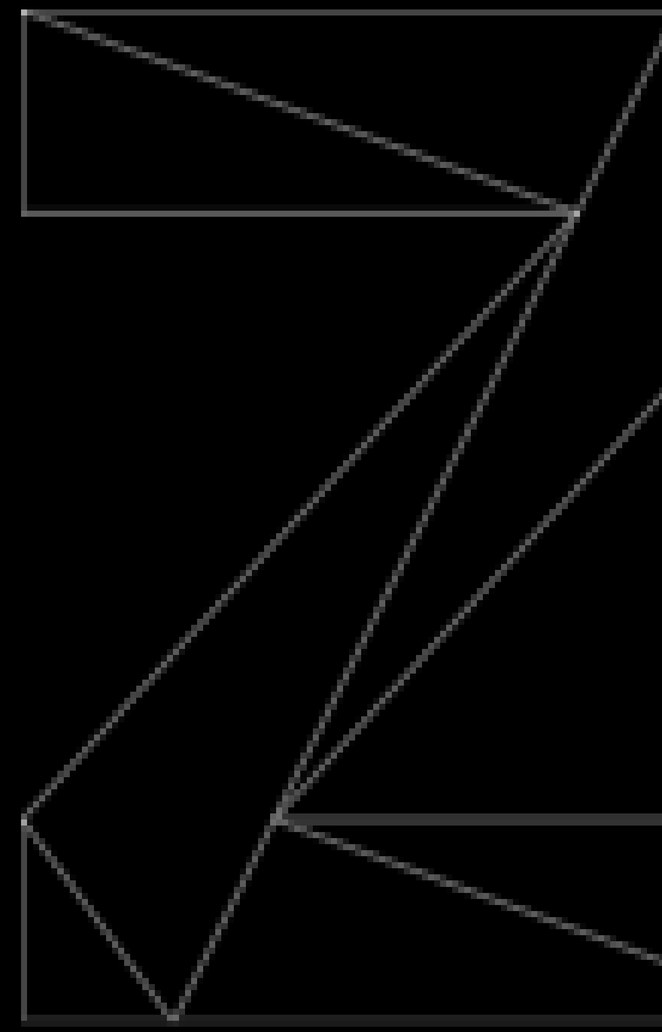
Import



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Introduction to TCP/IP profile import

Most of our customers already have working TCP/IP profiles and need a way to import them into the Network Configuration Assistant.

- We don’t expect you to recreate your TCP/IP configuration by hand in the Network Configuration Assistant!
- TCP/IP profile import works in three major steps:
  1. Run the VARY TCPIP,,EXPORTPROF operator command on z/OS Communications Server to format a TCP/IP configuration into a file that can be read by the Network Configuration Assistant
  2. Import the file created in step 1 into the Network Configuration Assistant
  3. Correct any errors as required to make the imported configuration installable

Step 1: Export TCP/IP configuration

Invoke the `VARY TCPIP,,EXPORTPROF` operator command against z/OS Communications Server and specify the MVS dataset that is the root file of the configuration to be exported.

- The stack will read the file and all its includes and create a file in z/OS UNIX directory `/var/exportprof` for the Network Configuration Assistant to read.
  - The stack reads and exports the specified profile, it does not export its running configuration
- The stack will detect syntax errors in the profile, but it will not detect context errors (for example, two IP interfaces with the same IP address).
- The stack will also export the values of all MVS system symbols used in the profile.
  - Rule: if the profile to be exported contains MVS system symbols, you must run EXPORTPROF on the same MVS image that the profile runs on, to ensure correct symbol values are exported.

