPCU_H OUR	0	0	1	100	1900-01-01- 00.00.00.000000	1900-01-01- 00.00.00.000000	FNP
FNP.VD_FTPCS_M ETRIC	FNP.STG_FTPCS_MET RIC	0	0	1	100	1900-01-01- 00.00.00.000000	1900-01-01- 00.00.00.000000	FNP
FNP.VD_FTPCS	FNP.T_FTPCS	0	0	1	100	1900-01-01- 00.00.00.000000	1900-01-01- 00.00.00.000000	FNP
FNP.VF_F_FTPCS_ HOUR	FNP.STG_F_FTPCS_H OUR	0	0	1	100	1900-01-01- 00.00.00.000000	1900-01-01- 00.00.00.000000	FNP
FNP.VD_TN32S_M ETRIC	FNP.STG_TN32S_MET RIC	0	0	1	100	1900-01-01- 00.00.00.000000	1900-01-01- 00.00.00.000000	FNP
FNP.VD_TN32S	FNP.T_TN32S	0	0	1	100	1900-01-01- 00.00.00.000000	1900-01-01- 00.00.00.000000	FNP
FNP.VF_F_TN32S_ HOUR	FNP.STG_F_TN32S_H OUR	0	0	1	100	1900-01-01- 00.00.00.000000	1900-01-01- 00.00.00.000000	FNP
FNP.VD_TN32A_M ETRIC	FNP.STG_TN32A_MET RIC	0	0	1	100	1900-01-01- 00.00.00.000000	1900-01-01- 00.00.00.000000	FNP
FNP.VD_TN32A	FNP.T_TN32A	0	0	1	100	1900-01-01- 00.00.00.000000	1900-01-01- 00.00.00.000000	FNP
FNP.VF_F_TN32A_ HOUR	FNP.STG_F_TN32A_H OUR	0	0	1	100	1900-01-01- 00.00.00.000000	1900-01-01- 00.00.00.000000	FNP
FNP.VD_TN32C_M ETRIC	FNP.STG_TN32C_MET RIC	0	0	1	100	1900-01-01- 00.00.00.000000	1900-01-01- 00.00.00.000000	FNP
FNP.VD_TN32C	FNP.T_TN32C	0	0	1	100	1900-01-01- 00.00.00.000000	1900-01-01- 00.00.00.000000	FNP
FNP.VF_F_TN32C_ HOUR	FNP.STG_F_TN32C_H OUR	0	0	1	100	1900-01-01- 00.00.00.000000	1900-01-01- 00.00.00.000000	FNP
FNP.VD_OSA_ME TRIC	FNP.STG_OSA_METRI C	0	0	1	100	1900-01-01- 00.00.00.000000	1900-01-01- 00.00.00.000000	FNP

FNP.VD_OSA	FNP.T_OSA	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP
FNP.VF_F_OSA_HOUR	FNP.STG_F_OSA_HOUR	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP
FNP.VD_LOSA_METRIC	FNP.STG_LOSA_METRIC	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP
FNP.VD_LOSA	FNP.T_LOSA	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP
FNP.VF_F_LOSA_HOUR	FNP.STG_F_LOSA_HOUR	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP
FNP.VD_OSAC_METRIC	FNP.STG_OSAC_METRIC	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP
FNP.VD_OSAC	FNP.T_OSAC	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP
FNP.VF_F_OSAC_HOUR	FNP.STG_F_OSAC_HOU	0	0	1	100	1900-01-01-00.00.00.000000	1900-01-01-00.00.00.000000	FNP

5.5 Problem determination

See the following publications for problem determination information:

- For problems with the Tivoli Data Warehouse, see *Installing and Configuring Tivoli Data Warehouse*.

- For Tivoli Monitoring for Network Performance installation problems, see *IBM Tivoli Monitoring for Network Performance: Planning, Installation, and Configuration*

- For Tivoli Monitoring for Network Performance problems that occur after installation, see *IBM Tivoli Monitoring for Network Performance: Messages and Troubleshooting*

- For problems with reports, see the Crystal Reports documentation.

6 ETL processes

The warehouse pack has the following processes:

- FNP_c05_ETL1_Process
- FNP_m05_ETL2_Process

6.1 FNP_c05_ETL1_Process

This process extracts the Network Performance data from the Tivoli Monitoring for Network Performance database, transforms it, and loads the data into the Tivoli central data warehouse.

Schedule this process to run, for example, once a day either at midnight or at some other off-peak time. However, before you determine what time of day you would want to schedule the ETLs to run, you might need to discuss this with your database administrator and network systems programmer. Consider your DB2 maintenance schedule, the Tivoli Monitoring for Network Performance Purge Utility schedule, and the monitor configuration schedules when you choose a time for the ETLs to run. All of these things are using the database and will affect each other and system performance.

Note: Do not schedule individual steps to run.

This process has the following steps:

- FNP_c05_s010_extractzosdata

  This step extracts the z/OS Data information from the database. This step also updates the extract control table.

- FNP_c05_s020_transformzosdata

  This step uses SQL scripts that transform the z/OS data into the data warehouse data model format.

- FNP_c05_s030_loadzosdata

  This step takes the z/OS data from the temporary tables and writes it into the central data warehouse.

- FNP_c05_s040_extracticmpdata

  This step extracts the ICMP ping data from the Tivoli Monitoring for Network Performance database. This step also updates the extract control table.

- FNP_c05_s050_transformicmpdata

  This step uses SQL scripts that transform the ICMP data into the data warehouse data model format.

- FNP_c05_s060_loadicmpdata

  This step takes the ICMP data from the temporary tables and writes it into the central data warehouse.

- FNP_c05_s070_extractsnmpdata

  This step extracts the SNMP data from the Tivoli Monitoring for Network Performance database. This step also updates the extract control table.

- FNP_c05_s080_transformsnmpdata

  This step uses SQL scripts that transform the SNMP data into the data warehouse data model format.

- FNP_c05_s090_loadsnmpdata

  This step takes the SNMP Data from the temporary tables and writes it into the central data warehouse.

- FNP_c05_s100_lastetlrun

This step takes the timestamp of the last ETL run from the central data warehouse extract control table and updates the last ETL run table in the Tivoli Monitoring for Network Performance source database.

6.2 FNP_m05_ETL2_Process

This process loads data from the central data warehouse into the Tivoli Monitoring for Network Performance data mart.

Notes:

1. Do not schedule the FNP_m05_ETL2_Process process to run. This process is automatically started by the FNP_c05_ETL1_Process process.

2. Do not schedule individual steps to run.

This process has the following steps:

- FNP_m05_s010_extract

  This step retrieves Tivoli Monitoring for Network Performance data from the central data warehouse and writes it into temporary tables in the data mart.

- FNP_m05_s020_load

  This step copies the Tivoli Monitoring for Network Performance data from the temporary tables and writes it in the data mart database.

- FNP_m05_s030_taam_rollup

  This step aggregates the hourly TCP application availability information for the daily, weekly, monthly, yearly, and quarterly fact tables.

- FNP_m05_s040_tcnm_rollup

  This step aggregates the hourly TCP connection availability, throughput, and traffic information for the daily, weekly, monthly, yearly, and quarterly fact tables.

- FNP_m05_s050_uetm_rollup

  This step aggregates the hourly UDP endpoint throughput and traffic information for the daily, weekly, monthly, yearly, and quarterly fact tables.

- FNP_m05_s060_csm_rollup

  This step aggregates the hourly Communications Storage Manager storage monitoring and summary information for the daily, weekly, monthly, yearly, and quarterly fact tables.

- FNP_m05_s070_eecs_rollup

  This step aggregates the hourly Enterprise Extender availability, throughput, and traffic information for the daily, weekly, monthly, yearly, and quarterly fact tables.

- FNP_m05_s080_ee_rollup

  This step aggregates the hourly Enterprise Extender throughput and traffic information on a port basis for the daily, weekly, monthly, yearly, and quarterly fact tables.

- FNP_m05_s090_hpr_rollup

  This step aggregates the hourly High Performance Routing (HPR) availability and pipe information for the daily, weekly, monthly, yearly, and quarterly fact tables.

- FNP_m05_s100_tcpip_rollup

  This step aggregates the hourly TCP/IP stack memory information for the daily, weekly, monthly, yearly, and quarterly fact tables.

- FNP_m05_s110_tcp_rollup

  This step aggregates the hourly stack TCP throughput and traffic information for the daily, weekly, monthly, yearly, and quarterly fact tables.

- FNP_m05_s120_udp_rollup

  This step aggregates the hourly stack UDP throughput and traffic information for the daily, weekly, monthly, yearly, and quarterly fact tables.

- FNP_m05_s130_ip_rollup

  This step aggregates the hourly stack IP throughput and traffic information for the daily, weekly, monthly, yearly, and quarterly fact tables.

- FNP_m05_s140_if_rollup

  This step aggregates the hourly interface multicast and unicast information for the daily, weekly, monthly, yearly, and quarterly fact tables.

- FNP_m05_s150_snmp_rollup

  This step aggregates the hourly SNMP information for the daily, weekly, monthly, yearly, and quarterly fact tables.

- FNP_m05_s160_icmp_rollup

  This step aggregates the hourly ICMP information for the daily, weekly, monthly, yearly, and quarterly fact tables.

- FNP_m05_s170_ftps_rollup

  This step aggregates the hourly FTP server information for the daily, weekly, monthly, yearly, and quarterly fact tables.

- FNP_m05_s180_ftpsu_rollup

  This step aggregates the hourly FTP server user information for the daily, weekly, monthly, yearly, and quarterly fact tables.

- FNP_m05_s190_ftpss_rollup

  This step aggregates the hourly FTP server session information for the daily, weekly, monthly, yearly, and quarterly fact tables.

- FNP_m05_s200_ftpc_rollup

  This step aggregates the hourly FTP client information for the daily, weekly, monthly, yearly, and quarterly fact tables.

- FNP_m05_s210_ftpcu_rollup

  This step aggregates the hourly FTP client user information for the daily, weekly, monthly, yearly, and quarterly fact tables.

- FNP_m05_s220_ftpcs_rollup

  This step aggregates the hourly FTP client session information for the daily, weekly, monthly, yearly, and quarterly fact tables.

- FNP_m05_s230_tn32s_rollup

  This step aggregates the hourly TN3270 server information for the daily, weekly, monthly, yearly, and quarterly fact tables.

- FNP_m05_s240_tn32a_rollup

This step aggregates the hourly TN3270 application information for the daily, weekly, monthly, yearly, and quarterly fact tables.

- FNP_m05_s250_tn32c_rollup

  This step aggregates the hourly TN3270 client information for the daily, weekly, monthly, yearly, and quarterly fact tables.

- FNP_m05_s260_osa_rollup

  This step aggregates the hourly OSA port information for the daily, weekly, monthly, yearly, and quarterly fact tables.

- FNP_m05_s270_losa_rollup

  This step aggregates the hourly OSA adapter processor utilization and throughput information for the daily, weekly, monthly, yearly, and quarterly fact tables.

- FNP_m05_s280_osac

  This step aggregates the hourly OSA adapter Ethernet throughput and traffic information for the daily, weekly, monthly, yearly, and quarterly fact tables.

- FNP_m05_s300_prune_rollup

  This step prunes the data in the Tivoli Data Warehouse data mart. For more information, see Changing the data mart pruning schedule after installation on page 44.

7 Central data warehouse information

Before reading this section, read about the generic schema for the central data warehouse, which is described in *Enabling an Application for Tivoli Data Warehouse*. That document defines the content of each table and explains the relationships between the tables in this document.

This section provides an example of how information about Tivoli Monitoring for Network Performance data is stored in Tivoli Data Warehouse.

The information in this chapter is provided for report designers and administrators that want to create their own reports.

Note: Knowledge about the information in this section is not required to use the predefined reports that are provided by Tivoli Monitoring for Network Performance.

7.1 SNMP data

This section provides information about the SNMP data that is stored in the Tivoli Monitoring for Network Performance database.

7.1.1 Flow diagram for storing SNMP data collected on a IP_NODE

The following diagram describes the component hierarchy of the measurement storage in the central data warehouse and how SNMP data is stored in the Tivoli Data Warehouse. The host can be either a distributed system or a z/OS system.

IP_NODE or IP_HOST

PCHILD

SNMP_AGENT
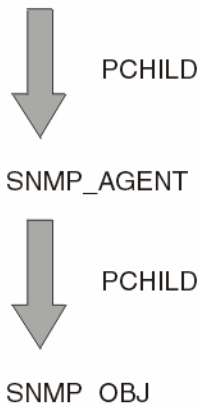
PCHILD

SNMP OBJ

IP Node or IP Host has a parent-child relationship with the SNMP agent. The SNMP agent provides MIB data for SNMP objects. The measurements are stored with the SNMP_OBJ component.

7.1.2 Sample network scenario for SNMP data

The sample network scenario uses the following node information.

Name	IP address	Network address
x.raleigh.tivoli.com (predefined as an IP_HOST in CDW)	1.2.3.4	143.5.23.0
y.raleigh.tivoli.com	9.8.7.6	143.5.23.0

7.1.2.1 Example 1 for bandwidth utilization

In this example, minimum, maximum, and average bandwidth utilizations are being collected for the x.raleigh.tivoli.com node and stored in Tivoli Data Warehouse:

- MIN: Minimum bandwidth utilization during the reporting interval

- MAX: Maximum bandwidth utilization during the reporting interval

- AVG: Average bandwidth utilization during the reporting interval

This example describes how to calculate bandwidth utilization using Simple Network Management Protocol (SNMP). One of the SNMP data collections, Bandwidth Utilization for Routers, can be collected from the SNMP agent.

Interface utilization is the primary measure used for network utilization. The following equation should be used, based on whether the connection you measure is half-duplex or full-duplex. Shared LAN connections tend to be half-duplex, mainly because contention detection requires that a device listen before transmitting. WAN connections typically are full-duplex because the connection is point-to-point; both devices can transmit and receive at the same time because they know only one other device is sharing the connection. Because MIB-II variables are stored as counters, you must take two poll cycles and figure the difference between the two (hence, the delta used in the equation).

```
bandwidth utilization = (IfInOctets +IfOutOctets) *8* 100/time * IfSpeed
```

where:

IfInOctets is the number of octets received on a given interface.

InOutOctets is the number of octets transmitted on a given interface.

IfSpeed is the speed of the interface as reported in the snmp ifSpeed object.

Assumptions are as follows:

- Average bandwidth utilization is collected for the x.raleigh.tivoli.com node, and the average for four measurements data is calculated.

- Measurement data was collected on April 3, 2002.

- The ETL process ran on April 4, 2002 at midnight.

- All the nodes listed in the previous table are discovered for the first time on April 3, 2002.

In this example, the following four bandwidth utilization measurements for Router - bytes IN/OUT for bandwidth (for example, bandwidth utilization) were taken during a period of 1 hour, the average percent bandwidth utilization was calculated for the x.raleigh.tivoli.com node, and this average data was stored in the measurement table.

- Bandwidth utilization for the x.raleigh.tivoli.com node collected at 1:00 pm on April 3, 2002 was 10%.

- Bandwidth utilization for the x.raleigh.tivoli.com node collected at 1:15 pm on April 3, 2002 was 20%.

- Bandwidth utilization for the x.raleigh.tivoli.com node collected at 1:30 pm on April 3, 2002 was 30%.

- Bandwidth utilization for the x.raleigh.tivoli.com node collected at 1:45 pm on April 3, 2002 was 40%.

- The average for these measurements is 25.

Then the following four bandwidth utilization measurements - bytes IN/OUT for bandwidth (for example, bandwidth utilization) were taken during a period of 1 hour starting at 2:00 p.m., the average percent bandwidth utilization was calculated for the x.raleigh.tivoli.com node, and this average data was stored in the measurement table.

- Bandwidth utilization for the x.raleigh.tivoli.com node collected at 2:00 pm on April 3, 2002 was 20%.

- Bandwidth utilization for the x.raleigh.tivoli.com node collected at 2:15 pm on April 3, 2002 was 30%.

- Bandwidth utilization for the x.raleigh.tivoli.com node collected at 2:30 pm on April 3, 2002 was 40%.

- Bandwidth utilization for the x.raleigh.tivoli.com node collected at 2:45 pm on April 3, 2002 was 50%.

- The average for these measurements is 35.

7.1.2.2 Example 2 for multicast traffic

In this example, the total number of MulticastTraffic (IfInMulticastPkts) in an hour for the y.Raleigh.Tivoli.com node was collected, and the total for three measurements was calculated.

Assumptions are as follows:

- Measurement data was collected on April 3, 2002.

- The ETL process ran on April 4, 2002 at midnight.

The following three Multicast Traffic (number of packets, delivered by this sublayer to a higher layer or sublayer, that were addressed to a multicast address at this sublayer) measurements were taken during a period of 1 hour:

- Number of packets delivered for the y.raleigh.tivoli.com node collected at 1:00 p.m. on April 3, 2002 was 10.

- Number of packets delivered for the y.raleigh.tivoli.com node collected at 1:30 p.m. on April 3, 2002 was 20.

- Number of packets delivered for the y.raleigh.tivoli.com node collected at 1:55 p.m. on April 3, 2002 was 30.

- The total number of packets delivered for the y.raleigh.tivoli.com node is collected; the total is 60.

- The average for these measurements is 20.

7.2 ICMP data

This section provides information about the ICMP data that is stored in the Tivoli Monitoring for Network Performance database.

7.2.1 Flow diagram for storing ICMP round trip time data in the Tivoli Data Warehouse

The following diagram describes the component hierarchy of the measurement storage in the central data warehouse and how ICMP Round Trip Time (Ping) data is stored in the IBM Tivoli Data Warehouse.

IP_NODE or IP_HOST

RUNSON

FNP ICMP PING

The FNP_ICMP_PING component stores the round Trip Time measurements for each z/OS system.

7.2.2 Sample network scenario for ICMP data

The sample network scenario uses the interface and the following node information

Name	IP address	Network address
x.raleigh.tivoli.com (predefined as an IP_HOST in CDW)	1.2.3.4	143.5.23.0
y.raleigh.tivoli.com	9.8.7.6	143.5.23.0

The example system has two interfaces. Round trip time data is collected from Node A (source) to Node B (destination). The default ping size value is 32 bytes. The average response time measurement is stored in the central data warehouse. The default ping size is stored in the Tivoli Monitoring for Network Performance database and the central data warehouse. Error information is stored for values that can not be retrieved.

7.2.2.1 Example for PING data (round trip time)

This is an example of calculating round trip time from IP address 1.2.3.4 to IP address 9.8.7.6.

Assumptions are as follows:

- Measurement data was collected on April 3, 2002.

- The ETL process ran on April 4, 2002 at midnight.

- The default ping size 32 bytes was used.

- The following Ping results were received:

  --- 9.8.7.6 Ping statistics ---

  4 packets transmitted, 0 packets received, 100% packet loss.

The following three round trip time measurements for the destination IP address of 9.8.7.6. The average response times taken to ping from this source to the destination were taken for a period of 1 hour.

The average response time from source 1.2.3.4 to destination 9.8.7.6 were taken for a period of 1 hour:

- Average Response time to the 9.8.7.6 node collected at 1:00 pm on April 3, 2002 was 5ms.

- Average Response time to the 9.8.7.6 node collected at 1:30 pm on April 3, 2002 was 2ms.

- Average Response time to the 9.8.7.6 node collected at 1:55 pm on April 3, 2002 was 5ms.

The average response time from IP address 1.2.3.4 to IP address 9.8.7.6 was 4ms. The value was calculated as follows:

  5ms + 2ms + 5ms =12 / 3 = 4ms

7.3 z/OS data

This section provides information about the z/OS data that is stored in the Tivoli Monitoring for Network Performance database.

7.3.1 Flow diagram for storing OSA adapter Port status summary, Processor utilization and throughput details and Ethernet throughput data to the Tivoli Data Warehouse

The following diagram details the component hierarchy of the measurement storage in the warehouse.
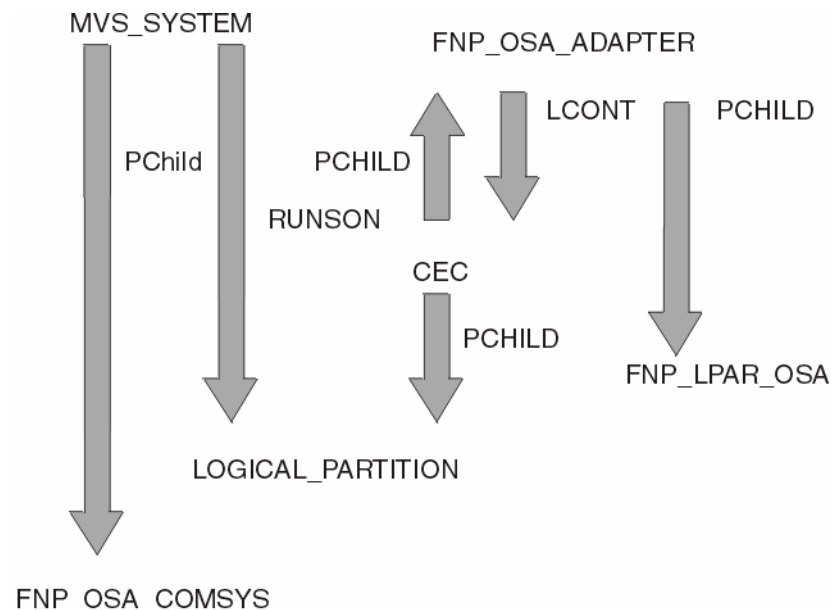
The FNP_OSA_ADAPTER component is used here to store the OSA Adapter measurements against each Z/OS system.

7.3.2 Sample network scenario for OSA Adapter Processor Utilization and Throughput

The sample network scenario uses the following information:

Channel ID	Port Name
4B	WES

Processor utilization is being collected.

This data is collected every 30 minutes:

- Measurement data has been collected on April 3, 2002.
- The ETL process ran on April 4, 2002 at midnight.

The following three OSA Adapter Processor Utilization and Throughput measurements for processor utilization is collected every 30 minutes over a period of 1 hour.

- The processor utilization at 1:00 pm on April 3, 2002 was 60%.
- The processor utilization at 1:30 pm on April 3, 2002 was 70%.
- The processor utilization at 1:55 pm on April 3, 2002 was 50%.

Average processor utilization of the hour was 60%. The minimum processor utilization was 50% and the maximum processor utilization was 70%.

7.4 Component configuration

The following sections describe the component configuration.

