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# Contents

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>PI Commands Overview</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Overview</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Command List</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>VPN Network</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Overview</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Add a Network</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Change a VPN Network Details</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Delete a VPN Network</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Query a VPN Network</td>
<td>11</td>
</tr>
<tr>
<td>3</td>
<td>Network White List Numbers</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Overview</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Add Network White List Numbers</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Delete Network White List Numbers</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>Query Network White List Numbers</td>
<td>17</td>
</tr>
<tr>
<td>4</td>
<td>Network Speed Dial Number</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>Overview</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>Add a Network Speed Dial Number</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>Change a Network Speed Dial Number</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Delete a Network Speed Dial Number</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>Query Network Speed Dial Numbers</td>
<td>22</td>
</tr>
<tr>
<td>5</td>
<td>VPN Station</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>Overview</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>Add a VPN Station</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>Change a VPN Station Details</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>Delete a VPN Station</td>
<td>31</td>
</tr>
<tr>
<td></td>
<td>Query a VPN Station</td>
<td>32</td>
</tr>
<tr>
<td>6</td>
<td>VPN Station White List</td>
<td>37</td>
</tr>
<tr>
<td></td>
<td>Overview</td>
<td>37</td>
</tr>
<tr>
<td></td>
<td>Add a VPN Station White List</td>
<td>37</td>
</tr>
<tr>
<td></td>
<td>Change a VPN Station Restriction Details</td>
<td>38</td>
</tr>
<tr>
<td></td>
<td>Delete a VPN Station White List</td>
<td>40</td>
</tr>
</tbody>
</table>
About This Document

Scope
The scope of this document includes all the information required to configure the VPN PI commands.

Audience
The audience for this document includes system administrators responsible for the monitoring, maintenance, and configuration of the Oracle Communications Network Charging and Control IN applications.

Prerequisites
A solid understanding of UNIX and a familiarity with IN concepts are an essential prerequisite for safely using the information contained in this technical guide.
Although it is not a prerequisite to using this guide, familiarity with the target platform would be an advantage.
This manual describes system tasks that should only be carried out by suitably trained operators.

Related documents
The following documents are related to this document:

- Oracle Communications Network Charging and Control Provisioning Interface User's and Technical Guide
- Oracle Communications Network Charging and Control Virtual Private Network User's Guide
- Oracle Communications Network Charging and Control CCS Provisioning Interface Commands
## Document Conventions

### Typographical Conventions

The following terms and typographical conventions are used in the Oracle Communications Network Charging and Control (NCC) documentation.

<table>
<thead>
<tr>
<th>Formatting convention</th>
<th>Type of information</th>
</tr>
</thead>
</table>
| **Special Bold**      | Items you must select, such as names of tabs.  
                        | Names of database tables and fields. |
| **Italics**           | Name of a document, chapter, topic or other publication.  
                        | Emphasis within text. |
| **Button**            | The name of a button to click or a key to press.  
                        | Example: To close the window, either click **Close**, or press **Esc**. |
| **Key+Key**           | Key combinations for which the user must press and hold down one key and then press another.  
                        | Example: **Ctrl+P**, or **Alt+F4**. |
| **Monospace**         | Examples of code or standard output. |
| **Monospace Bold**    | Text that you must enter. |
| **variable**          | Used to indicate variables or text that should be replaced. |
| **menu option > menu option >** | Used to indicate the cascading menu option to be selected, or the location path of a file.  
                        | Example: **Operator Functions > Report Functions**  
                        | Example: **/IN/html/SMS/HelpText/** |
| **hypertext link**    | Used to indicate a hypertext link on an HTML page. |

Specialized terms and acronyms are defined in the **Glossary** at the end of this guide.
Overview

Introduction

The provisioning interface (PI) uses TCP/IP-based UNIX sockets to receive provisioning commands and parameters. These are translated into SQL commands that update prepaid application tables of the SMF and E2BE Oracle databases. This chapter defines the rules and packages required to translate the provisioning commands into SQL commands.

In this chapter

This chapter contains the following topics.

Command List

Command list

The following table lists the available PI commands for provisioning VPN information on the SMS. To use the commands they must have been installed with the piVpnSms package.

<table>
<thead>
<tr>
<th>Function</th>
<th>Command</th>
</tr>
</thead>
<tbody>
<tr>
<td>Add a VPN wide default tariff</td>
<td>VPNCU1=ADD</td>
</tr>
<tr>
<td>Add a VPN network</td>
<td>VPNNW1=ADD</td>
</tr>
<tr>
<td>Modify a VPN network</td>
<td>VPNNW1=CHG</td>
</tr>
<tr>
<td>Delete a VPN network</td>
<td>VPNNW1=DEL</td>
</tr>
<tr>
<td>Query a VPN network</td>
<td>VPNNW1=QRY</td>
</tr>
<tr>
<td>Add a white list number</td>
<td>VPNNW2=ADD</td>
</tr>
<tr>
<td>Delete a white list number</td>
<td>VPNNW2=DEL</td>
</tr>
<tr>
<td>Query a white list number</td>
<td>VPNNW2=QRY</td>
</tr>
<tr>
<td>Add a network speed dial number</td>
<td>VPNNW3=ADD</td>
</tr>
<tr>
<td>Change a network speed dial number</td>
<td>VPNNW3=CHG</td>
</tr>
<tr>
<td>Delete a network speed dial number</td>
<td>VPNNW3=DEL</td>
</tr>
<tr>
<td>Query a network speed dial number</td>
<td>VPNNW3=QRY</td>
</tr>
<tr>
<td>Add a VPN station</td>
<td>VPNST1=ADD</td>
</tr>
<tr>
<td>Change a VPN station</td>
<td>VPNST1=CHG</td>
</tr>
<tr>
<td>Delete a VPN station</td>
<td>VPNST1=DEL</td>
</tr>
<tr>
<td>Query a VPN station</td>
<td>VPNST1=QRY</td>
</tr>
<tr>
<td>Add a VPN station white list</td>
<td>VPNST2=ADD</td>
</tr>
<tr>
<td>Change a VPN station white list</td>
<td>VPNST2=CHG</td>
</tr>
<tr>
<td>Delete a VPN station white list</td>
<td>VPNST2=DEL</td>
</tr>
</tbody>
</table>
Query a VPN station white list
Add a VPN station hunting list
Change a VPN station hunting list
Delete a VPN station hunting list
Query a VPN station hunting list
Add a VPN station hunting list plan
Change a VPN station hunting list plan
Delete a VPN station hunting list plan
Query a VPN station hunting list plan
Change the tariff for all VPN stations on a network

VPNST2=QRY
VPNST5=ADD
VPNST5=CHG
VPNST5=DEL
VPNST5=QRY
VPNST6=ADD
VPNST6=CHG
VPNST6=DEL
VPNST6=QRY
VPNST7=CHG
Overview

Introduction

This chapter explains the VPN PI commands for provisioning VPN Networks.

In this chapter

This chapter contains the following topics.

Add a Network  3
Change a VPN Network Details  7
Delete a VPN Network  11
Query a VPN Network  11

Add a Network

Name

VPNNW1=ADD

Description

Adds a new VPN Network definition.

Required parameters

Here are the required parameters for this command.

NAME

Syntax: NAME=name
Description: Name of VPN Network.
Format: String
Example: NAME="VPNNW1"

PROVIDER

Syntax: PROVIDER=sp
Description: Name of ACS service provider.
Format: String
Example: PROVIDER="Boss"

ORIGINATING

Syntax: ORIGINATING=origcp
Description: Originating ACS Call Plan.
Chapter 2

NCC VPN Provisioning Interface Commands

Format: String
Constraints: Should exist in acs_call_plan and start “VPN_”
Example: ORIGINATING="VPN_Originating"

TERMINATING
Syntax: TERMINATING=termcp
Description: Terminating ACS Call Plan.
Format: String
Constraints: Should exist in acs_call_plan and start “VPN_”
Example: TERMINATING="VPN_Terminating"

MANAGEMENT
Syntax: MANAGEMENT=mancp
Description: Management ACS Call Plan.
Format: String
Constraints: Should exist in acs_call_plan and start “VPN_”
Example: MANAGEMENT="VPN_Management"

SITE_CODE
Syntax: SITE_CODE=scode
Description: A site code.
Format: 10 character string containing only the characters 0123456789ABCD*#
Note:
* == B and is stored as B in the database
# == C and is stored as C in the database
Constraints: Cannot be a sub or super string of an existing site code.
Example: SITE_CODE="6449398461"

Constraint required parameters
This command accepts the following constraint required parameter.

EXTLENGTH
Syntax: EXTLENGTH=len
Description: Extension Length for a station extension number.
Format: Number
Default: 4
Example: EXTLENGTH=4

Optional parameters
This command accepts the following optional parameters.

PHYSRANGE
Syntax: PHYSRANGE=Y|N
Description: Physical range needed?
Format: Y or N.
Default: N
Example: PHYSRANGE=N

COMMENTS
Syntax: COMMENTS=text
Description: Comment field.
Format: String
Example: COMMENTS="This is a comment"

PRESENTONNETADDR
Syntax: PRESENTONNETADDR=Y|N
Description: Present the on-net address?
Format: Y or N
Default: N
Example: PRESENTONNETADDR=N

RESTRICTCLI
Syntax: RESTRICTCLI=Y|N
Description: Restrict CLI?
Format: Y or N
Default: N
Example: RESTRICTCLI=N

ALLOWSHORTTEXT
Syntax: ALLOWSHORTTEXT=Y|N
Description: Allow station IDs with less than EXTLENGTH digits?
Format: Y or N
Constraints: If ALLOWSHORTTEXT is specified, then EXTLENGTH must also be specified.
Default: Y
Example: ALLOWSHORTTEXT=Y

TARIFFNAME
Syntax: TARIFFNAME=tariff name
Description: Default ACS tariff name to use.
Format: String
Note: Matches ACS_TARIFF_CODE
Example: TARIFFNAME="TR1"

TAG
Syntax: TAG=tag
Description: Profile tag(s) to alter.
Format: Profile tag name(s).
Allowed: Pre-defined name corresponding to PROFILE_TAG_NAME in the ACS_PROFILE_DETAILS table.
Notes: Multiple tags should be separated by the pipe symbol '|'.
Example: TAG=LANGUAGE
VALUE

Syntax:  \texttt{VALUE=\texttt{val}}

Description:  The value of the tag(s).

Format:  Profile tag value(s).

The VALUE should match the type of the TAG specified, as defined in the ACS_PROFILE_DETAILS table.

\begin{itemize}
  \item If..  \texttt{VALUE} format is...
    \begin{itemize}
      \item DATE  "YYYYMMDDHHMMSS"
      \item BOOLEAN  "T" (true) or "F" (false)
      \item INTEGER  a decimal integer, maximum 4 bytes.
      \item BYTE  a signed single byte as a decimal integer (-128 to 127).
      \item PREFIX or OPREFIX,  the prefix tree data should be specified
        separated by the colon character.
        To specify a colon in the data, prefix it with a backslash (\texttt{:}).
        To specify a backslash, use two backslashes together (\texttt{\textbackslash\textbackslash}).
        A single backslash will result in a badly formatted parameter error code 68.
        The maximum number of characters or digits for a single value is 255.
        If OPREFIX, the value data should be in the desired order.
      \item STRING  free-form text.
      \item NSTRING  limited to the digits 0 to 9
    \end{itemize}

For all types, the separator characters comma and pipe cannot be used.

Notes:  Multiple values should be separated by the pipe symbol ‘|’ and be in the same order as for TAG.

Example:  \texttt{VALUE=8}

Logic and constraints

\begin{itemize}
  \item When creating a new VPN Network: NAME, PROVIDER, ORIGINATING, TERMINATING, and MANAGEMENT must be specified.
  \item An empty Blacklist will be created by default (i.e. no numbers barred)
  \item To specify more than one tag to update, the TAG parameter should contain the names of the tags separated by pipe symbols. The VALUE parameter should contain the values separated by pipe symbols in the same order as for TAG
  \item The TAG and VALUE parameters must have the same number of items.
\end{itemize}

Success return

\texttt{VPN\_NW1=ADD:ACK[:NETID=vpn\_network.id];}

Error codes

Error Codes:  1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 19, 20, and 20.

See \textit{PI Command Errors} (on page 70) for a description of error codes.
Change a VPN Network Details

Name
VPNNW1=CHG

Description
Changes the details associated with a VPN network.

Required parameter
Here is the required parameter for this command.
NAME
Syntax: NAME=name
Description: Name of VPN Network.
Format: String
Example: NAME="VPNNW1"

Constraint required parameters
This command accepts the following constraint required parameter.
NEW_NAME
Syntax: NEW_NAME=name
Description: The new NAME for VPN Network.
Format: String
Constraints: New name should not already exist.
Example: NEW_NAME="VPNNW2"

PROVIDER
Syntax: PROVIDER=sp
Description: Name of ACS service provider.
Format: String
Example: PROVIDER="Boss"

ORIGINATING
Syntax: ORIGINATING=origcp
Description: Originating ACS Call Plan.
Format: String
Constraints: Should exist in acs_call_plan and start "VPN_"
Example: ORIGINATING="VPN_Originating"

TERMINATING
Syntax: TERMINATING=termcp
Description: Terminating ACS Call Plan.
Format: String
Chapter 2

Constraints: Should exist in acs_call_plan and start "VPN_
Example: TERMINATING="VPN_Terminating"

MANAGEMENT
Syntax: MANAGEMENT=mancp
Description: Management ACS Call Plan.
Format: String
Constraints: Should exist in acs_call_plan and start "VPN_
Example: MANAGEMENT="VPN_Management"

PHYSRANGE
Syntax: PHYSRANGE=Y|N
Description: Physical range needed?
Format: Y or N.
Default: N
Example: PHYSRANGE=N

COMMENTS
Syntax: COMMENTS=text
Description: Comment field.
Format: String
Example: COMMENTS="This is a comment"

PRESENTONNETADDR
Syntax: PRESENTONNETADDR=Y|N
Description: Present the on-net address?
Format: Y or N
Default: N
Example: PRESENTONNETADDR=N

RESTRICTCLI
Syntax: RESTRICTCLI=Y|N
Description: Restrict CLI?
Format: Y or N
Default: N
Example: RESTRICTCLI=N

TARIFFNAME
Syntax: TARIFFNAME=tariff name
Description: Default ACS tariff name to use.
Format: String
Note: Matches ACS_TARIFF_CODE
Example: TARIFFNAME="TR1"
SITE_CODE

Syntax: SITE_CODE=scode
Description: A site code.
Format: 10 character string containing only the characters 0123456789ABCD*#
Note: * == B and is stored as B in the database
# == C and is stored as C in the database
Constraints: Cannot be a sub or super string of an existing site code.
Example: SITE_CODE="6449398461"

Optional parameters

This command accepts the following optional parameters.