TCP/IP profile export example

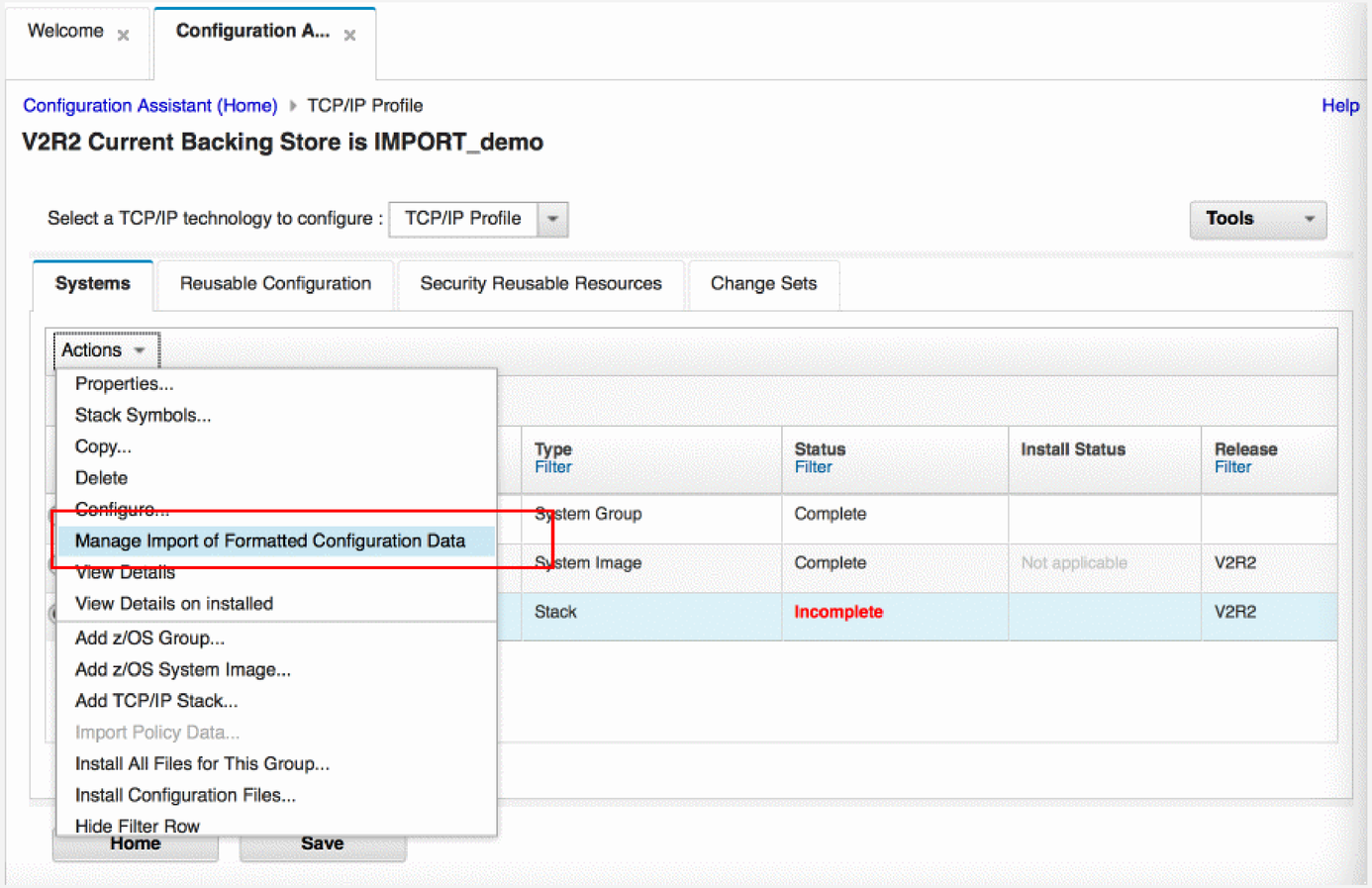
```
VARY TCPIP,TCPIP1,EXPORTPROF,USER.TCPPARMS(TCPIP)
EZZ0060I PROCESSING COMMAND: VARY TCPIP,TCPIP1,EXPO,USER.TCPPARMS(TCPIP)
EZZ0067I VARY EXPORTPROF COMMAND BEGINNING
EZZ0300I OPENED INCLUDE FILE 'USER.TCPPARMS(PORT)'
EZZ0300I OPENED INCLUDE FILE 'USER.TCPPARMS(INTFS)'
EZZ0300I OPENED EXPORTPROF FILE 'USER.TCPPARMS(TCPIP)'
EZZ0309I PROFILE PROCESSING BEGINNING FOR 'USER.TCPPARMS(TCPIP)'
EZZ0309I PROFILE PROCESSING BEGINNING FOR USER.TCPPARMS(PORT)
EZZ0316I PROFILE PROCESSING COMPLETE FOR FILE 'USER.TCPPARMS(PORT)'
EZZ0304I RESUMING PROCESSING OF FILE 'USER.TCPPARMS(TCPIP)'
EZZ0309I PROFILE PROCESSING BEGINNING FOR USER.TCPPARMS(INTFS)
EZZ0316I PROFILE PROCESSING COMPLETE FOR FILE 'USER.TCPPARMS(INTFS)'
EZZ0304I RESUMING PROCESSING OF FILE 'USER.TCPPARMS(TCPIP)'
EZZ0316I PROFILE PROCESSING COMPLETE FOR FILE 'USER.TCPPARMS(TCPIP)'
EZZ0070I VARY EXPORTPROF COMMAND CREATED EXPORT FILE:
MVS1.TCPIP1.2016.03.20.18.30.04
EZZ0053I COMMAND VARY EXPORTPROF COMPLETED SUCCESSFULLY
EZZ0069I VARY EXPORTPROF COMMAND COMPLETE
```

This profile uses two include files, PORT and INTFS. In the next step, you can control how these include files are handled.