7.4.1 Component type (table CompTyp)

CompTyp_Cd CHAR (17)	CompTyp_Parent_Cd CHAR (17)	CompTyp_Nm * VARCHAR (120)	CompTyp_Strt_ DtTm TIMESTAMP	CompTyp_End_ DtTm TIMESTAMP	Msrc_Corr_Cd CHAR(6)
IP_HOST	NULL	IP Host	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	MODEL1
IP_NODE	NULL	IP Node	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	MODEL1
SNMP_AGENT	NULL	SNMP Agent	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	SNMP
FNP_ICMP_PING	NULL	ICMP Ping	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	FNP
SYSPLEX	NULL	Sysplex	2002-04-03-	9999-01-01-	MODEL1

CompTyp_Cd CHAR (17)	CompTyp_Parent_Cd CHAR (17)	CompTyp_Nm * VARCHAR (120)	CompTyp_Strt_ DtTm TIMESTAMP	CompTyp_End_ DtTm TIMESTAMP	Msrc_Corr_Cd CHAR(6)
			03.00.00.000000	00.00.00.000000	
MVS_SYSTEM	NULL	MVS System	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	MODEL1
FNP_TCP_LISTE NER	NULL	TCP Listener	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	FNP
FNP_TCPIP_CO MSYS	NULL	TCPIP Communications Subsystem	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	FNP
FNP_UDP_LISTE NER	NULL	UDP Listener	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	FNP
FNP_FTP_SERV ER	NULL	FTP Server	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	FNP
FNP_FTP_CLIEN T	NULL	FTP Client	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	FNP
FNP_HPR	NULL	HPR	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	FNP
FNP_EE	NULL	Enterprise Extender	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	FNP
FNP_TN3270_SE RVER	NULL	TN3270 Server	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	FNP
FNP_OSA_COM SYS	NULL	OSA Communications Subsystem	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	FNP
FNP_FTP_SRV_ USER	NULL	FTP Server User	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	FNP
FNP_FTP_SRV_S ESSN	NULL	FTP Server Session	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	FNP
FNP_FTP_CLT_	NULL	FTP Client User	2002-04-03-	9999-01-01-	FNP

CompTyp_Cd CHAR (17)	CompTyp_Parent_Cd CHAR (17)	CompTyp_Nm * VARCHAR (120)	CompTyp_Strt_ DtTm TIMESTAMP	CompTyp_End_ DtTm TIMESTAMP	Msrc_Corr_Cd CHAR(6)
USER			03.00.00.000000	00.00.00.000000	
FNP_FTP _CLT_SESSN	NULL	FTP Client Session	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	FNP
FNP_INTERFAC E	NULL	TCP/IP Interface	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	FNP
FNP_CSM_STOR AGE	NULL	Communications Storage Manager	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	FNP
FNP_TN3270_AP PL	NULL	TN3270 Application	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	FNP
FNP_SNA_COM SYS	NULL	SNA Communications Subsystem	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	FNP
FNP_TN3270_CL IENT	NULL	TN3270 Client	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	FNP
FNP_EE_COMSY S	NULL	Enterprise Extender Communications Subsystem	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	FNP
FNP_TCP	NULL	TCP	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	FNP
FNP_IP	NULL	IP	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	FNP
FNP_UDP	NULL	UDP	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	FNP
CEC	NULL	Central Electronic Complex	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	MODEL1
LOGICAL_PART ITION	NULL	Logical Partition	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	MODEL1

CompTyp_Cd CHAR (17)	CompTyp_Parent_Cd CHAR (17)	CompTyp_Nm * VARCHAR (120)	CompTyp_Strt_DtTm TIMESTAMP	CompTyp_End_DtTm TIMESTAMP	Msrc_Corr_Cd CHAR(6)
FNP_OSA_ADAPTER	NULL	OSA Adapter	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	FNP
FNP_LPAR_OSA	NULL	Logical Partition OSA Adapter	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	FNP
FNP_TCP_CONN	NULL	TCPIP Connection	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	FNP
SNMP_OBJ	NULL	SNMP Object	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	SNMP

7.4.2 Component extension (table Comp_ext)

The Tivoli Monitoring for Network Performance warehouse pack does not use this table.

7.4.3 Component (table Comp)

Comp_ID INTEGER	CompTyp_Cd CHAR (17)	Centr_Cd CHAR (6)	Cust_ID INTEGER	Comp_Corr_ID INTEGER	Comp_Nm VARCHAR (254)	Comp_Corr_Val VARCHAR (254)	Comp_Strt_DtTm TIMESTAMP	Comp_End_DtTm TIMESTAMP	Comp_Ds VARCHAR (254)	Msrc_Corr_Cd CHAR(6)
1	IP_HOST	CDW	1		x.raleigh.tivoli.com		2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000		SHARED
2	IP_NODE	CDW	1		y.raleigh.tivoli.com		2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000		SHARED
3	SNMP_AGENT	CDW	1		161		2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000		SHARED

Comp_ID INTEGER	CompTyp_Cd CHAR (17)	Centr_Cd CHAR (6)	Cust_ID INTEGER	Comp_Corr_ID INTEGER	Comp_Nm VARCHAR (254)	Comp_Corr_Val VARCHAR (254)	Comp_Strt_DtTm TIMESTAMP	Comp_End_DtTm TIMESTAMP	Comp_Ds VARCHAR (254)	Msrc_Corr_Cd CHAR(6)
6	FNP_ICMP_PING	CDW	1		1.2.3.4: 9.8.7.6		2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000		FNP
7	SYSPLEX	CDW	1		SYSPLEX1		2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000		SHARED
8	MVS_SYSTEM	CDW	1		RALMVS		2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000		SHARED
9	FNP_FTP_SERVER	CDW	1		5.6.7..8:21		2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000		FNP
10	FNP_FTP_CLIENT	CDW	1		1.2.3.4		2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000		FNP
11	FNP_TCP_LISTENER	CDW	1		9.8.7.6:23		2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	SMTP	FNP
12	FNP_TCPIP_COMSYS	CDW	1		x.raleigh.ibm.com		2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000		FNP
13	FNP_HPR	CDW	1		CNR54312		2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000		FNP
14	FNP_UDP_LISTENER	CDW	1		1.2.3.4:23		2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000		FNP
15	FNP_EE	CDW	1		50		2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000		FNP

Comp_ID INTEGER	CompTyp_Cd CHAR (17)	Centr_Cd CHAR (6)	Cust_ID INTEGER	Comp_Corr_ID INTEGER	Comp_Nm VARCHAR (254)	Comp_Corr_Val VARCHAR (254)	Comp_Strt_DtTm TIMESTAMP	Comp_End_DtTm TIMESTAMP	Comp_Ds VARCHAR (254)	Msrc_Corr_Cd CHAR(6)
16	FNP_TN3270_SERVER	CDW	1		1.2.3.4:23		2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000		FNP
17	FNP_OSA_COMSYS	CDW	1		00-D0-59-B7-AF-15		2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000		FNP
18	FNP_TCP	CDW	1		TCP		2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000		FNP
19	FNP_FTP_SRV_SESSN	CDW	1		1.2.3.4:21		2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000		FNP
20	FNP_FTP_CLT_SESSN	CDW	1		25-3.4:21		2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000		FNP
21	FNP_INTERFACE	CDW	1		Art		2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000		FNP
22	FNP_CSM_STORAGE	CDW	1		Communications Storage Manager		2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000		FNP
23	FNP_TN3270_APPL	CDW	1		CICS01		2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000		FNP
24	FNP_SNA_COMSYS	CDW	1		SNA Communication Subsystem		2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	Local CP Name	FNP
25	FNP_TN3270_CLIENT	CDW	1		CRN5567		2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	LU Name	FNP

Comp_ID INTEGER	CompTyp_Cd CHAR (17)	Centr_Cd CHAR (6)	Cust_ID INTEGER	Comp_Corr_ID INTEGER	Comp_Nm VARCHAR (254)	Comp_Corr_Val VARCHAR (254)	Comp_Strt_DtTm TIMESTAMP	Comp_End_DtTm TIMESTAMP	Comp_Ds VARCHAR (254)	Msrc_Corr_Cd CHAR(6)
26	FNP_IP	CDW	1		IP		2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000		FNP
27	FNP_UDP	CDW	1		UDP		2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000		FNP
28	FNP_EE_COMSYS	CDW	1		1.2.3.4: 9.8.7.6		2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000		FNP
29	FNP_OSA_ADAPTER	CDW	1		00-D0-59-B7-AF-15		2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000		FNP
30	CEC	CDW	1		CEC		2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000		SHARED
31	LOGICAL_PARTITION	CDW	1		5		2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000		SHARED
32	FNP_LPAR_OSA	CDW	1		5		2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000		FNP
33	FNP_TCP_CONN	CDW	1		5.6.7.8:83		2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000		FNP
34	SNMP_OBJ	CDW	1		1.3.6.1.2.1.2.2.1.2		2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000		SHARED

7.4.4 Component relationship type (table RelnTyp)

RelnTyp_Cd CHAR (6)	RelnTyp_Nm * VARCHAR (120)	MSrc_Corr_Cd CHAR (6)
PCHILD	Parent Child Relation	MODEL1
NETWRK	Network Relation	MODEL1
RUNSON	Runs on Relation	MODEL1
LCONT	Logical Containment Relation	MODEL1
* This column is translated.		

7.4.5 Component relationship rule (table RelnRul)

CompTyp_Source_Cd CHAR (17)	CompTyp_Target_Cd CHAR (17)	RelnTyp_Cd CHAR (6)	RelnRul_Strt_DtTm TIMESTAMP	RelnRul_End_DtTm TIMESTAMP
IP_NODE	SNMP_AGENT	PCHILD	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000
IP_HOST	SNMP_AGENT	PCHILD	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000
IP_HOST	IP_NODE	NETWRK	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000
IP_NODE	IP_NODE	NETWRK	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000
FNP_ICMP_PING	IP_NODE	RUNSON	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000
FNP_ICMP_PING	IP_HOST	RUNSON	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000

CompTyp_Source_Cd CHAR (17)	CompTyp_Target_Cd CHAR (17)	RelnTyp_Cd CHAR (6)	RelnRul_Strt_DtTm TIMESTAMP	RelnRul_End_DtTm TIMESTAMP
MVS_SYSTEM	SYSPLEX	LCONT	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000
FNP_TCP	FNP_TCP_LISTENER	PCHILD	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000
MVS_SYSTEM	FNP_TCPIP_COMSYS	PCHILD	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000
FNP_UDP	FNP_UDP_LISTENER	PCHILD	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000
FNP_SNA_COMSYS	FNP_HPR	PCHILD	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000
FNP_EE_COMSYS	FNP_EE	PCHILD	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000
FNP_FTP_SERVER	MVS_SYSTEM	RUNSON	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000
FNP_FTP_CLIENT	MVS_SYSTEM	RUNSON	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000
FNP_TN3270_SERVER	MVS_SYSTEM	RUNSON	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000
MVS_SYSTEM	FNP_OSA_COMSYS	PCHILD	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000
FNP_FTP_SERVER	FNP_FTP_SRV_USER	PCHILD	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000
FNP_FTP_SERVER	FNP_FTP_SRV_SESSN	PCHILD	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000
FNP_FTP_CLIENT	FNP_FTP_CLT_USER	PCHILD	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000
FNP_FTP_CLIENT	FNP_FTP_CLT_SESSN	PCHILD	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000

CompTyp_Source_Cd CHAR (17)	CompTyp_Target_Cd CHAR (17)	RelnTyp_Cd CHAR (6)	RelnRul_Strt_DtTm TIMESTAMP	RelnRul_End_DtTm TIMESTAMP
FNP_TCPIP_COMSYS	FNP_INTERFACE	PCHILD	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000
MVS_SYSTEM	FNP_CSM_STORAGE	PCHILD	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000
MVS_SYSTEM	FNP_SNA_COMSYS	PCHILD	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000
FNP_SNA_COMSYS	FNP_TN3270_APPL	PCHILD	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000
MVS_SYSTEM	FNP_EE_COMSYS	PCHILD	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000
FNP_TCPIP_COMSYS	FNP_TCP	PCHILD	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000
FNP_TCPIP_COMSYS	FNP_UDP	PCHILD	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000
FNP_TCPIP_COMSYS	FNP_IP	PCHILD	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000
CEC	FNP_OSA_ADAPTER	PCHILD	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000
CEC	LOGICAL_PARTITION	PCHILD	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000
FNP_OSA_ADAPTER	CEC	LCONT	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000
FNP_OSA_ADAPTER	FNP_LPAR_OSA	PCHILD	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000
MVS_SYSTEM	LOGICAL_PARTITION	RUNSON	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000
FNP_TCP_LISTENER	FNP_TCP_CONN	PCHILD	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000

CompTyp_Source_Cd CHAR (17)	CompTyp_Target_Cd CHAR (17)	RelnTyp_Cd CHAR (6)	RelnRul_Strt_DtTm TIMESTAMP	RelnRul_End_DtTm TIMESTAMP
SNMP_AGENT	SNMP_OBJ	PCHILD	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000

7.4.6 Component relationship (table CompReln)

CompReln_ID INTEGER	Comp_Source_ID INTEGER	Comp_Target_ID INTEGER	RelnTyp_Cd CHAR (6)	CompReln_Strt_DtTm TIMESTAMP	CompReln_End_DtTm TIMESTAMP	Msrc_Corr_Cd CHAR(6)
1	2	3	PCHILD	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	SHARED
2	1	3	PCHILD	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	SHARED
6	2	6	RUNSON	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	FNP
7	1	6	RUNSON	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	FNP
8	8	7	LCONT	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	SHARED
9	18	11	PCHILD	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	FNP
10	8	12	PCHILD	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	FNP
11	27	14	PCHILD	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	FNP
12	24	13	PCHILD	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	FNP
13	28	15	PCHILD	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	FNP

CompReln_ID INTEGER	Comp_Source_ID INTEGER	Comp_Target_ID INTEGER	RelnTyp_Cd CHAR (6)	CompReln_Strt_DtTm TIMESTAMP	CompReln_End_DtTm TIMESTAMP	Msrc_Corr_Cd CHAR(6)
14	9	8	RUNSON	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	FNP
15	10	8	RUNSON	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	FNP
16	16	8	RUNSON	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	FNP
17	8	17	PCHILD	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	FNP
18	9	19	PCHILD	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	FNP
19	10	20	PCHILD	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	FNP
20	12	21	PCHILD	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	FNP
21	8	22	PCHILD	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	FNP
22	8	24	PCHILD	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	FNP
23	24	23	PCHILD	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	FNP
24	8	28	PCHILD	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	FNP
25	12	18	PCHILD	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	FNP
26	12	27	PCHILD	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	FNP
27	12	26	PCHILD	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	FNP

CompReln_ID INTEGER	Comp_Source_ID INTEGER	Comp_Target_ID INTEGER	RelnTyp_Cd CHAR (6)	CompReln_Strt_DtTm TIMESTAMP	CompReln_End_DtTm TIMESTAMP	Msrc_Corr_Cd CHAR(6)
28	30	29	PCHILD	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	FNP
39	30	31	PCHILD	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	SHARED
30	29	30	LCONT	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	FNP
31	29	32	PCHILD	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	FNP
32	8	31	RUNSON	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	SHARED
33	11	33	PCHILD	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	FNP
34	3	34	PCHILD	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	FNP

7.4.7 Component type keyword (table CompTyp_Keyword)

The Tivoli Monitoring for Network Performance warehouse pack does not use this table.

7.4.8 Attribute type (table AttrTyp)

AttrTyp_Cd CHAR (17)	AttrTyp_Nm * VARCHAR (120)	Msrc_Corr_Cd CHAR(6)
LAST_IP_ADDRESS	Last IP Address	MODEL1
IP_NET_ADDRESS	IP Network Address	MODEL1

AttrTyp_Cd CHAR (17)	AttrTyp_Nm * VARCHAR (120)	Msrc_Corr_Cd CHAR(6)
IP_HOSTNAME	IP Hostname	MODEL1
ULB_BUCKET_1	Bucket 1 Upper Limit Boundary	MODEL1
ULB_ BUCKET_2	Bucket 2 Upper Limit Boundary	MODEL1
ULB_ BUCKET_3	Bucket 3 Upper Limit Boundary	MODEL1
ULB_ BUCKET_4	Bucket 4 Upper Limit Boundary	MODEL1
ULB_ BUCKET_5	Bucket 5 Upper Limit Boundary	MODEL1
LLB_ BUCKET_1	Bucket 1 Lower Limit Boundary	MODEL1
LLB_ BUCKET_2	Bucket 2 Lower Limit Boundary	MODEL1
LLB_ BUCKET_3	Bucket 3 Lower Limit Boundary	MODEL1
LLB_ BUCKET_4	Bucket 4 Lower Limit Boundary	MODEL1
LLB_ BUCKET_5	Bucket 5 Lower Limit Boundary	MODEL1
FNP_SYSPLEX_NAME	Z/OS Sysplex Name	FNP
FNP_SYSTEM_NAME	Z/OS System Name	FNP
FNP_TCPIP_JOB_NM	TCP/IP Job Name	FNP
FNP_BACKLOG_LIMIT	Maximum Backlog Connections Allowed	FNP
LOCAL_PORT	Local Port	MODEL1
FNP_APPL_JOB_NAME	Application Job Name	FNP
FNP_ASID	MVS Address Space Identifier	FNP

AttrTyp_Cd CHAR (17)	AttrTyp_Nm * VARCHAR (120)	Msrc_Corr_Cd CHAR(6)
REMOTE_PORT	Remote Port	MODEL1
LOCAL_IP_ADDR	Local IP Address	MODEL1
REMOTE_IP_ADDR	Remote IP Address	MODEL1
FNP_HWMACCPT_CONN	High Water Mark Accepted Connections	FNP
FNP_TMHWMACPTCONN	Timestamp Highest Value Accepted Connections	FNP
FNP_TMHWMACTVCONN	Timestamp High Water Mark Active Connections	FNP
FNP_LISTENER_IP	Local IP Address for TCP Application	FNP
FNP_LISTENER_PORT	Local Port for TCP Application	FNP
FNP_HWMACTV_CONN	High Water Mark for Active Connections	FNP
FNP_TMBCKLOG_EXCD	Timestamp Connection Rejected	FNP
FNP_CONN_START_TM	Timestamp Connection Started	FNP
FNP_CONN_STATE	State of TCP Connection	FNP
INTERFACE_NAME	Interface Name	MODEL1
FNP_START_TM	Timestamp UDP Endpoint Opened the Socket	FNP
FNP_SEND_DGRAM_SZ	Maximum Transmit Datagram Size	FNP
FNP_RECV_DGRAM_SZ	Maximum Datagram Size Received	FNP
FNP_RECV_Q_BYTE	Maximum Data Bytes Allowed	FNP

AttrTyp_Cd CHAR (17)	AttrTyp_Nm * VARCHAR (120)	Msrc_Corr_Cd CHAR(6)
FNP_RECV_Q_DGRAM	Maximum Datagrams Allowed	FNP
FNP_SRV_FTP_UID	Server Login UserID	FNP
FNP_CLT_FTP_UID	Client Login UserID	FNP
FNP_LOGIN_FAILRSN	Reason Login Failed	FNP
FNP_SESSION_START	Timestamp Control Session Started	FNP
FNP_SESSION_END	Timestamp Control Session Ended	FNP
FNP_TRANS_START	Timestamp Transmission Started	FNP
FNP_TRANS_END	Timestamp Transmission Ended	FNP
FNP_TELNET_LU_NM	Client LU Name for Telnet Session	FNP
FNP_SNA_APPL_NM	SNA Application LU Name for Telnet Session	FNP
FNP_TN_SESSN_STRT	Timestamp Telnet Session Started	FNP
FNP_TN_SESSN_END	Timestamp Telnet Session Ended	FNP
FNP_CONN_ESTAB	Timestamp Connection Started	FNP
FNP_LOCALRTPENDPT	Local RTP Endpoint	FNP
FNP_REMRTPENDPT	Remote RTP Endpoint	FNP
FNP_COS_NAME	Original Class of Service for RTP Pipe	FNP
FNP_LOCAL_TCID	Local TCID	FNP
FNP_REMOTE_TCID	Remote TCID	FNP

AttrTyp_Cd CHAR (17)	AttrTyp_Nm * VARCHAR (120)	Msrc_Corr_Cd CHAR(6)
FNP_ACTIVATE_TM	RTP Pipe Activate Timestamp	FNP
FNP_ARB_MODE	Current Status of RTP Pipe	FNP
FNP_PATHSWITCH_TM	Timestamp Most Recent Path Switch Occurred	FNP
FNP_PATH_SWITCH	Reason for Most Recent Path Switch	FNP
FNP_HWMUNACK_BUFR	High Water Mark for Unacknowledged Buffers	FNP
FNP_TMUNACK_BUFR	Timestamp Unacknowledged Buffers High Water Mark	FNP
FNP_TOS_VALUE	Type of Service Value	FNP
DESCRIPTION	Description	MODEL1
FNP_INTRF_TYPE	Type of Interface	FNP
FNP_INTRF_ADDR	Interface Address	FNP
FNP_MTU	Size of Largest Packet Sent or Received	FNP
FNP_INTRF_DATACAP	Current Data Rate Capacity of Interface	FNP
FNP_CHANNEL_ID	OSA Express Adapter Channel Path Identifier	FNP
FNP_PORT_NAME	TCP/IP Port Name	FNP
FNP_PORT_NUMBER	Physical Port Number	FNP
FNP_CURR_MAC_ADDR	Current MAC Address on Adapter	FNP

AttrTyp_Cd CHAR (17)	AttrTyp_Nm * VARCHAR (120)	Msrc_Corr_Cd CHAR(6)
FNP_FEATURE_TYPE	Physical Port Type	FNP
FNP_SPEED_MODE	Actual Speed and Mode for OSA	FNP
FNP_FEATURESHARED	OSA Express Feature Shared	FNP
FNP_IMAGE_NUMBER	Image Number	FNP
FNP_MAXECSA_STOR	Maximum Extended Common Subpool Address Storage Bytes Allowed	FNP
FNP_MAXPRIV_STOR	Maximum Private Subpool Storage Bytes Allowed	FNP
FNP_FTPSESSN_TYPE	FTP Session Type	FNP
FNP_SERVERFILETYP	Server File Type Transferred	FNP
FNP_FRSTDATASETNM	First Dataset Name Transferred	FNP
FNP_SEC_DATASETNM	Second Dataset Name Transferred	FNP
FNP_FRSTPDS_MBRNM	First PDS Member Name Transferred	FNP
FNP_SEC_PDS_MBRNM	Second PDS Member Name Transferred	FNP
FNP_CLT_FILETYP	Client File Type Transferred	FNP
FNP_CLT_DS_NM	Client Dataset Name	FNP
FNP_CLT_PDS_NM	Client PDS Name	FNP
FNP_BURNT_MACADDR	OSA Burned in MAC Address	FNP
FNP_CSM_MAXECSA	Maximum Extended Common Subpool Address Space Storage	FNP