TAG

Syntax: TAG=tag
Description: Profile tag(s) to alter.
Format: Profile tag name(s).
Allowed: Pre-defined name corresponding to PROFILE_TAG_NAME in the ACS_PROFILE_DETAILS table.
Notes: Multiple tags should be separated by the pipe symbol ‘|’.
Example: TAG=LANGUAGE

VALUE

Syntax: VALUE=val
Description: The value of the tag(s).
Format: Profile tag value(s).
The VALUE should match the type of the TAG specified, as defined in the ACS_PROFILE_DETAILS table.

<table>
<thead>
<tr>
<th>VALUE format is...</th>
<th>Date format</th>
<th>Boolean format</th>
<th>Integer format</th>
<th>Byte format</th>
</tr>
</thead>
<tbody>
<tr>
<td>DATE</td>
<td>&quot;YYYYMMDDHHMMSS&quot;</td>
<td>&quot;T&quot; (true) or &quot;F&quot; (false)</td>
<td>a decimal integer, maximum 4 bytes.</td>
<td>a signed single byte as a decimal integer (-128 to 127).</td>
</tr>
<tr>
<td>PREFIX or OPREFIX,</td>
<td>the prefix tree data should be specified separated by the colon character. To specify a colon in the data, prefix it with a backslash (). To specify a backslash, use two backslashes together (). A single backslash will result in a badly formatted parameter error code 68. The maximum number of characters or digits for a single value is 255. If OPREFIX, the value data should be in the desired order.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STRING</td>
<td>free-form text.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NSTRING</td>
<td>limited to the digits 0 to 9</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

For all types, the separator characters comma and pipe cannot be used.

Notes: Multiple values should be separated by the pipe symbol '|' and be in the same order as for TAG.

Example:

```
VALUE=8
```

**Logic and constraints**

- NAME must exist
- At least one optional parameter should be specified.
- NEW_NAME should not already exist
- PROVIDER should exist in acs_customer.name
- The TAG and VALUE parameters must have the same number of items
- To delete a TAG value, the TAG and VALUE should be specified with an empty VALUE.

Examples:

- "TAG=set_1|to_delete|set_2,VALUE=value_1||value_2"
- "TAG=set_1,VALUE=

**Success return**

```
VPNW1=CHG:ACK;
```

**Error codes**

Error codes: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 18, 19, 20, 21, 22, 23.

See *PI Command Errors* (on page 70) for a description of error codes.
Delete a VPN Network

Name
VPNNW1=DEL

Description
Delete a VPN Network and all stations defined for that network in vpn_station.

Required parameter
Here is the required parameter for this command.
NAME

Syntax: NAME=name
Description: Name of VPN Network.
Format: String
Example: NAME="VPNNW1"

Constraint required parameters
There are no constraint required parameters.

Optional parameters
There are no optional parameters.

Logic and constraints
- NAME must exist.

Success return
VPNNW1=DEL:ACK; if the network has stations defined.
VPNNW1=DEL:ACK:0; if no stations defined for network.

Error codes
Error codes: 1, 19, and 20.
See PI Command Errors (on page 70) for a description of error codes.

Query a VPN Network

Name
VPNNW1=QRY

Description
Query a VPN network’s details.
**Required parameters**

This command has no required parameters.

**Constraint required parameters**

This command accepts the following constraint required parameter.

**NAME**

**Syntax:** NAME=name

**Description:** Name of VPN Network.

**Format:** String

**Example:** NAME="VPNNW1"

**LISTTYPE**

**Syntax:** LISTTYPE=type

**Description:** The type of list to return.

**Allowed:**
- **Value**: Returns ..
  - **SHORT**: a list of network names only.
  - **LONG**: a list of network name (vpn_network.name), white list for each network name, speed dial numbers for each network name.
  - **DEFTARIFF**: the default tariff for that network
  - **TARIFF**: a list of ACS Tariffs used by the Network NAME. This is found by listing a distinct list of Tariffs from every station in the network, the network default, and the customer default.
  - **STATION**: a list of all stations on this network.

**Default:** SHORT

**Example:** LISTTYPE=SHORT

**Optional parameter**

This command accepts the following optional parameter.

**TAG**

**Syntax:** TAG=tag

**Description:** Profile tag(s) to alter.

**Format:** Profile tag name(s).

**Allowed:** Pre-defined name corresponding to PROFILE_TAG_NAME in the ACS_PROFILE_DETAILS table.

**Notes:** Multiple tags should be separated by the pipe symbol '|'.

**Example:** TAG=LANGUAGE

**Logic and constraints**

- At least one optional parameter must be specified.
- NAME can be specified to retrieve a sub set of Network(s) information. If it is not specified then information for all networks are returned.
To specify more than one tag to query, the tag parameter should contain the names of the tags separated by pipe symbols:

- DATE values are returned as YYYYMMDDHHMMSS
- BOOLEAN values are returned as “T” (true) or “F” (false)
- INTEGER values are returned as the decimal integer unaltered
- BYTE values are returned as a decimal integer
- PREFIX and OPREFIX values are returned colon separated. Colons in the data are prefixed with a backslash (\). Backslashes are returned as two backslashes together (\\)
- STRING and NSTRING values are returned unaltered

Success return

```plaintext
VPNNW1=QRY:QRYNet:ACK[:][result 1|...];
```

result n for LISTTYPE=

- SHORT:
  ```plaintext
  NETWORK[number]name:name[,tag l=value l,...,tag n=value n]
  ```

- LONG:
  ```plaintext
  NETWORK[number]name:name, whitelist numbers:number:..., speed dial numbers:number:...[,tag l=value l,...,tag n=value n]
  ```
  If no white list numbers are defined, "none defined" appears in place of the first number.

- DEFTARIFF:
  ```plaintext
  NETWORK[number]name:name, default tariff:tariff code[,tag l=value l,...,tag n=value n]
  ```

- TARIFF:
  ```plaintext
  NETWORK[number]name:name, tariff(s) defined:tariff code:...[,tag l=value l,...,tag n=value n]
  ```
  If no tariffs are defined, "none defined" appears in place of the first tariff code.

- STATION:
  ```plaintext
  NETWORK[number]stations:station_name_1/physical_address_1:...:station_name_n/physical_address_1[,tag l=value l,...,tag n=value n]
  ```
  If no stations are defined, "none defined" appears in place of the first station.

Error codes

Error codes: 1, 2 3, 4, 19, 20, and 21

See PI Command Errors (on page 70) for a description of error codes.
Chapter 3

Network White List Numbers

Overview

Introduction

This chapter explains the VPN PI commands for provisioning VPN Network White List Numbers.

In this chapter

This chapter contains the following topics.

Add Network White List Numbers 15
Delete Network White List Numbers 16
Query Network White List Numbers 17

Add Network White List Numbers

Name

VPNNW2=ADD

Description

Adds new white list numbers.

Required parameters

Here are the required parameters for this command.

NAME

Syntax: \nNAME=name
Description: Name of VPN Network.
Format: String
Example: NAME="VPNNW1"

NUMBER

Syntax: \nNUMBER=num
Description: Number(s) to add to, or delete from, list.
Format: Single number or colon separated list of numbers.
Example: NUMBER=1234567

Constraint required parameters

There are no constraint required parameters.
Optional parameters

There are no optional parameters.

Logic and constraints

- When adding a white list number: NAME must exist, and NUMBER must be specified.
- If whitelist is not active for Network NAME, then blacklist will be deactivated, numbers in the blacklist deleted, and the whitelist made active with the number(s) supplied in NUMBER.

Success return

VPNNW2=ADD:ACK[::number of whitelist numbers added];

Error codes

Error codes: 1, 2, 19, and 20

See Pl Command Errors (on page 70) for a description of error codes.

Delete Network White List Numbers

Name

VPNNW2=DEL

Description

Deletes white list numbers from a specified VPN Network.

Required parameters

Here are the required parameters for this command.

NAME

Syntax: NAME=name

Description: Name of VPN Network.

Format: String

Example: NAME="VPNNW1"

NUMBER

Syntax: NUMBER=num

Description: Number(s) to add to, or delete from, list.

Format: Single number or colon separated list of numbers.

Example: NUMBER=1234567

Constraint required parameters

There are no constraint required parameters.

Optional parameters

There are no optional parameters.
Logic and constraints

- When removing white list numbers, NAME and NUMBER must exist.
- When deleting all numbers in white list, an empty blacklist will become active. This makes no numbers barred.
- If delete from white list is used when black list is active, the NUMBER does not exist for NAME error will be used.
- The NUMBER data must consist of 1 or more values, separated by :.
- It is possible to specify ALL as the list of numbers which will indicate delete all numbers.

Success return

```
VPNNW2=DEL:ACK[:number of whitelist numbers deleted];
```

Error codes

Error codes: 1, 2, 3, 19, 20.
See PI Command Errors (on page 70) for a description of error codes.

Query Network White List Numbers

Name

VPNNW2=QRY

Description

Queries white list numbers for a specified VPN Network.

Required parameters

Here are the required parameters for this command.

NAME

Syntax:

```
NAME=name
```

Description:

Name of VPN Network.

Format:

String

Example:

```
NAME="VPNNW1"
```

Constraint required parameters

There are no constraint required parameters.

Optional parameters

There are no optional parameters.

Logic and constraints

- When querying a white list number: NAME must exist.
Success return

VPNW2=QRY:ACK:NUMBER=number 1:number 2:...;

- The list of white list numbers will consist of a NUMBER tag with the data format of each number separated with a :
- It is possible for the NUMBER tag data to be zero length.

Error codes

Error codes: 1, 2, 19, 20

See *PI Command Errors* (on page 70) for a description of error codes.
Overview

Introduction
This chapter explains the VPN PI commands for provisioning VPN Network Speed Dial Numbers.

In this chapter

This chapter contains the following topics.
Add a Network Speed Dial Number 19
Change a Network Speed Dial Number 20
Delete a Network Speed Dial Number 21
Query Network Speed Dial Numbers 22

Add a Network Speed Dial Number

Name
VPNNW3=ADD

Description
Adds a new speed dial number to a specified network.

Required parameters
Here are the required parameters for this command.
NAME
Syntax: NAME=\textit{name}
Description: Name of VPN Network.
Format: String
Example: NAME="VPNNW1"

NUMBER
Syntax: NUMBER=\textit{num}
Description: Number to add to the list.
Format: xxx:yyyy:y
where:
\begin{itemize}
  \item \textit{xxx} is the speed dial number
  \item \textit{yyyy} is the physical address for termination, and
  \item \textit{n} is an On-net/Off-net indicator, where Y=On-net and N=Off-net.
\end{itemize}
Example: NUMBER=1.23456.Y
Constraint required parameters
There are no constraint required parameters.

Optional parameters
There are no optional parameters.

Logic and constraints
- When adding a speed dial number: NAME must exist, and NUMBER must be specified.

Success return
VPNNW3=ADD:ACK;

Error codes
Error codes: 1, 2, 19, 20.
See PI Command Errors (on page 70) for a description of error codes.

Change a Network Speed Dial Number

Name
VPNNW3=CHG

Description
Change a speed dial number for a specified network.

Required parameters
Here are the required parameters for this command.

NAME
Syntax: NAME=name
Description: Name of VPN Network.
Format: String
Example: NAME="VPNNW1"

NUMBER
Syntax: NUMBER=num
Description: Number to change from speed dial list.
Format: xxx
Example: NUMBER=1

NEW_NUMBER
Syntax: NEW_NUMBER=num
Description: New Number.
Format: \[xxx:yyyy:n\]
where:
- \(xxx\) is the speed dial number
- \(yyyy\) is the physical address for termination, and
- \(n\) is an On-net/Off-net indicator, where Y=On-net and N=Off-net.

Example: NEW_NUMBER=2.23456.Y

**Constraint required parameters**

There are no constraint required parameters.

**Optional parameters**

There are no optional parameters.

**Logic and constraints**

- When changing a speed dial number: NAME, NUMBER must exist, and NEW_NUMBER must not already exist.
- NUMBER should be a single existing speed dial number.

**Success return**

VPNNW3=CHG:ACK;

**Error codes**

Error codes: 1, 2, 3, 18, 19, 20.
See *PI Command Errors* (on page 70) for a description of error codes.

**Delete a Network Speed Dial Number**

**Name**

VPNNW3=DEL

**Description**

Delete a speed dial number from a specified network.

**Required parameters**

Here are the required parameters for this command.

**NAME**

**Syntax:** NAME=name
**Description:** Name of VPN Network.
**Format:** String
**Example:** NAME="VPNNW1"
NUMBER

Syntax: NUMBER=num
Description: Number(s) to delete from speed dial list.
Format: Colon separated list of numbers.
Example: NUMBER=1:2:3

Constraint required parameters
There are no constraint required parameters.

Optional parameters
There are no optional parameters.

Logic and constraints
- NUMBER may be a colon separated list of speed dial numbers.

Success return
VPNNW3=DEL:ACK[:number of speed dials deleted];

Error codes
Error codes: 1, 2, 19, 20.
See PI Command Errors (on page 70) for a description of error codes.

