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**H210IPZ NetEx/IP<sup>®</sup> and TNP210  
for IBM z/OS Operating Systems**

**Release 7.4**

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**Memo To Users**

**May 2015**

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# Introduction

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This memo-to-users contains information for H210IPZ and TNP210, and should be reviewed before beginning the installation process.

NetEx/IP for z/OS (H210IPZ) Release 7.4 is a feature upgrade and maintenance release, and replaces H210IPZ Release 7.3. H210IPZ Release 7.4 uses OSA as either local or remote NetEx/IP devices. H210IPZ Release 7.4 is compatible and interoperable with all other NetEx/IP products. For local devices, H210IPZ uses socket calls for local OSA adapters. NetEx/IP traffic is directed to the remote NetEx/IP network addresses, which can be remote OSA adapters or remote NetEx/IP hosts running on other hardware platforms.

NESiGate and DXE hardware devices, as well as all other legacy HYPERchannel hardware devices, are not supported by H210IPZ.

The TNP was introduced with Release 7.1, which is a replacement of NESiGate-LO appliances in some configurations.

Support for OSA native IP connectivity and support for the TNP feature is enabled by a software key.

H210IPZ is available by download. It is no longer packaged for SMP/E installation.

The following manuals are available for H210IPZ:

*H210IPZ NetEx/IP for IBM z/OS Operating Systems Installation Reference Manual*

*H210IPZ NetEx/IP for IBM z/OS Operating Systems Operator Reference Manual*

*H210IPZ NetEx/IP for IBM z/OS Operating Systems Programming Reference Manual*

*H210IPZ NetEx/IP for IBM z/OS Operating Systems Messages and Abend Codes Reference Manual*

*“C” Configuration Manager and NetEx Alternate Path Retry (APR) Software Reference Manual*

The manuals, along with this Memo-to-Users can be downloaded from [www.netex.com](http://www.netex.com) by selecting the ‘Support’ tab, then navigating to ‘Products’ in the drop-down menu, then selecting the ‘IBM z System/zOS’ link on the left side of the window, then clicking on ‘Docs’ in the ‘NetEx/IP [H210IPZ]’ entry for the appropriate version.

## Support

Support for NetEx/IP and its associated products is available via:

- Telephone (24x7) at (800) 854-0359 (+1 763-694-4350)
- <http://www.netex.com>
- E-mail to [support@netex.com](mailto:support@netex.com)

## Notice to the Customer

Comments about this documentation may be submitted via e-mail to [support@netex.com](mailto:support@netex.com) or by visiting our website, <http://www.netex.com>. Always include the complete title of the document with your comments.

Information on Network Executive Software's general software support policy (e.g., alternate contact methods, support severity level descriptions, and service status definitions) may be found at <http://www.netex.com/support/software-support-policy>.

## Software Modification Policy

Modifications to H210IPZ that are not specifically authorized by NESi are prohibited.

Any unauthorized modifications to H210IPZ may affect its operation and/or obstruct NESi's ability to diagnose problems and provide corrections. Any work resulting from unauthorized modifications shall be paid by the customer at NESi's then-current support rates and may result in the immediate termination of warranty/support coverage.

# New Features

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## Release 7.4

### Reusable Address Spaces

Reusable address spaces are fully supported in Release 7.4. Initial toleration support was provided by a patch in Release 7.2, which was then carried forward into Release 7.3. The toleration support allowed other products to run in reusable address spaces without being affected by the Netex termination routine. With Release 7.4, NetEx/IP can optionally run in a reusable address space if so desired. If a reusable address space is not used for NetEx/IP, the message

```
IEF352I ADDRESS SPACE UNAVAILABLE
```

is issued at NetEx/IP termination, and the address space will not be used again until after a subsequent IPL is performed. This could potentially result in a shortage of address spaces if left unchecked over a long period of time, particularly if NetEx/IP is stopped and started many times between IPL's, and/or other products are also causing address spaces to become unusable, and/or there are an insufficient number of address spaces defined on the system to tolerate an excessive loss of address spaces.

NetEx/IP can be run in a reusable address space by specifying the REUSASID=YES parameter on the z/OS START command:

```
S NETEX,REUSASID=YES
```

If NetEx/IP is always started in a reusable address space, the NetEx/IP address space will be added to the pool of available reusable address spaces at NetEx/IP termination and message IEF352I will not be issued, thus minimizing the risk of running out of address spaces.

### USERPK/USERSK Initialization Statements

With the implementation of REUSASID support, it is now necessary to identify Netex user programs that execute in a program key other than key8, or use storage for Netex data buffers that is in a storage key different from the program key. These statements are required whether or not NetEx/IP is running in a reusable address space, but only if the Netex user programs are using program and/or storage keys other than key8.