7.4.9 Attribute rule (table AttrRul)

CompTyp_Cd CHAR (17)	AttrTyp_Cd CHAR (17)	AttrRul_Strt_DtTm TIMESTAMP	AttrRul_End_DtTm TIMESTAMP	AttrRul_Dom_ Ind CHAR	AttrTyp_Multi_Val CHAR (1)
IP_HOST	IP_NET_ADDRESS	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
IP_HOST	LAST_IP_ADDRESS	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
IP_NODE	IP_NET_ADDRESS	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
IP_NODE	LAST_IP_ADDRESS	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_ICMP_PING	LAST_IP_ADDRESS	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_ICMP_PING	IP_HOSTNAME	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
SYSPLEX	FNP_SYSPLEX_NAME	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
MVS_SYSTEM	FNP_SYSTEM_NAME	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_TCPIP_COMSYS	IP_NET_ADDRESS	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_TCPIP_COMSYS	IP_HOSTNAME	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_TCPIP_COMSYS	FNP_TCPIP_JOB_NM	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_TCP	IP_NET_ADDRESS	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_TCP	IP_HOSTNAME	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_TCP	FNP_TCPIP_JOB_NM	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_TCP	FNP_HWMACCPT_CONN	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_TCP	FNP_TMHWMACPTCONN	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N

CompTyp_Cd CHAR (17)	AttrTyp_Cd CHAR (17)	AttrRul_Strt_DtTm TIMESTAMP	AttrRul_End_DtTm TIMESTAMP	AttrRul_Dom_Ind CHAR	AttrTyp_Multi_Val CHAR (1)
FNP_TCP_LISTENER	IP_HOSTNAME	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_TCP_LISTENER	FNP_TCPIP_JOB_NM	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	**N**	**N**
FNP_TCP_LISTENER	FNP_APPL_JOB_NAME	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	**N**	**N**
FNP_TCP_LISTENER	FNP_ASID	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	**N**	**Y**
FNP_TCP_LISTENER	FNP_LISTENER_IP	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_TCP_LISTENER	FNP_LISTENER_PORT	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_TCP_LISTENER	FNP_HWMACTV_CONN	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_TCP_LISTENER	FNP_TMHWMACTVCONN	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_TCP_LISTENER	FNP_TMBCKLOG_EXCD	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_TCP_LISTENER	FNP_BACKLOG_LIMIT	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_TCP_CONN	FNP_TCPIP_JOB_NM	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_TCP_CONN	REMOTE_IP_ADDR	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_TCP_CONN	REMOTE_PORT	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_TCP_CONN	LOCAL_IP_ADDR	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_TCP_CONN	LOCAL_PORT	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_TCP_CONN	FNP_APPL_JOB_NAME	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_TCP_CONN	FNP_ASID	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	Y
FNP_TCP_CONN	FNP_CONN_START_TM	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_TCP_CONN	FNP_CONN_STATE	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N

CompTyp_Cd CHAR (17)	AttrTyp_Cd CHAR (17)	AttrRul_Strt_DtTm TIMESTAMP	AttrRul_End_DtTm TIMESTAMP	AttrRul_Dom_ Ind CHAR	AttrTyp_Multi_Val CHAR (1)
FNP_TCP_CONN	INTERFACE_NAME	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_UDP	FNP_TCPIP_JOB_NM	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_UDP	IP_NET_ADDRESS	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_UDP	IP_HOSTNAME	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_UDP_LISTENER	IP_NET_ADDRESS	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_UDP_LISTENER	LOCAL_PORT	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_UDP_LISTENER	FNP_APPL_JOB_NAME	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_UDP_LISTENER	FNP_ASID	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	Y
FNP_UDP_LISTENER	FNP_START_TM	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_UDP_LISTENER	FNP_SEND_DGRAM_SZ	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_UDP_LISTENER	FNP_RECV_DGRAM_SZ	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_UDP_LISTENER	FNP_RECV_Q_BYTE	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_UDP_LISTENER	FNP_RECV_Q_DGRAM	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_FTP_SRV_SESSN	FNP_APPL_JOB_NAME	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_FTP_SRV_SESSN	REMOTE_IP_ADDR	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_FTP_SRV_SESSN	REMOTE_PORT	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_FTP_SRV_SESSN	FNP_SRV_FTP_UID	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_FTP_SRV_SESSN	FNP_SESSION_START	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_FTP_SRV_SESSN	FNP_SESSION_END	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N

CompTyp_Cd CHAR (17)	AttrTyp_Cd CHAR (17)	AttrRul_Strt_DtTm TIMESTAMP	AttrRul_End_DtTm TIMESTAMP	AttrRul_Dom_Ind CHAR	AttrTyp_Multi_Val CHAR (1)
FNP_FTP_SRV_SESSN	FNP_LOGIN_FAILRSN	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_FTP_SRV_SESSN	FNP_ASID	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	Y
FNP_FTP_SRV_SESSN	FNP_TRANS_START	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_FTP_SRV_SESSN	FNP_TRANS_END	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_FTP_SRV_SESSN	FNP_SERVERFILETYP	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_FTP_SRV_SESSN	FNP_FRSTDATASETNM	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_FTP_SRV_SESSN	FNP_SEC_DATASETNM	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_FTP_SRV_SESSN	FNP_FRSTPDS_MBRNM	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_FTP_SRV_SESSN	FNP_SEC_PDS_MBRNM	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_FTP_CLT_SESSN	FNP_APPL_JOB_NAME	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_FTP_CLT_SESSN	REMOTE_IP_ADDR	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_FTP_CLT_SESSN	REMOTE_PORT	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_FTP_CLT_SESSN	LOCAL_PORT	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_FTP_CLT_SESSN	FNP_SRV_FTP_UID	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_FTP_CLT_SESSN	FNP_CLT_FTP_UID	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_FTP_CLT_SESSN	FNP_SESSION_START	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_FTP_CLT_SESSN	FNP_SESSION_END	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_FTP_CTL_SESSN	FNP_TRANS_START	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_FTP_CTL_SESSN	FTP_TRANS_END	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N

CompTyp_Cd CHAR (17)	AttrTyp_Cd CHAR (17)	AttrRul_Strt_DtTm TIMESTAMP	AttrRul_End_DtTm TIMESTAMP	AttrRul_Dom_Ind CHAR	AttrTyp_Multi_Val CHAR (1)
FNP_FTP_CTL_SESSN	FTP_CLT_FILETYP	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_FTP_CTL_SESSN	FTP_CLT_DS_NM	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_FTP_CTL_SESSN	FTP_CLT_PDS_NM	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_FTP_SERVER	LOCAL_IP_ADDR	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_FTP_SERVER	FTP_LOCAL_PORT	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_FTP_CLIENT	LOCAL_IP_ADDR	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_FTP_SRV_USER	FNP_APPL_JOB_NM	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_FTP_SRV_USER	FNP_SRV_FTP_UID	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_FTP_SRV_USER	FNP_LOGIN_FAILRSN	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_FTP_SRV_USER	FNP_ASID	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	Y
FNP_FTP_CLT_USER	FNP_APPL_JOB_NM	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_FTP_CLT_USER	FNP_SRV_FTP_UID	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_FTP_CLT_USER	FNP_CLT_FTP_UID	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_FTP_CLT_USER	FNP_ASID	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	Y
FNP_TN3270_SERVER	LOCAL_IP_ADDR	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_TN3270_SERVER	LOCAL_PORT	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_TN3270_CLIENT	REMOTE_IP_ADDR	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_TN3270_CLIENT	FNP_TELNET_LU_NM	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_TN3270_CLIENT	ULB_BUCKET_1	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N

CompTyp_Cd CHAR (17)	AttrTyp_Cd CHAR (17)	AttrRul_Strt_DtTm TIMESTAMP	AttrRul_End_DtTm TIMESTAMP	AttrRul_Dom_ Ind CHAR	AttrTyp_Multi_Val CHAR (1)
FNP_TN3270_CLIENT	ULB_BUCKET_2	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_TN3270_CLIENT	ULB_BUCKET_3	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_TN3270_CLIENT	ULB_BUCKET_4	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_HPR	FNP_LOCALRTPENDPT	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_HPR	FNP_REMRTPENDPT	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_HPR	FNP_COS_NAME	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_HPR	FNP_LOCAL_TCID	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_HPR	FNP_ACTIVATE_TM	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_HPR	FNP_REMOTE_TCID	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_HPR	FNP_ARB_MODE	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_HPR	FNP_PATHSWITCH_TM	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_HPR	FNP_PATH_SWITCH	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_HPR	FNP_HWMUNACK_BUFR	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_HPR	FNP_TMUNACK_BUFR	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_EE_COMSYS	LOCAL_IP_ADDR	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_EE_COMSYS	REMOTE_IP_ADDR	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_EE	LOCAL_IP_ADDR	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_EE	REMOTE_IP_ADDR	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_EE	LOCAL_PORT	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N

CompTyp_Cd CHAR (17)	AttrTyp_Cd CHAR (17)	AttrRul_Strt_DtTm TIMESTAMP	AttrRul_End_DtTm TIMESTAMP	AttrRul_Dom_ Ind CHAR	AttrTyp_Multi_Val CHAR (1)
FNP_EE	REMOTE_PORT	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_OSA_ADAPTER	FNP_CHANNEL_ID	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_OSA_ADAPTER	FNP_PORT_NAME	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_OSA_ADAPTER	FNP_PORT_NUMBER	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_OSA_COMSYS	FNP_CURR_MAC_ADDR	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_OSA_ADAPTER	FNP_FEATURE_TYPE	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_OSA_ADAPTER	FNP_SPEED_MODE	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_OSA_ADAPTER	FNP_FEATURESHARED	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	Y	N
FNP_OSA_ADAPTER	FNP_IMAGE_NUMBER	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_OSA_ADAPTER	FNP_BURNT_MACADDR	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_INTERFACE	FNP_TCPIP_JOB_NM	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_INTERFACE	FNP_INTRF_TYPE	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_INTERFACE	DESCRIPTION	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_INTERFACE	FNP_INTRF_ADDR	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_INTERFACE	FNP_MTU	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_INTERFACE	FNP_INTRF_DATACAP	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_IP	FNP_TCPIP_JOB_NM	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_IP	IP_NET_ADDRESS	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_IP	IP_HOSTNAME	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N

CompTyp_Cd CHAR (17)	AttrTyp_Cd CHAR (17)	AttrRul_Strt_DtTm TIMESTAMP	AttrRul_End_DtTm TIMESTAMP	AttrRul_Dom_ Ind CHAR	AttrTyp_Multi_Val CHAR (1)
FNP_TN3270_APPL	FNP_SNA_APPL_NM	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_TN3270_APPL	FNP_TN_SESSN_STRT	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_TN3270_APPL	FNP_TN_SESSN_END	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_TCPIP_COMSYS	FNP_MAXECSA_STOR	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_TCPIP_COMSYS	FNP_MAXPRIV_STOR	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N
FNP_CSM_STORAGE	FNP_CSM_MAXECSA	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	N	N

7.4.10 Attribute domain (table AttrDom)

AttrDom _ID INTEGER	CompTyp_Cd CHAR (17)	AttrTyp_Cd CHAR (17)	AttrDom_Strt_DtTm TIMESTAMP	AttrDom_End_DtTm TIMESTAMP	AttrDom _Val VARCHAR (254)	AttrDom_Ds VARCHAR (254)	MSrc_C orr_Cd CHAR (6)
1	FNP_FTP_SRV_SESSN	FNP_LOGIN_FAILRSN	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	1	Password not valid	FNP
2	FNP_FTP_SRV_SESSN	FNP_LOGIN_FAILRSN	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	2	Password has expired	FNP
3	FNP_FTP_SRV_SESSN	FNP_LOGIN_FAILRSN	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	3	User ID has been revoked	FNP
4	FNP_FTP_SRV_SESSN	FNP_LOGIN_FAILRSN	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	4	User does not have access to server	FNP
5	FNP_FTP_SRV_SESSN	FNP_LOGIN_FAILRSN	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	5	FTCHKPWD exit routine rejected login	FNP
6	FNP_FTP_SRV_SESSN	FNP_LOGIN_FAILRSN	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	6	Excessive bad passwords	FNP

AttrDom_ID INTEGER	CompTyp_Cd CHAR (17)	AttrTyp_Cd CHAR (17)	AttrDom_Strt_DtTm TIMESTAMP	AttrDom_End_DtTm TIMESTAMP	AttrDom_Val VARCHAR (254)	AttrDom_Ds VARCHAR (254)	MSrc_Corr_Cd CHAR (6)
7	FNP_FTP_SRV_SESSN	FNP_LOGIN_FAILRSN	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	7	Group ID process failed	FNP
8	FNP_FTP_SRV_SESSN	FNP_LOGIN_FAILRSN	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	8	User ID is unknown	FNP
9	FNP_OSA_ADAPTER	FNP_FEATURE_SHARED	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	1	Yes	FNP
10	FNP_OSA_ADAPTER	FNP_FEATURE_SHARED	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	0	No	FNP
11	FNP_HPR	FNP_ARB_MODE	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	0	Green	FNP
12	FNP_HPR	FNP_ARB_MODE	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	1	Yellow	FNP
13	FNP_HPR	FNP_ARB_MODE	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	2	Red	FNP
14	FNP_OSA_ADAPTER	FNP_FEATURE_TYPE	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	65	gigabitEthernet	FNP
15	FNP_OSA_ADAPTER	FNP_FEATURE_TYPE	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000	81	fastEthernet	FNP
16	FNP_OSA_ADAPTER	FNP_SPEED_MODE	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	0	unknown	FNP
17	FNP_OSA_ADAPTER	FNP_SPEED_MODE	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	1	tenMbHalfDuplex	FNP
18	FNP_OSA_ADAPTER	FNP_SPEED_MODE	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	2	tenMbFullDuplex	FNP
19	FNP_OSA_ADAPTER	FNP_SPEED_MODE	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	3	oneHundredMbHalfDuplex	FNP
20	FNP_OSA_ADAPTER	FNP_SPEED_MODE	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	4	oneHundredMbFullDuplex	FNP
21	FNP_OSA_ADAPTER	FNP_SPEED_MODE	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	6	oneThousandMbFullDuplex	FNP
22	FNP_HPR	FNP_PATH_SWITCH	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	1	TGINOP	FNP

AttrDom_ID INTEGER	CompTyp_Cd CHAR (17)	AttrTyp_Cd CHAR (17)	AttrDom_Strt_DtTm TIMESTAMP	AttrDom_End_DtTm TIMESTAMP	AttrDom_Val VARCHAR (254)	AttrDom_Ds VARCHAR (254)	MSrc_Corr_Cd CHAR (6)
23	FNP_HPR	FNP_PATH_SWITCH	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	2	SRT retries	FNP
24	FNP_HPR	FNP_PATH_SWITCH	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	3	No NCB	FNP
25	FNP_HPR	FNP_PATH_SWITCH	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	4	Modify RTP command	FNP
26	FNP_HPR	FNP_PATH_SWITCH	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	5	Auto path switch	FNP
27	FNP_HPR	FNP_PATH_SWITCH	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	6	Partner initiated	FNP
28	FNP_TCP_CONN	FNP_CONN_STATE	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	1	Closed	FNP
29	FNP_TCP_CONN	FNP_CONN_STATE	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	2	Listening	FNP
30	FNP_TCP_CONN	FNP_CONN_STATE	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	3	Syn sent	FNP
31	FNP_TCP_CONN	FNP_CONN_STATE	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	4	Syn received	FNP
32	FNP_TCP_CONN	FNP_CONN_STATE	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	5	Established	FNP
33	FNP_TCP_CONN	FNP_CONN_STATE	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	6	FIN wait 1	FNP
34	FNP_TCP_CONN	FNP_CONN_STATE	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	7	FIN wait 2	FNP
35	FNP_TCP_CONN	FNP_CONN_STATE	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	8	Close wait	FNP
36	FNP_TCP_CONN	FNP_CONN_STATE	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	9	Last Ack	FNP
37	FNP_TCP_CONN	FNP_CONN_STATE	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	10	Closing	FNP
38	FNP_TCP_CONN	FNP_CONN_STATE	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	11	Time wait	FNP
39	FNP_TCP_CONN	FNP_CONN_STATE	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	12	Delete TCB	FNP
40	FNP_FTP_SRV_USER	FNP_LOGIN_FAILRSN	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	1	Password not valid	FNP
41	FNP_FTP_SRV_USER	FNP_LOGIN_FAILRSN	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	2	Password has expired	FNP

AttrDom_ID INTEGER	CompTyp_Cd CHAR (17)	AttrTyp_Cd CHAR (17)	AttrDom_Strt_DtTm TIMESTAMP	AttrDom_End_DtTm TIMESTAMP	AttrDom_Val VARCHAR (254)	AttrDom_Ds VARCHAR (254)	MSrc_Corr_Cd CHAR (6)
42	FNP_FTP_SRV_USER	FNP_LOGIN_FAILRSN	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	3	User ID has been revoked	FNP
43	FNP_FTP_SRV_USER	FNP_LOGIN_FAILRSN	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	4	User does not have access to server	FNP
44	FNP_FTP_SRV_USER	FNP_LOGIN_FAILRSN	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	5	FTCHKPWD exit routine rejected login	FNP
45	FNP_FTP_SRV_USER	FNP_LOGIN_FAILRSN	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	6	Excessive bad passwords	FNP
46	FNP_FTP_SRV_USER	FNP_LOGIN_FAILRSN	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	7	Group ID process failed	FNP
47	FNP_FTP_SRV_USER	FNP_LOGIN_FAILRSN	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	8	User ID is unknown	FNP

7.4.11 Component attribute (table CompAttr)

CompAttr_ID INTEGER	Comp_ID INTEGER	AttrTyp_Cd CHAR (17)	CompAttr_Strt_DtTm TIMESTAMP	CompAttr_End_DtTm TIMESTAMP	CompAttr_Val VARCHAR (254)	Msrc_Corr_Cd CHAR(6)
1	1	IP_NET_ADDRESS	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.0000	123.46.3.7	SHARED
2	1	LAST_IP_ADDRESS	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	2.3.4.6.7	SHARED
4	7	FNP_SYSPLEX_NAME	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	SYSPLEX1	FNP

CompAttr_ID INTEGER	Comp_ID INTEGER	AttrTyp_Cd CHAR (17)	CompAttr_Strt_DtTm TIMESTAMP	CompAttr_End_DtTm TIMESTAMP	CompAttr_Val VARCHAR (254)	Msrc_Corr_Cd CHAR(6)
5	8	FNP_SYSTEM_NAME	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	1	FNP
6	12	FNP_TCPIP_JOB_NM	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	TCPIP	FNP
7	18	FNP_HWMACCPT_CONN	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	900	FNP
8	18	FNP_TMHWMACPTCONN	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	9999-01-01-00.00.00.000000	FNP
9	11	FNP_APPL_JOB_NAME	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	FTPD	FNP
10	11	FNP_ASID	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	1C	FNP
11	11	FNP_LISTENER_IP	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	9.67.100.3	FNP
12	11	FNP_LISTENER_PORT	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	23	FNP
13	11	FNP_HWMACTV_CONN	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	1000	FNP
14	11	FNP_TMHWMACTVCONN	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	9999-01-01-00.00.00.000000	FNP
15	11	FNP_TMBCKLOG_EXCD	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	200	FNP
16	11	FNP_BACKLOG_LIMIT	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	1000	FNP
17	33	REMOTE_IP_ADDR	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	2.3.5.8.9	FNP
18	33	REMOTE_PORT	2002-04-03-	9999-01-01-00.00.00.000000	1049	FNP

CompAttr_ID INTEGER	Comp_ID INTEGER	AttrTyp_Cd CHAR (17)	CompAttr_Strt_DtTm TIMESTAMP	CompAttr_End_DtTm TIMESTAMP	CompAttr_Val VARCHAR (254)	Msrc_Corr_Cd CHAR(6)
			03.00.00.000000			
19	33	LOCAL_IP_ADDR	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	1.2.3.4	FNP
20	33	LOCAL_PORT	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	53	FNP
21	33	FNP_CONN_START_TM	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	9999-01-01-00.00.00.000000	FNP
22	33	FNP_CONN_STATE	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	5	FNP
23	33	INTERFACE_NAME	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	art	FNP
24	14	FNP_START_TM	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	9999-01-01-00.00.00.000000	FNP
25	14	FNP_SEND_DGRAM_SZ	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	2000	FNP
26	14	FNP_RECV_DGRAM_SZ	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	2000	FNP
27	14	FNP_RECV_Q_BYTE	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	10000	FNP
28	14	FNP_RECV_Q_DGRAM	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	500	FNP
29	19	FNP_FTPSESSN_TYPE	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	Client	FNP
30	19	FNP_SRV_FTP_UID	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	jacobm	FNP
31	19	FNP_CLNT_FTP_UID	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	gjacob	FNP

CompAttr_ID INTEGER	Comp_ID INTEGER	AttrTyp_Cd CHAR (17)	CompAttr_Strt_DtTm TIMESTAMP	CompAttr_End_DtTm TIMESTAMP	CompAttr_Val VARCHAR (254)	Msrc_Corr_Cd CHAR(6)
32	19	FNP_SESSION_START	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	9999-01-01-00.00.00.000000	FNP
33	19	FNP_LOGIN_FAILRSN	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	2	FNP
34	9	FNP_TRANS_START	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	9999-01-01-00.00.00.000000	FNP
35	9	FNP_TRANS_END	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	9999-01-01-00.00.00.000000	FNP
36	9	FNP_SERVERFILETYP	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	SQL	FNP
37	9	FNP_FRSTDATASETNM	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	sys2.parmlib	FNP
38	9	FNP_SEC_DATASETNM	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	sys3.parmlib	FNP
39	9	FNP_FRSTPDS_MBRNM	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	BPXPRM00	FNP
40	9	FNP_SEC_PDS_MBRNM	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	NVYPRM00	FNP
41	10	FNP_CLNT_FILETYP	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	SEQ	FNP
42	10	FNP_CLIENT_DSNM	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	sys1.parmlib	FNP
43	10	FNP_CLIENTPDS_NM	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	KIMPRM00	FNP
44	16	FNP_TELNET_LU_NM	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	LUNAMEA	FNP
45	16	FNP_SNA_APPL_NM	2002-04-03-	9999-01-01-00.00.00.000000	net1.CRN5567	FNP

CompAttr_ID INTEGER	Comp_ID INTEGER	AttrTyp_Cd CHAR (17)	CompAttr_Strt_DtTm TIMESTAMP	CompAttr_End_DtTm TIMESTAMP	CompAttr_Val VARCHAR (254)	Msrc_Corr_Cd CHAR(6)
			03.00.00.000000			
46	16	FNP_TN_SESSN_STRT	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	9999-01-01-00.00.00.000000	FNP
47	16	FNP_TN_SESSN_END	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	9999-01-01-00.00.00.000000	FNP
48	25	FNP_CONN_ESTAB	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	9999-01-01-00.00.00.000000	FNP
49	25	ULB_BUCKET_1	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	10	FNP
50	25	ULB_BUCKET_2	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	20	FNP
51	25	ULB_BUCKET_3	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	30	FNP
52	25	ULB_BUCKET_4	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	40	FNP
53	25	ULB_BUCKET_5	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	50	FNP
54	25	LLB_BUCKET_1	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	0	FNP
55	25	LLB_BUCKET_2	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	10	FNP
56	25	LLB_BUCKET_3	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	20	FNP
57	25	LLB_BUCKET_4	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	30	FNP
58	25	LLB_BUCKET_5	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	40	FNP