The Network Configuration Assistant import file created by this example is:

/var/exportprof/MVS1.TCPIP1.2016.03.20.18.30.04

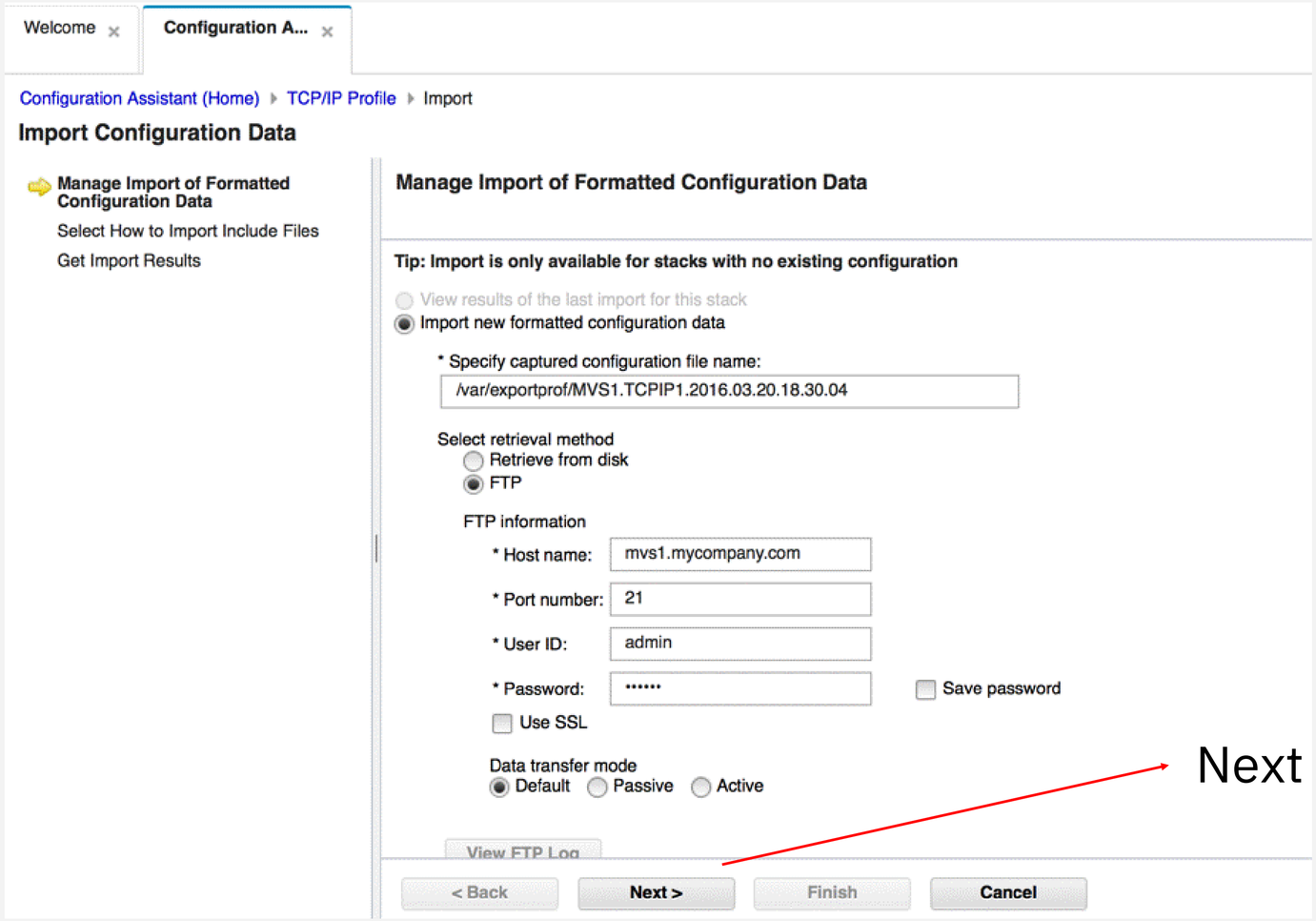
Importing TCP/IP configuration



To import TCP/IP configuration, you must first create a stack to receive the imported configuration.

- This stack must have no configuration, except possibly dynamic XCF attachment to the sysplex.
- Then select the stack and pull down the import action as shown in the screen capture.