*Note: Since most user programs run in program key 8, these initialization statements are not normally needed.*

### Changes to Operator Commands

Updated displays for display host and display host specific. Information is clear and more consistent with other NetEx products.

## **Other Miscellaneous Features and Corrections**

Refer to the “Update Summary” for a description of all maintenance corrections contained in this release.

### **Upgrade Options**

H210IPZ Release 7.4 is available as a no-charge upgrade to existing H210IPZ Release 7.2 and 7.3 licensed customers for continued use of OSA connectivity. However, if OSA connectivity is being added, a new license and a new software key is required in order to enable OSA support. Similarly, if the TNP feature is being added, a new license and a new software key is required in order to enable TNP support. H210IPZ is licensed and keyed on a per-LPAR basis.

## **Previous Releases**

### **Release 7.3**

#### **Additional Messages**

Additional messages were added to better indicate the beginning and end of session establishment and termination.

#### **Drain/Start Path**

A drain path and start path feature was added to the operator interface to prevent new NetEx connections from using specified paths and to restart them again.

## **Other Miscellaneous Features and Corrections**

Refer to the “Update Summary” for a description of all maintenance corrections contained in this release.

### **Upgrade Options**

H210IPZ Release 7.3 is available as a no-charge upgrade to existing H210IPZ Release 7.2 licensed customers for continued use of OSA connectivity. However, if OSA connectivity is being added, a new license and a new software key is required in order to enable OSA support. Similarly, if the TNP feature is being added, a new license and a new software key is required in order to enable TNP support. H210IPZ is licensed and keyed on a per-LPAR basis.

### **Release 7.2**

#### **TNP Feature**

The TNP feature was introduced in Release 7.1. An additional installation option exists in Release 7.2 that allows TNP to be initiated as either a started task or a batch job.

#### **Software Key Format**

A new software key was introduced in Release 7.1. When upgrading from Release 7.1, the same software key will continue to work for Release 7.2 unless additional features are being licensed. If additional fea-

tures are being licensed, or if upgrading from any release prior to Release 7.1, a new software key will be required. A new key can be obtained by contacting [support@netex.com](mailto:support@netex.com).

## Installation Procedure Changes

H210IPZ Release 7.2 is packaged and distributed the same as Release 7.1. It does not use SMP/E for installation. Instead, it is distributed as a downloadable package that includes a scripted batch job and sets of distribution libraries, all packaged together in TSO TRANSMIT format.

## Upgrade Options

H210IPZ Release 7.2 is available as a no-charge upgrade to existing H210IPZ Release 7.1 licensed customers for continued use of NESiGate appliances or OSA connectivity. However, if OSA connectivity is being added, a new license and a new software key is required in order to enable OSA support. Similarly, if the TNP feature is being added, a new license and a new software key is required in order to enable TNP support. H210IPZ is licensed and keyed on a per-LPAR basis.

## Release 7.1

For reference purposes, descriptions of the features provided by Release 7.1 are as follows:

### TNP Feature

The TNP feature serves as a NetEx/IP “proxy”, which can be used by other hosts for which a host-based NetEx/IP is not available. A NetEx/IP Requester, residing on an HP NonStop, OpenVMS, or Bull server, works with BFX (or other NetEx/IP applications running on the Requester server), and reads and writes the application’s NetEx/IP requests over a TCP/IP connection to TNP, which then passes the request to H210IPZ, on behalf of the Requester’s NetEx/IP application. In effect, TNP serves as a “proxy” application for the Requester’s NetEx/IP applications.

Prior to H210IPZ with TNP, Requester applications would use a NESiGate-LO device to provide NetEx/IP services. H210IPZ with TNP eliminates the need for NESiGate-LO.

**Note:** the TNP feature requires OSA as the only network connectivity option. TNP is not supported in NESiGate channel configurations.

### OSAA Initialization Statement Change

The OSAA initialization statement can now specify either a 2-character or the full 4-character GNA address. Prior to Release 7.1, only the first 2-characters of the GNA address could be specified. In addition, an IP address can now also be specified on this statement, which results in NetEx/IP binding to this IP address during initialization. This may provide more configuration flexibility when there is a requirement to temporarily move NetEx/IP to a DR system.

An example of the new OSAA format is as follows:

```
OSAA uuss [ip-address]
```

### New Software Key Format

A new software key is required for this release. Previous keys used with H210IP Release 6.1 or H210IPZ Release 7.0 will not work with this release. The software key has been expanded to include additional information. For example, it now contains information that identifies the LPAR name in addition to the system serial/model number on which H210IPZ is licensed. It also contains information on what features are supported (e.g. OSA, NESiGate, TNP), and for TNP, the key also contains information regarding the number of concurrent TNP NetEx/IP sessions that are supported. The key contains an expiration date,

after which time NetEx/IP will become non-operational. A new key must be obtained and installed prior to the expiration of the current key.