CompAttr_ID INTEGER	Comp_ID INTEGER	AttrTyp_Cd CHAR (17)	CompAttr_Strt_DtTm TIMESTAMP	CompAttr_End_DtTm TIMESTAMP	CompAttr_Val VARCHAR (254)	Msrc_Corr_Cd CHAR(6)
59	13	FNP_LOCALRTPENDPT	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	10	FNP
60	13	FNP_REMRTPENDPT	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	35	FNP
61	13	FNP_COS_NAME	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	#connect	FNP
62	13	FNP_LOCAL_TCID	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	3CEE355D000012	FNP
63	13	FNP_REMOTE_TCID	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	3MRE355D000013	FNP
64	13	FNP_ACTIVATE_TM	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	9999-01-01-00.00.00.000000	FNP
65	13	FNP_ARB_MODE	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	2	FNP
66	13	FNP_PATHSWITCH_TM	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	9999-01-01-00.00.00.000000	FNP
67	13	FNP_PATH_SWITCH	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	9999-01-01-00.00.00.000000	FNP
68	13	FNP_HWMUNACK_BUFR	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	1000	FNP
69	13	FNP_TMUNACK_BUFR	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	9999-01-01-00.00.00.000000	FNP
70	15	FNP_TOS_VALUE	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	3	FNP
71	29	FNP_CHANNEL_ID	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	DH	FNP
72	29	FNP_PORT_NAME	2002-04-03-	9999-01-01-00.00.00.000000	ETH1	FNP

CompAttr_ID INTEGER	Comp_ID INTEGER	AttrTyp_Cd CHAR (17)	CompAttr_Strt_DtTm TIMESTAMP	CompAttr_End_DtTm TIMESTAMP	CompAttr_Val VARCHAR (254)	Msrc_Corr_Cd CHAR(6)
			03.00.00.000000			
73	29	FNP_PORT_NUMBER	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	23	FNP
74	29	FNP_CURR_MAC_ADDR	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	00-B0-59-B7-AF-15	FNP
75	29	FNP_FEATURE_TYPE	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	81	FNP
76	29	FNP_SPEED_MODE	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	2	FNP
77	29	FNP_FEATURESHARED	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	1	FNP
78	29	FNP_IMAGE_NUMBER	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	15	FNP
79	29	FNP_BURNT_MACADDR	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	00-D0-59-B7-AF-15	FNP
80	21	FNP_INTRF_TYPE	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	csmacd	FNP
81	21	DESCRIPTION	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	3 Com Etherlink PCI	FNP
82	21	FNP_INTRF_ADDR	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	1.2.3.4	FNP
83	21	FNP_MTU	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	1500	FNP
84	21	FNP_INTRF_DATACAP	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	1000000000	FNP
87	23	FNP_TN_SESSN_STRT	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	9999-01-01-00.00.00.000000	FNP

CompAttr_ID INTEGER	Comp_ID INTEGER	AttrTyp_Cd CHAR (17)	CompAttr_Strt_DtTm TIMESTAMP	CompAttr_End_DtTm TIMESTAMP	CompAttr_Val VARCHAR (254)	Msrc_Corr_Cd CHAR(6)
88	23	FNP_TN_SESSN_END	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	9999-01-01-00.00.00.000000	FNP
91	25	FNP_TN_SESSN_STRT	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	9999-01-01-00.00.00.000000	FNP
92	25	FNP_TN_SESSN_END	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	9999-01-01-00.00.00.000000	FNP
93	12	FNP_MAXECSA_STOR	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	600	FNP
94	12	FNP_MAXPRIV_STOR	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	500	FNP
95	22	FNP_CSM_MAXECSA	2002-04-03-03.00.00.000000	9999-01-01-00.00.00.000000	800	FNP

7.4.12 Component type relationship (table CTypReln)

The Tivoli Monitoring for Network Performance warehouse pack does not use this table.

7.4.13 Component attribute type relationship (table ATypReln)

The Tivoli Monitoring for Network Performance warehouse pack does not use this table.

7.5 Component measurement

The following sections describe the component measurement.

7.5.1 Measurement group type (table MGrpTyp)

MGrpTyp_Cd CHAR (6)	MGrpTyp_Nm * VARCHAR (120)
GROUP	Aggregate Types or Group Functions.
* This column is translated.	

7.5.2 Measurement group (table MGrp)

MGrp_Cd CHAR (6)	MGrpTyp_Cd CHAR (6)	MGrp_Parent_Cd CHAR (6)	MGrp_Nm * VARCHAR (120)
AVG_E	GROUP	NULL	Average value exists
MIN_E	GROUP	NULL	Minimum value exists
MAX_E	GROUP	NULL	Maximum value exists
TOT_E	GROUP	NULL	Total value exists
* This column is translated.			

7.5.3 Measurement group member (table MGrpMbr)

MGrp_Cd CHAR(6)	MGrpTyp_Cd CHAR(6)	MsmtTyp_ID INTEGER
TOT_E	GROUP	3,31,33-35,40-43,45,47-48,50-54,57,64-68,74,86-87,96-99,105,112-117,140-144,164-167,172-175,177,181-188,190-191,209-212,214-215
AVG_E	GROUP	1-2,5-6,30,32,36-39,44,46,49,55-56,58-63,69-73,75-85,88-95,100-104,106-111,118-139,145-163,168-171,176,178-180,189,192-

MGrp_Cd CHAR(6)	MGrpTyp_Cd CHAR(6)	MsmtTyp_ID INTEGER
		208,213,216-221
MIN_E	GROUP	1-2,5-6,30,32,36-39,44,46,49,55-56,58-63,69-73,75-85,88-95,100-104,106-111,118-139,145-163,168-171,176,178-180,189,192-208,213,216-221
MAX_E	GROUP	1-2,5-6,30,32,36-39,44,46,49,55-56,58-63,69-73,75-85,88-95,100-104,106-111,118-139,145-163,168-171,176,178-180,189,192-208,213,216-221

7.5.4 Measurement unit category (table MUnitCat)

MunitCat_Cd CHAR (6)	MunitCat_Nm * VARCHAR (120)
TM	Time Duration
QTY	Quantity
PRC	Percentage
RT	Rate
* This column is translated.	

7.5.5 Measurement unit (table MUnit)

MUnit_Cd CHAR (6)	MUnitCat_Cd CHAR (6)	Munit_Nm * VARCHAR (120)

MUnit_Cd CHAR (6)	MUnitCat_Cd CHAR (6)	Munit_Nm * VARCHAR (120)
PRC	PRC	Percentage
Bps	RT	Bytes per Second
MBps	RT	Megabytes per Second
KBps	RT	Kilobytes per Second
Qps	RT	Quantity per Second
QTY	QTY	Quantity
KB	QTY	Kilobytes
MB	QTY	Megabytes
B	QTY	Bytes
MSec	TM	Milliseconds
Sec	TM	Seconds
TSEC	TM	Tenths of a Second
Hr	TM	Hours
* This column is translated.		

7.5.6 Measurement alias names (table MTypReln)

The Tivoli Monitoring for Network Performance warehouse pack does not use this table.

7.5.7 Time summary (table TmSum)

The period over which a measurement might be summarized.

TmSum_Cd CHAR	TmSum_Nm * VARCHAR (120)
H	Hourly
* This column is translated.	

7.5.8 Measurement source (table MSrc)

MSrc_Cd CHAR (6)	MSrc_Parent_Cd CHAR (6)	MSrc_Nm VARCHAR (120)
Tivoli	NULL	Tivoli Application
FNP	Tivoli	Tivoli Monitoring for Network Performance

7.5.9 Measurement source history (table MSrcHistory)

The Tivoli Monitoring for Network Performance warehouse pack does not use this table.

7.5.10 Measurement type (table MsmtTyp)

MsmtTyp_ID INTEGER	MUnit_Cd CHAR(6)	MSrc_Cd CHAR (6)	MsmtTyp_Nm * VARCHAR(120)	MsmtTyp_Ds * VARCHAR(254)
SNMP_OBJ 1	PRC	SNMP	avgBusy5	5 minute exponentially-decayed moving average of the CPU busy percentage. 1.3.6.1.4.1.9.2.1.58
2	PRC	SNMP	cpmCPUTotal5min	The overall CPU busy percentage in the last 5 minute period. 1.3.6.1.4.1.9.9.109.1.1.1.1.5
3	B	SNMP	ciscomemoryPoolFree	Number of bytes from memory pool that are currently unused on the managed device. Sum of ciscoMemoryPoolUsed and ciscoMemoryPoolFree is total amount of memory in the pool. 1.3.6.1.4.1.9.9.48.1.1.1.6

MsmtTyp_ID INTEGER	MUnit_Cd CHAR(6)	MSrc_Cd CHAR (6)	MsmtTyp_Nm * VARCHAR(120)	MsmtTyp_Ds * VARCHAR(254)
5	PRC	SNMP	sysTraffic	Traffic meter value, i.e. the percentage of bandwidth utilization for the previous polling interval. 1.3.6.1.4.1.9.5.1.1.8
6	PRC	SNMP	sysTrafficMeter	Traffic meter value, i.e. the percentage of bandwidth utilization for the previous polling interval . 1.3.6.1.4.1.9.5.1.1.32.1.2
FNP_TCP 30	QTY	FNP	tcpCurrEstab	tcpCurrEstab Number of active connections.
31	QTY	FNP	ibmMvsTcpListenerAcceptCount	Delta(ibmMvsTcpListenerAcceptCount) Total number of connections accepted by the listener.
32	KBps	FNP	TCPIP Connection Rate	ibmMvsTcpListenerAcceptCount/Delta(sec)
33	QTY	FNP	TCPIP Connections Dropped	Total number of connections lost by this listener during the most recent time interval. Delta(ibmMvsTcpRxmtDrops)+Delta(ibmMvsTcpProbeDrops)+Delta(ibmMvsTcpKeepAliveDrops)+Delta(ibmMvsTcpFinwait2Drops)
34	QTY	FNP	ibmMvsTcpOutWinProbes	Delta(ibmMvsTcpOutWinProbes) Number of window probes sent.
35	QTY	FNP	tcpRetransSegs	Delta(tcpRetransSegs) Number of segments retransmitted.
36	PRC	FNP	Percent Segment Retransmitted	Percent segment retransmitted. (Delta(tcpRetransSegs)/Delta(tcpOutSegs))*100
37	Qps	FNP	TCP Stack Retransmission Rate	Retransmission rate. (Delta(tcpRetransSegs))/Delta(sec)
38	Qps	FNP	Transmit Segment Rate	Delta(tcpOutSegs)/Delta(sec).

MsmtTyp_ID INTEGER	MUnit_Cd CHAR(6)	MSrc_Cd CHAR (6)	MsmtTyp_Nm * VARCHAR(120)	MsmtTyp_Ds * VARCHAR(254)
39	Qps	FNP	Receive Segment Rate	Delta(tcpInSegs)/Delta(sec).
40	QTY	FNP	tcpOutSegs	Delta(tcpOutSegs) Total number of segments sent.
41	QTY	FNP	tcpInSegs	Delta(tcpInSegs) Total number of segments received.
42	QTY	FNP	tcpInErrs	Delta(tcpInErrs) Total number of segments received in error.
43	QTY	FNP	ibmMvsTcpInOutOfOrder	Delta(ibmMvsTcpInOutOfOrder) Number of inbound TCP data segments that did not contain the next expected sequence number.
FNP_TCP_LI STENER 44	QTY	FNP	Current Active Connections	NWMTCPLCurrActive Total number of current active connections .
45	QTY	FNP	Accepted Connection Count	Delta(NWMTCPLAcceptCount) Total number of connections accepted by this listener.
46	Qps	FNP	Connection Rate	Delta(NWMTCPLAcceptCount)/Delta(sec). Number of connections accepted per second.
47	Hr	FNP	Total Server Idle Time	Delta(Current time – NWMTCPLLastActivity) The total amount of time that the server has been idle since last accept.
48	Hr	FNP	Total Server Active Time	Delta(Current time – NWMTCPLStartTime) The total amount of time that the server has been active.
49	QTY	FNP	Connections In Backlog	NWMTCPLCurrBacklog The current number of connections in Backlog.

MsmtTyp_ID INTEGER	MUnit_Cd CHAR(6)	MSrc_Cd CHAR (6)	MsmtTyp_Nm * VARCHAR(120)	MsmtTyp_Ds * VARCHAR(254)
50	QTY	FNP	Connections Dropped Due to Backlog Exceeded	Delta(NWMTCPLExceedBacklog) The total number of connections dropped by this listener due to backlog exceeded.
FNP_TCP_C ONN 51	Sec	FNP	Total Connection Duration	Delta(Current time – Connection Start Time)
52	Sec	FNP	Total Time Since Last Activity	Total time since last activity. Delta(Current time – NWMConnLastActivity)
53	QTY	FNP	Times Local Window Size Set to Zero	Delta(NWMConnLcl0WindowCount) Number of times local window size was set to zero.
54	QTY	FNP	Times Remote Window Size Set to Zero	Delta(NWMConnRmt0WindowCount) Number of times remote window size was set to zero.
FNP_TCP_C ONN,FNP_IC MP 55	Msec	MODEL1	Response Time	The amount of time it took a process to respond
56	Msec	FNP	Round Trip Response Time Variance	NWMConnRoundTripVar Round trip response time variance
57	QTY	FNP	Number of Segments Retransmitted	Delta(NWMConnReXmtCount) Number of segments retransmitted
58	PRC	FNP	Percent Segment Loss	(Delta(NWMConnReXmtCount)/ Delta(NWMConnOutSegs)) * 100
59	Qps	FNP	Retransmission Rate	Rate of segment retransmission. Delta(NWMConnReXmtCount/Delta(sec)

MsmtTyp_ID INTEGER	MUnit_Cd CHAR(6)	MSrc_Cd CHAR (6)	MsmtTyp_Nm * VARCHAR(120)	MsmtTyp_Ds * VARCHAR(254)
FNP_TCP_CONN 60	Qps	MODEL1	Number of Bytes Transmitted Rate	Number of bytes transmitted rate
61	Qps	MODEL1	Number of Bytes Received Rate	Number of bytes received rate
62	Qps	FNP	Number of Segments Transmitted Per Second	Delta(NWMConnOutSegs)/Delta(sec) Number of segments transmitted per second since the last measurement
63	Qps	FNP	Number of Segments Received Per Second	Delta(NWMConnInSegs)/Delta(sec) Number of segments received per second since the last measurement
64	Bps	FNP	Number Of Bytes Sent To IP	Delta(NWMConnBytesOut) The number of bytes sent to IP
65	Bps	FNP	Number Of Bytes Received From IP	Delta(NWMConnBytesIn) The number of bytes received from IP
66	QTY	FNP	Number of Segments Sent to IP	Delta(NWMConnOutSegs) The number of segments sent to IP
67	QTY	FNP	Number of Segments Received From IP	Delta(NWMConnInSegs) The number of segments received from IP
68	QTY	FNP	Number of Out-of-Order Segments Received	Delta(NWMConnOutOfOrderCount) The number of out-of-order segments received.
TN3270_SERVER,TN3270_CLIENT,TN3270_APPL 69	QTY	MODEL1	Number of Bytes Received	The number of bytes received
70	QTY	MODEL1	Number of Bytes Sent	The number of bytes sent

MsmtTyp_ID INTEGER	MUnit_Cd CHAR(6)	MSrc_Cd CHAR (6)	MsmtTyp_Nm * VARCHAR(120)	MsmtTyp_Ds * VARCHAR(254)
TN3270_CLIENT 71	MSec	FNP	Sliding Window Average Total Response Time	(ibmMvsTN3270ConnRtAvgRt)/(ibmMvsTN3270ConnRtAvgCountTrans)
72	MSec	FNP	Sliding Window Average IP Response Time	(ibmMvsTN3270ConnRtAvgIpRt)/(ibmMvsTN3270ConnRtAvgCountTrans)
73	MSec	FNP	Sliding Window Average Systems Network Architecture Response Time	(ibmMvsTN3270ConnRtAvgRt – ibmMvsTN3270ConnRtAvgIpRt)/(ibmMvsTN3270ConnRtAvgCountTrans)
74	QTY	FNP	Total Number of Transactions Detected	Delta(ibmMvsTN3270ConnRtCountTrans) Count of number of transactions detected since last measurement
75	QTY	FNP	Bucket1 Count of Response Times	ibmMvsTN3270ConnRtBucket1Rts The count of response times falling into bucket 1
76	QTY	FNP	Bucket2 Count of Response Times	ibmMvsTN3270ConnRtBucket2Rts The count of response times falling into bucket 2
77	QTY	FNP	Bucket3 Count of Response Times	ibmMvsTN3270ConnRtBucket3Rts The count of response times falling into bucket 3
78	QTY	FNP	Bucket4 Count of Response Times	ibmMvsTN3270ConnRtBucket4Rts The count of response times falling into bucket 4
79	QTY	FNP	Bucket5 Count of Response Times	ibmMvsTN3270ConnRtBucket5Rts The count of response times falling into bucket 5
FNP_HPR 80	QTY	FNP	Number of Sessions Using Pipe	HPRConnDS_LULU_Session_Count Number of sessions using the pipe
81	Msec	FNP	Average Round Trip Time Variance	HPRConnDS_Smooth_Deviation Average round trip time variance

MsmtTyp_ID INTEGER	MUnit_Cd CHAR(6)	MSrc_Cd CHAR (6)	MsmtTyp_Nm * VARCHAR(120)	MsmtTyp_Ds * VARCHAR(254)
82	Msec	FNP	Current Receiver Threshold	HPRConnDS_ARB2_RCVR_TRESHOLD The current receiver threshold
83	Msec	FNP	Minimum Receiver Threshold	HPRConnDS_ARB2_RCVR_TRESHOLD_MIN The minimum receiver threshold
84	Msec	FNP	Maximum Receiver Threshold	HPRConnDS_ARB2_RCVR_TRESHOLD_MAX The maximum receiver threshold
85	Sec	FNP	ALIVE Timer	HPRConnDS_Liveness_Time The value of the liveness timer.
86	QTY	FNP	Number of Path Switches	The number of path switches initiated by the remote or local nodes. Delta(HPRConnDP_Cnt_PS_Initiated_Rem +HPRConnDP_Cnt_PS_Initiated_Loc)
87	QTY	FNP	Number of High-Performance Routing Network Layer Packets Retransmitted	Delta(HPRConnDS_Num_Rexmitted_NLPS) Number of high-performance routing Network Layer Packets retransmitted
88	PRC	FNP	Percent High-Performance Routing Packet Retransmitted	Percent high-performance routing packet retransmitted. (Delta(HPRConnDS_Num_Rexmitted_NLPS)/HPRConnDS_NLPOut_Info)*100
89	Qps	FNP	High-Performance Routing Packets Retransmission Rate	High-performance routing packets retransmission rate. HPRConnDS_Num_Rexmitted_NLPS/Delta(sec)
90	KBps	FNP	Initial Throughput Rate	HPRConnDS_Initial_Send_Rate Initial throughput rate
91	KBps	FNP	Actual Throughput Rate	HPRConnDS_Actual_Send_Rate Actual throughput rate
92	Bps	FNP	High-Performance Routing Transmit Bytes Rate	Delta(HPRConnDS_TotalBytes_Sent_Info)/Delta(sec)

MsmtTyp_ID INTEGER	MUnit_Cd CHAR(6)	MSrc_Cd CHAR (6)	MsmtTyp_Nm * VARCHAR(120)	MsmtTyp_Ds * VARCHAR(254)
93	Bps	FNP	High-Performance Routing Receive Bytes Rate	Delta(HPRConnDS_TotalBytes_Rcv_Info)/Delta(sec)
94	Qps	FNP	High-Performance Routing Transmit Packet Rate	Delta(HPRConnDS_NLPOut_Info)/Delta(sec)
95	Qps	FNP	High-Performance Routing Receive Packet Rate	Delta(HPRConnDS_NLPIn_Info)/Delta(sec)
96	B	FNP	High-Performance Routing Number of Bytes Sent	Delta(HPRConnDS_TotalBytes_Sent_Info) Number of bytes sent
97	B	FNP	High-Performance Routing Number of Bytes Received	Delta(HPRConnDS_TotalBytes_Rcv_Info) Number of bytes received
98	QTY	FNP	Number of High-Performance Routing Network Layer Packets Sent	Delta(HPRConnDS_NLPOut_Info) Number of high-performance routing network layer packets sent
99	QTY	FNP	Number of High-Performance Routing Network Layer Packets Received	Delta(HPRConnDS_NLPIn_Info) Number of high-performance routing network layer packets received
100	QTY	FNP	Number of Network Layer Packets On Waiting to Send Queue	HPRConnDS_Num_NLPs_On_Pending_Sends_Q Number of high-performance routing network layer packets on waiting to send queue
101	QTY	FNP	High-Performance Routing Number of Out of Sequence Buffers	HPRConnDS_Num_NLPs_On_OOSQ Number of out of sequence buffers
102	QTY	FNP	High-Performance Routing Number of Unacknowledged Buffers	HPRConnDS_NLPs_On_Wait_For_Ack_Q Number of unacknowledged buffers
FNP_EE_CO MSYS 103	QTY	FNP	Number of Rapid Transport Protocol Pipes Flowing Over Enterprise Extender Link	EEConn_PUTriplet.EEHNMTNumber Number of rapid transport protocol pipes flowing over enterprise extender link

MsmtTyp_ID INTEGER	MUnit_Cd CHAR(6)	MSrc_Cd CHAR (6)	MsmtTyp_Nm * VARCHAR(120)	MsmtTyp_Ds * VARCHAR(254)
104	QTY	FNP	Number of Sessions Flowing Over Enterprise Extender Link	EEConnS_total_LULU_Sess_Count Number of sessions flowing over enterprise extender link
105	QTY	FNP	Enterprise Extender Number of High-Performance Routing Network Layer Packets Retransmitted	Delta(EEConnS_NLPOut_Rxmt_Info_A) Number of high-performance routing network layer packets retransmitted
106	PRC	FNP	Percent of High-Performance Routing Network Layer Packets Retransmitted	(Delta(EEConnS_NLPOut_Rxmt_Info_A)/Delta(EEConnS_NLPOut_Info_A))*100
107	Qps	FNP	Rate of High-Performance Routing Network Layer Packets Retransmission	Delta(EEConnS_NLPOut_Rxmt_Info_A)/delta(sec)
FNP_EE_COMSYS, FNP_EE 108	Bps	FNP	Enterprise Extender Transmit Bytes Rate	Delta(EEConnS_SNA_Bytes_Sent_A)/Delta(sec)
109	Bps	FNP	Enterprise Extender Receive Bytes Rate	Delta(EEConnS_SNA_Bytes_Rcv_A)/Delta(sec)
110	Qps	FNP	Enterprise Extender Transmit Packet Rate	Delta(EEConnS_NLPOut_Info_A)/Delta(sec)
111	Qps	FNP	Enterprise Extender Receive Packet Rate	Delta(EEConnS_NLPIn_Info_A)/Delta(sec)
112	B	FNP	Enterprise Extender Number of Bytes Sent	Delta(EEConnS_SNA_Bytes_Sent_A) Number of bytes sent
113	B	FNP	Enterprise Extender Number of Bytes Received	Delta(EEConnS_SNA_Bytes_Rcv_A) Number of bytes received