Query Network Speed Dial Numbers

Name
VPNNW3=QRY

Description
Queries speed dial numbers for a specified network.

Required parameters
Here are the required parameters for this command.
NAME

Syntax: NAME=name
Description: Name of VPN Network.
Format: String
Example: NAME="VPNNW1"

Constraint required parameters
There are no constraint required parameters.
Optional parameters

There are no optional parameters.

Logic and constraints

- NAME must be specified.

Success return

VPNNW3=QRY:ACK[:list of speed dials];

- The list of speed dial numbers will consist of NUMBER tags with the data format \( xxx:yyyyMMddn \) where \( xxx \) is the speed dial number, \( yyy \) is the physical address for termination and \( n \) is an On-net/Off-net indicator where Y=On-net and N=Off-net.
- Format: NUMBER=<number 1>|<number 2>|...
- An ACK may be returned with no NUMBER tags if no Speed dial numbers are defined for this network.

Error codes

Error codes: 1, 19, 20.

See PI Command Errors (on page 70) for a description of error codes.
Overview

Introduction
This chapter explains the VPN PI commands for provisioning VPN Stations.

In this chapter

This chapter contains the following topics.

Add a VPN Station 25
Change a VPN Station Details 28
Delete a VPN Station 31
Query a VPN Station 32

Add a VPN Station

Name

VPNST1=ADD

Description

Adds a new VPN Station definition.

Required parameters

Here are the required parameters for this command.

NETNAME

Syntax: NETNAME=network name
Description: The name of the VPN Network.
Format: String
Example: NETNAME="Net1"

STNNAME

Syntax: STNNAME=station name
Description: The name of VPN Station. (Extension number field in VPN Screen).
Format: Extension number.
Example: STNNAME=123

PHYSADDR

Syntax: PHYSADDR=msisdnn
Description: The Physical Address, usually real MSISDN.
Constraint required parameters
There are no constraint required parameters.

Optional parameters
This command accepts the following optional parameters.

GVNSADDR
Syntax: \texttt{GVNSADDR=gvns\ address}
Description: The GVNS Address name.
Format: String
Example: \texttt{GVNSADDR=6449393404}

VDDIADDR
Syntax: \texttt{VDDIADDR=vddi\ address}
Description: The VDDI Address.
Format: String
Example: \texttt{VDDIADDR=6449393404}

COMMENTS
Syntax: \texttt{COMMENTS=text}
Description: Comment field.
Format: String
Example: \texttt{COMMENTS="This is a comment"}

OFFNET
Syntax: \texttt{OFFNET=Y|N}
Description: Allow or deny off net calls.
Default: Y
Example: \texttt{OFFNET=Y}

INOFFNET
Syntax: \texttt{INOFFNET=Y|N}
Description: Allow or deny all incoming calls from off net.
Example: \texttt{INOFFNET=N}

TARIFFNAME
Syntax: \texttt{TARIFFNAME=tariff\ name}
Description: Default ACS tariff name to use.
Format: String
Note: Matches ACS_TARIFF_CODE
Example: 

```
Tariffname=TR1
```

**WHITELIST**

**Syntax:** 

```
WHITELIST=whitelist
```

**Description:** The numbers to add to, or delete from, the white list.

**Format:** Single number, or colon separated list of numbers.

**Example:** 

```
WHITELIST=6449393404:6449393764
```

**TAG**

**Syntax:** 

```
TAG=tag
```

**Description:** Profile tag(s) to alter.

**Format:** Profile tag name(s).

**Allowed:** Pre-defined name corresponding to PROFILE_TAG_NAME in the ACS_PROFILE_DETAILS table.

**Notes:** Multiple tags should be separated by the pipe symbol ‘|’.

**Example:** 

```
TAG=LANGUAGE
```

**VALUE**

**Syntax:** 

```
VALUE=val
```

**Description:** The value of the tag(s).

**Format:** Profile tag value(s).

The VALUE should match the type of the TAG specified, as defined in the ACS_PROFILE_DETAILS table.

- **DATE** “YYYYMMDDHHMMSS”
- **BOOLEAN** “T” (true) or “F” (false)
- **INTEGER** a decimal integer, maximum 4 bytes.
- **BYTE** a signed single byte as a decimal integer (-128 to 127).
- **PREFIX or OPREFIX,** the prefix tree data should be specified separated by the colon character.
  To specify a colon in the data, prefix it with a backslash (\). To specify a backslash, use two backslashes together (\\). A single backslash will result in a badly formatted parameter error code 68. The maximum number of characters or digits for a single value is 255.
  If OPREFIX, the value data should be in the desired order.
- **STRING** free-form text.
- **NSTRING** limited to the digits 0 to 9

For all types, the separator characters comma and pipe cannot be used.

**Notes:** Multiple values should be separated by the pipe symbol ‘|’ and be in the same order as for TAG.

**Example:** 

```
VALUE=8
```
Logic and constraints

- The number of digits in the STNNAME must equal EXTLENGTH in the add network command (VPNNW1=ADD) if ALLOWSHORTTEXT = N
- The number of digits in the STNNAME must be less than or equal to the EXTLENGTH defined in the add network command (VPNNW1=ADD) if ALLOWSHORTTEXT = Y
- If no COMMENTS are supplied, PI will insert an automatic comment to show PI was used.
- If OFFNET is not specified it will be set to Y (default).
- If INOFFNET is not specified it will be set to N (default).
- If WHITELIST is not specified, an empty blacklist will be created and activated. This means no numbers are barred.
- To specify more than one tag to update, the TAG parameter should contain the names of the tags separated by pipe symbols. The VALUE parameter should contain the values separated by pipe symbols in the same order as for TAG.
- The TAG and VALUE parameters must have the same number of items.

Success return

VPNST1=ADD:ACK[:STNID=vpn_station.id];

Error codes

Error codes: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 17, 19, 20, 21, 22, 23.

See PI Command Errors (on page 70) for a description of error codes.

Change a VPN Station Details

Name

VPNST1=CHG

Description

Changes the details associated with a VPN station.

Required parameters

This command has no required parameters.

Constraint required parameters

This command accepts the following constraint required parameter.

PHYSADDR

Syntax: PHYSADDR=msisd
Description: The Physical Address, usually real MSISDN.
Format: MSISDN number.
Example: PHYSADDR=6494111111

STNNAME

Syntax: STNNAME=station name
Description: The name of VPN Station. (Extension number field in VPN Screen).
Format: Extension number.
Example: STNNAME=123

NEW_NAME
Syntax: NEW_NAME=name
Description: The new NETNAME for VPN station.
Format: String
Constraints: New name should already exist.
Example: NEW_NAME="Net2"

NEW_STNNAME
Syntax: NEW_STNNAME=exnum
Description: The new STNNAME for VPN station.
Format: Extension number.
Example: NEW_STNNAME=124

NEW_PHYSADDR
Syntax: NEW_PHYSADDR=addr
Description: The new PHYSADDR for the VPN station.
Format: MSISDN number.
Example: NEW_PHYSADDR=6494111112

GVNSADDR
Syntax: GVNSADDR=gvns address
Description: The GVNS Address name.
Format: String
Example: GVNSADDR="6449393404"

VDDIADDR
Syntax: VDDIADDR=vddi address
Description: The VDDI Address.
Format: String
Example: VDDIADDR="6449393404"

COMMENTS
Syntax: COMMENTS=text
Description: Comment field.
Format: String
Example: COMMENTS="This is a comment"

TARIFFNAME
Syntax: TARIFFNAME=tariff name
Description: Default ACS tariff name to use.
Format: String
Note: Matches ACS_TARIFF_CODE
Example: TARIFFNAME="TR1"

Optional parameters

This command accepts the following optional parameters.

TAG
Syntax: \( \text{TAG}=tag \)
Description: Profile tag(s) to alter.
Format: Profile tag name(s).
Allowed: Pre-defined name corresponding to PROFILE_TAG_NAME in the ACS_PROFILE_DETAILS table.
Notes: Multiple tags should be separated by the pipe symbol '}'.
Example: TAG=LANGUAGE

VALUE
Syntax: \( \text{VALUE}=val \)
Description: The value of the tag(s).
Format: Profile tag value(s).
The VALUE should match the type of the TAG specified, as defined in the ACS_PROFILE_DETAILS table.
If.. VALUE format is...
DATE "YYYYMMDDHHMMSS"
BOOLEAN "T" (true) or "F" (false)
INTEGER a decimal integer, maximum 4 bytes.
BYTE a signed single byte as a decimal integer (-128 to 127).
PREFIX or OPREFIX, the prefix tree data should be specified separated by the colon character.
To specify a colon in the data, prefix it with a backslash (\:). To specify a backslash, use two backslashes together (\\). A single backslash will result in a badly formatted parameter error code 68. The maximum number of characters or digits for a single value is 255.
If OPREFIX, the value data should be in the desired order.
STRING free-form text.
NSTRING limited to the digits 0 to 9
Notes: Multiple values should be separated by the pipe symbol '}' and be in the same order as for TAG.
Example: VALUE=8

Logic and constraints

- At least one optional parameter should be specified.
• If specified, NETNAME must exist. It is used in conjunction with STNNAME and PHYSADDR to determine a unique station.
• Either or both STNNAME and PHYSADDR must be specified, exist, and define a unique station.
• NETNAME should exist in vpn_network.name
• PHYSADDR must exist in vpn_network_physical_range table.
• GVNSADDR must exist in vpn_network_gvns_range table.
• VDDIADDR must exist in vpn_network_vddi_range table.
• TARIFFNAME should exist in the acs_tariff table.
• TAG is a pre-defined name corresponding to PROFILE_TAG_NAME in the ACS_PROFILE DETAILS table.
• To specify more than one tag to update, the TAG parameter should contain the names of the tags separated by pipe symbols. The VALUE parameter should contain the values separated by pipe symbols in the same order as for TAG.
• The TAG and VALUE parameters must have the same number of items.
• To delete a TAG value, the TAG and VALUE should be specified with an empty VALUE. e.g. “TAG=to_delete,VALUE=”, or “TAG=set_1|to_delete|set_2,VALUE=value_1||value_2”

Success return

VPNST1=CHG:ACK

Error codes

Error codes: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 17, 18, 19, 20, 21, 22, 23.
See PI Command Errors (on page 70) for a description of error codes.

Delete a VPN Station

Name

VPNST1=DEL

Description

Deletes a VPN station.

Required parameters

This command has no required parameters.

Constraint required parameters

This command accepts the following constraint required parameter.

PHYSADDR

Syntax: PHYSADDR=msisdn
Description: The Physical Address, usually real MSISDN.
Format: MSISDN number.
Example: PHYSADDR=6494111111
STNNAME

Syntax: STNNAME=station name
Description: The name of VPN Station. (Extension number field in VPN Screen).
Format: Extension number.
Example: STNNAME=123

Optional parameter
This command accepts the following optional parameter.

NETNAME

Syntax: NETNAME=network name
Description: The name of the VPN Network.
Format: String
Example: NETNAME="Net1"

Logic and constraints

- If specified, NETNAME must exist. It is used in conjunction with STNNAME and PHYSADDR to
determine a unique station.
- Either or both STNNAME and PHYSADDR must be specified, exist, and define a unique station for
a single station to be deleted.
- No optional parameters specified will delete all stations for the specified Network in NETNAME.

Success return

VPNST1=DEL:ACK

Error codes

Error codes: 1, 17, 19, 20.
See PI Command Errors (on page 70) for a description of error codes.

Query a VPN Station

Name

VPNST1=QRY

Description
Queries a VPN station's details.

Required parameters
This command has no required parameters.

Constraint required parameters
This command accepts the following constraint required parameter.
STNNAME
Syntax:  STNNAME=station name
Description:  The name of VPN Station.  (Extension number field in VPN Screen).
Format:  Extension number.
Example:  STNNAME=123

PHYSADDR
Syntax:  PHYSADDR=msisdn
Description:  The Physical Address, usually real MSISDN.
Format:  MSISDN number.
Example:  PHYSADDR=6494111111

Optional parameters
This command accepts the following optional parameters.

NETNAME
Syntax:  NETNAME=network name
Description:  The name of the VPN Network.
Format:  String
Example:  NETNAME="Net1"

LISTTYPE
Syntax:  LISTTYPE=type
Description:  The type of list to return.
Allowed:  Valid values:
  •  GROUP
  •  BASIC
  •  ALL
Default:  GROUP
Example:  LISTTYPE=GROUP

PHYSADDR
Syntax:  PHYSADDRMASK=pref
Description:  The Prefix to search for MSISDNs (PHYSADDR list).
Format:  MSISDN number.
Example:  PHYSADDRMASK=64941

TAG
Syntax:  TAG=tag
Description:  Profile tag(s) to alter.
Format:  Profile tag name(s).
Allowed:  Pre-defined name corresponding to PROFILE_TAG_NAME in the ACS_PROFILE_DETAILS table.
Notes:  Multiple tags should be separated by the pipe symbol ‘|’.
Example:  TAG=LANGUAGE
Logic and constraints

- One or both of STNNAME or PHYSADDR must be specified.
- If PHYSADDRMASK is specified:
  - STNNAME must also be specified.
  - LISTTYPE must be specified as BASIC.
- LISTTYPE = BASIC can only be used if PHYSADDRMASK is specified.
- TAG is a pre-defined name corresponding to PROFILE_TAG_NAME in the ACS_PROFILE_DETAILS table.
- To specify more than one tag to query, the tag parameter should contain the names of the tags separated by pipe symbols.
  - DATE values are returned as YYYYMMDDHHMSS
  - BOOLEAN values are returned as “T” (true) or “F” (false)
  - INTEGER values are returned as the decimal integer unaltered
  - BYTE values are returned as a decimal integer
  - PREFIX and OPREFIX values are returned colon separated. Colons in the data are prefixed with a backslash (\:). Backslashes are returned as two backslashes together (\\)
  - STRING and NSTRING values are returned unaltered

Success return

VPNST1=QRY:ACK[:result of query returned;]
The result may contain one or more of the following comma separated values. There may be more than one of each tag. Records always start with STNNAME:

For LISTTYPE=

- BASIC:
  - STNNAME=station name
  - NETNAME=network name
  - tag=value
- GROUP:
  - STNNAME=station name
  - NETNAME=network name
  - PHYSADDR=physical address (MSISDN)
  - tag=value
- ALL:
  - STNNAME=station name
  - NETNAME=network name
  - PHYSADDR=physical address (MSISDN)
  - VDDADDR=vddi address
  - GVNSADDR=gvns address
  - COMMENTS=comment
  - TARIFFNAME=tariff name
  - OFFNET=Y or N
  - INOFFNET=Y or N
  - WHITELIST=whitelist
  - tag=value

Error codes

Error codes: 1, 2, 3, 4, 5, 19, 20, 21.