A new key can be obtained by contacting [support@netex.com](mailto:support@netex.com).

## **Installation Procedure Changes**

H210IPZ Release 7.1 does not use SMP/E for installation. Instead, it is distributed as a downloadable package that includes a scripted batch job and sets of distribution libraries, all packaged together in TSO TRANSMIT format.

## **TCP/IP Retry During NetEx/IP Initialization**

If NetEx/IP is started before TCP/IP has completed initialization, it will now wait and retry using the stack for a period of up to 2 minutes before giving up.

## **Miscellaneous NetEx/IP Operator Command Changes**

### **Display Halted Adapters**

A NetEx/IP “halted” OSA adapter will now appear in the list of halted adapters when a Display Halted Adapters (D HAL A) command is issued. The list of all halted adapters will appear in the output of the NetEx/IP ‘D U’ or ‘D D’ operator commands. Halted adapters are prefixed with an “\*” in the displayed output.

### **Clear IProute uuss**

A ‘Clear IProute uuss’ command was added that can be used to clear a GNA-to-IP route from the NetEx/IP internal mapping table.

### **SET Multihost ON|OFF**

The ‘Set Multihost ON|OFF’ command was added. This command can be used when the TNP feature is enabled in support of multiple NetEx/IP Requesters running on HP NonStop, OpenVMS, and/or Bull hosts.

## **Miscellaneous NetEx/IP Message Changes and Additions**

Remote adapter numbers were added to messages NXMT2O214E AND NXMT2O216I when Alternate Path Retry (APR) operations are taking place, to make it more clear which network paths are being used.

Several new messages were added in support of the TNP feature.



# Installation

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## Installation Notes

1. H210IPZ is available as a downloadable distribution. Download instructions can be obtained by contacting [support@netex.com](mailto:support@netex.com).
2. H210IPZ is no longer distributed in SMP/E format. Instead, it is distributed as a downloadable package that includes a scripted batch job and sets of distribution libraries, all packaged together in TSO TRANSMIT format.
3. H210IPZ requires a software key, which is installed as part of the installation process. Refer to the “Obtaining the Software Key” section in the *H210IPZ NetEx/IP z/OS Operating Systems Installation Reference Manual* for the procedure to obtain the software key.
4. Follow the installation instructions in the *H210IPZ NetEx/IP for IBM z/OS Operating Systems Installation Reference Manual* to complete the installation.

Additional clarifications are as follows:

- a. Installation steps 11-16 are required if NetEx/IP will use OSA, and OSA is not already configured on the system. NetEx/IP supports the use of VIPA (Virtual IP Address). Refer to IBM’s *z/OS Communications Server IP Configuration Guide* for descriptions of IP configuration requirements.
  - b. Installation step 18 is required if CSA storage is restricted with the ALLOWUSERKEYCSA system parameter.
  - c. Check if there are any H210IPZ updates by going to [www.netex.com](http://www.netex.com), and under the Support tab select products – follow the link to IBM z System z/OS platform and then select ‘Updates’ for the appropriate NetEx/IP H210IPZ product. If there are any, download them and follow their installation instructions.
5. When running the Configuration Manager, there is an error message displayed at the end of the STDOUT file that says:

*warning: this program uses gets(), which is unsafe.*

This message can be ignored.

## OSA Configuration Notes

1. OSA adapters are defined in the NetEx/IP NCT with unique NETADDR and CHANADDR values, similar to assigning these values for other NetEx/IP nodes. Refer to Step 8 in the installation instructions for details on OSA NCT requirements.
2. Since there is nothing in the NCT that identifies an adapter as an OSA device, an initialization statement in the NTXINIT file identifies a specific NETADDR as being an OSA device. Refer to Step 7 in the installation instructions for details on the OSAA initialization statement.
3. As with other NetEx/IP nodes, NetEx/IP requires NetEx host names of the following format:

NTX0000xyxy (where xyxy is the OSA NCT NETADDR and SMGDREF values)

to exist for the OSA adapters, and these host names must resolve to an IP address that is assigned to that OSA interface. This IP address must also be defined as a local IP address in the HOME statements for the TCP/IP stack that H210IPZ is using.

The NTX host names can be resolved through the use of a name server or a local host file. The NTX host names for remote NetEx/IP OSA interfaces can optionally be defined to the local NetEx/IP with the NetEx/IP 'SET IP gna ip' operator command. The NTX host name for a local NetEx/IP OSA interface can optionally be defined to the local NetEx/IP with the OSAA initialization statement, or by specifying it in the TCP/IP profile dataset. Refer to Step 16 in the installation instructions for NetEx host name resolution requirements.