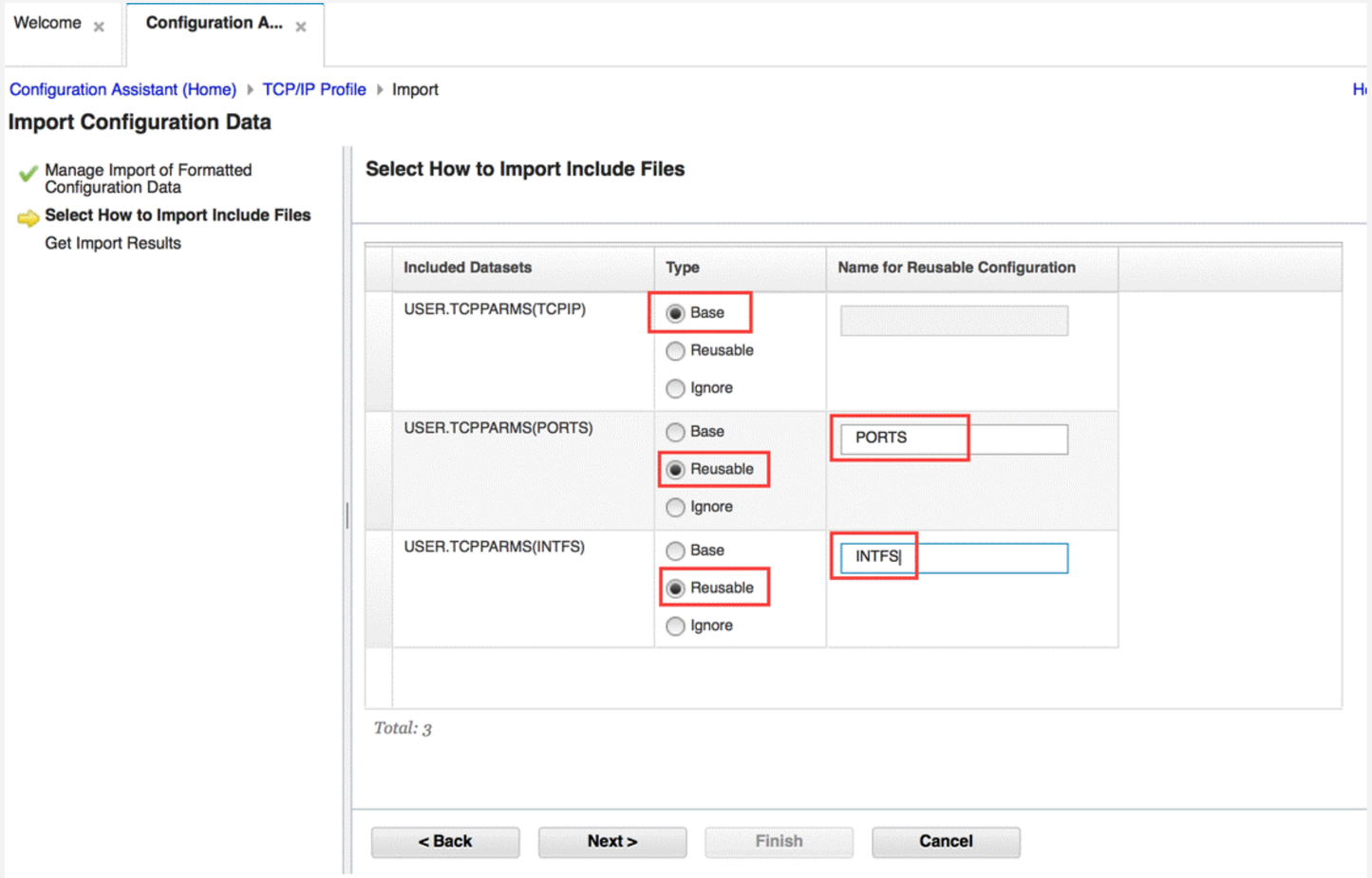
Importing configuration, continued



You can import a formatted configuration file from the local file system, or you can have Network Configuration Assistant FTP it from another system.

Next page

Import, continued



The include file structure of the original configuration is preserved. You can specify which file is the base configuration, which ones to use as reusable configuration (and the names for those reusable configurations), and which ones to ignore.