See PI Command Errors (on page 70) for a description of error codes.
Overview

Introduction

This chapter explains the VPN PI commands for provisioning VPN Station White Lists.

In this chapter

This chapter contains the following topics.

Add a VPN Station White List 37
Change a VPN Station Restriction Details 38
Delete a VPN Station White List 40
Query a Station White List 42

Add a VPN Station White List

Name

VPNST2=ADD

Description

Adds a new VPN Station whitelist definition.

Required parameters

This command has no required parameters.

Constraint required parameters

This command accepts the following constraint required parameter.

STNNAME

Syntax: STNAME=station name
Description: The name of VPN Station. (Extension number field in VPN Screen).
Format: Extension number.
Example: STNNAME=123

PHYSADDR

Syntax: PHYSADDR=msisdn
Description: The Physical Address, usually real MSISDN.
Format: MSISDN number.
Example: PHYSADDR=6494111111
Optional parameters

This command accepts the following optional parameters.

**NETNAME**

Syntax: \texttt{NETNAME=network \space name}

Description: The name of the VPN Network.

Format: String

Example: \texttt{NETNAME="Net1"}

**WHITELIST**

Syntax: \texttt{WHITELIST=whitelist}

Description: The numbers to add to, or delete from, the white list.

Format: Single number, or colon separated list of numbers.

Example: \texttt{WHITELIST=6449393404:6449393764}

Logic and constraints

- If specified, NETNAME must exist. It is used in conjunction with STNNAME and PHYSADDR to determine a unique station.
- Either or both STNNAME and PHYSADDR must be specified, exist, and define a unique station.
- WHITELIST number must not already exist for the defined STNNAME and PHYSADDR pair.
- WHITELIST should be a single number, or a colon separated list of valid white list numbers.
- If white list is not active, then black list will be deleted (including numbers), and the white list made active with the number(s) specified by WHITELIST.

Success return

\texttt{VPNST2=ADD:ACK:number \space of \space whitelist \space numbers \space added;}

Error codes

Error codes: 1, 3, 7, 17, 19, 20.

See *PI Command Errors* (on page 70) for a description of error codes.

Change a VPN Station Restriction Details

**Name**

VPNST2=CHG

**Description**

Changes the details associated with a VPN station restrictions.

**Required parameters**

This command has no required parameters.
Constraint required parameters

This command accepts the following constraint required parameter.

STNNAME

Syntax: \texttt{STNNAME=station name}

Description: The name of VPN Station. (Extension number field in VPN Screen).

Format: Extension number.

Example: \texttt{STNNAME=123}

PHYSADDR

Syntax: \texttt{PHYSADDR=msisdn}

Description: The Physical Address, usually real MSISDN.

Format: MSISDN number.

Example: \texttt{PHYSADDR=6494111111}

OFFNET

Syntax: \texttt{OFFNET=Y|N}

Description: Allow or deny off net calls.

Format: Y, or N.

Default: Y

Example: \texttt{OFFNET=Y}

INOFFNET

Syntax: \texttt{INOFFNET=Y|N}

Description: Allow or deny all incoming calls from off net.

Format: Y, or N.

Example: \texttt{INOFFNET=N}

WHITELIST

Syntax: \texttt{WHITELIST=whitelist}

Description: The existing value in the white list.

Format: Single number.

Example: \texttt{WHITELIST=6449393404}

NEW_OFFNET

Syntax: \texttt{NEW_OFFNET=Y|N}

Description: New value for allow/deny off net calls.

Format: Y, or N.

Example: \texttt{NEW_OFFNET=Y}

NEW_INOFFNET

Syntax: \texttt{INOFFNET=Y|N}

Description: New value for Allow or deny all incoming calls from off net.

Format: Y, or N.

Example: \texttt{INOFFNET=N}
NEW_WHITELIST

Syntax: \texttt{NEW\_WHITELIST=tname}

Description: New value for the white list, replacing old value.

Format: Single number.

Example: \texttt{NEW\_WHITELIST=6449393403}

Optional parameters

This command accepts the following optional parameters.

NETNAME

Syntax: \texttt{NETNAME=network \textit{name}}

Description: The name of the VPN Network.

Format: String

Example: \texttt{NETNAME=\textquote{Net1}}

Logic and constraints

- If specified, NETNAME must exist. It is used in conjunction with STNNAME and PHYSADDR to determine a unique station.
- Either or both STNNAME and PHYSADDR must be specified, exist, and define a unique station.
- At least one of OFFNET, INOFFNET or WHITELIST should be specified.
- If OFFNET is specified, NEW\_OFFNET must also be specified.
- If INOFFNET is specified, NEW\_INOFFNET must also be specified.
- If WHITELIST is specified, NEW\_WHITELIST must also be specified.

Success return

\texttt{VPNST2=CHG:ACK}

Error codes

Error codes: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 17, 18, 19, 20.

See \textit{PI Command Errors} (on page 70) for a description of error codes.

Delete a VPN Station White List

Name

\texttt{VPNST2=DEL}

Description

Deletes a VPN station white list number.

Required parameters

This command has no required parameters.
Constraint required parameters

This command accepts the following constraint required parameter.

STNNAME

Syntax: STNNAME=station name
Description: The name of VPN Station. (Extension number field in VPN Screen).
Format: Extension number.
Example: STNNAME=123

PHYSADDR

Syntax: PHYSADDR=msisdn
Description: The Physical Address, usually real MSISDN.
Format: MSISDN number.
Example: PHYSADDR=6494111111

Optional parameters

This command accepts the following optional parameters.

NETNAME

Syntax: NETNAME=network name
Description: The name of the VPN Network.
Format: String
Example: NETNAME="Net1"

WHITELIST

Syntax: WHITELIST=whitelist
Description: The numbers to add to, or delete from, the white list.
Format: Single number, or colon separated list of numbers.
Example: WHITELIST=6449393404:6449393764

Logic and constraints

- If specified, NETNAME must exist. It is used in conjuction with STNNAME and PHYSADDR to determine a unique station.
- Either or both STNNAME and PHYSADDR must be specified, exist, and define a unique station
- Number(s) in WHITELIST must exist in a PHYSADDR range for the Network in NETNAME.
- Either a single number or colon seperated list of numbers must be specified for WHITELIST.

Success return

VPNST2=DEL:ACK[:number of whitelist numbers deleted];

Error codes

Error codes: 1, 3, 7, 17, 19, 20.
See PI Command Errors (on page 70) for a description of error codes.
Query a Station White List

Name
VPNST2=QRY

Description
Query a white list number for a specified VPN Station.

Required parameters
This command has no required parameters.

Constraint required parameters
This command accepts the following constraint required parameter.

STNNAME
Syntax: STNNAME=station name
Description: The name of VPN Station. (Extension number field in VPN Screen).
Format: Extension number.
Example: STNNAME=123

PHYSADDR
Syntax: PHYSADDR=msisdn
Description: The Physical Address, usually real MSISDN.
Format: MSISDN number.
Example: PHYSADDR=6494111111

Optional parameter
This command accepts the following optional parameter.

NETNAME
Syntax: NETNAME=network name
Description: The name of the VPN Network.
Format: String
Example: NETNAME="Net1"

Logic and constraints
- If specified, NETNAME must exist. It is used in conjunction with STNNAME and PHYSADDR to determine a unique station.
- Either or both STNNAME and PHYSADDR must be specified, exist, and define a unique station.

Success return

VPNST2=QRY:ACK[:result list];
- result list contains one or more of the following:
- OFFNET=Y or N
- INOFFNET=Y or N
- WHITELIST=number1:number2:...

Error codes

Error codes: 1, 7, 17, 19, 20.

See *PI Command Errors* (on page 70) for a description of error codes.
Overview

Introduction
This chapter explains the VPN PI commands for provisioning VPN Station Hunting Lists.

In this chapter
This chapter contains the following topics.

Add a VPN Station Hunting List  
Change a VPN Station Hunting List  
Delete a VPN Station Hunting List  
Query a VPN Station Hunting List

Add a VPN Station Hunting List

Name
VPNST5=ADD

Description
Adds a new VPN Station hunting list.

Required parameters
Here are the required parameters for this command.

HUNTLIST
Syntax: HUNTLIST=\text{name}  
Description: The name of the Hunt list.  
Format: String  
Example: HUNTLIST="HL1"

RANK
Syntax: RANK=\text{order}  
Description: The order to apply entries, in ascending order.  
Format: Number  
Example: RANK=1

TERMNUM
Syntax: TERMNUM=\text{num}  
Description: The terminating number.
Chapter 7

Format: Terminating number.
Example: TERMNUM=649393377

TIMEOUT

Syntax: TIMEOUT=num
Description: The timeout.
Format: Number of seconds. Integer value between 1 and 99.
Example: TIMEOUT=5

Constraint required parameters

This command accepts the following constraint required parameter.

STNNAME

Syntax: STNNAME=station name
Description: The name of VPN Station. (Extension number field in VPN Screen).
Format: Extension number.
Example: STNNAME=123

PHYSADDR

Syntax: PHYSADDR=msisdn
Description: The Physical Address, usually real MSISDN.
Format: MSISDN number.
Example: PHYSADDR=6494111111

Optional parameters

This command accepts the following optional parameters.

NETNAME

Syntax: NETNAME=network name
Description: The name of the VPN Network.
Format: String
Example: NETNAME="Net1"

ONNET

Syntax: ONNET=Y|N
Description: Is the terminating number an on-net number?
Format: Y, or N
Default: N
Example: ONNET=Y

Logic and constraints

- If specified, NETNAME must exist. It is used in conjunction with STNNAME and PHYSADDR to determine a unique station.
- Either or both STNNAME and PHYSADDR must be specified, exist, and define a unique station.
- If HUNTLIST does:
• not already exist, it will be created.
• exist, the specified information will be added to that HUNTLIST.
• RANK must either exist or be number of items +1 (the last entry in the list).
• If RANK exists the new value will be inserted into the list.
• If ONNET=Y then TERMNUM must be a valid station address for the network.

Success return

VPNST5=ADD:ACK;

Error codes

Error codes: 1, 3, 4, 5, 6, 9, 10, 17, 19, 20.
See PI Command Errors (on page 70) for a description of error codes.

Change a VPN Station Hunting List

Name

VPNST5=CHG

Description

Changes the details associated with a VPN Station Hunting List.

Required parameter

Here is the required parameter for this command.

HUNTLIST

Syntax: HUNTLIST= name
Description: The name of the Hunt list.
Format: String
Example: HUNTLIST= "HL1"

Constraint required parameters

This command accepts the following constraint required parameter.

STNNAME

Syntax: STNNAME= station name
Description: The name of VPN Station. (Extension number field in VPN Screen).
Format: Extension number.
Example: STNNAME= 123

PHYSADDR

Syntax: PHYSADDR= msisdn
Description: The Physical Address, usually real MSISDN.
Format: MSISDN number.

...
Example: PHYSADDR=6494111111

RANK
Syntax: RANK=order
Description: The order to apply entries, in ascending order.
Format: Number
Example: RANK=1

TIMEOUT
Syntax: TIMEOUT=num
Description: The timeout.
Format: Number of seconds. Integer value between 1 and 99.
Example: TIMEOUT=5

ONNET
Syntax: ONNET=Y|N
Description: Is the terminating number an on-net number?
Format: Y, or N
Default: N
Example: ONNET=Y

Optional parameters
This command accepts the following optional parameters.

NETNAME
Syntax: NETNAME=network name
Description: The name of the VPN Network.
Format: String
Example: NETNAME="Net1"

RANK
Syntax: NEW_RANK=order
Description: The order to apply entries, in ascending order.
Format: Number
Example: NEW_RANK=3

TIMEOUT
Syntax: NEW_TIMEOUT=num
Description: The timeout.
Format: Number of seconds. Integer value between 1 and 99.
Example: NEW_TIMEOUT=4

ONNET
Syntax: NEW_ONNET=Y|N
Description: Is the terminating number an on-net number?
Format: Y, or N
Default: N
Example: NEW_ONNET=N

Logic and constraints

- The HUNTLIST must already exist.
- If specified, NETNAME must exist. It is used in conjunction with STNNAME and PHYSADDR to determine a unique station.
- Either or both STNNAME and PHYSADDR must be specified, exist, and define a unique station.
- If NEW_RANK is specified, then RANK must be specified and exist.
- If NEW_TIMEOUT is specified, then TIMEOUT must be specified and exist.
- If NEW_ONNET is specified, then ONNET must be specified and exist.
- NEW_ONNET must be Y or N.
- If NEW_ONNET is Y, all defined termination numbers must be VPN numbers for this network.

Success return

VPNST5=CHG:ACK;

Error codes

Error codes: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 17, 18, 19, 20.
See PI Command Errors (on page 70) for a description of error codes.

Delete a VPN Station Hunting List

Name

VPNST5=DEL

Description

Deletes the details associated with a VPN Station Hunting List.

Required parameter

Here is the required parameter for this command.