MsmtTyp_ID INTEGER	MUnit_Cd CHAR(6)	MSrc_Cd CHAR (6)	MsmtTyp_Nm * VARCHAR(120)	MsmtTyp_Ds * VARCHAR(254)
114	QTY	FNP	Enterprise Extender Number of High-Performance Routing Network Layer Packets Sent	Delta(EEConnS_NLPOut_Info_A) Number of high-performance routing network layer packets sent
115	QTY	FNP	Enterprise Extender Number of High-Performance Routing Network Layer Packets Received	Delta(EEConnS_NLPIn_Info_A) Number of high-performance routing network layer packets received
FNP_INTERF ACE 116	QTY	FNP	Octets Transmitted	Delta(ifHCOutOctets) Number of octets transmitted
117	QTY	FNP	Octets Received	Delta(ifHCInOctets) Number of octets received
118	Qps	MODEL1	Transmit Packet Rate	Transmit packet rate
119	Qps	MODEL1	Receive Packet Rate	Receive packet rate
120	PRC	MODEL1	Transmit Utilization	Transmit utilization
121	PRC	MODEL1	Receive Utilization	Receive utilization
122	PRC	MODEL1	Bandwidth Utilization	Bandwidth Utilization
123	Qps	MODEL1	Inbound Discard Rate	Inbound discard rate
124	Qps	MODEL1	Outbound Discard Rate	Outbound discard rate
125	Qps	FNP	Transmit Error Rate	ifOutErrors/Delta(sec) Number of outbound packets or transmission units per second that could not be transmitted due to errors
126	Qps	FNP	Receive Error Rate	ifInErrors/Delta Number of inbound packets or transmission units per second that could not be transmitted due to errors

MsmtTyp_ID INTEGER	MUnit_Cd CHAR(6)	MSrc_Cd CHAR (6)	MsmtTyp_Nm * VARCHAR(120)	MsmtTyp_Ds * VARCHAR(254)
127	Qps	FNP	Receive Broadcast/Multicast Packet Rate	Delta(ifHCInBroadcastPkts) + Delta(ifHCInMulticastPkts) Number of received broadcast/multicast packets delivered to higher layer protocol/Delta(sec)
128	Qps	FNP	Transmit Broadcast/Multicast Packet Rate	Delta(ifHCOutBroadcastPkts) + Delta(ifHCOutMulticastPkts) Number of packets transmitted to a broadcast /multicast address/Delta(sec)
FNP_OSA_A DAPTER 129	PRC	FNP	ibmOSAExpChannelPCIBusUtil Hour	ibmOSAExpChannelPCIBusUtilHour PCI Bus Utilization for IBM Open System Adapter
130	PRC	MODEL1	Processor Utilization	Processor Utilization
FNP_LPAR_ OSA 131	PRC	FNP	Processor Utilization Over 1 Minute	ibmOSAExpPerfDataLP* 1 Minute The average over a 1 minute interval of a percentage of time that the processor was utilized to transfer data for the specified z/OS image
132	PRC	FNP	Processor Utilization Over 5 Minutes	ibmOSAExpPerfDataLP* 5 Minutes The average over a 5 minute interval of a percentage of time that the processor was utilized to transfer data for the specified z/OS image
133	PRC	FNP	Processor Utilization Over 60 Minutes	ibmOSAExpPerfDataLP* 60 Minutes The average over a 60 minute interval of a percentage of time that the processor was utilized to transfer data for the specified z/OS image
134	KB	FNP	Inbound Kilobytes Over 1 Minute	ibmOSAExpPerfDataLP* Inbound 1 Minute The average over a 1 minute interval of the number of inbound kilobytes processed for a specific image
135	KB	FNP	Inbound Kilobytes Over 5 Minutes	ibmOSAExpPerfDataLP* Inbound 5 Minutes The average over a 5 minute interval of the number of inbound kilobytes processed for a specific image

MsmtTyp_ID INTEGER	MUnit_Cd CHAR(6)	MSrc_Cd CHAR (6)	MsmtTyp_Nm * VARCHAR(120)	MsmtTyp_Ds * VARCHAR(254)
136	KB	FNP	Inbound Kilobytes Over 60 Minutes	ibmOSAExpPerfDataLP* Inbound 60 Minutes The average over a 60 minute interval of the number of inbound kilobytes processed for a specific image
137	KB	FNP	Outbound Kilobytes Over 1 Minute	ibmOSAExpPerfDataLP* Outbound 1 Minute The average over a 1 minute interval of the number of outbound kilobytes processed for a specific image
138	KB	FNP	Outbound Kilobytes Over 5 Minutes	ibmOSAExpPerfDataLP* Outbound 5 Minutes The average over a 5 minute interval of the number of outbound kilobytes process
139	KB	FNP	Outbound Kilobytes Over 60 Minutes	ibmOSAExpPerfDataLP* Outbound 60 Minutes The average over a 60 minute interval of the number of outbound kilobytes process
FNP_OSA_COMSYS 140	QTY	FNP	ibmOsaExpEthOutPackets	Delta(ibmOsaExpEthOutPackets) Number of packets that have been transmitted by Open System Adapter
141	QTY	FNP	ibmOsaExpEthInPackets	Delta(ibmOsaExpEthInPackets) Number of packets that have been received by Open System Adapter
142	QTY	FNP	ibmOsaExpEthInGroupFrames	Delta(ibmOsaExpEthInGroupFrames) Number of multicast frames that have been received by Open System Adapter
143	QTY	FNP	ibmOsaExpEthInBroadcastFrames	Delta(ibmOsaExpEthInBroadcastFrames) Number of broadcast frames that have been received by Open System Adapter
144	QTY	FNP	ibmOsaExpEthInUnknownIPFrames	Delta(ibmOsaExpEthInUnknownIPFrames) Number of non-IP frames that have been received by Open System Adapter

MsmtTyp_ID INTEGER	MUnit_Cd CHAR(6)	MSrc_Cd CHAR (6)	MsmtTyp_Nm * VARCHAR(120)	MsmtTyp_Ds * VARCHAR(254)
FNP_TCPIP_ COMSYS 145	B	FNP	Current Extended Common Storage Address Space Storage Bytes	NWMStgECSACurrent Current number of Extended Common Storage Address Space storage bytes allocated
146	B	FNP	Maximum Extended Common Storage Address Space Storage Bytes	NWMStgECSAMax Maximum number of Extended Common Storage Address Space storage bytes allocated since the TCP/IP stack was started
147	B	FNP	Number of Private Subpool Storage Bytes Allowed	NWMStgPrivateCurrent Current number of authorized private subpool storage bytes allowed
148	B	FNP	Maximum Private Subpool Storage Bytes	NWMStgPrivateMax Maximum number of authorized private subpool storage bytes allocated since the TCP/IP stack was started
FNP_CSM_S TORAGE 149	KB	FNP	Cumulative Extended Common Storage Address Space Pool Storage	Cumulative storage allocated across all Extended Common Storage Address Space pools CSMSummGD_CurECSA
150	KB	FNP	Cumulative Data Space Pool Storage	Cumulative storage allocated across all data space pools Sum of dataq space pool from individual pool records.
151	KB	FNP	Cumulative All Pool Storage	Cumulative storage allocated across all pools Storage allocated across Extended Common Storage Address pools +Storage allocated across data space pools.
152	KB	FNP	Extended Common Storage Address Space 4K Pool Communication Storage Manager Storage	Amount of communication storage manager storage allocated to Extended Common Storage Address Space 4K pool (CSMPoolGD_InUse + CSMPoolGD_Free) * CSMPoolGD_Size

MsmtTyp_ID INTEGER	MUnit_Cd CHAR(6)	MSrc_Cd CHAR (6)	MsmtTyp_Nm * VARCHAR(120)	MsmtTyp_Ds * VARCHAR(254)
153	KB	FNP	Extended Common Storage Address Space 16K Pool Communication Storage Manager Storage	Amount of communication storage manager storage allocated to Extended Common Storage Address Space 16K pool (CSMPoolGD_InUse + CSMPoolGD_Free) * CSMPoolGD_Size
154	KB	FNP	Extended Common Storage Address Space 32K Pool Communication Storage Manager Storage	Amount of communication storage manager storage allocated to Extended Common Storage Address Space 32K pool (CSMPoolGD_InUse + CSMPoolGD_Free) * CSMPoolGD_Size
155	KB	FNP	Extended Common Storage Address Space 60K Pool Communication Storage Manager Storage	Amount of communication storage manager storage allocated to Extended Common Storage Address Space 60K pool (CSMPoolGD_InUse + CSMPoolGD_Free) * CSMPoolGD_Size
156	KB	FNP	Extended Common Storage Address Space 180K Pool Communication Storage Manager Storage	Amount of communication storage manager storage allocated to Extended Common Storage Address Space 180K pool (CSMPoolGD_InUse + CSMPoolGD_Free) * CSMPoolGD_Size
157	KB	FNP	Data Space Pool 4K Communication Storage Manager Storage	Amount of communication storage manager storage allocated to data space pool 4K (CSMPoolGD_InUse + CSMPoolGD_Free) * CSMPoolGD_Size
158	KB	FNP	Data Space Pool 16K Communication Storage Manager Storage	Amount of communication storage manager storage allocated to data space pool 16K (CSMPoolGD_InUse + CSMPoolGD_Free) * CSMPoolGD_Size

MsmtTyp_ID INTEGER	MUnit_Cd CHAR(6)	MSrc_Cd CHAR (6)	MsmtTyp_Nm * VARCHAR(120)	MsmtTyp_Ds * VARCHAR(254)
159	KB	FNP	Data Space Pool 32K Communication Storage Manager Storage	Amount of communication storage manager storage allocated to data space pool 32K pool (CSMPoolGD_InUse + CSMPoolGD_Free) * CSMPoolGD_Size
160	KB	FNP	Data Space Pool 60K Communication Storage Manager Storage	Amount of communication storage manager storage allocated to data space pool 60K (CSMPoolGD_InUse + CSMPoolGD_Free) * CSMPoolGD_Size
161	KB	FNP	Data Space Pool 180K Communication Storage Manager Storage	Amount of communication storage manager storage allocated to data space pool 180K (CSMPoolGD_InUse + CSMPoolGD_Free) * CSMPoolGD_Size
FNP_UDP 162	Qps	FNP	User Datagram Protocol Transmit Datagram Rate	Delta(udpOutDatagrams)/Delta(sec)
163	Qps	FNP	User Datagram Protocol Receive Datagram Rate	Number of datagrams received/Delta(sec)
164	QTY	FNP	User Datagram Protocol Out Datagrams	Delta(udpOutDatagrams) Number of datagrams sent
165	QTY	FNP	User Datagram Protocol Number of Datagrams Received	Number of datagrams received. Delta(udpInDatagrams) +Delta(udpNoPorts)+Delta(udpInErrors)
166	QTY	FNP	User Datagram Protocol In Datagrams	Delta(udpInDatagrams) Number of received datagrams delivered
167	QTY	FNP	User Datagram Protocol Number of Received Datagrams Unable to Deliver	Delta(udpNoPorts)+Delta(udpInErrors) Number of received datagrams unable to be delivered

MsmtTyp_ID INTEGER	MUnit_Cd CHAR(6)	MSrc_Cd CHAR (6)	MsmtTyp_Nm * VARCHAR(120)	MsmtTyp_Ds * VARCHAR(254)
FNP_UDP_LISTENER 168	Bps	FNP	User Datagram Protocol Transmit Byte Rate	Delta(NWMUDPCBytesOut)/Delta(sec)
169	Bps	FNP	User Datagram Protocol Receive Byte Rate	Delta(NWMUDPCBytesIn)/Delta(sec)
170	Qps	FNP	User Datagram Protocol Endpoint Transmit Datagram Rate	Delta(NWMUDPCDgramOut)/Delta(sec)
171	Qps	FNP	User Datagram Protocol Endpoint Receive Datagram Rate	Delta(NWMUDPCDgramIn)/Delta(sec)
172	B	FNP	User Datagram Protocol Number of Bytes Sent	Delta(NWMUDPCBytesOut)
173	B	FNP	User Datagram Protocol Number of Bytes Received	Delta(NWMUDPCBytesIn)
174	QTY	FNP	User Datagram Protocol Number of Datagrams Sent	Delta(NWMUDPCDgramOut)
175	QTY	FNP	Stack User Datagram Protocol Number of Datagrams Received	Delta(NWMUDPCDgramIn)
176	QTY	FNP	User Datagram Protocol Number of Datagrams Queued	NWMUDPCReadQueueCount
177	QTY	FNP	User Datagram Protocol Number of Datagrams Discarded	Delta(NWMUDPCReadQueueLimitDiscards)
178	B	FNP	User Datagram Protocol Number of Bytes For All Queued Datagrams	NWMUDPCReadQueueByteCount Number of bytes for all queued datagrams
FNP_IP 179	Qps	FNP	IP Transmit Datagram Rate	Delta(ipOutRequests)/Delta(sec)
180	Qps	FNP	IP Receive Datagram Rate	Delta(IpInReceives)/Delta(sec)

MsmtTyp_ID INTEGER	MUnit_Cd CHAR(6)	MSrc_Cd CHAR (6)	MsmtTyp_Nm * VARCHAR(120)	MsmtTyp_Ds * VARCHAR(254)
181	QTY	FNP	ipInReceives	Delta(ipInReceives) Number of input datagrams received
182	QTY	FNP	ipForwDatagrams	Delta(ipForwDatagrams) Number of input datagrams forwarded
183	QTY	FNP	IP Number of Input Datagrams Discarded	Delta(ipInHdrErrors)+Delta(ipInAddrErrors)+Delta(ipInUnknownProtos)+Delta(ipInDiscards)
184	QTY	FNP	ipInDelivers	Delta(ipInDelivers) Number of input datagrams successfully delivered
185	QTY	FNP	ipOutRequests	Delta(ipOutRequests) Number of output datagrams requested to be transmitted
186	QTY	FNP	IP Number of Output Datagrams Discarded	Delta(ipOutDiscards)+Delta(ipOutNoRoutes)
187	QTY	FNP	ipReasmReqds	Delta(ipReasmReqds) Number of fragments received that needed to be reassembled
FNP_FTP_SRV_USER, FNP_FTP_CLT_USER 188	Sec	FNP	FTP Transmission Duration	FTP Transmission duration
FNP_FTP_SRV_SESSN, FNP_FTP_CLT_SESSN, FNP_FTP_SRV_USER, FNP_FTP_CLT_USER 189	B	FNP	FTP Transmission Byte Count	FTP Transmission byte count

MsmtTyp_ID INTEGER	MUnit_Cd CHAR(6)	MSrc_Cd CHAR (6)	MsmtTyp_Nm * VARCHAR(120)	MsmtTyp_Ds * VARCHAR(254)
FNP_FTP_SRV_SESSN, FNP_FTP_CLT_SESSN 190	QTY	FNP	Number of FTP Sessions	Number of FTP sessions
FNP_FTP_SRV_SESSN, FNP_FTP_SRV_USER 191	QTY	FNP	Number of FTP Login Failures	Number of FTP login failures
FNP_HPR 192	KBps	FNP	Allowed Throughput Rate	HPRConnDS_Allowed_Send_Rate Allowed throughput rate
FNP_TCP_LISTENER 193	Hr	FNP	Average Server Idle Time	Current time – NWMTCPLLastActivity The average amount of time that the server has been idle since last accept.
FNP_TCP_LISTENER 194	Hr	FNP	Average Server Active Time	Current time – NWMTCPLStartTime The average amount of time that the server has been active.
FNP_TCP_CONN 195	Sec	FNP	Average Connection Duration	Current time-Connection Start Time
FNP_TCP_CONN 196	Sec	FNP	Average Time Since Last Activity	Average time since last activity. Current time-NWMConnLastActivity
FNP_TCP 197	PRC	FNP	Percent Out-of-Order Segments for TCP Stack	(Delta(ibmMvsTcpInOutOfOrder) / Delta(tcpInSegs)) * 100 Percent of segments received that were out of order.
FNP_TCP_CONN 198	PRC	FNP	Percent Out-of-Order Segments for TCP Connection	(Delta(NWMConnOutOfOrderCount) / Delta(NWMConnInSegs)) * 100 Percent of segments received for the connection that were out-of-order.

MsmtTyp_ID INTEGER	MUnit_Cd CHAR(6)	MSrc_Cd CHAR (6)	MsmtTyp_Nm * VARCHAR(120)	MsmtTyp_Ds * VARCHAR(254)
FNP_TCPIP_ COMSYS 199	PRC	FNP	Percent Extended Common Storage Address Space Pool Storage Allocated	(Extended Common Storage Address pool storage allocated / maximum Extended Common Storage Address pool storage allowed) * 100
200	PRC	FNP	Percent Authorized Private Allocated Storage	(Authorized private storage allocated / maximum private storage allowed) * 100
FNP_IP 201	PRC	FNP	IP Percent of Input Datagrams Discarded	(Number of datagrams discarded / Number of datagrams received) * 100
FNP_UDP 202	PRC	FNP	User Datagram Protocol Percent of Received Datagrams Unable to Deliver	(Number of datagrams not delivered / Number of datagrams received) * 100
FNP_UDP_LI STENER 203	PRC	FNP	User Datagram Protocol Percent of Datagrams Discarded	(Number of datagrams discarded / Number of datagrams received) * 100
FNP_CSM_S TORAGE 204	PRC	FNP	Percent Extended Common Storage Address Space Pool Storage	(Extended Common Storage Address pools storage allocated / Extended Common Storage Address pools storage allowed) * 100
FNP_INTERF ACE 205	PRC	FNP	Percent of Packets Discarded	Percent of total interface packets (both transmitted and received) that were discarded.
206	PRC	FNP	Percent of Outbound Packets in Error	(Outbound Packets in Error / (ifHCOutUcastPkts + ifHCOutBroadcastPkts + ifHCOutMulticastPkts)) * 100
207	PRC	FNP	Percent of Inbound Packets in Error	(Inbound Packets in Error / (ifHCInUcastPkts + ifHCInBroadcastPkts + ifHCInMulticastPkts)) * 100
208	PRC	FNP	Percent of Packets in Error	Percent of total interface packets (both transmitted and received) that were in error.
209	QTY	FNP	Inbound Packets Discarded	Delta(ifInDiscards) The number of inbound packets that have been discarded.

MsmtTyp_ID INTEGER	MUnit_Cd CHAR(6)	MSrc_Cd CHAR (6)	MsmtTyp_Nm * VARCHAR(120)	MsmtTyp_Ds * VARCHAR(254)
210	QTY	FNP	Outbound Packets Discarded	Delta(ifOutDiscards) The number of outbound packets that have been discarded.
211	QTY	FNP	Outbound Packets in Error	Delta(ifOutErrors) The number of outbound packets that could not be transmitted because of errors.
212	QTY	FNP	Inbound Packets in Error	Delta(ifInErrors) The number of inbound packets that could not be transmitted because of errors.
213	PRC	FNP	Percent Buffer Misses	(bufferMdMiss / (bufferMdMiss +bufferMdHit))*100 bufferMdMiss (1.3.6.1.4.1.9.2.1.27) contains the number of medium buffer misses. BufferMdHit (1.3.6.1.4.1.9.2.1.26) contains the number of medium buffer hits.
214	QTY	FNP	ifHCInOctets	The total number of octets received on the interface, including framing characters. 1.3.6.1.2.1.31.1.1.1.6
	QTY	FNP	ifHCOutOctets	The total number of octets transmitted out of the interface, including framing characters. 1.3.6.1.2.1.31.1.1.1.10
216	PRC	FNP	Transmit Bandwidth Utilization	(Rate(ifHCOutOctets) * 8) / ifSpeed
217	PRC	FNP	Receive Bandwidth Utilization	(Rate(ifHCInOctets) * 8) / ifSpeed
218	Qps	FNP	Unicast Packet Transmit Rate	Rate(ifHCOutUcastPkts)
219	Qps	FNP	Unicast Packet Receive Rate	Rate(ifHCInUcastPkts)
220	Qps	FNP	Broadcast/Multicast Packet Transmit Rate	Rate(ifHCOutBroadcastPkts) + Rate(ifHCOutMulticastPkts)
221	Qps	FNP	Broadcast/Multicast Packet Receive Rate	Rate(ifHCInBroadcastPkts) + Rate(ifHCInMulticastPkts)

MsmtTyp_ID INTEGER	MUnit_Cd CHAR(6)	MSrc_Cd CHAR (6)	MsmtTyp_Nm * VARCHAR(120)	MsmtTyp_Ds * VARCHAR(254)
* This column is translated.				

7.5.11 Component measurement rule (table MsmtRul)

CompTyp_Cd CHAR (17)	MsmtTyp_ID INTEGER
SNMP_OBJ	1-3,5-7,213-221
FNP_ICMP_PING	55
FNP_TCP_LISTENER	44-50,193,194
FNP_TCPIP_COMSYS	145-148,199-200
FNP_HPR	80-102,192
FNP_UDP_LISTENER	168-178,203
FNP_EE	108-115
FNP_EE_COMSYS	103-115
FNP_OSA_COMSYS	140-144
FNP_CSM_STORAGE	149-161,204
FNP_INTERFACE	116-128, ,205-212
FNP_TN3270_SERVER	69,70
FNP_TN3270_CLIENT	69,70,71-79

CompTyp_Cd CHAR (17)	MsmtTyp_ID INTEGER
FNP_TCP	30-43,197
FNP_UDP	162-167,202
FNP_IP	179-187,201
FNP_OSA_ADAPTER	129,130
FNP_LPAR_OSA	131-139
FNP_TCP_CONN	51-59,60-68,195,196,198
FNP_FTP_SRV_SESSN	188,189
FNP_FTP_CLT_SESSN	190,191
FNP_TN3270_APPL	69,70

7.5.12 Measurement (table Msmt)

Msmt_ID BIGINT	Comp_ID INTEGER	MsmtTyp_ID INTEGER	TmSum_Cd CHAR	Msmt_Strt_Dt DATE	Msmt_Strt_Tm TIME	Msmt_Min_Val FLOAT	Msmt_Max_Val FLOAT	Msmt_Avg_Val FLOAT	Msmt_Tot_Val FLOAT	Msmt_Smpl_Cnt INTEGER	Msmt_Err_Cnt INTEGER	Msmt_stddev_Val DOUBLE	Msrc_Corr_Cd CHAR (6)
1	6	195	H	2002/04/03	01:00:00	2	5	4		3	0		FNP
2	4	195	H	2002/04/03	01:00:00	20	27	23.5		2	0		FNP

Msmt_ID BIGINT	Comp_ID INTEGER	MsmtTyp_ID INTEGER	TmSum_Cd CHAR	Msmt_Strt_Dt DATE	Msmt_Strt_Tm TIME	Msmt_Min_Val FLOAT	Msmt_Max_Val FLOAT	Msmt_Avg_Val FLOAT	Msmt_Tot_Val FLOAT	Msmt_Smpl_Cnt INTEGER	Msmt_Err_Cnt INTEGER	Msmt_stddev_Val DOUBLE	Msrc_Corr_Cd CHAR (6)
3	5	195	H	2002/04/03	01:00:00	8	9	8.5		2	0		FNP
4	5	195	H	2002/04/03	01:00:0	7	8	7.5		2	0		FNP
5	5	195	H	2002/04/03	01::00:00	5	10	7.5		2	0		FNP
6	18	45	H	2002/04/03	01:00:00				21000	3	0		FNP
7	13	89	H	2002/04/03	01:00:00	4	6	5		3	0		FNP
8	28	108	H	2002/04/03	01:00:00	800	1000	900		3	0		FNP

7.5.13 Threshold measurement objective (table Mobj)

The Tivoli Monitoring for Network Performance warehouse pack does not use this table.