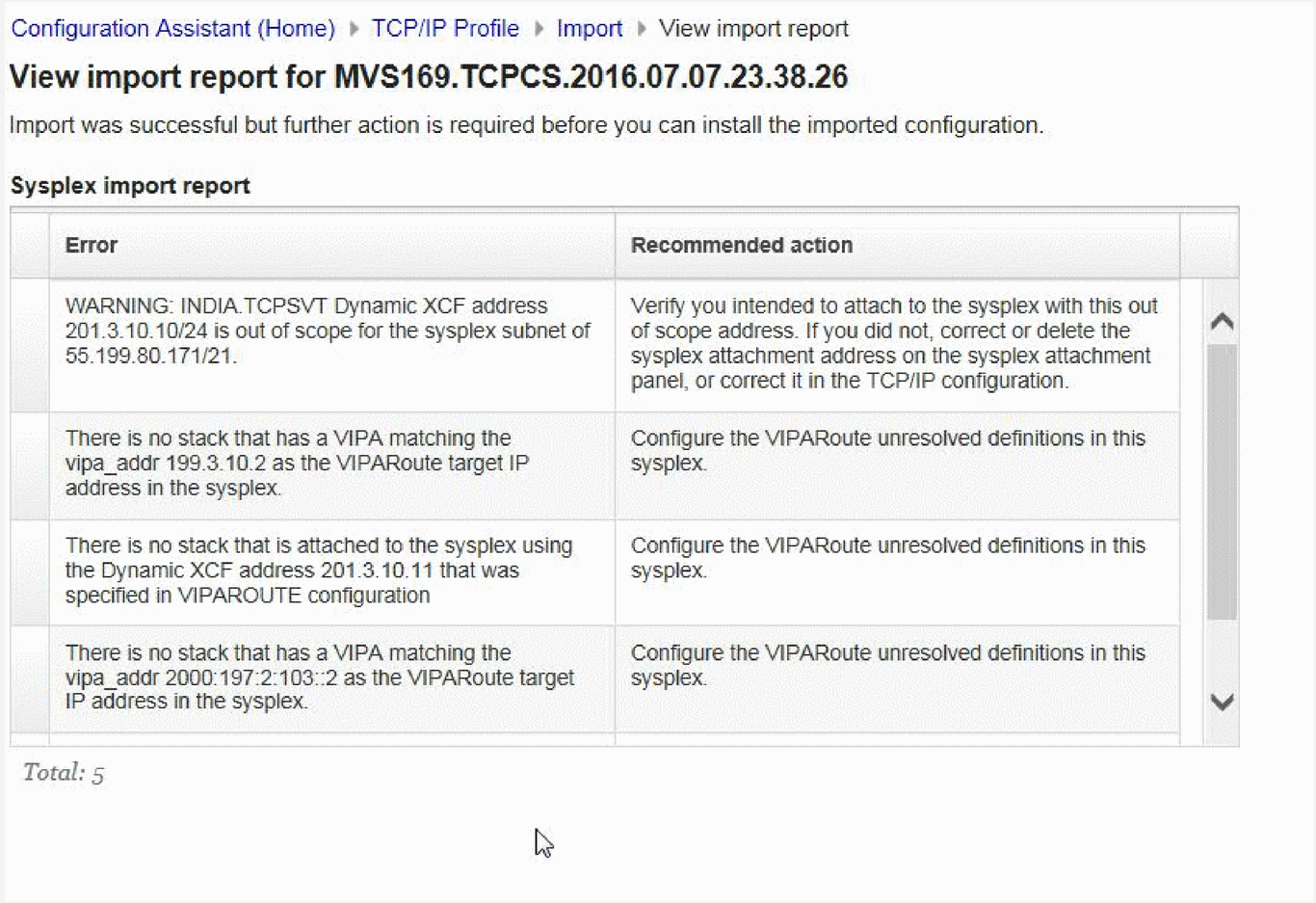
- Sysplex configuration is imported into the sysplex level, regardless of which file it was found in.

When you click **Next** on this panel, the configuration is imported

Post-import actions

- Because of the sophistication and variety of the TCP/IP profile possibilities, the Network Configuration Assistant might not be able to completely resolve an import file.
  - Additionally, you might have errors in your TCP/IP configuration that you are ignoring, which the Network Configuration Assistant doesn’t ignore.
  - Finally, you might import profiles in an order that doesn’t resolve all references at first, especially in a sysplex.
- Because of this, you might need to take additional action to complete an import. To determine what, if any, additional actions are required, look at the import report generated from the import.
- You can access the import report from the last panel of the import wizard. You are automatically placed into this screen after an import completes.