HUNTLIST

Syntax: HUNTLIST=name
Description: The name of the Hunt list.
Format: String
Example: HUNTLIST="HL1"

Constraint required parameters

This command accepts the following constraint required parameter.
STNNAME
Syntax: STNNAME=station name
Description: The name of VPN Station. (Extension number field in VPN Screen).
Format: Extension number.
Example: STNNAME=123

PHYSADDR
Syntax: PHYSADDR=msisdn
Description: The Physical Address, usually real MSISDN.
Format: MSISDN number.
Example: PHYSADDR=649411111

TERMNUM
Syntax: TERMNUM=num
Description: The terminating number.
Format: Terminating number.
Example: TERMNUM=649393377

Optional parameter
This command accepts the following optional parameter.

NETNAME
Syntax: NETNAME=network name
Description: The name of the VPN Network.
Format: String
Example: NETNAME="Net1"

Logic and constraints
- The HUNTLIST must already exist.
- If specified, NETNAME must exist. It is used in conjunction with STNNAME and PHYSADDR to determine a unique station.
- Either or both STNNAME and PHYSADDR must be specified, exist, and define a unique station
- If deleting a Hunt List entry then STNNAME/PHYSADDR, HUNTLIST and TERMNUM must be specified.

Success return
VPNST5=DEL:ACK;

Error codes
Error codes: 1, 2, 3, 4, 10, 17, 19, 20.
See PI Command Errors (on page 70) for a description of error codes.
Query a VPN Station Hunting List

Name
VPNST5=QRY

Description
Query a VPN station’s Hunting List details.

Required parameter
Here is the required parameter for this command.

HUNTLIST
Syntax: HUNTLIST=name
Description: The name of the Hunt list.
Format: String
Example: HUNTLIST="HL1"

Constraint required parameters
This command accepts the following constraint required parameter.

STNNAME
Syntax: STNNAME=station name
Description: The name of VPN Station. (Extension number field in VPN Screen).
Format: Extension number.
Example: STNNAME=123

PHYSADDR
Syntax: PHYSADDR=msisdn
Description: The Physical Address, usually real MSISDN.
Format: MSISDN number.
Example: PHYSADDR=6494111111

Optional parameter
This command accepts the following optional parameter.

NETNAME
Syntax: NETNAME=network name
Description: The name of the VPN Network.
Format: String
Example: NETNAME="Net1"

Logic and constraints
- The HUNTLIST must already exist.
- If specified, NETNAME must exist. It is used in conjunction with STNNAME and PHYSADDR to determine a unique station.
- Either or both STNNAME and PHYSADDR must be specified, exist, and define a unique station.

**Success return**

```
VPNST5=QRY:ACK:RANK=rank 1:...,TERMNUM=terminating number 1:...,TIMEOUT=timeout 1:...,ONNET=Y/N:...;
```

Each parameter can have a colon separated list of values.

**Error codes**

Error codes: 1, 2, 10, 17, 19, 20.

See *PI Command Errors* (on page 70) for a description of error codes.
Overview

Introduction

This chapter explains the VPN PI commands for provisioning VPN Station Hunting List Plans.

In this chapter

This chapter contains the following topics.

Add a VPN Station Hunting List Plan 53
Change a VPN Station Hunting List Plan 56
Delete a VPN Station Hunting List Plan 60
Query a VPN Station Hunting List Plan 62

Add a VPN Station Hunting List Plan

Name

VPNST6=ADD

Description

Adds a new VPN Station hunt list plan to an existing hunt list definition.

Required parameters

Here are the required parameters for this command.

HUNTLIST

Syntax: HUNTLIST= name
Description: The name of the Hunt list.
Format: String
Example: HUNTLIST="HL1"

TIMERANGE

Syntax: TIMERANGE= type
Description: The time range type.
Format: Type is:
  - TOD (Time of day)
  - DOW (Day of week)
  - DOY (Day of year)
Example: TIMERANGE=TOD
STARTTIME

Syntax: \texttt{STARTTIME=\textit{time}}

Description: The start time to use HUNTLIST.

Format: If \texttt{TIMERANGE=}

\begin{itemize}
  \item \texttt{TOD: HH:MM}
  \item \texttt{DOW: DDD:HH:MM}
  \item \texttt{DOY: MON:DD:HH:MM}
\end{itemize}

\texttt{HH = hours 00 to 23}
\texttt{MM = minutes 00 to 59}
\texttt{DDD = day prefix SUN,MON,TUE,WED,THU,FRI,SAT}
\texttt{DD = day of month 01 to 31}
\texttt{MON = month prefix JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC}

Example: \texttt{STARTTIME=23:11}

ENDTIME

Syntax: \texttt{ENDTIME=\textit{time}}

Description: The end time to use HUNTLIST.

Format: If \texttt{TIMERANGE=}

\begin{itemize}
  \item \texttt{TOD: HH:MM}
  \item \texttt{DOW: DDD:HH:MM}
  \item \texttt{DOY: MON:DD:HH:MM}
\end{itemize}

\texttt{HH = hours 00 to 23}
\texttt{MM = minutes 00 to 59}
\texttt{DDD = day prefix SUN,MON,TUE,WED,THU,FRI,SAT}
\texttt{DD = day of month 01 to 31}
\texttt{MON = month prefix JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC}

Example: \texttt{ENDTIME=08:00}

\textbf{Constraint required parameters}

This command accepts the following constraint required parameter.

\textbf{STNNAME}

Syntax: \texttt{STNNAME=\textit{station name}}

Description: The name of VPN Station. (Extension number field in VPN Screen).

Format: Extension number.

Example: \texttt{STNNAME=123}

\textbf{PHYSADDR}

Syntax: \texttt{PHYSADDR=\textit{msisdn}}

Description: The Physical Address, usually real MSISDN.

Format: MSISDN number.

Example: \texttt{PHYSADDR=649411111}
Optional parameters

This command accepts the following optional parameters.

NETNAME

Syntax: \texttt{NETNAME=network name}

Description: The name of the VPN Network.

Format: String

Example: \texttt{NETNAME="Net1"}

LOCATION

Syntax: \texttt{LOCATION=loc}

Description: Location of Calling number to apply hunt list plan.

Format: \texttt{MccMncLacCellid}

where:
- \texttt{Mcc}: A 3-digit country code
- \texttt{Mnc}: A 2 or 3-digit network code (starting with 0)
- \texttt{Lac}: A 5-digit Location code with decimal value (starting with 0), and
- \texttt{Cellid}: A 5-digit Cell ID with decimal value (starting with 0).

Example: \texttt{LOCATION="530020012304567"}

CLI

Syntax: \texttt{CLI=msisdn}

Description: CLI, or range of CLIs to apply hunt list plan.

Format: MSISDN number, or colon separated list of MSISDN numbers.

Example: \texttt{CLI=649049393461}

Logic and constraints

- The HUNTLIST must already exist.
- If specified, NETNAME must exist. It is used in conjunction with STNNAME and PHYSADDR to determine a unique station.
- Either or both STNNAME and PHYSADDR must be specified, exist, and define a unique station.
- When the first VPNST6=ADD command is used the specified HUNTLIST will become the default for the station.
- The default of ‘Hunt Unconditionally’ will be set.
- TIMERANGE must be one of TOD, DOW, DOY
- If TOD is specified STARTTIME and ENDTIME must be in the format HH:MM.
- If DOW is specified STARTTIME and ENDTIME must be in the format DDD:HH:MM where DDD is MON, TUE etc.
- If DOY is specified STARTTIME and ENDTIME must be in the format DD:MON:HH:MM where DD is 01-31, MON is JAN, FEB etc.

Success return

\texttt{VPNST6=ADD:ACK;}
Error codes

Error codes: 1, 2, 4, 5, 6, 7, 8, 17, 19, 20.

See PI Command Errors (on page 70) for a description of error codes.

Change a VPN Station Hunting List Plan

Name

VPNST6=CHG

Description

Changes the details associated with a VPN station Hunt Plan.

Required parameters

This command has no required parameters.

Constraint required parameters

This command accepts the following constraint required parameter.

STNNAME

Syntax: STNNAME=station name

Description: The name of VPN Station.  (Extension number field in VPN Screen).

Format: Extension number.

Example: STNNAME=123

PHYSADDR

Syntax: PHYSADDR=msisdn

Description: The Physical Address, usually real MSISDN.

Format: MSISDN number.

Example: PHYSADDR=6494111111

LOCATION

Syntax: LOCATION=loc

Description: Location of Calling number to apply hunt list plan.

Format: MccMncLacCellid

where:

- Mcc: A 3-digit country code
- Mnc: A 2 or 3-digit network code (starting with 0)
- Lac: A 5-digit Location code with decimal value (starting with 0), and
- Cellid: A 5-digit Cell ID with decimal value (starting with 0).

Example: LOCATION="530020012304567"

CLI

Syntax: CLI=msisdn

Description: CLI, or range of CLIs to apply hunt list plan.
Format: MSISDN number, or colon separated list of MSISDN numbers.
Example: CLI=649049393461

HUNTLIST

Syntax: HUNTLIST=name
Description: The name of the Hunt list.
Format: String
Example: HUNTLIST="HL1"

TIMERANGE

Syntax: TIMERANGE=type
Description: The time range type.
Format: Type is:
- TOD (Time of day)
- DOW (Day of week)
- DOY (Day of year)
Example: TIMERANGE=TOD

STARTTIME

Syntax: STARTTIME=time
Description: The start time to use HUNTLIST.
Format: If TIMERANGE=
- TOD: HH:MM
- DOW: DDD:HH:MM
- DOY: MON:DD:HH:MM

HH = hours 00 to 23
MM = minutes 00 to 59
DDD = day prefix SUN,MON,TUE,WED,THU,FRI,SAT
DD = day of month 01 to 31
MON = month prefix JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC
Example: STARTTIME=23:11

ENDTIME

Syntax: ENDTIME=time
Description: The end time to use HUNTLIST.
Format: If TIMERANGE=
   - TOD: HH:MM
   - DOW: DDD:HH:MM
   - DOY: MON:DD:HH:MM
HH = hours 00 to 23
MM = minutes 00 to 59
DDD = day prefix SUN, MON, TUE, WED, THU, FRI, SAT
DD = day of month 01 to 31
MON = month prefix JAN, FEB, MAR, APR, MAY, JUN,
      JUL, AUG, SEP, OCT, NOV, DEC

Example:     ENDTIME=08:00

Optional parameters

This command accepts the following optional parameters.

NETNAME

Syntax: NETNAME=network name
Description: The name of the VPN Network.
Format: String
Example: NETNAME="Net1"

NEW_LOCATION

Syntax: NEW_LOCATION="loc"
Description: Location of Calling number to apply hunt list plan.
Format: String
Example: NEW_LOCATION="Ipswich office"

NEW_CLI

Syntax: NEW_CLI=msisdn
Description: CLI, or range of CLIs to apply hunt list plan.
Format: MSISDN number, or colon separated list of MSISDN numbers.
Example: NEW_CLI=

NEW_HUNTLIST

Syntax: NEW_HUNTLIST=name
Description: The name of the Hunt list.
Format: String
Example: NEW_HUNTLIST="HL2"

NEW_TIMERANGE

Syntax: NEW_TIMERANGE=type
Description: The time range type.
Format: Type is:
   - TOD (Time of day)
   - DOW (Day of week)
   - DOY (Day of year)
Example: \texttt{NEW\_TIMERANGE=TOD}

NEW\_STARTTIME

Syntax: \texttt{NEW\_STARTTIME=\texttt{time}}
Description: The start time to use HUNTLIST.
Format: If \texttt{TIMERANGE}=
  - \texttt{TOD: HH:MM}
  - \texttt{DOW: DDD:HH:MM}
  - \texttt{DOY: MON:DD:HH:MM}

  \begin{itemize}
  \item \texttt{HH} = hours 00 to 23
  \item \texttt{MM} = minutes 00 to 59
  \item \texttt{DDD} = day prefix SUN, MON, TUE, WED, THU, FRI, SAT
  \item \texttt{DD} = day of month 01 to 31
  \item \texttt{MON} = month prefix JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC
  \end{itemize}

Example: \texttt{NEW\_STARTTIME=22:00}

NEW\_ENDTIME

Syntax: \texttt{NEW\_ENDTIME=\texttt{time}}
Description: The end time to use HUNTLIST.
Format: If \texttt{TIMERANGE}=
  - \texttt{TOD: HH:MM}
  - \texttt{DOW: DDD:HH:MM}
  - \texttt{DOY: MON:DD:HH:MM}

  \begin{itemize}
  \item \texttt{HH} = hours 00 to 23
  \item \texttt{MM} = minutes 00 to 59
  \item \texttt{DDD} = day prefix SUN, MON, TUE, WED, THU, FRI, SAT
  \item \texttt{DD} = day of month 01 to 31
  \item \texttt{MON} = month prefix JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC
  \end{itemize}

Example: \texttt{NEW\_ENDTIME=08:00}

Logic and constraints

- The HUNTLIST must already exist.
- If specified, NETNAME must exist. It is used in conjunction with STNNAME and PHYSADDR to determine a unique station.
- Either or both STNNAME and PHYSADDR must be specified, exist, and define a unique station.
- \texttt{TOD, DOW, DOY} and \texttt{NEW\_TIMERANGE} must be one of TOD, DOW, DOY.
- If \texttt{TOD} is specified \texttt{STARTTIME, ENDTIME NEW\_STARTTIME, NEW\_ENDTIME} must be in the format HH:MM.
- If \texttt{DOW} is specified \texttt{STARTTIME, ENDTIME NEW\_STARTTIME, NEW\_ENDTIME} must be in the format DDD:HH:MM where DDD is MON, TUE etc.
- If \texttt{DOY} is specified \texttt{STARTTIME, ENDTIME NEW\_STARTTIME, NEW\_ENDTIME} must be in the format DD:MON:HH:MM where DD is 01-31, MON is JAN, FEB etc.
- If \texttt{NEW\_LOCATION} is specified then LOCATION must be specified and exist.
Chapter 8

- If NEW_CLI is specified then CLI must be specified
- If NEW_HUNTLIST is specified then HUNTLIST must be specified
- If NEW_STARTTIME is specified then STARTTIME must be specified
- If NEW_ENDTIME is specified then ENDTIME must be specified
- The resulting combination of LOCATION, CLI, HUNTLIST, STARTTIME and ENDTIME exists and must be a unique match

Success return

VPNST6=CHG:ACK;

Error codes

Error codes: 1, 2, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20.
See PI Command Errors (on page 70) for a description of error codes.