7.5.14 Threshold measurement objective range (table MobjRng)

The Tivoli Monitoring for Network Performance warehouse pack does not use this table.

7.5.15 Threshold severity level (table SevLvl)

The Tivoli Monitoring for Network Performance warehouse pack does not use this table.

7.6 Component events

The Tivoli Monitoring for Network Performance warehouse pack does not use event tables.

7.7 Helper tables

The Tivoli Monitoring for Network Performance warehouse pack does not use helper tables.

7.8 Exception tables

The Tivoli Monitoring for Network Performance warehouse pack does not use exception tables.

7.9 Incremental extraction

This warehouse pack uses incremental extraction to extract data from the central data warehouse and store it into the data mart tables. The data in the Extract_Control table controls this process. For more information, see "Extraction control (table Extract_Control)" on page 44.

8 Data mart schema information

The following sections contain the definition of star schemas, tables, and data marts provided with the Tivoli Monitoring for Network Performance warehouse pack.

Shaded columns in the following tables are translated. For information about installing support for additional languages, see *Installing and Configuring Tivoli Data Warehouse*.

8.1 Data mart FNP TWH_MART

This data mart uses the following star schemas:

- FNP TCP Application Workload
- FNP TCP Connection Application Workload
- FNP UDP Application Workload
- FNP Availability and Response Time
- FNP TN3270 Server
- FNP TN3270 Client
- FNP TN3270 Application
- FNP OSA Adapter Port
- FNP OSA Adapter Processor Utilization and Throughput
- FNP OSA Ethernet Throughput
- FNP Interface
- FNP FTP Server
- FNP FTP Client
- FNP FTP Server User
- FNP FTP Client User
- FNP Enterprise Extender Availability
- FNP Enterprise Extender Throughput and Traffic
- FNP TCP Layer Stack
- FNP IP Layer Stack
- FNP UDP Layer Stack
- FNP TCPIP Stack Memory
- FNP CSM Storage

- FNP SNMP

8.2 Star schemas

Before using this section, read about the star schemas in *Enabling an Application for Tivoli Enterprise Data Warehouse*. That document defines the content of each table and explains the relationships between the tables in this document.

Reports for hourly, daily, weekly, monthly, quarterly and yearly time frames can be generated for each star schema that is described in this section.

This warehouse pack provides the following star schemas and fact tables:

8.2.1 FNP TCP Application Workload Star Schema

The following table defines the star schema. The description of the star schema is translated.

Description of star schema (in IWH_STARSCHEMA)	Daily, Hourly, Weekly, Monthly, Yearly and Quarterly TCP Application Workload
Name of fact tables	FNP.F_TAAM_HOUR FNP.F_TAAM_DAY FNP.F_TAAM_WEEK FNP.F_TAAM_MONTH FNP.F_TAAM_YEAR FNP.F_TAAM_QUARTER
Name of metric dimension table	FNP.D_TAAM_METRIC
Names of other dimension tables	FNP.D_TAAM

The FNP TCP Application Workload star schema uses the following fact tables.

Note: The other star schemas use similar fact tables. For each star schema, the name of the table and the table ID column are unique. The table ID column uses the same unique string that is used in the table name. In this case, the unique string is TAAM. Therefore, the table ID column is Taam_ID. All other columns are the same.

8.2.1.1 TCP Application Workload Star Schema Fact table FNP.F_TAAM_HOUR

The following columns are used in the fact table:

- Fact_ID INTEGER
- Cdw_ID INTEGER
- Metric_ID INTEGER
- Taam_ID INTEGER
- Meas_hour TIMESTAMP
- Min_value DOUBLE

- Max_value DOUBLE
- Avg_value DOUBLE
- Total_value DOUBLE
- Sample_count DOUBLE

8.2.1.2 Fact table FNP.F_TAAM_DAY

The following columns are used in the fact table:

- Fact_ID INTEGER
- Cdw_ID INTEGER
- Metric_ID INTEGER
- Taam_ID INTEGER
- Meas_date TIMESTAMP
- Min_value DOUBLE
- Max_value DOUBLE
- Avg_value DOUBLE
- Total_value DOUBLE
- Sample_count DOUBLE

8.2.1.3 Fact table FNP.F_TAAM_WEEK

The following columns are used in the fact table:

- Fact_ID INTEGER
- Cdw_ID INTEGER
- Metric_ID INTEGER
- Taam_ID INTEGER
- Meas_date TIMESTAMP
- Min_value DOUBLE
- Max_value DOUBLE
- Avg_value DOUBLE
- Total_value DOUBLE
- Sample_count DOUBLE

8.2.1.4 Fact table FNP.F_TAAM_MONTH

The following columns are used in the fact table:

- Fact_ID INTEGER
- Cdw_ID INTEGER
- Metric_ID INTEGER
- Taam_ID INTEGER
- Meas_date TIMESTAMP
- Min_value DOUBLE
- Max_value DOUBLE
- Avg_value DOUBLE
- Total_value DOUBLE
- Sample_count DOUBLE

8.2.1.5 Fact table FNP.F_TAAM_YEAR

The following columns are used in the fact table:

- Fact_ID INTEGER
- Cdw_ID INTEGER
- Metric_ID INTEGER
- Taam_ID INTEGER
- Meas_date TIMESTAMP
- Min_value DOUBLE
- Max_value DOUBLE
- Avg_value DOUBLE
- Total_value DOUBLE
- Sample_count DOUBLE

8.2.1.6 Fact table FNP.F_TAAM_QUARTER

The following columns are used in the fact table:

- Fact_ID INTEGER
- Cdw_ID INTEGER
- Metric_ID INTEGER
- Taam_ID INTEGER
- Meas_date TIMESTAMP
- Min_value DOUBLE
- Max_value DOUBLE
- Avg_value DOUBLE
- Total_value DOUBLE
- Sample_count DOUBLE

8.2.2 FNP TCP Connection Application Workload Star Schema

The following table defines the star schema. The description of the star schema is translated.

Description of star schema (in IWH_STARSCHEMA)	Daily, Hourly, Weekly, Monthly, Yearly and Quarterly TCP Connection Application Workload
Name of fact tables [1]	FNP.F_TCNM_HOUR FNP.F_TCNM_DAY FNP.F_TCNM_WEEK FNP.F_TCNM_MONTH FNP.F_TCNM_YEAR FNP.F_TCNM_QUARTER
Name of metric dimension table	FNP.D_TCNM_METRIC
Names of other dimension tables	FNP.D_TCNM

[1] For information about the fact tables see "FNP TCP Application Workload Star Schema" on page 125 .

8.2.3 FNP UDP Application Workload Star Schema

The following table defines the star schema. The description of the star schema is translated.

Description of star schema (in IWH_STARSCHEMA)	Daily, Hourly, Weekly, Monthly, Yearly and Quarterly UDP Application Workload
Name of fact tables [1]	FNP.F_UETM_HOUR FNP.F_UETM_DAY FNP.F_UETM_WEEK

	FNP.F_UETM_MONTH FNP.F_UETM_YEAR FNP.F_UETM_QUARTER
Name of metric dimension table	FNP.D_UETM_METRIC
Names of other dimension tables	FNP.D_UETM

[1] For information about the fact tables see "FNP TCP Application Workload Star Schema" on page 125 .

8.2.4 FNP Availability and Response Time Star Schema

The following table defines the star schema. The description of the star schema is translated.

Description of star schema (in IWH_STARSCHEMA)	**Daily, Hourly, Weekly, Monthly, Yearly and Quarterly Availability and Response Time**
Name of fact tables [1]	FNP.F_ICMP_HOUR FNP.F_ICMP_DAY FNP.F_ICMP_WEEK FNP.F_ICMP_MONTH FNP.F_ICMP_QUARTER FNP.F_ICMP_YEAR
Name of metric dimension table	FNP.D_ICMP_METRIC
Names of other dimension tables	FNP.D_ICMP

[1] For information about the fact tables see "FNP TCP Application Workload Star Schema" on page 125 .

8.2.5 FNP TN3270 Server Star Schema

The following table defines the star schema. The description of the star schema is translated.

Description of star schema (in IWH_STARSCHEMA)	**Daily, Hourly, Weekly, Monthly, Yearly and Quarterly TN3270 Server**
Name of fact tables [1]	FNP.F_TN32S_HOUR FNP.F_TN32S_DAY FNP.F_TN32S_WEEK FNP.F_TN32S_MONTH FNP.F_TN32S_QUARTER FNP.F_TN32S_YEAR
Name of metric dimension table	FNP.D_TN32S_METRIC
Names of other dimension tables	FNP.D_TN32S

[1] For information about the fact tables see "FNP TCP Application Workload Star Schema" on page 125 .

8.2.6 FNP TN3270 Client Star Schema

The following table defines the star schema. The description of the star schema is translated.

Description of star schema (in IWH_STARSCHEMA)	Daily, Hourly, Weekly, Monthly, Yearly and Quarterly TN3270 Server
Name of fact tables [1]	FNP.F_TN32C_HOUR FNP.F_TN32C_DAY FNP.F_TN32C_WEEK FNP.F_TN32C_MONTH FNP.F_TN32C_QUARTER FNP.F_TN32C_YEAR
Name of metric dimension table	FNP.D_TN32C_METRIC
Names of other dimension tables	FNP.D_TN32C

[1] For information about the fact tables see "FNP TCP Application Workload Star Schema" on page 125 .

8.2.7 FNP TN3270 Application Star Schema

The following table defines the star schema. The description of the star schema is translated.

Description of star schema (in IWH_STARSCHEMA)	Daily, Hourly, Weekly, Monthly, Yearly and Quarterly TN3270 Server
Name of fact tables [1]	FNP.F_TN32A_HOUR FNP.F_TN32A_DAY FNP.F_TN32A_WEEK FNP.F_TN32A_MONTH FNP.F_TN32A_QUARTER FNP.F_TN32A_YEAR
Name of metric dimension table	FNP.D_TN32A_METRIC
Names of other dimension tables	FNP.D_TN32A

[1] For information about the fact tables see "FNP TCP Application Workload Star Schema" on page 125 .

8.2.8 FNP OSA Adapter Port Status Star Schema

The following table defines the star schema. The description of the star schema is translated.

Description of star schema (in IWH_STARSCHEMA)	Daily, Hourly, Weekly, Monthly, Yearly and Quarterly OSA Adapter
Name of fact tables [1]	FNP.F_OSA_HOUR

	FNP.F_OSA_DAY FNP.F_OSA_WEEK FNP.F_OSA_MONTH FNP.F_OSA_QUARTER FNP.F_OSA_YEAR
Name of metric dimension table	FNP.D_OSA_METRIC
Names of other dimension tables	FNP.D_OSA

[1] For information about the fact tables see "FNP TCP Application Workload Star Schema" on page 125 .

8.2.9 FNP OSA Adapter Processor Utilization and Throughput Star Schema

The following table defines the star schema. The description of the star schema is translated.

Description of star schema (in IWH_STARSCHEMA)	Daily, Hourly, Weekly, Monthly, Yearly and Quarterly OSA Adapter
Name of fact tables [1]	FNP.F_LOSA_HOUR FNP.F_LOSA_DAY FNP.F_LOSA_WEEK FNP.F_LOSA_MONTH FNP.F_LOSA_QUARTER FNP.F_LOSA_YEAR
Name of metric dimension table	FNP.D_LOSA_METRIC
Names of other dimension tables	FNP.D_LOSA

[1] For information about the fact tables see "FNP TCP Application Workload Star Schema" on page 125 .

8.2.10 FNP OSA Ethernet Throughput Star Schema

The following table defines the star schema. The description of the star schema is translated.

Description of star schema (in IWH_STARSCHEMA)	Daily, Hourly, Weekly, Monthly, Yearly and Quarterly OSA Adapter
Name of fact tables [1]	FNP.F_OSAC_HOUR FNP.F_OSAC_DAY FNP.F_OSAC_WEEK FNP.F_OSAC_MONTH FNP.F_OSAC_QUARTER FNP.F_OSAC_YEAR
Name of metric dimension table	FNP.D_OSAC_METRIC
Names of other dimension tables	FNP.D_OSAC

[1] For information about the fact tables see "FNP TCP Application Workload Star Schema" on page 125 .

8.2.11 FNP Interface Star Schema

The following table defines the star schema. The description of the star schema is translated.

Description of star schema (in IWH_STARSCHEMA)	Daily, Hourly, Weekly, Monthly, Yearly and Quarterly Interface
Name of fact tables [1]	FNP.F_IF_HOUR FNP.F_IF_DAY FNP.F_IF_WEEK FNP.F_IF_MONTH FNP.F_IF_QUARTER FNP.F_IF_YEAR
Name of metric dimension table	FNP.D_IF_METRIC
Names of other dimension tables	FNP.D_IF

[1] For information about the fact tables see "FNP TCP Application Workload Star Schema" on page 125 .

8.2.12 FNP FTP Server Star Schema

The following table defines the star schema. The description of the star schema is translated.

Description of star schema (in IWH_STARSCHEMA)	Daily, Hourly, Weekly, Monthly, Yearly and Quarterly FTP Server
Name of fact tables [1]	FNP.F_FTPS_HOUR FNP.F_FTPS_DAY FNP.F_FTPS_WEEK FNP.F_FTPS_MONTH FNP.F_FTPS_QUARTER FNP.F_FTPS_YEAR
Name of metric dimension table	FNP.D_FTPS_METRIC
Names of other dimension tables	FNP.D_FTPS

[1] For information about the fact tables see "FNP TCP Application Workload Star Schema" on page 125 .

8.2.13 FNP FTP Client Star Schema

The following table defines the star schema. The description of the star schema is translated.

Description of star schema (in IWH_STARSCHEMA)	Daily, Hourly, Weekly, Monthly, Yearly and Quarterly FTP Client
Name of fact tables [1]	FNP.F_FTPC_HOUR FNP.F_FTPC_DAY FNP.F_FTPC_WEEK FNP.F_FTPC_MONTH FNP.F_FTPC_QUARTER FNP.F_FTPC_YEAR
Name of metric dimension table	FNP.D_FTPC_METRIC
Names of other dimension tables	FNP.D_FTPC

[1] For information about the fact tables see "FNP TCP Application Workload Star Schema" on page 125 .

8.2.14 FNP FTP Server User Star Schema

The following table defines the star schema. The description of the star schema is translated.

Description of star schema (in IWH_STARSCHEMA)	Daily, Hourly, Weekly, Monthly, Yearly and Quarterly FTP Server User
Name of fact tables [1]	FNP.F_FTPSU_HOUR FNP.F_FTPSU_DAY FNP.F_FTPSU_WEEK FNP.F_FTPSU_MONTH FNP.F_FTPSU_QUARTER FNP.F_FTPSU_YEAR
Name of metric dimension table	FNP.D_FTPSU_METRIC
Names of other dimension tables	FNP.D_FTPSU

[1] For information about the fact tables see "FNP TCP Application Workload Star Schema" on page 125 .

8.2.15 FNP FTP Client User Star Schema

The following table defines the star schema. The description of the star schema is translated.

Description of star schema (in IWH_STARSCHEMA)	Daily, Hourly, Weekly, Monthly, Yearly and Quarterly FTP Client User
Name of fact tables [1]	FNP.F_FTPCU_HOUR FNP.F_FTPCU_DAY FNP.F_FTPCU_WEEK FNP.F_FTPCU_MONTH

	FNP.F_FTPCU_QUARTER FNP.F_FTPCU_YEAR
Name of metric dimension table	FNP.D_FTPCU_METRIC
Names of other dimension tables	FNP.D_FTPCU

[1] For information about the fact tables see "FNP TCP Application Workload Star Schema" on page 125 .

8.2.16 FNP Enterprise Extender Availability Star Schema

The following table defines the star schema. The description of the star schema is translated.

Description of star schema (in IWH_STARSCHEMA)	Daily, Hourly, Weekly, Monthly, Yearly and Quarterly Enterprise Extender
Name of fact tables [1]	FNP.F_EECS_HOUR FNP.F_EECS_DAY FNP.F_EECS_WEEK FNP.F_EECS_MONTH FNP.F_EECS_QUARTER FNP.F_EECS_YEAR
Name of metric dimension table	FNP.D_EECS_METRIC
Name of other dimension tables	FNP.D_EECS

[1] For information about the fact tables see "FNP TCP Application Workload Star Schema" on page 125 .

8.2.17 FNP Enterprise Extender Throughput and Traffic Star Schema

The following table defines the star schema. The description of the star schema is translated.

Description of star schema (in IWH_STARSCHEMA)	Daily, Hourly, Weekly, Monthly, Yearly and Quarterly Enterprise Extender
Name of fact tables [1]	FNP.F_EE_HOUR FNP.F_EE_DAY FNP.F_EE_WEEK FNP.F_EE_MONTH FNP.F_EE_QUARTER FNP.F_EE_YEAR
Name of metric dimension table	FNP.D_EE_METRIC
Names of other dimension tables	FNP.D_EE

[1] For information about the fact tables see "FNP TCP Application Workload Star Schema" on page 125 .

8.2.18 FNP TCP Layer Stack Star Schema

The following table defines the star schema. The description of the star schema is translated.

Description of star schema (in IWH_STARSCHEMA)	Daily, Hourly, Weekly, Monthly, Yearly and Quarterly TCP Layer Stack
Name of fact tables [1]	FNP.F_TCP_HOUR FNP.F_TCP_DAY FNP.F_TCP_WEEK FNP.F_TCP_MONTH FNP.F_TCP_QUARTER FNP.F_TCP_YEAR
Name of metric dimension table	FNP.D_TCP_METRIC
Names of other dimension tables	FNP.D_TCP

[1] For information about the fact tables see "FNP TCP Application Workload Star Schema" on page 125 .

8.2.19 FNP IP Layer Stack Star Schema

The following table defines the star schema. The description of the star schema is translated.

Description of star schema (in IWH_STARSCHEMA)	Daily, Hourly, Weekly, Monthly, Yearly and Quarterly IP Layer Stack
Name of fact tables [1]	FNP.F_IP_HOUR FNP.F_IP_DAY FNP.F_IP_WEEK FNP.F_IP_MONTH FNP.F_IP_QUARTER FNP.F_IP_YEAR
Name of metric dimension table	FNP.D_IP_METRIC
Names of other dimension tables	FNP.D_IP

[1] For information about the fact tables see "FNP TCP Application Workload Star Schema" on page 125 .

8.2.20 FNP UDP Layer Stack Star Schema

The following table defines the star schema. The description of the star schema is translated.

Description of star schema (in IWH_STARSCHEMA)	Daily, Hourly, Weekly, Monthly, Yearly and Quarterly UDP Layer Stack
Name of fact tables [1]	FNP.F_UDP_HOUR

	FNP.F_UDP_DAY
	FNP.F_UDP_WEEK
	FNP.F_UDP_MONTH
	FNP.F_UDP_QUARTER
	FNP.F_UDP_YEAR
Name of metric dimension table	FNP.D_UDP_METRIC
Names of other dimension tables	FNP.D_UDP

[1] For information about the fact tables see "FNP TCP Application Workload Star Schema" on page 125 .

8.2.21 FNP TCPIP Stack Memory Star Schema

The following table defines the star schema. The description of the star schema is translated.

Description of star schema (in IWH_STARSCHEMA)	**Daily, Hourly, Weekly, Monthly, Yearly and Quarterly TCPIP Stack Memory**
Name of fact tables [1]	FNP.F_TCPIP_HOUR
	FNP.F_TCPIP_DAY
	FNP.F_TCPIP_WEEK
	FNP.F_TCPIP_MONTH
	FNP.F_TCPIP_QUARTER
	FNP.F_TCPIP_YEAR
Name of metric dimension table	FNP.D_TCPIP_METRIC
Names of other dimension tables	FNP.D_TCPIP

[1] For information about the fact tables see "FNP TCP Application Workload Star Schema" on page 125 .

8.2.22 FNP CSM Storage Star Schema

The following table defines the star schema. The description of the star schema is translated.

Description of star schema (in IWH_STARSCHEMA)	**Daily, Hourly, Weekly, Monthly, Yearly and Quarterly CSM Storage**
Name of fact tables [1]	FNP.F_CSM_HOUR
	FNP.F_CSM_DAY
	FNP.F_CSM_WEEK
	FNP.F_CSM_MONTH
	FNP.F_CSM_QUARTER
	FNP.F_CSM_YEAR
Name of metric dimension table	FNP.D_CSM_METRIC
Names of other dimension tables	FNP.D_CSM

[1] For information about the fact tables see "FNP TCP Application Workload Star Schema" on page 125 .

8.2.23 FNP SNMP Storage Star Schema

The following table defines the star schema. The description of the star schema is translated.

Description of star schema (in IWH_STARSCHEMA)	Daily, Hourly, Weekly, Monthly, Yearly and Quarterly SNMP Storage
Name of fact tables [1]	FNP.F_ SNMP_HOUR FNP.F_ SNMP_DAY FNP.F_SNMP_WEEK FNP.F_SNMP_MONTH FNP.F_SNMP_QUARTER FNP.F_SNMP_YEAR
Name of metric dimension table	FNP.D_SNMP_METRIC
Names of other dimension tables	FNP.D_SNMP

[1] For information about the fact tables see "FNP TCP Application Workload Star Schema" on page 125 .

8.3 IBM Tivoli Monitoring Metric dimension tables

This section describes the metric dimension tables used by the star schemas in this warehouse pack. Shaded columns indicate text that is translated. These column headings are also marked with an asterisk (*).