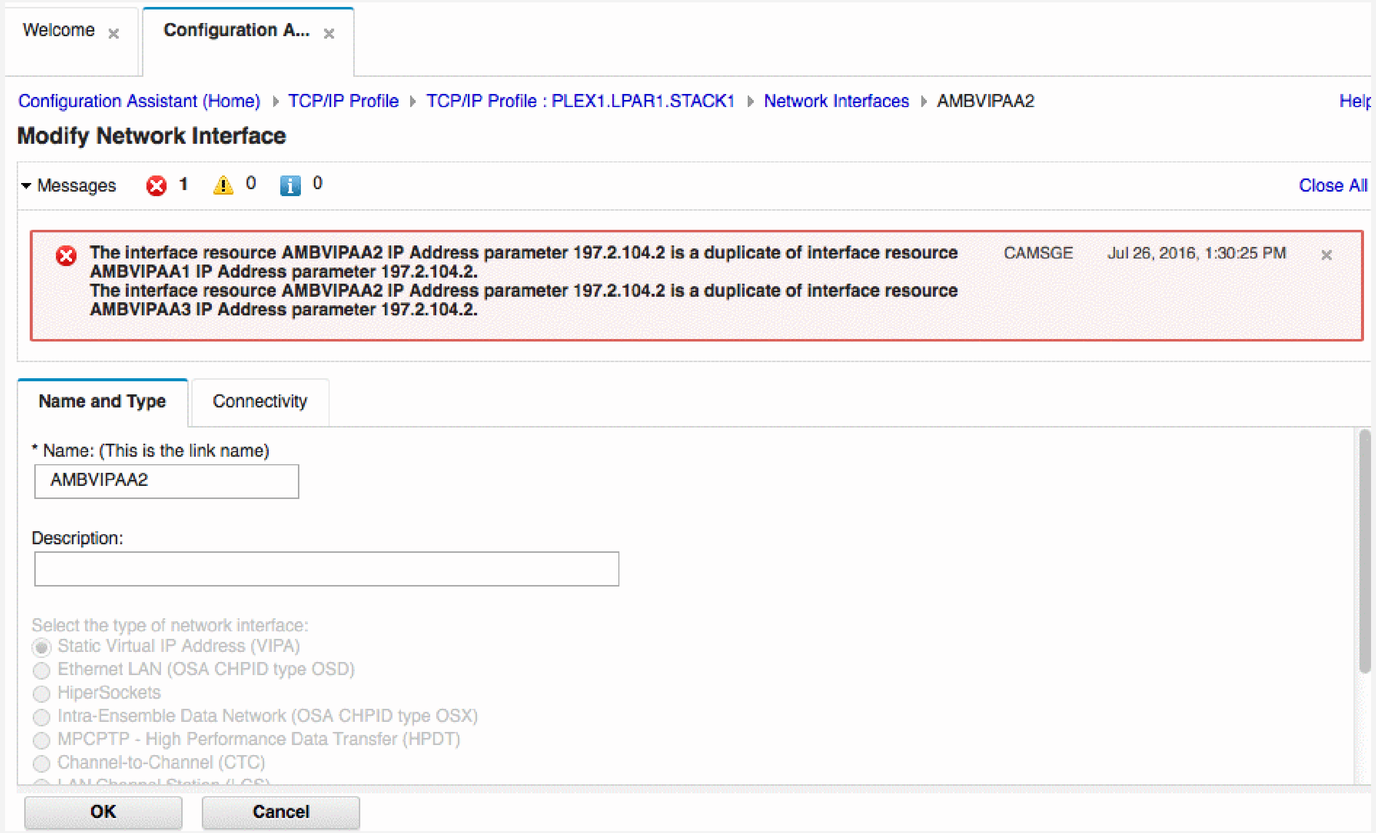
Import report example



Here is an example of an import report.

- The first message is a warning.
- The three unresolved reference errors are most likely because the other stacks in the sysplex have not been imported yet.
  - –They may resolve on their own as the rest of the sysplex stacks are imported
  - –If not they will need to be manually fixed

Example of imported error



Since EXPORTPROF can't catch context errors, you could import erroneous configuration. When this happens, the Network Configuration Assistant will mark the affected resources incomplete and you will have to manually fix them.

Network Configuration Assistant will provide error messages for the affected resources to help you.

- In this example, a profile was imported that contained 3 IP interfaces that had the same IP address.