Delete a VPN Station Hunting List Plan

Name

VPNST6=DEL

Description

Delete details of a VPN Station hunting plan.

Required parameters

This command has no required parameters.

Constraint required parameters

This command accepts the following constraint required parameter.

STNNNAME

Syntax: STNNNAME=station name
Description: The name of VPN Station. (Extension number field in VPN Screen).
Format: Extension number.
Example: STNNNAME=123

PHYSADDR

Syntax: PHYSADDR=msisdn
Description: The Physical Address, usually real MSISDN.
Format: MSISDN number.
Example: PHYSADDR=6494111111

LOCATION

Syntax: LOCATION=loc
Description: Location of Calling number to apply hunt list plan.
Chapter 8

Chapter 8, VPN Hunting List Plan

Format: $MccMncLacCellid$

where:
- $Mcc$: A 3-digit country code
- $Mnc$: A 2 or 3-digit network code (starting with 0)
- $Lac$: A 5-digit Location code with decimal value (starting with 0), and
- $Cellid$: A 5-digit Cell ID with decimal value (starting with 0).

Example: LOCATION="530020012304567"

CLI

Syntax: CLI=$msisdn$

Description: CLI, or range of CLIs to apply hunt list plan.

Format: MSISDN number, or colon separated list of MSISDN numbers.

Example: CLI=649049393461

TIMERANGE

Syntax: TIMERANGE=$type$

Description: The time range type.

Format: Type is:
- TOD (Time of day)
- DOW (Day of week)
- DOY (Day of year)

Example: TIMERANGE=TOD

STARTTIME

Syntax: STARTTIME=$time$

Description: The start time to use HUNTLIST.

Format: If TIMERANGE=
- TOD: HH:MM
- DOW: DDD:HH:MM
- DOY: MON:DD:HH:MM

HH = hours 00 to 23
MM = minutes 00 to 59
DDD = day prefix SUN,MON,TUE,WED,THU,FRI,SAT
DD = day of month 01 to 31
MON = month prefix JAN, FEB, MAR, APR, MAY, JUN,
      JUL, AUG, SEP, OCT, NOV, DEC

Example: STARTTIME=23:11

ENDTIME

Syntax: ENDTIME=$time$

Description: The end time to use HUNTLIST.
Chapter 8

NCC VPN Provisioning Interface Commands

Format:
If TIMERANGE=
  • TOD: HH:MM
  • DOW: DDD:HH:MM
  • DOY: MON:DD:HH:MM
HH = hours 00 to 23
MM = minutes 00 to 59
DDD = day prefix SUN,MON,TUE,WED,THU,FRI,SAT
DD = day of month 01 to 31
MON = month prefix JAN, FEB, MAR, APR, MAY, JUN,
      JUL, AUG, SEP, OCT, NOV, DEC

Example: ENDTIME=08:00

Optional parameter

This command accepts the following optional parameter.

NETNAME

Syntax: NETNAME=network name

Description: The name of the VPN Network.

Format: String

Example: NETNAME="Net1"

Logic and constraints

• If specified, NETNAME must exist. It is used in conjunction with STNNAME and PHYSADDR to determine a unique station.
• Either or both STNNAME and PHYSADDR must be specified, exist, and define a unique station.
• If deleting a complete Hunt Plan then just the STNNAME and/or PHYSADDR are required.
• If deleting a Hunt Plan entry then at least one of the rest of optional parameters must be specified.
• If TOD is specified STARTTIME and ENDTIME must be in the format HH:MM.
• If DOW is specified STARTTIME and ENDTIME must be in the format DDD:HH:MM where DDD is MON, TUE etc.
• If DOY is specified STARTTIME and ENDTIME must be in the format DD:MON:HH:MM where DD is 01-31, MON is JAN, FEB etc.

Success return

VPNST6=DEL:ACK;

Error codes

Error codes: 1, 4, 5, 6, 7, 13, 15, 16, 17, 19, 20.

See PI Command Errors (on page 70) for a description of error codes.

Query a VPN Station Hunting List Plan

Name

VPNST6=QRY
Description
Query a VPN Station’s Hunting Plan details.

Required parameters
This command has no required parameters.

Constraint required parameters
This command accepts the following constraint required parameter.

STNNAME
Syntax: \text{STNNAME}=\text{station name}
Description: The name of VPN Station. (Extension number field in VPN Screen).
Format: Extension number.
Example: STNNAME=123

PHYSADDR
Syntax: \text{PHYSADDR}=\text{msisdn}
Description: The Physical Address, usually real MSISDN.
Format: MSISDN number.
Example: PHYSADDR=6494111111

Optional parameter
This command accepts the following optional parameter.

NETNAME
Syntax: \text{NETNAME}=\text{network name}
Description: The name of the VPN Network.
Format: String
Example: NETNAME="Net1"

Logic and constraints
- If specified, NETNAME must exist. It is used in conjunction with STNNAME and PHYSADDR to determine a unique station.
- Either or both STNNAME and PHYSADDR must be specified, exist, and define a unique station.

Success return
VPNST6=QRY:ACK:hunting plan1|hunting plan 2|...;

For each hunting plan, the following is returned, comma separated:
- LOCATION=\text{location}
- CLI=\text{cli}
- TIMERANGE=\text{timerange type (TOD, DOW, DOY)}
- STARTTIME=\text{start time}
- ENDTIME=\text{end time}
- **HUNTLIST**=*name*
  STARTTIME, ENDTIME are formatted for TIMERANGE as:
  - **TOD:** Format HH:MM
  - **DOW:** Format DDD:HH:MM
  - **DOY:** Format DD:MON:HH:MM
  
  where:
  - DD = day of month 01 to 31
  - DDD = day of week (SUN, MON, TUE, WED, THU, FRI, SAT)
  - MON = short month (JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC)
  - HH = 24 hour clock hours 00 to 23
  - MM = minute 00 to 59

**Error codes**

Error codes: 1, 7, 15, 16, 17, 19, 20.

See *PI Command Errors* (on page 70) for a description of error codes.
Overview

Introduction

This chapter explains the VPN PI commands for provisioning VPN tariffs.

In this chapter

This chapter contains the following topics.

Add a VPN Wide Default Tariff 65
Change the Tariff for all VPN Stations in a Network 66

Add a VPN Wide Default Tariff

Name

VPNCU1=ADD

Description

Adds a new VPN wide default ACS Tariff to use if there is no Network or Station default defined.

Required parameter

Here is the required parameter for this command.

TARIFFNAME

Syntax: TARIFFNAME= tariff name
Description: Default ACS tariff name to use.
Format: String
Note: Matches ACS_TARIFF_CODE
Example: TARIFFNAME="TR1"

Constraint required parameters

There are no constraint required parameters.

Optional parameter

This command accepts the following optional parameter.

PROVIDER

Syntax: PROVIDER=sp
Description: Name of ACS service provider.
Chapter 9

NCC VPN Provisioning Interface Commands

Format: String
Example: PROVIDER="Boss"

Logic and constraints
The following rules apply when using the VPNCU1=ADD command:

- TARIFFNAME must exist.
- If PROVIDER is defined a single Service Provider will be updated, if it is not specified ALL service providers will be updated.
- If a VPN wide default tariff is already defined this will over write the existing setting.

Success return
VPNCU1=ADD:ACK:TARIFFCODE=acs_tariff.tariff_code;

Error codes
Error Codes: 1, 2, 19, 20
See PI Command Errors (on page 70) for a description of error codes.

Change the Tariff for all VPN Stations in a Network

Name
VPNST7=CHG

Description
Changes the ACS tariff for all VPN stations associated with a specified VPN network.

Required parameters
Here are the required parameters for this command.

NAME
Syntax: NAME=\name\nDescription: Name of VPN Network.
Format: String
Example: NAME="VPNNW1"

NEW_TARIFF
Syntax: NEW_TARIFF=\dbname\nDescription: Name of new ACS Tariff for all stations in a network.
Format: String
Example: NEW_TARIFF="TR1"

Constraint required parameters
There are no constraint required parameters.
Optional parameters
There are no optional parameters.

Logic and constraints
- NAME and NEW_TARIFF must exist.

Success return
```
VPNST7=CHG:ACK[:number of stations changed];
```

Error codes
Error codes: 1, 2, 18, 19, 20.
See *PI Command Errors* (on page 70) for a description of error codes.
Overview

Introduction

This chapter explains the error codes for PI commands.

In this chapter

This chapter contains the following topics.

- PI Chassis Errors 69
- PI Command Errors 70

PI Chassis Errors

Format

Command:NACK: error code-error message;

Example: VFNST7=CHG:NACK:91-TIMEOUT

Error list

This table describes the PI Chassis error codes.

<table>
<thead>
<tr>
<th>Code</th>
<th>Message</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>70</td>
<td>TOO MANY SESSIONS</td>
<td>All PI sessions are in use.</td>
</tr>
<tr>
<td>71</td>
<td>LOGON SYNTAX ERROR</td>
<td>The login string was incorrectly formatted.</td>
</tr>
<tr>
<td>72</td>
<td>INVALID LOGON - username, password</td>
<td>Invalid username and/or password</td>
</tr>
<tr>
<td>73</td>
<td>INVALID LOGON - user not allowed on this port</td>
<td>The user attempted to log in to the wrong PI port.</td>
</tr>
<tr>
<td>74</td>
<td>INVALID LOGON - host</td>
<td>The PI client is unknown.</td>
</tr>
<tr>
<td>75</td>
<td>UNKNOWN COMMAND</td>
<td>Client sent an unknown command.</td>
</tr>
<tr>
<td>76</td>
<td>USER DOES NOT HAVE SUFFICIENT SECURITY</td>
<td>The user's security level is less than the command's security level.</td>
</tr>
<tr>
<td>77</td>
<td>SYNSTAMP NOT FOUND</td>
<td>Synstamps are turned on, but the client did not send one.</td>
</tr>
<tr>
<td>78</td>
<td>SYNSTAMP NOT VALID</td>
<td>Synstamps are turned on, but the synstamp sent by the client is invalid.</td>
</tr>
</tbody>
</table>
| 79   | INVALID OR MISSING CHECKSUM                  | Checksums are turned on, but the client is one of the following:  
|      |                                              | • Did not send one  
|      |                                              | • It was invalid |
Chapter 10

<table>
<thead>
<tr>
<th>Code</th>
<th>Message</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>80</td>
<td>UNKNOWN PARAMETER FOR COMMAND</td>
<td>A parameter was sent that was not valid for this command.</td>
</tr>
<tr>
<td>81</td>
<td>MISSING PARAMETERS FROM COMMAND</td>
<td>A required parameter is missing.</td>
</tr>
<tr>
<td>82</td>
<td></td>
<td>Undefined</td>
</tr>
<tr>
<td>83</td>
<td>DUPLICATE PARAMETER</td>
<td>The client sent two identically named parameters.</td>
</tr>
<tr>
<td>84</td>
<td>ERROR RUNNING PROCEDURE</td>
<td>An internal error occurred running the command.</td>
</tr>
<tr>
<td>85</td>
<td>USER SESSION TERMINATED</td>
<td>The user’s session has been terminated by an administrator.</td>
</tr>
<tr>
<td>86</td>
<td>COMMAND TOO BIG</td>
<td>The command sent is too long. Indicates an incorrectly formatted command.</td>
</tr>
<tr>
<td>87</td>
<td>COMMAND SYNTAX ERROR</td>
<td>The command sent is incorrectly formatted.</td>
</tr>
<tr>
<td>88</td>
<td>PARAMETER NAME TOO BIG</td>
<td>A parameter name is too long. Indicates the command was incorrectly formatted.</td>
</tr>
<tr>
<td>89</td>
<td>PARAMETER VALUE TOO BIG</td>
<td>A parameter value is too long. Indicates the command was incorrectly formatted.</td>
</tr>
<tr>
<td>90</td>
<td>SYNSTAMP OUT OF PLACE</td>
<td>The synstamp is not at the end of the command, but before the checksum.</td>
</tr>
<tr>
<td>91</td>
<td>TIMEOUT</td>
<td>The command took too long to run.</td>
</tr>
</tbody>
</table>

PI Command Errors

Format

Command:NACK: error code-error message;

Example: VPNST6=DEL:NACK:17-Station selection is not unique

Error list

This table describes the PI Command error codes.