8.3.1 FNP.D_TAAM_METRIC

Metric_ID INTEGER	Met_category * VARCHAR (254)	Met_desc * VARCHAR (254)	Met_name * VARCHAR (120)	Met_units * VARCHAR (120)	Min_exists CHAR (1)	Max_exists CHAR (1)	Avg_exists CHAR (1)	Total_exists CHAR (1)	Msrc_Nm * VARCHAR (254)
45	Quantity	Delta(NWMTC PLAcceptCount) Total number of connections accepted by this listener	Accepted Connection Count	Quantity	N	N	N	Y	FNP

Metric_ID INTEGER	Met_category * VARCHAR (254)	Met_desc * VARCHAR (254)	Met_name * VARCHAR (120)	Met_units * VARCHAR (120)	Min_exists CHAR (1)	Max_exists CHAR (1)	Avg_exists CHAR (1)	Total_exists CHAR (1)	Msrc_Nm * VARCHAR (254)
46	Rate	Delta(NWMTCPLAcceptCount)/Delta(sec) Number of connections accepted per second	Connection Rate	Quantity per Second	Y	Y	Y	N	FNP
47	Time Duration	Delta(Current time – NWMTCPLLastActivity) The total amount of time that the server has been idle since last accept.	Total Server Idle Time	Hours	N	N	N	Y	FNP
48	Time Duration	Delta(Current time – NWMTCPLStartTime) The total amount of time that the server has been active.	Total Server Active Time	Hours	N	N	N	Y	FNP
50	Quantity	Delta(NWMTCPLExceedBacklog) The total number of connections dropped by this listener due to backlog exceeded.	Connections Dropped Due to Backlog Exceeded	Quantity	N	N	N	Y	FNP
* This column is translated.									

8.3.2 FNP.D_TCNM_METRIC

Metric_ID INTEGER	Met_category * VARCHAR (254)	Met_desc * VARCHAR (254)	Met_name * VARCHAR (120)	Met_units * VARCHAR (120)	Min_exists CHAR (1)	Max_exists CHAR (1)	Avg_exists CHAR (1)	Total_exists CHAR (1)	Msrc_Nm * VARCHAR (254)
60	Rate	Number of bytes transmitted rate	Number of Bytes Transmitted Rate	Quantity per Second	Y	Y	Y	N	MODEL1
61	Rate	Number of bytes received rate	Number of Bytes Received Rate	Quantity per Second	Y	Y	Y	N	MODEL1
* This column is translated.									

8.3.3 FNP.D_UETM_METRIC

Metric_ID INTEGER	Met_category * VARCHAR (254)	Met_desc * VARCHAR (254)	Met_name * VARCHAR (120)	Met_units * VARCHAR (120)	Min_exists CHAR (1)	Max_exists CHAR (1)	Avg_exists CHAR (1)	Total_exists CHAR (1)	Msrc_Nm * VARCHAR (254)
168	Rate	Delta(NWMUDPCBytesOut)/Delta(sec)	User Datagram Protocol Transmit Byte Rate	Bytes per Second	Y	Y	Y	N	FNP
169	Rate	Delta(NWMUDPCBytesIn)/Delta(sec)	User Datagram Protocol Receive Byte Rate	Bytes per Second	Y	Y	Y	N	FNP
170	Rate	Delta(NWMUDPCDgramOut)/Delta(sec)	User Datagram Protocol Endpoint Transmit Datagram Rate	Quantity per Second	Y	Y	Y	N	FNP
171	Rate	Delta(NWMUDPCDgramIn)/Delta(sec)	User Datagram Protocol Endpoint Receive Datagram Rate	Quantity per Second	Y	Y	Y	N	FNP

Metric_ID INTEGER	Met_category * VARCHAR (254)	Met_desc * VARCHAR (254)	Met_name * VARCHAR (120)	Met_units * VARCHAR (120)	Min_exists CHAR (1)	Max_exists CHAR (1)	Avg_exists CHAR (1)	Total_exists CHAR (1)	Msrc_Nm * VARCHAR (254)
176	Quantity	NWMUDPCReadQueueCount	User Datagram Protocol Number of Datagrams Queued	Quantity	Y	Y	Y	N	FNP
177	Quantity	Delta(NWMUDPCReadQueueLimitDiscards)	User Datagram Protocol Number of Datagrams Discarded	Quantity	N	N	N	Y	FNP
203	Percentage	(Number of datagrams discarded / Number of datagrams received) * 100	User Datagram Protocol Percent of Datagrams Discarded	Percentage	Y	Y	Y	N	FNP
* This column is translated.									

8.3.4 FNP.D_ICMP_METRIC

Metric_ID INTEGER	Met_category * VARCHAR (254)	Met_desc * VARCHAR (254)	Met_name * VARCHAR (120)	Met_units * VARCHAR (120)	Min_exists CHAR (1)	Max_exists CHAR (1)	Avg_exists CHAR (1)	Total_exists CHAR (1)	Msrc_Nm * VARCHAR (254)
55	Time Duration	The amount of time it took a process to respond	Response Time	Milliseconds	Y	Y	Y	N	MODEL1
* This column is translated.									

8.3.5 FNP.D_TN32S_METRIC

Metric_ID INTEGER	Met_category * VARCHAR (254)	Met_desc * VARCHAR (254)	Met_name * VARCHAR (120)	Met_units * VARCHAR (120)	Min_exists CHAR (1)	Max_exists CHAR (1)	Avg_exists CHAR (1)	Total exists CHAR (1)	Msrc_Nm * VARCHAR (254)
70	Quantity	The number of bytes sent	Number of Bytes Sent	Quantity	Y	Y	Y	N	MODEL1
69	Quantity	The number of bytes received	Number of Bytes Received	Quantity	Y	Y	Y	N	MODEL1
* This column is translated.									

8.3.6 FNP.D_TN32C_METRIC

Metric_ID INTEGER	Met_category * VARCHAR (254)	Met_desc * VARCHAR (254)	Met_name * VARCHAR (120)	Met_units * VARCHAR (120)	Min_exists CHAR (1)	Max_exists CHAR (1)	Avg_exists CHAR (1)	Total exists CHAR (1)	Msrc_Nm * VARCHAR (254)
70	Quantity	The number of bytes sent	Number of Bytes Sent	Quantity	Y	Y	Y	N	MODEL1
69	Quantity	The number of bytes received	Number of Bytes Received	Quantity	Y	Y	Y	N	MODEL1
71	Time Duration	(ibmMvsTN3270ConnRtAvgRt)/(ibmMvsTN3270ConnRtAvgCountTrans)	Sliding Window Average Total Response Time	Milliseconds	Y	Y	Y	N	FNP
72	Time Duration	(ibmMvsTN3270ConnRtAvgIpRt)/(ibmMvsTN3270ConnRtAvgCountTrans)	Sliding Window Average IP Response Time	Milliseconds	Y	Y	Y	N	FNP
73	Time Duration	(ibmMvsTN3270ConnRtAvgRt-ibmMvsTN3270ConnRtAvgIpRt))/(ibmMvsTN3	Sliding Window Average Systems Network Architecture	Milliseconds	Y	Y	Y	N	FNP

Metric_ID INTEGER	Met_category * VARCHAR (254)	Met_desc * VARCHAR (254)	Met_name * VARCHAR (120)	Met_units * VARCHAR (120)	Min_exists CHAR (1)	Max_exists CHAR (1)	Avg_exists CHAR (1)	Total exists CHAR (1)	Msrc_Nm * VARCHAR (254)
		270ConnRtAvg CountTrans)	Response Time						
74	Quantity	Delta(ibmMvsT N3270ConnRtC ountTrans) Count of number of transactions detected since last measurement	Total Number of Transactions Detected	Quantity	N	N	N	Y	FNP
* This column is translated.									

8.3.7 FNP.D_TN32A_METRIC

Metric_ID INTEGER	Met_category * VARCHAR (254)	Met_desc * VARCHAR (254)	Met_name * VARCHAR (120)	Met_units * VARCHAR (120)	Min_exists CHAR (1)	Max_exists CHAR (1)	Avg_exists CHAR (1)	Total exists CHAR (1)	Msrc_Nm * VARCHAR (254)
70	Quantity	The number of bytes sent	Number of Bytes Sent	Quantity	Y	Y	Y	N	MODEL1
69	Quantity	The number of bytes received	Number of Bytes Received	Quantity	Y	Y	Y	N	MODEL1
* This column is translated.									

8.3.8 FNP.D_OSA_METRIC

Metric_ID INTEGER	Met_category * VARCHAR (254)	Met_desc * VARCHAR (254)	Met_name * VARCHAR (120)	Met_units * VARCHAR (120)	Min_exists CHAR (1)	Max_exists CHAR (1)	Avg_exists CHAR (1)	Total_exists CHAR (1)	Msrc_Nm * VARCHAR (254)
129	Percentage	ibmOSAExpCha nnelPCIBusUtil Hour PCI Bus Utilization for	ibmOSAExpCha nnelIPCIBusUtil Hour	Percentage	Y	Y	Y	N	FNP

Metric_ID INTEGER	Met_category * VARCHAR (254)	Met_desc * VARCHAR (254)	Met_name * VARCHAR (120)	Met_units * VARCHAR (120)	Min_exists CHAR (1)	Max_exists CHAR (1)	Avg_exists CHAR (1)	Total_exists CHAR (1)	Msrc_Nm * VARCHAR (254)
		IBM Open System Adapter							

* This column is translated.

8.3.9 FNP.D_LOSA_METRIC

Metric_ID INTEGER	Met_category * VARCHAR (254)	Met_desc * VARCHAR (254)	Met_name * VARCHAR (120)	Met_units * VARCHAR (120)	Min_exists CHAR (1)	Max_exists CHAR (1)	Avg_exists CHAR (1)	Total_exists CHAR (1)	Msrc_Nm * VARCHAR (254)
133	Percentage	ibmOSAExpPerf DataLP* 60 Minutes The average over a 60 minute interval of a percentage of time that the processor was utilized to transfer data for the specified zos image	Processor Utilization Over 60 Minutes	Percentage	Y	Y	Y	N	FNP
136		ibmOSAExpPerf DataLP* Inbound 60 Minutes The average over a 60 minute interval of the number of inbound kilobytes processed for a specific image	Inbound Kilobytes Over 60 Minutes	Kilobytes	Y	Y	Y	N	FNP
139	Quantity	ibmOSAExpPerf DataLP* Outbound 60	Outbound Kilobytes Over	Kilobytes	Y	Y	Y	N	FNP

Metric_ID INTEGER	Met_category * VARCHAR (254)	Met_desc * VARCHAR (254)	Met_name * VARCHAR (120)	Met_units * VARCHAR (120)	Min_exists CHAR (1)	Max_exists CHAR (1)	Avg_exists CHAR (1)	Total_exists CHAR (1)	Msrc_Nm * VARCHAR (254)
		Minutes The average over a 60 minute interval of the number of outbound kilobytes process	60 Minutes						
* This column is translated.									

8.3.10 FNP.D_OSAC_METRIC

Metric_ID INTEGER	Met_category * VARCHAR (254)	Met_desc * VARCHAR (254)	Met_name * VARCHAR (120)	Met_units * VARCHAR (120)	Min_exists CHAR (1)	Max_exists CHAR (1)	Avg_exists CHAR (1)	Total_exists CHAR (1)	Msrc_Nm * VARCHAR (254)
140	Quantity	Delta(ibmOsaExpEthOutPackets) Number of packets that have been transmitted by Open System Adapter	ibmOsaExpEthOutPackets	Quantity	N	N	N	Y	FNP
141	Quantity	Delta(ibmOsaExpEthInPackets) Number of packets that have been received by Open System Adapter	ibmOsaExpEthInPackets	Quantity	N	N	N	Y	FNP
142	Quantity	Delta(ibmOsaExpEthInGroupFrames) Number of multicast frames	ibmOsaExpEthInGroupFrames	Quantity	N	N	N	Y	FNP

Metric_ID INTEGER	Met_category * VARCHAR (254)	Met_desc * VARCHAR (254)	Met_name * VARCHAR (120)	Met_units * VARCHAR (120)	Min_exists CHAR (1)	Max_exists CHAR (1)	Avg_exists CHAR (1)	Total_exists CHAR (1)	Msrc_Nm * VARCHAR (254)
		that have been received by Open System Adapter							
143	Quantity	Delta(ibmOsaExpEthInBroadcastFrames) Number of broadcast frames that have been received by Open System Adapter	ibmOsaExpEthInBroadcastFrames	Quantity	N	N	N	Y	FNP
144	Quantity	Delta(ibmOsaExpEthInUnknownIPFrames) Number of non-IP frames that have been received by Open System Adapter	ibmOsaExpEthInUnknownIPFrames	Quantity	N	N	N	Y	FNP
* This column is translated.									

8.3.11 FNP.D_IF_METRIC

Metric_ID INTEGER	Met_category * VARCHAR (254)	Met_desc * VARCHAR (254)	Met_name * VARCHAR (120)	Met_units * VARCHAR (120)	Min_exists CHAR (1)	Max_exists CHAR (1)	Avg_exists CHAR (1)	Total_exists CHAR (1)	Msrc_Nm * VARCHAR (254)
118	Rate	Transmit packet Rate	Transmit Packet Rate	Quantity per Second	Y	Y	Y	N	MODEL1
119	Rate	Receive packet rate	Receive Packet Rate	Quantity per Second	Y	Y	Y	N	MODEL1
120	Percentage	Transmit	Transmit	Percentage	Y	Y	Y	N	MODEL1

Metric_ID INTEGER	Met_category * VARCHAR (254)	Met_desc * VARCHAR (254)	Met_name * VARCHAR (120)	Met_units * VARCHAR (120)	Min_exists CHAR (1)	Max_exists CHAR (1)	Avg_exists CHAR (1)	Total_exists CHAR (1)	Msrc_Nm * VARCHAR (254)
		utilization	Utilization						
121	Percentage	Receive utilization	Receive Utilization	Percentage	Y	Y	Y	N	MODEL1
123	Rate	Inbound discard rate	Inbound Discard Rate	Quantity per Second	Y	Y	Y	N	MODEL1
124	Rate	Outbound discard rate	Outbound Discard Rate	Quantity per Second	Y	Y	Y	N	MODEL1
116	Quantity	Delta(ifHCOutOctets) Number of octets transmitted	Octets Transmitted	Quantity	N	N	N	Y	FNP
117	Quantity	Delta(ifHCInOctets) Number of octets received.	Octets Received	Quantity	N	N	N	Y	FNP
205	Percentage	Percent of total interface packets (both transmitted and received) that were discarded	Percent of Packets Discarded	Percentage	N	N	N	Y	FNP
206	Percentage	(Outpbound Packets in Error / (ifHCOutUcastPkts + ifHCOutBroadcastPkts + ifHCOutMulticastPkts)) * 100	Percent of Outbound Packets in Error	Percentage	N	N	N	Y	FNP
207	Percentage	(Inbound Packets in Error /	Percent of Inbound Packets	Percentage	N	N	N	Y	FNP

Metric_ID INTEGER	Met_category * VARCHAR (254)	Met_desc * VARCHAR (254)	Met_name * VARCHAR (120)	Met_units * VARCHAR (120)	Min_exists CHAR (1)	Max_exists CHAR (1)	Avg_exists CHAR (1)	Total_exists CHAR (1)	Msrc_Nm * VARCHAR (254)
		(ifHCInUcastPkt s + ifHCInBroadcast Pkts + ifHCInMulticast Pks)) * 100	in Error						
208	Percentage	Percent of total interface packets (both transmitted and received) that were in error.	Percent of Packets in Error	Percentage	N	N	N	Y	FNP
125	Rate	ifOutErrors/Delt a(sec) Number of outbound packets or transmission units per second that could not be transmitted due to errors.	Transmit Error Rate	Quantity per Second	Y	Y	Y	N	FNP
126	Rate	ifInErrors/Delta(sec) Number of inbound packets or transmission units per second that could not be received due to errors.	Receive Error Rate	Quantity per Second	Y	Y	Y	N	FNP
209	Quantity	Delta(ifInDiscar ds) The number of inbound packets that have been discarded.	Inbound Packets Discarded	Quantity	N	N	N	Y	FNP

Metric_ID INTEGER	Met_category * VARCHAR (254)	Met_desc * VARCHAR (254)	Met_name * VARCHAR (120)	Met_units * VARCHAR (120)	Min_exists CHAR (1)	Max_exists CHAR (1)	Avg_exists CHAR (1)	Total_exists CHAR (1)	Msrc_Nm * VARCHAR (254)
210	Quantity	Delta(ifOutDiscards) The number of outbound packets that have been discarded.	Outbound Packets Discarded	Quantity	N	N	N	Y	FNP
211	Quantity	Delta(ifOutErrors) The number of outbound packets that could not be transmitted due to errors.	Outbound Packets in Error	Quantity	N	N	N	Y	FNP
212	Quantity	Delta(ifInDiscards) The number of inbound packets that could not be received due to errors.	Inbound Packets in Error	Quantity	N	N	N	Y	FNP
127	Rate	Delta(ifHCInBroadcastPkts) + Delta(ifHCInMulticastPkts) Number of received broadcast/multicast packets delivered to higher layer protocol/Delta(sec)	Receive Broadcast/Multicast Packet Rate	Quantity per Second	Y	Y	Y	N	FNP
128	Rate	Delta(ifHCOutBroadcastPkts) + Delta(ifHCOut	Transmit Broadcast/Multicast Packet Rate	Quantity per Second	Y	Y	Y	N	FNP

Metric_ID INTEGER	Met_category * VARCHAR (254)	Met_desc * VARCHAR (254)	Met_name * VARCHAR (120)	Met_units * VARCHAR (120)	Min_exists CHAR (1)	Max_exists CHAR (1)	Avg_exists CHAR (1)	Total_exists CHAR (1)	Msrc_Nm * VARCHAR (254)
		MulticastPkts) Number of packets transmitted to a broadcast /multicast address/Delta(sec)							

* This column is translated.

8.3.12 FNP.D_FTPS_METRIC

Metric_ID INTEGER	Met_category * VARCHAR (254)	Met_desc * VARCHAR (254)	Met_name * VARCHAR (120)	Met_units * VARCHAR (120)	Min_exists CHAR (1)	Max_exists CHAR (1)	Avg_exists CHAR (1)	Total_exists CHAR (1)	Msrc_Nm * VARCHAR (254)
189	Bytes	FTP Transmission byte count	FTP Transmission Byte Count	Bytes	Y	Y	Y	N	FNP
190	Quantity	Number of FTP sessions	Number of FTP Sessions	Quantity	N	N	N	Y	FNP
191	Quantity	Number of FTP login failures	Number of FTP Login Failures	Quantity	N	N	N	Y	FNP

* This column is translated.

8.3.13 FNP.D_FTPC_METRIC

Metric_ID INTEGER	Met_category * VARCHAR (254)	Met_desc * VARCHAR (254)	Met_name * VARCHAR (120)	Met_units * VARCHAR (120)	Min_exists CHAR (1)	Max_exists CHAR (1)	Avg_exists CHAR (1)	Total_exists CHAR (1)	Msrc_Nm * VARCHAR (254)
189	Quantity	FTP	FTP	Bytes	Y	Y	Y	N	FNP

Metric_ID INTEGER	Met_category * VARCHAR (254)	Met_desc * VARCHAR (254)	Met_name * VARCHAR (120)	Met_units * VARCHAR (120)	Min_exists CHAR (1)	Max_exists CHAR (1)	Avg_exists CHAR (1)	Total_exists CHAR (1)	Msrc_Nm * VARCHAR (254)
		Transmission byte count	Transmission Byte Count						
190	Quantity	Number of FTP sessions	Number of FTP Sessions	Quantity	N	N	N	Y	FNP
* This column is translated.									

8.3.14 FNP.D_FTPSU_METRIC

Metric_ID INTEGER	Met_category * VARCHAR (254)	Met_desc * VARCHAR (254)	Met_name * VARCHAR (120)	Met_units * VARCHAR (120)	Min_exists CHAR (1)	Max_exists CHAR (1)	Avg_exists CHAR (1)	Total_exists CHAR (1)	Msrc_Nm * VARCHAR (254)
188	Time Duration	FTP Transmission duration	FTP Transmission Duration	Seconds	N	N	N	Y	FNP
189	Quantity	FTP Transmission byte count	FTP Transmission Byte Count	Bytes	Y	Y	Y	N	FNP
191	Quantity	Number of FTP login failures	Number of FTP Login Failures	Quantity	N	N	N	Y	FNP
* This column is translated.									

8.3.15 FNP.D_FTPCU_METRIC

Metric_ID INTEGER	Met_category * VARCHAR (254)	Met_desc * VARCHAR (254)	Met_name * VARCHAR (120)	Met_units * VARCHAR (120)	Min_exists CHAR (1)	Max_exists CHAR (1)	Avg_exists CHAR (1)	Total_exists CHAR (1)	Msrc_Nm * VARCHAR (254)
188	Time Duration	FTP Transmission	FTP Transmission	Seconds	N	N	N	Y	FNP

		duration	Duration						
189	Quantity	FTP Transmission byte count	FTP Transmission Byte Count	Bytes	Y	Y	Y	N	FNP

* This column is translated.

8.3.16 FNP.D_EECS_METRIC

Metric_ID INTEGER	Met_category * VARCHAR (254)	Met_desc * VARCHAR (254)	Met_name * VARCHAR (120)	Met_units * VARCHAR (120)	Min_exists CHAR (1)	Max_exists CHAR (1)	Avg_exists CHAR (1)	Total_exists CHAR (1)	Msrc_Nm * VARCHAR (254)
103	Quantity	EEConn_PUTriplet.EEHNMTNumber Number of rapid transport protocol pipes flowing over enterprise extender link	Number of Rapid Transport Protocol Pipes Flowing Over Enterprise Extender Link	Quantity	Y	Y	Y	N	FNP
104	Quantity	EEConnS_total_LULU_Sess_Count Number of sessions flowing over enterprise extender link	Number of Sessions Flowing Over Enterprise Extender Link	Quantity	Y	Y	Y	N	FNP
106	Percentage	Delta(EEConnS_NLPOut_Rxmt_Info_A)/Delta(ConnS_NLPOut_Info_A))*100	Percent High-Performance Routing Network Layer Packets Retransmitted	Percentage	Y	Y	Y	N	FNP
107	Rate	Delta(EEConnS_NLPOut_Rxmt_Info_A)/delta(s	Rate of High-Performance Routing	Quantity per Second	Y	Y	Y	N	FNP

Metric_ID INTEGER	Met_category * VARCHAR (254)	Met_desc * VARCHAR (254)	Met_name * VARCHAR (120)	Met_units * VARCHAR (120)	Min_exists CHAR (1)	Max_exists CHAR (1)	Avg_exists CHAR (1)	Total_exists CHAR (1)	Msrc_Nm * VARCHAR (254)
		ec)	Network Layer Packets Retransmission						

* This column is translated.