Import of MVS system symbols

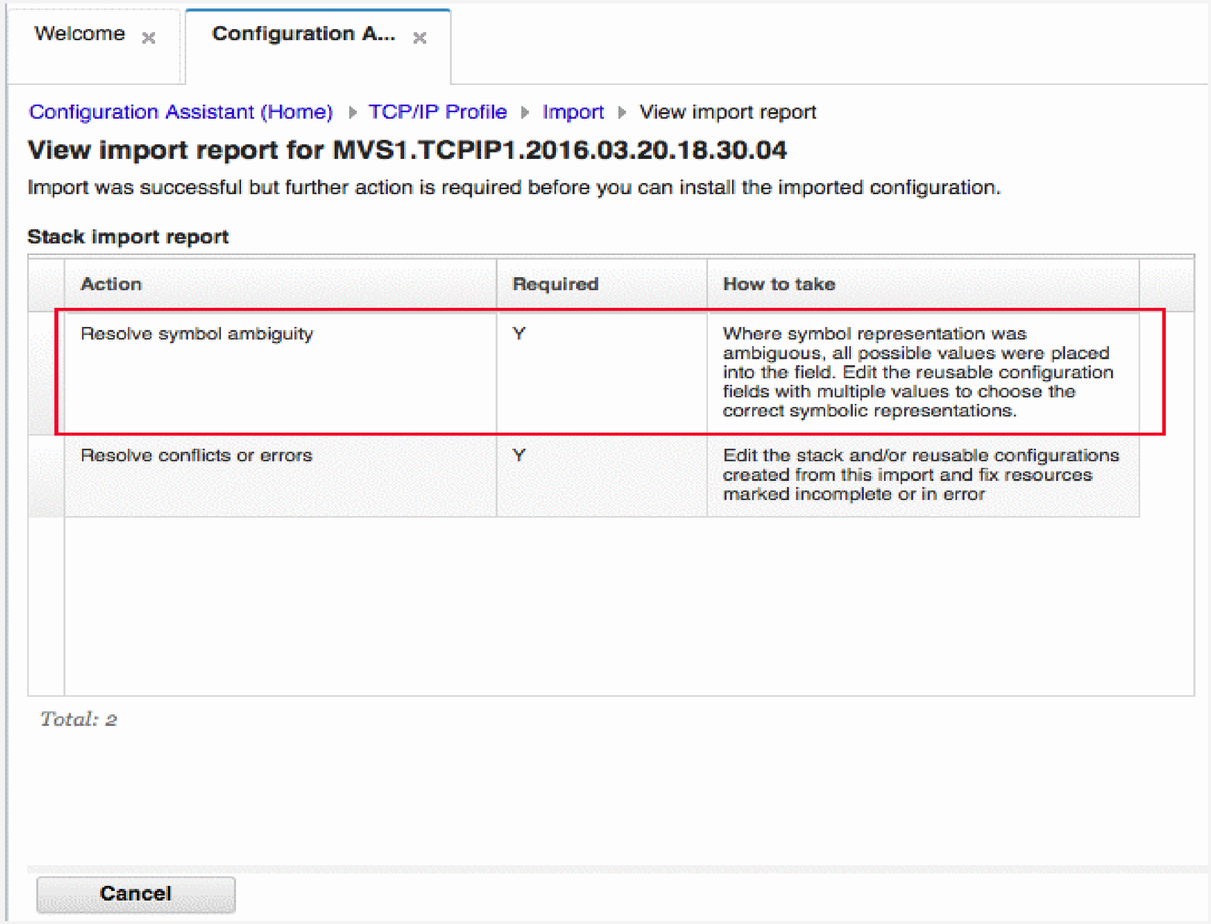
- If the imported profile uses MVS system symbols in fields where NCA supports NCA system symbols, those MVS symbols are converted to NCA system symbols.
  - Restriction: remember that NCA system symbols are only supported in reusable configuration. MVS system symbols found in base configuration will simply be imported as constants of their resolved values, regardless of field
- The converted NCA system symbols are inserted into their appropriate fields, and the symbol tables are populated with their imported values, so you do not need to resolve their values.
- MVS system symbols in fields where NCA does not support NCA system symbols will be imported as constants of their resolved values.

Imported symbol ambiguity

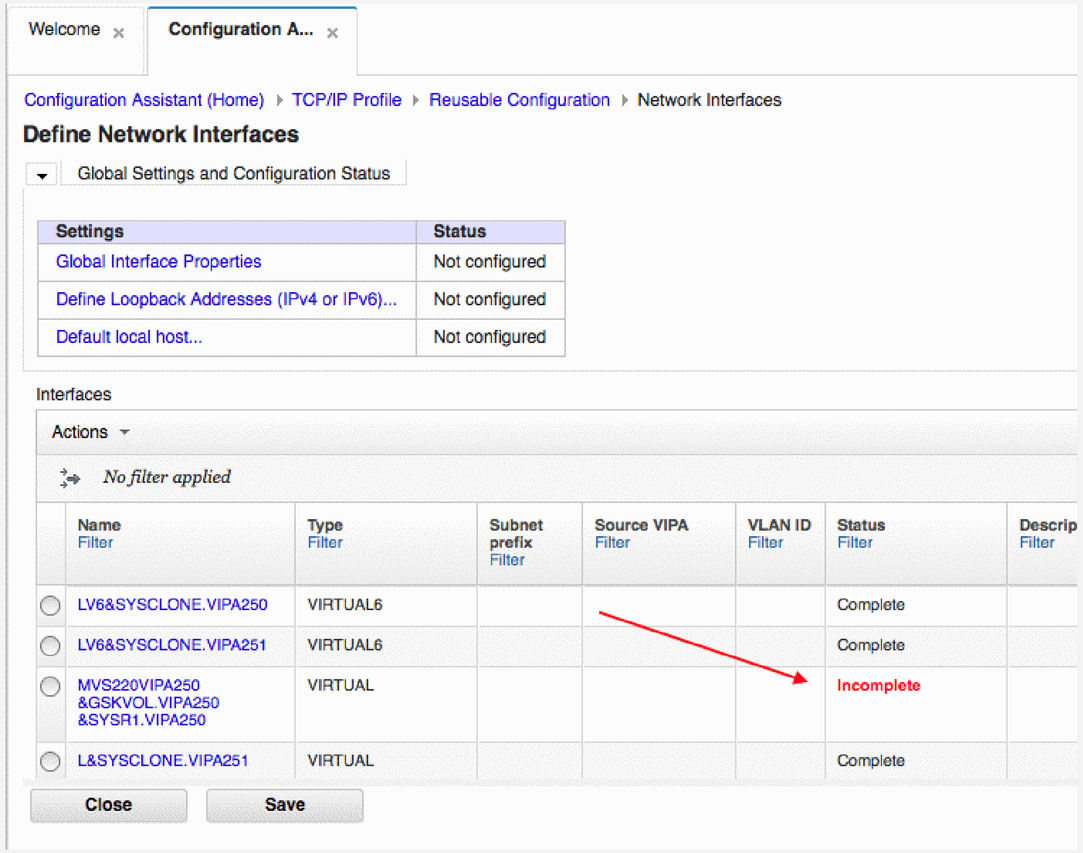
Because of the way EXPORTPROF and MVS symbol resolution works, NCA gets configuration with all symbol values resolved, and, must do reverse look-up to restore symbol usage in supported fields.