<table>
<thead>
<tr>
<th>Code</th>
<th>Message</th>
<th>Commands</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>TARIFFNAME name does not exist</td>
<td>VPNCU1=ADD</td>
</tr>
<tr>
<td>1</td>
<td>NAME name already exists in vpn_network table</td>
<td>VPNNW1=ADD</td>
</tr>
<tr>
<td>1</td>
<td>NAME name does not exist</td>
<td>VPNNW1=CHG</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VPNST7=CHG</td>
</tr>
<tr>
<td>1</td>
<td>NAME name does not exist in vpn_network table</td>
<td>VPNNW1=DEL</td>
</tr>
<tr>
<td>1</td>
<td>No Network exists with prefix of NAME name in vpn_network table</td>
<td>VPNNW1=QRY</td>
</tr>
<tr>
<td>Code</td>
<td>Message</td>
<td>Commands</td>
</tr>
<tr>
<td>------</td>
<td>--------------------------------------------------------------------------</td>
<td>---------------------------------</td>
</tr>
<tr>
<td>1</td>
<td>NAME name is not valid</td>
<td>VPNNW2=ADD, VPNNW2=DEL, VPNNW3=ADD, VPNNW3=QRY, VPNNW3=CHG, VPNNW3=DEL</td>
</tr>
<tr>
<td>1</td>
<td>Station defined by NETNAME name STNNAME name PHYSADDR address already exists</td>
<td>VPSN1=ADD</td>
</tr>
<tr>
<td>1</td>
<td>Station defined by [NETNAME name][ STNNAME name] PHYSADDR address] does not exist (dependent on the combination of NETNAME, STNNAME and PHYSADDR specified).</td>
<td>VPSN1=CHG, VPSN1=QRY, VPSN2=ADD, VPSN2=CHG, VPSN2=DEL, VPSN2=QRY, VPSN5=ADD, VPSN5=CHG, VPSN5=DEL, VPSN5=QRY, VPSN6=ADD, VPSN6=CHG, VPSN6=DEL, VPSN6=QRY</td>
</tr>
<tr>
<td>2</td>
<td>PROVIDER name does not exist</td>
<td>VPCU1=ADD</td>
</tr>
<tr>
<td>2</td>
<td>PROVIDER name is not valid</td>
<td>VPNNW1=ADD, VPNNW1=CHG</td>
</tr>
<tr>
<td>2</td>
<td>NEW_NAME name already exists</td>
<td>VPNNW1=QRY</td>
</tr>
<tr>
<td>2</td>
<td>LISTTYPE name is not SHORT, LONG, DEFTARIFF, TARIFF or STATION</td>
<td>VPNNW1=QRY</td>
</tr>
<tr>
<td>2</td>
<td>NUMBER number already exists for NAME name</td>
<td>VPNNW2=ADD, VPNNW2=DEL, VPNNW3=ADD, VPNNW3=QRY, VPNNW3=CHG, VPNNW3=DEL</td>
</tr>
<tr>
<td>2</td>
<td>NUMBER [number ] does not exist for NAME name</td>
<td>VPNNW2=QRY, VPNNW3=ADD, VPNNW3=DEL</td>
</tr>
<tr>
<td>2</td>
<td>Blacklist is active</td>
<td>VPNNW2=QRY, VPNNW3=DEL</td>
</tr>
<tr>
<td>2</td>
<td>NETNAME name is not valid</td>
<td>VPNNW2=QRY, VPNNW3=DEL</td>
</tr>
<tr>
<td>2</td>
<td>NEW_STNNAME name already exists in NEW_NAME name network</td>
<td>VPNNW2=QRY, VPNNW3=DEL</td>
</tr>
<tr>
<td>2</td>
<td>LISTTYPE name is not one of GROUP, BASIC, ALL</td>
<td>VPNNW2=QRY, VPNNW3=DEL</td>
</tr>
<tr>
<td>2</td>
<td>OFFNET is invalid (not Y or N)</td>
<td>VPNNW2=QRY, VPNNW3=DEL</td>
</tr>
<tr>
<td>2</td>
<td>HUNTLIST name does not exist</td>
<td>VPNNW2=QRY, VPNNW3=DEL</td>
</tr>
<tr>
<td>2</td>
<td>NEW_TARIFF name does not exist</td>
<td>VPNNW2=QRY, VPNNW3=DEL</td>
</tr>
<tr>
<td>2</td>
<td>ORIGINATING Call Plan name does not exist in acs_call_plan table</td>
<td>VPNNW1=ADD, VPNNW1=CHG</td>
</tr>
<tr>
<td>3</td>
<td>PROVIDER name does not exist</td>
<td>VPNNW1=CHG</td>
</tr>
<tr>
<td>Code</td>
<td>Message</td>
<td>Commands</td>
</tr>
<tr>
<td>------</td>
<td>-------------------------------------------------------------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>3</td>
<td>No default network tariff defined</td>
<td>VPNNW1=QRY</td>
</tr>
<tr>
<td>3</td>
<td>Blacklist is active</td>
<td>VPNNW2=DEL</td>
</tr>
<tr>
<td>3</td>
<td>NEW NUMBER number already exists</td>
<td>VPNNW3=CHG</td>
</tr>
<tr>
<td>3</td>
<td>STNNAME name length is invalid (not Y or N)</td>
<td>VPNST1=ADD</td>
</tr>
<tr>
<td>3</td>
<td>NEW NAME name does not exist</td>
<td>VPNST1=CHG</td>
</tr>
<tr>
<td>3</td>
<td>STNNAME not specified with PHYSADDRMASK</td>
<td>VPNST1=QRY</td>
</tr>
<tr>
<td>3</td>
<td>WHITELIST already exists</td>
<td>VPNST2=ADD</td>
</tr>
<tr>
<td>3</td>
<td>NEW_OFFNET is invalid (not Y or N)</td>
<td>VPNST2=CHG</td>
</tr>
<tr>
<td>3</td>
<td>WHITELIST does not exist for STNNAME name and PHYSADDR name pair</td>
<td>VPNST2=DEL</td>
</tr>
<tr>
<td>3</td>
<td>RANK rank out of range</td>
<td>VPNST5=ADD</td>
</tr>
<tr>
<td>3</td>
<td>RANK rank is not in a valid format</td>
<td>VPNST5=DEL</td>
</tr>
<tr>
<td>4</td>
<td>TERMINATING Call Plan name does not exist in acs_call_plan table</td>
<td>VPNNW1=ADD</td>
</tr>
<tr>
<td>4</td>
<td>ORIGINATING Call Plan name does not exist</td>
<td>VPNNW1=CHG</td>
</tr>
<tr>
<td>4</td>
<td>One of NAME or LISTTYPE must be specified</td>
<td>VPNNW1=QRY</td>
</tr>
<tr>
<td>4</td>
<td>OFFNET is invalid (not Y or N)</td>
<td>VPNST1=ADD</td>
</tr>
<tr>
<td>4</td>
<td>GVNSADDR name does not exist</td>
<td>VPNST1=CHG</td>
</tr>
<tr>
<td>4</td>
<td>LISTTYPE specified with PHYSADDRMASK but LISTTYPE value is not BASIC</td>
<td>VPNST1=QRY</td>
</tr>
<tr>
<td>4</td>
<td>INOFFNET is invalid (not Y or N)</td>
<td>VPNST2=ADD</td>
</tr>
<tr>
<td>4</td>
<td>TERMNUM number is invalid</td>
<td>VPNST2=CHG</td>
</tr>
<tr>
<td>4</td>
<td>TIMEOUT timeout is not in a valid format</td>
<td>VPNST5=ADD</td>
</tr>
<tr>
<td>4</td>
<td>HUNTLIST name in use</td>
<td>VPNST5=DEL</td>
</tr>
<tr>
<td>4</td>
<td>TIMERANGE name is not valid (not one of TOD, DOW, DOY)</td>
<td>VPNST6=ADD</td>
</tr>
<tr>
<td>5</td>
<td>MANAGEMENT Call Plan name does not exist in acs_call_plan table</td>
<td>VPNNW1=ADD</td>
</tr>
<tr>
<td>5</td>
<td>TERMINATING Call Plan name does not exist</td>
<td>VPNNW1=CHG</td>
</tr>
<tr>
<td>5</td>
<td>NEW_INOFFNET is invalid (not Y or N)</td>
<td>VPNST1=ADD</td>
</tr>
<tr>
<td>5</td>
<td>PHYSADDR name does not exist</td>
<td>VPNST1=CHG</td>
</tr>
<tr>
<td>5</td>
<td>LISTTYPE specified as BASIC with no PHYSADDRMASK</td>
<td>VPNST1=QRY</td>
</tr>
<tr>
<td>5</td>
<td>NEW_INOFFNET is invalid (not Y or N)</td>
<td>VPNST2=CHG</td>
</tr>
<tr>
<td>5</td>
<td>TIMEOUT value is invalid</td>
<td>VPNST5=ADD</td>
</tr>
<tr>
<td>5</td>
<td>ONNET is not Y or N</td>
<td>VPNST5=CHG</td>
</tr>
<tr>
<td>5</td>
<td>STARTTIME time is not in a valid format</td>
<td>VPNST6=ADD</td>
</tr>
<tr>
<td>5</td>
<td>STARTTIME time is not valid</td>
<td>VPNST6=DEL</td>
</tr>
<tr>
<td>6</td>
<td>PHYSRANGE value not Y or N</td>
<td>VPNNW1=ADD</td>
</tr>
<tr>
<td>6</td>
<td>PHYSADDR name does not exist in a vpn_network_physical_range:start_number to end_number range</td>
<td>VPNST1=ADD</td>
</tr>
<tr>
<td>6</td>
<td>MANAGEMENT Call Plan name does not exist</td>
<td>VPNNW1=CHG</td>
</tr>
<tr>
<td>6</td>
<td>VDDIADDR name does not exist</td>
<td>VPNST1=CHG</td>
</tr>
<tr>
<td>Code</td>
<td>Message</td>
<td>Commands</td>
</tr>
<tr>
<td>------</td>
<td>-------------------------------------------------------------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>6</td>
<td>WHITELIST number does not exist for STNNAME name and PHYSADDR name pair</td>
<td>VPNST2=CHG</td>
</tr>
<tr>
<td>6</td>
<td>ONNET is not Y or N</td>
<td>VPNST5=ADD</td>
</tr>
<tr>
<td>6</td>
<td>NEW_RANK rank is not valid</td>
<td>VPNST5=CHG</td>
</tr>
<tr>
<td>6</td>
<td>ENDTIME time is not in a valid format</td>
<td>VPNST6=ADD</td>
</tr>
<tr>
<td>6</td>
<td>ENDTIME time is not valid</td>
<td>VPNST6=CHG</td>
</tr>
<tr>
<td>7</td>
<td>GNVSADDR name does not exist in a vpn_network_physical_range:start_number to end_number range</td>
<td>VPNST1=ADD</td>
</tr>
<tr>
<td>7</td>
<td>PRESENTONNETADDR value not Y or N</td>
<td>VPNNW1=ADD</td>
</tr>
<tr>
<td>7</td>
<td>PHYSRANGE value not Y or N</td>
<td>VPNNW1=CHG</td>
</tr>
<tr>
<td>7</td>
<td>TARIFFNAME name does not exist in ACS_TARIFF table</td>
<td>VPNST1=CHG</td>
</tr>
<tr>
<td>7</td>
<td>STNNAME and PHYSADDR both not specified</td>
<td>VPNST2=ADD</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VPNST2=CHG</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VPNST2=DEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VPNST2=QRY</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VPNST6=ADD</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VPNST6=DEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VPNST6=QRY</td>
</tr>
<tr>
<td>7</td>
<td>NEW_TIMEOUT timeout is not valid</td>
<td>VPNST5=CHG</td>
</tr>
<tr>
<td>8</td>
<td>RESTRICTCLI value not Y or N</td>
<td>VPNNW1=ADD</td>
</tr>
<tr>
<td>8</td>
<td>PRESENTONNETADDR value not Y or N</td>
<td>VPNNW1=CHG</td>
</tr>
<tr>
<td>8</td>
<td>VDDIADDR name does not exist in a vpn_network_physical_range:start_number to end_number range</td>
<td>VPNST1=ADD</td>
</tr>
<tr>
<td>8</td>
<td>NEW_PHYSADDR name does not exist in a vpn_network_physical_range:start_number to end_number range or is not unique or is invalid</td>
<td>VPNST1=CHG</td>
</tr>
<tr>
<td>8</td>
<td>OFFNET and NEW_OFFNET pair not provided</td>
<td>VPNST2=CHG</td>
</tr>
<tr>
<td>8</td>
<td>NEW_ONNET is not Y or N</td>
<td>VPNST5=CHG</td>
</tr>
<tr>
<td>8</td>
<td>STARTTIME-ENDTIME time-time overlaps an existing plan range</td>
<td>VPNST6=ADD</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VPNST6=CHG</td>
</tr>
<tr>
<td>9</td>
<td>EXTLENGTH not valid - reason</td>
<td>VPNNW1=ADD</td>
</tr>
<tr>
<td>9</td>
<td>RESTRICTCLI value not Y or N</td>
<td>VPNNW1=CHG</td>
</tr>
<tr>
<td>9</td>
<td>TARIFFNAME name not valid</td>
<td>VPNST1=ADD</td>
</tr>
<tr>
<td>9</td>
<td>NEW_STNNAME name is invalid</td>
<td>VPNST1=CHG</td>
</tr>
<tr>
<td>9</td>
<td>INOFFNET and NEW_INOFFNET pair not provided</td>
<td>VPNST2=CHG</td>
</tr>
<tr>
<td>9</td>
<td>TERMINUM number is not valid station number</td>
<td>VPNST5=ADD</td>
</tr>
<tr>
<td>9</td>
<td>Cannot change ONNET to Y: A termination number in the list is not a VPN number</td>
<td>VPNST5=CHG</td>
</tr>
<tr>
<td>9</td>
<td>NEW_HUNTLIST name does not exist</td>
<td>VPNST6=CHG</td>
</tr>
<tr>
<td>10</td>
<td>ALLOWSHORTTEXT value not Y or N</td>
<td>VPNNW1=ADD</td>
</tr>
<tr>
<td>10</td>
<td>TARIFFNAME name does not exist</td>
<td>VPNNW1=CHG</td>
</tr>
<tr>
<td>10</td>
<td>PHYSADDR address is already in use</td>
<td>VPNST1=ADD</td>
</tr>
<tr>
<td>10</td>
<td>STNNAME name does not exist</td>
<td>VPNST1=CHG</td>
</tr>
<tr>
<td>Code</td>
<td>Message</td>
<td>Commands</td>
</tr>
<tr>
<td>------</td>
<td>-------------------------------------------------------------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>10</td>
<td>WHITELIST and NEW_WHITELIST pair not provided</td>
<td>VPNST2=CHG</td>
</tr>
<tr>
<td></td>
<td>STNNAME and PHYSADDR both not specified</td>
<td>VPNST5=ADD</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VPNST5=CHG</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VPNST5=DEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VPNST5=QRY</td>
</tr>
<tr>
<td>10</td>
<td>NEW_TIMERANGE name is not valid (not one of TOD, DOW, DOY)</td>
<td>VPNST6=CHG</td>
</tr>
<tr>
<td>11</td>
<td>TARIFFNAME name does not exist</td>
<td>VPNNW1=ADD</td>
</tr>
<tr>
<td>11</td>
<td>TARIFFNAME name not valid for PROVIDER name</td>
<td>VPNNW1=CHG</td>
</tr>
<tr>
<td>11</td>
<td>WHITELIST does not exist for STNNAME name and PHYSADDR name pair</td>
<td>VPNST1=ADD</td>
</tr>
<tr>
<td>11</td>
<td>NEW_RANK specified without RANK</td>
<td>VPNST5=CHG</td>
</tr>
<tr>
<td>11</td>
<td>NEW_STARTTIME time is not valid</td>
<td>VPNST6=CHG</td>
</tr>
<tr>
<td>12</td>
<td>TARIFFNAME name not valid for PROVIDER name</td>
<td>VPNNW1=ADD</td>
</tr>
<tr>
<td>12</td>
<td>NEW_TIMEOUT specified without TIMEOUT</td>
<td>VPNST5=CHG</td>
</tr>
<tr>
<td>12</td>
<td>NEW_ENDTIME time is not valid</td>
<td>VPNST6=CHG</td>
</tr>
<tr>
<td>13</td>
<td>SITE_CODE cannot be a sub or super string of an existing SITE_CODE</td>
<td>VPNNW1=ADD</td>
</tr>
<tr>
<td>13</td>
<td>NEW_ONNET specified without ONNET</td>
<td>VPNST5=CHG</td>
</tr>
<tr>
<td>14</td>
<td>The resulting combination of LOCATION, CLI, STARTTIME and ENDTIME is not a unique match</td>
<td>VPNST6=CHG</td>
</tr>
<tr>
<td>15</td>
<td>The selected station does not have an associated hunting plan</td>
<td>VPNST6=DEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VPNST6=QRY</td>
</tr>
<tr>
<td>16</td>
<td>The selected station does not have an associated hunting plan table</td>
<td>VPNST6=CHG</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VPNST6=DEL</td>
</tr>
<tr>
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<td></td>
<td>VPNST6=QRY</td>
</tr>
<tr>
<td>17</td>
<td>Station selection is not unique</td>
<td>VPNST1=ADD</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VPNST1=CHG</td>
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<td>VPNST2=QRY</td>
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<td>VPNST6=QRY</td>
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<tr>
<td>18</td>
<td>Nothing to change</td>
<td>VPNNW1=CHG</td>
</tr>
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<td>19</td>
<td>Badly formatted parameter parameter</td>
<td>All commands</td>
</tr>
<tr>
<td>20</td>
<td>General error</td>
<td>All commands</td>
</tr>
<tr>
<td>Code</td>
<td>Message</td>
<td>Commands</td>
</tr>
<tr>
<td>------</td>
<td>----------------------------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>21</td>
<td><strong>TAG</strong> <em>tag name</em> does not exist</td>
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</tr>
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<td></td>
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<td>VPNNW1=CHG</td>
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<tr>
<td></td>
<td></td>
<td>VPNST1=QRY</td>
</tr>
<tr>
<td>22</td>
<td><strong>VALUE</strong> value is not valid</td>
<td>VPNNW1=ADD</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VPNNW1=CHG</td>
</tr>
<tr>
<td></td>
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<td>VPNST1=ADD</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VPNST1=CHG</td>
</tr>
<tr>
<td>23</td>
<td>Wrong number of values for the number of tags</td>
<td>VPNNW1=ADD</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VPNNW1=CHG</td>
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<td>VPNST1=ADD</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VPNST1=CHG</td>
</tr>
</tbody>
</table>
NCC Glossary of Terms