4. Create VTAM Transport Resource List (TRL) definition(s) for the NetEx/IP OSA device(s). Refer to Step 11 in the installation instructions for details on TRL requirements.
5. Make sure the OSA devices are defined in the TCPIP.PROFILE.TCPIP (or equivalent) dataset. Refer to Step 12 in the installation instructions for details on the TCP/IP device requirements.
6. Make sure the user name associated with the NETEX started task has an OMVS segment defined in RACF (or whatever alternate security product is being used). Refer to Step 13 in the installation instructions for NetEx RACF security requirement.
7. If the TNP feature is being deployed, make sure the user name associated with the TNP started task or batch job has an OMVS segment defined in RACF (or whatever alternate security product is being used). Refer to Step 14 in the installation instructions for NetEx RACF security requirement.
8. If z/OS Policy Agent is being used, determine if policy changes are needed in order to authorize NetEx/IP access over the IP network. Refer to Step 15 in the installation instructions.

# Update Summary

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## Release 7.4

Updates contained in this release include:

### **Ticket# Description**

- 6309 DIRE, DISE not in NTXPARM Sample
- 6311 Add COBOL Programming Interface
- 6321 Add support so NetEx/IP can run in a Reusable Address Space
- 6327 Added a HELP description for NTXMEAT and NTXMGEN programs
- 6355 Remote ntxoper output is getting truncated in the multiWTO
- 6356 The groupname in the connect data is an option
- 6366 The cmd resp buffer can be overflowed if histlist is exceeds size of buffer
- 6372 When TNP is listening on the command socket - it is blocking...(denial of service)
- 6375 Several errors in socket handling should be retried - not exited
- 6378 To aid in diagnosing problems add some information to the logging
- 6404 Provide useful and consistent information in the display host (summary)
- 6413 Provide useful and consistent information in the display host 'specific'
- 6546 Add other identifying information to message NXMXME575W (ASCB not found)
- 6565 S0D5-20 abend when starting H210IPZ 7.4 with old level of nxmusrpc in load library
- 6569 Make stacking PC routines run in problem state and Netex program key

# Previous Releases

## Release 7.3

Updates contained in this release include:

### **Ticket# Description**

- 5223 Install job linkedit output is separated into a different sysout class from rest of job output
- 5364 Installation manual has an incorrect statement regarding when DNS lookups are done
- 5415 Improve installation messages when linking alternate NXMUIF00 and NXMTERM0 names
- 5449 Host names and Offer names specified by an application can now be entered in any case, Netex converts the name to upper case
- 5558 Enable COMPRESS(YES) parameter in installation job
- 5978 Add documentation for potential message IEFC166D at Netex startup
- 6093 Ensure that segsize can't be set below a workable minimum
- 6147 Add messages which better indicate beginning and end of sessions (NXMS2R320I, NXMS2W320I, and NXMS2R321I)
- 6156 Correct NetEx utilities (ntxmeat & ntxmgen) looping problem
- 6286 Implement a Drain/Start path feature
- 6310 Alternate I/O (ALTIO) is no longer supported
- 6336 S0D3 abends occur when REUSASID(YES) is specified (or defaulted) in DIAGxx
- 6337 COMPRESS(NO) not honored during patch installation
- 6338 0c4 abend when running Unisys BFX job to zOS
- 6339 Need additional code conversion tables when Bull uses TNP in H210IPZ
- 6340 Netex loop on Intrahost connection
- 6342 Send individual host name on group connects

## Release 7.2

Updates contained in this release include:

<b>Ticket #</b>	<b>Description</b>
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4321	Correct the usage of VOL and UNIT in installation job when installing in a non-SMS environment.
4164	Correct the format of the DISPLAY (or SHOW) KEY displayed output.
4488	Correct the PRTPAM utility to support a hyphenated NetEx/IP host name.
4525	In an OSA configuration, a missing OSAA initialization parameter is incorrectly reported as a CTC license error.
4526	TIME=1440 was added to the distributed TNP JCL (batch and started task).
4154	Incorrect NXMUEx5 source was distributed due to SMF record change.
4510	NRBSTAT 1 may be incorrectly reported in Netex user application.
4678	NRBSTAT 3403 may be incorrectly reported in Netex user application.
4751	Added end-of-license warning message.
4648	Corrected SA03 abends that occurred at NetEx/IP and TNP termination.
4806	Obsolete NetEx/IP initialization statements were removed from the distributed sample NTXINIT file.
4471	Installation option added to allow TNP to be started as either a batch job or a started task.
4885	Pipe size recalculation problem was corrected.



# Known Problems

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At the time of release, there were no known problems.

Future product updates and FAQs can be found at [www.netex.com](http://www.netex.com) by clicking on the 'Support' tab, then navigating to 'Products' in the drop-down menu, then selecting the 'IBM z System z/OS' link on the left side of the window, then clicking on 'Updates' and 'FAQs' in the 'NetEx/IP [H210IPZ]' entry for the appropriate version.