- This can result in symbol ambiguity.
  - For example, if symbol &HOST.=“10”, every “10” found within a field that supports symbols could be replaced with &HOST., but that may not be what was originally configured.
- If symbol ambiguity exists, the user must resolve it.
  - NCA will provide all possible representations and the user must choose the correct one by deleting the incorrect ones.
  - See next page for an example

Symbol ambiguity example

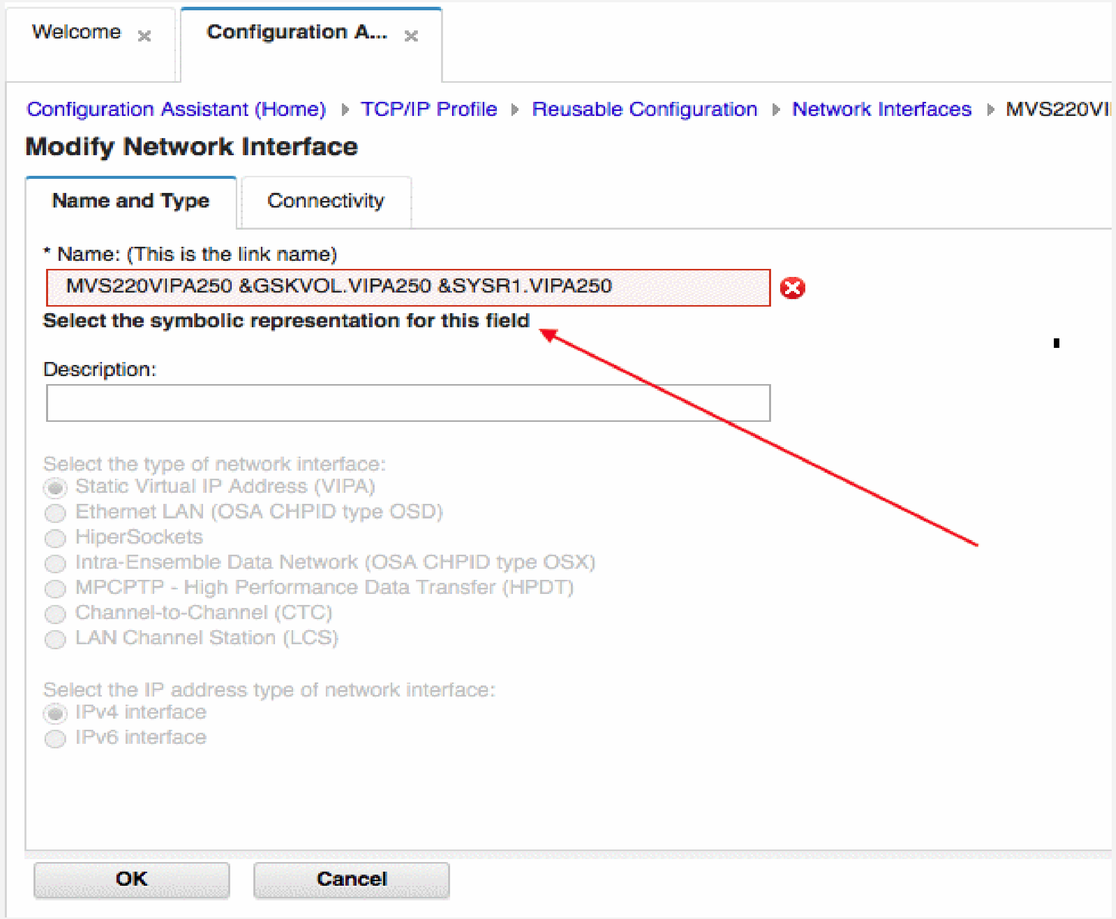


If symbol ambiguity exists, the import report will indicate it.



Look for resources marked “Incomplete” in reusable configurations in the imported configuration. See next page for how to resolve this one.

Symbol ambiguity example, continued



In this example, two symbols share the same value.

- &GSKVOL.=“MVS220”
- &SYSR1.=“MVS220”

The user resolves this ambiguity by deleting the incorrect representations from the field and leaving only the correct one.

Note: a constant representation is always offered as one of the choices. In this example, it’s the first one.

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