ACS
Advanced Control Services configuration platform.

ANI
Automatic Number Identification - Term used in the USA by long-distance carriers for CLI.

CC
Country Code. Prefix identifying the country for a numeric international address.

CCS
1) Charging Control Services (or Prepaid Charging) component.
2) Common Channel Signalling. A signalling system used in telephone networks that separates signalling information from user data.

CLI
Calling Line Identification - the telephone number of the caller. Also referred to as ANI.

cron
Unix utility for scheduling tasks.

DTMF
Dual Tone Multi-Frequency - system used by touch tone telephones where one high and one low frequency, or tone, is assigned to each touch tone button on the phone.

E2BE
Code used to designate some components and path locations used by the UBE.

GUI
Graphical User Interface

GVNS
Global Virtual Numbering Scheme - When multiple VPNs are in use by a customer, the capability to route calls between these VPNs requires a numbering scheme that uses destination addresses based on a customer id and extension number. These GVNS addresses can then be interpreted to provide inter VPN operation.

HTML
HyperText Markup Language, a small application of SGML used on the World Wide Web.

It defines a very simple class of report-style documents, with section headings, paragraphs, lists, tables, and illustrations, with a few informational and presentational items, and some hypertext and multimedia.
Hunting
A terminating call feature where a subscriber may request a list of alternate destination addresses. If their mobile station is not attached, or does not answer a call, then the service logic should attempt to reach the supplied alternate destinations in sequence.

IN
Intelligent Network

IP
1) Internet Protocol
2) Intelligent Peripheral - This is a node in an Intelligent Network containing a Specialized Resource Function (SRF).

ISDN
Integrated Services Digital Network - set of protocols for connecting ISDN stations.

Messaging Manager
The Messaging Manager service and the Short Message Service components of Oracle Communications Network Charging and Control product. Component acronym is MM (formerly MMX).

MM
Messaging Manager. Formerly MMX, see also XMS (on page 79) and Messaging Manager (on page 78).

MSISDN
Mobile Station ISDN number. Uniquely defines the mobile station as an ISDN terminal. It consists of three parts; the country code (CC), the national destination code (NDC) and the subscriber number (SN).

Oracle
Oracle Corporation

PI
Provisioning Interface - used for bulk database updates/configuration instead of GUI based configuration.

Service Provider
See Telco.

SGML

SLC
Service Logic Controller (formerly UAS).
SMS
Depending on context, can be:
- Short Message Service
- Service Management System platform
- NCC Service Management System application

SN
Service Number

SQL
Structured Query Language - a database query language.

SRF
Specialized Resource Function - This is a node on an IN which can connect to both the SSP and the SLC and delivers additional special resources into the call, mostly related to voice data, for example play voice announcements or collect DTMF tones from the user. Can be present on an SSP or an Intelligent Peripheral (IP).

SSP
Service Switching Point

TCP
Transmission Control Protocol. This is a reliable octet streaming protocol used by the majority of applications on the Internet. It provides a connection-oriented, full-duplex, point to point service between hosts.

Telco
Telecommunications Provider. This is the company that provides the telephone service to customers.

Telecommunications Provider
See Telco.

VDDI
Virtual Direct Dial In

VPN
The Virtual Private Network product is an enhanced services capability enabling private network facilities across a public telephony network.

XMS
Three letter code used to designate some components and path locations used by the Oracle Communications Network Charging and Control Messaging Manager (on page 78) service and the Short Message Service. The published code is MM (on page 78) (formerly MMX).
Index

A
About This Document • v
ACS • 77
Add a Network • 3
Add a Network Speed Dial Number • 19
Add a VPN Station • 25
Add a VPN Station Hunting List • 45
Add a VPN Station Hunting List Plan • 53
Add a VPN Station White List • 37
Add Network White List Numbers • 15
ALLOWSHORTTEXT • 5
ANI • 77
Audience • v

C
CC • 77
CCS • 77
Change a Network Speed Dial Number • 20
Change a VPN Network Details • 7
Change a VPN Station Details • 29
Change a VPN Station Hunting List • 47
Change a VPN Station Hunting List Plan • 56
Change a VPN Station Restriction Details • 38
Change the Tariff for all VPN Stations in a Network • 66
CLI • 55, 57, 61, 77
Command list • 1
Command List • 1
COMMENTS • 5, 8, 26, 30
Constraint required parameters • 4, 7, 11, 12, 15, 16, 17, 20, 21, 22, 23, 26, 29, 32, 33, 37, 39, 41, 42, 46, 47, 49, 51, 54, 56, 60, 63, 65, 66
Copyright • ii
cron • 77

D
Delete a Network Speed Dial Number • 21
Delete a VPN Network • 11
Delete a VPN Station • 32
Delete a VPN Station Hunting List • 49
Delete a VPN Station Hunting List Plan • 60
Delete a VPN Station White List • 40
Delete Network White List Numbers • 16
Description • 3, 7, 11, 15, 16, 17, 19, 20, 21, 22, 25, 29, 32, 33, 37, 38, 40, 42, 45, 47, 49, 51, 53, 56, 60, 63, 65, 66
Document Conventions • vi
DTMF • 77

E
E2BE • 77

ENDTIME • 54, 57, 61
Error Code Lists • 69
Error codes • 7, 10, 11, 13, 16, 17, 18, 20, 21, 22, 23, 28, 32, 33, 35, 38, 40, 41, 43, 47, 49, 50, 52, 56, 60, 62, 64, 66, 67
Error list • 69, 70
EXTLENGTH • 4

F
Format • 69, 70

G
GUI • 77
GVNS • 77
GVNSADDR • 26, 30

H
HTML • 77
Hunting • 78
HUNTLIST • 45, 47, 49, 51, 53, 57

I
IN • 78
INOFFNET • 26, 39
IP • 78
ISDN • 78

L
LISTTYPE • 12, 34
LOCATION • 55, 56, 60
Logic and constraints • 6, 10, 11, 12, 16, 17, 20, 21, 22, 23, 28, 31, 33, 34, 38, 40, 41, 42, 46, 49, 50, 52, 55, 59, 62, 63, 66, 67

M
MANAGEMENT • 4, 8
Messaging Manager • 78, 79
MM • 78, 79
MSISDN • 78

N
Name • 3, 7, 11, 15, 16, 17, 19, 20, 21, 22, 25, 29, 32, 33, 37, 38, 40, 42, 45, 47, 49, 51, 53, 56, 60, 62, 65, 66
NAME • 3, 7, 12, 15, 16, 17, 19, 20, 22, 66
NETNAME • 25, 32, 34, 38, 40, 41, 42, 46, 48, 50, 51, 55, 58, 62, 63
Network Speed Dial Number • 19
Network White List Numbers • 19
NEW_CLI • 58
NEW_ENDTIME • 59
NEW_HUNTLIST • 58
NEW_INOFFNET • 39
NEW_LOCATION • 58
NEW_NAME • 7, 29
NEW_NUMBER • 21
NEW_OFFNET • 39
NEW_PHYSADDR • 30
NEW_STARTTIME • 59
NEW_STNNAME • 29
NEW_TARIFF • 66
NEW_TIMERANGE • 58
NEW_WHITELIST • 40
NUMBER • 15, 16, 19, 20, 22
OFFNET • 26, 39
ONNET • 46, 48
Optional parameter • 12, 32, 34, 37, 41, 42, 46, 48, 55, 58
Optional parameters • 4, 9, 11, 16, 17, 20, 21, 22, 23, 26, 30, 34, 38, 40, 41, 46, 48, 55, 58
Oracle • 78
ORIGINATING • 3, 7
Overview • 1, 3, 15, 19, 25, 37, 45, 53, 65, 69
PHYSADDR • 26, 29, 32, 33, 34, 37, 39, 41, 42, 46, 47, 50, 51, 54, 56, 60, 63
PHYSRANGE • 4, 8
PI • 78
PI Chassis Errors • 69
PI Command Errors • 7, 10, 11, 13, 16, 17, 18, 20, 21, 22, 23, 29, 32, 33, 35, 38, 40, 41, 43, 47, 49, 50, 52, 56, 60, 62, 64, 66, 67, 70
PI Commands Overview • 1
Prerequisites • v
PRESENTONNETADDR • 5, 8
PROVIDER • 3, 7, 65
Query a Station White List • 42
Query a VPN Network • 11
Query a VPN Station • 33
Query a VPN Station Hunting List • 51
Query a VPN Station Hunting List Plan • 62
Query Network Speed Dial Numbers • 22
Query Network White List Numbers • 17
RANK • 45, 48
Required parameter • 7, 11, 47, 49, 51, 65
Required parameters • 3, 12, 15, 16, 17, 19, 20, 21, 22, 25, 29, 32, 33, 37, 38, 40, 42, 45, 53, 56, 60, 63, 66
RESTRICTCLI • 5, 8
Scope • v
Service Provider • 78
SGML • 78
SITE_CODE • 4, 9
SLC • 78
SMS • 79
SN • 79
SQL • 79
SRF • 79
SSP • 79
STARTTIME • 54, 57, 61
STNNAME • 25, 29, 32, 33, 37, 39, 41, 42, 46, 47, 50, 51, 54, 56, 60, 63
Success return • 6, 10, 11, 13, 16, 17, 18, 20, 21, 22, 23, 28, 32, 33, 35, 38, 40, 41, 42, 47, 49, 50, 52, 55, 60, 62, 63, 66, 67
TAG • 5, 9, 12, 27, 30, 34
Tariff • 65
TARIFFNAME • 5, 8, 27, 30, 65
TCP • 79
Telco • 79
Telecommunications Provider • 79
TERMINATING • 4, 8
TERMNUM • 45, 50
TIMEOUT • 46, 48
TIMERANGE • 53, 57, 61
Typographical Conventions • vi
VALUE • 6, 9, 27, 30
VDDI • 79
VDDIADDR • 26, 30
VPN • 79
VPN Hunting List Plan • 53
VPN Network • 3
VPN Station • 25
VPN Station Hunting List • 45
VPN Station White List • 37
WHITELIST • 27, 38, 39, 41
XMS • 78, 79