8.3.17 FNP.D_EE_METRIC

Metric_ID INTEGER	Met_category * VARCHAR (254)	Met_desc * VARCHAR (254)	Met_name * VARCHAR (120)	Met_units * VARCHAR (120)	Min_exists CHAR (1)	Max_exists CHAR (1)	Avg_exists CHAR (1)	Total_exists CHAR (1)	Msrc_Nm * VARCHAR (254)
108	Rate	Delta(EEConnS _SNA_Bytes_Se nt_A)/Delta(sec)	Enterprise Extender Transmit Bytes Rate	Bytes per Second	Y	Y	Y	N	FNP
109	Rate	Delta(EEConnS _SNA_Bytes_R cv_A)/Delta(sec)	Enterprise Extender Receive Bytes Rate	Bytes per Second	Y	Y	Y	N	FNP
110	Rate	Delta(EEConnS _NLPOut_Info_ A)/Delta(sec)	Enterprise Extender Transmit Packet Rate	Quantity per Second	Y	Y	Y	N	FNP
111	Rate	Delta(EEConnS _NLPIn_Info_A)/Delta(sec)	Enterprise Extender Receive Packet Rate	Quantity per Second	Y	Y	Y	N	FNP

* This column is translated.

8.3.18 FNP.D_TCP_METRIC

Metric_ID INTEGER	Met_category * VARCHAR (254)	Met_desc * VARCHAR (254)	Met_name * VARCHAR (120)	Met_units * VARCHAR (120)	Min_exists CHAR (1)	Max_exists CHAR (1)	Avg_exists CHAR (1)	Total_exists CHAR (1)	Msrc_Nm * VARCHAR (254)
31	Quantity	Delta(ibmMvsTcpListenerAcceptCount) Total number of connections accepted by the listener.	ibmMvsTcpListenerAcceptCount	Quantity	N	N	N	Y	FNP
32	Rate	ibmMvsTcpListenerAcceptCount/Delta(sec)	TCPIP Connection Rate	Kilobytes per Second	Y	Y	Y	N	FNP
33	Quantity	Total number of connections lost by this listener during the most recent time interval. Delta(ibmMvsTcpRxmtDrops)+ Delta(ibmMvsTcpProbeDrops)+ Delta(ibmMvsTcpKeepAliveDrops)+Delta(ibmMvsTcpFinwait2Drops)	TCPIP Connections Dropped	Quantity	N	N	N	Y	FNP
34	Quantity	Delta(ibmMvsTcpOutWinProbes) Numbwer of window probes sent.	ibmMvsTcpOutWinProbes	Quantity	N	N	N	Y	FNP
36	Percentage	Percent segment retransmitted. (Delta(tcpRetransSegs))/Delta(tcpOutSegs) * 100	Percent Segment Retransmitted	Percentage	Y	Y	Y	N	FNP

Metric_ID INTEGER	Met_category * VARCHAR (254)	Met_desc * VARCHAR (254)	Met_name * VARCHAR (120)	Met_units * VARCHAR (120)	Min_exists CHAR (1)	Max_exists CHAR (1)	Avg_exists CHAR (1)	Total_exists CHAR (1)	Msrc_Nm * VARCHAR (254)
37	Rate	Retransmission rate. (Delta(tcpRetransSegs))/Delta(sec)	TCP Stack Retransmission Rate	Quantity per Second	Y	Y	Y	N	FNP
38	Rate	Delta(tcpOutSegs)/Delta(sec).	Transmit Segment Rate	Quantity per Second	Y	Y	Y	N	FNP
39	Rate	Delta(tcpInSegs)/Delta(sec).	Receive Segment Rate	Quanity per Second	Y	Y	Y	N	FNP
42	Quantity	Delta(tcpInErrs) Total number of segments received in error.	tcpInErrs	Quantity	N	N	N	Y	FNP
43	Quantity	Delta(ibmMvsTcpInOutOfOrder) Number of inbound TCP data segments that did not contain the next expected sequence number.	ibmMvsTcpInOutOfOrder	Quantity	N	N	N	Y	FNP
197	Percentage	(Delta(ibmMvsTcpInOutOfOrder) / Delta(tcpInSegs)) * 100 Percent of segments received that were out of order.	Percent Out-of-Order Segments for TCP Stack	Percentage	Y	Y	Y	N	FNP

Metric_ID INTEGER	Met_category * VARCHAR (254)	Met_desc * VARCHAR (254)	Met_name * VARCHAR (120)	Met_units * VARCHAR (120)	Min_exists CHAR (1)	Max_exists CHAR (1)	Avg_exists CHAR (1)	Total_exists CHAR (1)	Msrc_Nm * VARCHAR (254)
* This column is translated.									

8.3.19 FNP.D_IP_METRIC

Metric_ID INTEGER	Met_category * VARCHAR (254)	Met_desc * VARCHAR (254)	Met_name * VARCHAR (120)	Met_units * VARCHAR (120)	Min_exists CHAR (1)	Max_exists CHAR (1)	Avg_exists CHAR (1)	Total_exists CHAR (1)	Msrc_Nm * VARCHAR (254)
179	Rate	Delta(ipOutRequests)/Delta(sec)	IP Transmit Datagram Rate	Quantity per Second	Y	Y	Y	N	FNP
180	Rate	Delta(ipInReceives)/Delta(sec)	IP Receive Datagram Rate	Quantity per Second	Y	Y	Y	N	FNP
183	Quantity	Delta(ipInHdrErrors)+Delta(ipInAddrErrors)+Delta(ipInUnknownProtos)+Delta(ipInDiscards)	IP Number of Input Datagrams Discarded	Quantity	N	N	N	Y	FNP
201	Percentage	(Number of datagrams discarded / Number of datagrams received) * 100	IP Percent of Input Datagrams Discarded	Percentage	Y	Y	Y	N	FNP
184	Quantity	Delta(ipInDelivers) Number of input datagrams successfully delivered	ipInDelivers	Quantity	N	N	N	Y	FNP
186	Quantity	Delta(ipOutDiscards)+Delta(ipOutNoRoutes)	IP Number of Output Datagrams Discarded	Quantity	N	N	N	Y	FNP

Metric_ID INTEGER	Met_category * VARCHAR (254)	Met_desc * VARCHAR (254)	Met_name * VARCHAR (120)	Met_units * VARCHAR (120)	Min_exists CHAR (1)	Max_exists CHAR (1)	Avg_exists CHAR (1)	Total_exists CHAR (1)	Msrc_Nm * VARCHAR (254)
187	Quantity	Delta(ipReasmReqds) Number of fragments received that needed to be reassembled	ipReasmReqds	Quantity	N	N	N	Y	FNP
* This column is translated.									

8.3.20 FNP.D_UDP_METRIC

Metric_ID INTEGER	Met_category * VARCHAR (254)	Met_desc * VARCHAR (254)	Met_name * VARCHAR (120)	Met_units * VARCHAR (120)	Min_exists CHAR (1)	Max_exists CHAR (1)	Avg_exists CHAR (1)	Total_exists CHAR (1)	Msrc_Nm * VARCHAR (254)
162	Rate	Delta(udpOutDatagrams)/Delta(sec)	User Datagram Protocol Transmit Datagram Rate	Quantity per Second	Y	Y	Y	N	FNP
163	Rate	Number of datagrams received/Delta(sec)	User Datagram Protocol Receive Datagram Rate	Quantity per Second	Y	Y	Y	N	FNP
166	Quantity	Delta(udpInDatagrams) Number of received datagrams delivered	User Datagram Protocol In Datagrams	Quantity	N	N	N	Y	FNP
167	Quantity	Delta(udpNoPorts)+Delta(udpInErrors) Number of received datagrams	User Datagram Protocol Number of Received Datagrams Unable to	Quantity	N	N	N	Y	FNP

Metric_ID INTEGER	Met_category * VARCHAR (254)	Met_desc * VARCHAR (254)	Met_name * VARCHAR (120)	Met_units * VARCHAR (120)	Min_exists CHAR (1)	Max_exists CHAR (1)	Avg_exists CHAR (1)	Total_exists CHAR (1)	Msrc_Nm * VARCHAR (254)
		unable to be delivered	Deliver						
202	Percentage	(Number of datagrams not delivered / Number of datagrams received) * 100	User Datagram Protocol Percent of Received Datagrams Unable to Deliver	Percentage	Y	Y	Y	N	FNP

* This column is translated.

8.3.21 FNP.D_TCPIP_METRIC

Metric_ID INTEGER	Met_category * VARCHAR (254)	Met_desc * VARCHAR (254)	Met_name * VARCHAR (120)	Met_units * VARCHAR (120)	Min_exists CHAR (1)	Max_exists CHAR (1)	Avg_exists CHAR (1)	Total_exists CHAR (1)	Msrc_Nm * VARCHAR (254)
145	Quantity	NWMStgECSA Current Current number of Extended Common Storage Address Space storage bytes allocated	Current Extended Common Storage Address Space Storage Bytes	Bytes	Y	Y	Y	N	FNP
147	Quantity	NWMStgPrivate Current Current number of authorized private subpool storage bytes allowed	Number of Private Subpool Storage Bytes Allowed	Bytes	Y	Y	Y	N	FNP
199	Percentage	(Extended Common Storage Address pool storage allocated / maximum	Percent Extended Common Storage Address Space Pool Storage	Percentage	Y	Y	Y	N	FNP

Metric_ID INTEGER	Met_category * VARCHAR (254)	Met_desc * VARCHAR (254)	Met_name * VARCHAR (120)	Met_units * VARCHAR (120)	Min_exists CHAR (1)	Max_exists CHAR (1)	Avg_exists CHAR (1)	Total_exists CHAR (1)	Msrc_Nm * VARCHAR (254)
		Extended Common Storage Address pool storage allowed) * 100	Allocated						
200	Percentage	(Authorized private storage allocated / maximum private storage allowed) * 100	Percent Authorized Private Allocated Storage	Percentage	Y	Y	Y	N	FNP
* This column is translated.									

8.3.22 FNP.D_CSM_METRIC

Metric_ID INTEGER	Met_category * VARCHAR (254)	Met_desc * VARCHAR (254)	Met_name * VARCHAR (120)	Met_units * VARCHAR (120)	Min_exists CHAR (1)	Max_exists CHAR (1)	Avg_exists CHAR (1)	Total_exists CHAR (1)	Msrc_Nm * VARCHAR (254)
149	Quantity	Cumulative storage allocated across all Extended Common Storage Address Space pools CSMSummGD_ CurECSA	Cumulative Extended Common Storage Address Space Pool Storage	Kilobytes	Y	Y	Y	N	FNP
150	Quantity	Cumulative storage allocated across all data space pools Sum of data space pool from individual pool records.	Cumulative Data Space Pool Storage	Kilobytes	Y	Y	Y	N	FNP

Metric_ID INTEGER	Met_category * VARCHAR (254)	Met_desc * VARCHAR (254)	Met_name * VARCHAR (120)	Met_units * VARCHAR (120)	Min_exists CHAR (1)	Max_exists CHAR (1)	Avg_exists CHAR (1)	Total_exists CHAR (1)	Msrc_Nm * VARCHAR (254)
151	Quantity	Cumulative storage allocated across all pools. Storage allocated across Extended Common Storage Address pools + Storage allocated across data space pools.	Cumulative All Pool Storage	Kilobytes	Y	Y	Y	N	FNP
204	Percentage	(Extended Common Storage Address pools storage allocated / Extended Common Storage Address pools storage allowed) * 100	Percent Extended Common Storage Address Space Pool Storage	Percentage	Y	Y	Y	N	FNP
* This column is translated.									

8.3.23 FNP.D_SNMP_METRIC

Metric_ID INTEGER	Met_category * VARCHAR (254)	Met_desc * VARCHAR (254)	Met_name * VARCHAR (120)	Met_units * VARCHAR (120)	Min_exists CHAR (1)	Max_exists CHAR (1)	Avg_exists CHAR (1)	Total_exists CHAR (1)	Msrc_Nm * VARCHAR (254)
1	Percentage	5 minutes exponentially-decayed moving average of the CPU busy percentage. 1.3.6.1.4.1.9.2.1. 58	avgBusy5	Percentage	Y	Y	Y	N	SNMP

Metric_ID INTEGER	Met_category * VARCHAR (254)	Met_desc * VARCHAR (254)	Met_name * VARCHAR (120)	Met_units * VARCHAR (120)	Min_exists CHAR (1)	Max_exists CHAR (1)	Avg_exists CHAR (1)	Total_exists CHAR (1)	Msrc_Nm * VARCHAR (254)
2	Percentage	The overall CPU busy percentage in the 5 minute period. 1.3.6.1.4.1.9.9.1 09.1.1.1.1.5	cpmCPUTotal5 min	Percentage	Y	Y	Y	N	SNMP
3	Quantity	Number of bytes from memory pool that are currently unused on the managed device. Sum of ciscoMemoryPo olUsed and ciscoMemoryPo olFree is total amount of memory in the pool. 1.3.6.1.4.1.9.9.4 8.1.1.1.6	ciscomemoryPo olFree	Bytes	N	N	N	Y	SNMP
5	Percentage	Traffic meter value, i.e. the percentage of bandwidth utilization for the previous polling interval. 1.3.6.1.4.1.9.1.5. 1.1.8	SysTraffic	Percentage	Y	Y	Y	N	SNMP
6	Percentage	Traffic meter value, i.e. the percentage of bandwidth utilization for the previous polling interval. 1.3.6.1.4.1.9.5.1. 1.32.1.2	SysTrafficMeter	Percentage	Y	Y	Y	N	SNMP

Metric_ID INTEGER	Met_category * VARCHAR (254)	Met_desc * VARCHAR (254)	Met_name * VARCHAR (120)	Met_units * VARCHAR (120)	Min_exists CHAR (1)	Max_exists CHAR (1)	Avg_exists CHAR (1)	Total_exists CHAR (1)	Msrc_Nm * VARCHAR (254)
7	Quantity	Count of the number of buffer create failures due to no free memory. 1.3.6.1.4.1.9.2.1.47	bufferNoMem	Quantity	N	N	N	Y	SNMP
125	Rate	ifOutErrors/Delta(sec) Number of outbound packets or transmission units per second that could not be transmitted due to errors	Transmit Error Rate	Quantity per second	Y	Y	Y	N	FNP
126	Rate	ifInErrors/Delta(sec) Number of inbound packets or transmission units per second that could not be received due to errors	Receive Error Rate	Quantity per second	Y	Y	Y	N	FNP
213	Percentage	(bufferMdMiss / (bufferMdMiss +bufferMdHit))* 100 bufferMdMiss (1.3.6.1.4.1.9.2.1.27) contains the number of medium buffer misses. BufferMdHit (1.3.6.1.4.1.9.2.1.26) contains the number of medium buffer hits.	Percent Buffer Misses	Percentage	Y	Y	Y	N	FNP

Metric_ID INTEGER	Met_category * VARCHAR (254)	Met_desc * VARCHAR (254)	Met_name * VARCHAR (120)	Met_units * VARCHAR (120)	Min_exists CHAR (1)	Max_exists CHAR (1)	Avg_exists CHAR (1)	Total_exists CHAR (1)	Msrc_Nm * VARCHAR (254)
214	Quantity	The total number of octets received on the interface, including framing characters. 1.3.6.1.2.1.31.1.1.1.6	ifHCInOctets	Quantity	N	N	N	Y	FNP
215	Quantity	The total number of octets transmitted out of the interface, including framing characters. 1.3.6.1.2.1.31.1.1.1.10	ifHCOutOctets	Quantity	N	N	N	Y	FNP
216	Percentage	(Rate(ifHCOutOctets) * 8) / ifSpeed	Transmit Bandwidth Utilization	Percentage	Y	Y	Y	N	FNP
217	Percentage	(Rate(ifHCInOctets) * 8) / ifSpeed	Receive Bandwidth Utilization	Percentage	Y	Y	Y	N	FNP
218	Rate	Rate(ifHCOutUcastPkts)	Unicast Packet Transmit Rate	Quantity per second	Y	Y	Y	N	FNP
219	Rate	Rate(ifHCInUcastPkts)	Unicast Packet Receive Rate	Quantity per second	Y	Y	Y	N	FNP
220	Rate	Rate(ifHCOutBroadcastPkts) + Rate(ifHCOutMulticastPkts)	Broadcast/Multicast Packet Transmit Rate	Quantity per second	Y	Y	Y	N	FNP
221	Rate	Rate(ifHCInBroadcastPkts) + Rate(ifHCInMul	Broadcast/Multicast Packet Receive Rate	Quantity per second	Y	Y	Y	N	FNP

Metric_ID INTEGER	Met_category * VARCHAR (254)	Met_desc * VARCHAR (254)	Met_name * VARCHAR (120)	Met_units * VARCHAR (120)	Min_exists CHAR (1)	Max_exists CHAR (1)	Avg_exists CHAR (1)	Total_exists CHAR (1)	Msrc_Nm * VARCHAR (254)
		ticastPkts)							

* This column is translated.

8.4 Dimension tables

The following sections describe the dimension tables (other than metric dimension tables) used by the star schemas in the warehouse pack.

8.4.1 Dimension table FNP.D_TAAM

The following columns are used in this dimension table:

- TAAM_ID
- LISTENER_IP
- LISTENER_PORT
- APPL_JOB_NAME
- HOSTNAME
- TCPIP_JOB_NM
- IP_NET_ADDRESS
- SYSTEM_NAME
- SYSPLEX_NAME

8.4.2 Dimension table FNP.D_TCNM

The following columns are used in this dimension table:

- TCNM_ID
- LOCAL_IP_ADDR
- LOCAL_PORT
- REMOTE_IP_ADDR
- REMOTE_PORT
- APPL_JOB_NAME

- HOSTNAME
- TCPIP_JOB_NM
- IP_NET_ADDRESS
- SYSTEM_NAME
- SYSPLEX_NAME

8.4.3 Dimension table FNP.D_UETM

The following columns are used in this dimension table:

- UETM_ID
- LOCAL_PORT
- LOCAL_IP_ADDR
- APPL_JOB_NAME
- HOSTNAME
- TCPIP_JOB_NM
- IP_NET_ADDRESS
- SYSTEM_NAME
- SYSPLEX_NAME

8.4.4 Dimension table FNP.D_TCP

The following columns are used in this dimension table:

- TCP_ID
- HOSTNAME
- TCPIP_JOB_NM
- IP_NET_ADDRESS
- SYSTEM_NAME
- SYSPLEX_NAME

8.4.5 Dimension table FNP.D_TCPIP

The following columns are used in this dimension table:

- TCPIP_ID

- HOSTNAME
- TCPIP_JOB_NM
- IP_NET_ADDRESS
- SYSTEM_NAME
- SYSPLEX_NAME

8.4.6 Dimension table FNP.D_IP

The following columns are used in this dimension table:

- IP_ID
- HOSTNAME
- TCPIP_JOB_NM
- IP_NET_ADDRESS
- SYSTEM_NAME
- SYSPLEX_NAME

8.4.7 Dimension table FNP.D_UDP

The following columns are used in this dimension table:

- UDP_ID
- HOSTNAME
- TCPIP_JOB_NM
- IP_NET_ADDRESS
- SYSTEM_NAME
- SYSPLEX_NAME

8.4.8 Dimension table FNP.D_TN32C

The following columns are used in this dimension table:

- TN32C_ID
- LU_NAME
- REMOTE_IP_ADDR

8.4.9 Dimension table FNP.D_TN32S

The following columns are used in this dimension table:

- TN32S_ID
- LOCAL_IP_ADDR
- LOCAL_PORT
- SYSTEM_NAME
- SYSPLEX_NAME

8.4.10 Dimension table FNP.D_TN32A

The following columns are used in this dimension table:

- TN32A_ID
- SNA_APPL_NM
- SYSTEM_NAME
- SYSPLEX_NAME

8.4.11 Dimension table FNP.D_OSA

The following columns are used in this dimension table:

- OSA_ID
- BURNT_MACADDR
- PORT_NAME
- PORT_NUMBER
- CHANNEL_ID

8.4.12 Dimension table FNP.D_OSAC

The following columns are used in this dimension table:

- OSAC_ID
- CURR_MAC_ADDR
- BURNT_MACADDR
- PORT_NAME

- CHANNEL_ID
- SYSTEM_NAME
- SYSPLEX_NAME

8.4.13 Dimension table FNP.D_LOSA

The following columns are used in this dimension table:

- LOSA_ID
- IMAGE_NUMBER
- BURNT_MACADDR
- PORT_NAME
- PORT_NUMBER
- CHANNEL_ID

8.4.14 Dimension table FNP.D_EE

The following columns are used in this dimension table:

- EE_ID
- LOCAL_PORT
- REMOTE_PORT
- TOS_VALUE
- LOCAL_IP_ADDR
- REMOTE_IP_ADDR
- SYSTEM_NAME
- SYSPLEX_NAME

8.4.15 Dimension table FNP.D_EECS

The following columns are used in this dimension table:

- EECS_ID
- LOCAL_IP_ADDR
- REMOTE_IP_ADDR
- SYSTEM_NAME

- SYSPLEX_NAME

8.4.16 Dimension table FNP.D_CSM

The following columns are used in this dimension table:

- CSM_ID
- SYSTEM_NAME
- SYSPLEX_NAME

8.4.17 Dimension table FNP.D_IF

The following columns are used in this dimension table:

- IF_ID
- IF_NAME
- HOSTNAME
- TCPIP_JOB_NM
- IP_NET_ADDRESS
- SYSTEM_NAME
- SYSPLEX_NAME

8.4.18 Dimension table FNP.D_ICMP

The following columns are used in this dimension table:

- ICMP_ID
- DEST_HOST_OR_IP
- DEST_HOSTNAME
- DEST_IP_ADDR
- SRC_HOSTNAME
- SRC_IP_ADDR

8.4.19 Dimension table FNP.D_FTPC

The following columns are used in this dimension table:

- FTPC_ID

- LOCAL_IP_ADDR
- SYSTEM_NAME
- SYSPLEX_NAME

8.4.20 Dimension table FNP.D_FTPCU

The following columns are used in this dimension table:

- FTPCU_ID
- SRV_USERID
- APPL_JOB_NAME
- LOCAL_IP_ADDR
- SYSTEM_NAME
- SYSPLEX_NAME

8.4.21 Dimension table FNP.D_FTPS

The following columns are used in this dimension table:

- FTPS_ID
- LOCAL_IP_ADDR
- LOCAL_PORT
- SYSTEM_NAME
- SYSPLEX_NAME

8.4.22 Dimension table FNP.D_FTPSU

The following columns are used in this dimension table:

- FTPSU_ID
- SRV_USERID
- APPL_JOB_NAME
- LOCAL_IP_ADDR
- LOCAL_PORT
- SYSTEM_NAME
- SYSPLEX_NAME

8.4.23 Dimension table FNP.D_SNMP

The following columns are used in this dimension table:

- SNMP_ID
- HOST_OR_IP
- HOSTNAME
- IP_ADDR

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SC31-6793-00