



## Configuration Extraction Tool

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This chapter describes how to use the Configuration Extraction Tool (CET). The CET extracts data from the Informix database used by the Cisco Wan Manager (CWM), formerly called StrataView Plus.(SV+). The CET then formats the data into a standard .cnf file that can be read by the NMT. The CET works with CWM Releases 9.2 through 15, and with SV+ Release 7.0 or greater. CET is included in the UNIX installation of NMT. For instructions on installing the CET, see the chapter “Installing WAN Modeling Tools.”

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### Fields Addressed by CET

A configuration file generated by the CET consists of data extracted from your network. The source is the CWM Informix database. Where that data is not available, NMT default values are used. See [Chapter 4, “Configuration Tables and Fields,”](#) for descriptions of the fields that are extracted from the CWM data, and their source fields and their limitations.

CET provides the added functionality of translating all coded value fields in INFORMIX into easy to use strings. For some fields, CET will check 2nd sources for the data if there are problems with the CWM collection process. For older versions of CWM, specifically 9.1 or earlier, CET will heuristically fill in some fields

# Using the CET

To extract data from CWM and generate an NMT-compatible .cnf file, perform the following steps:

- Step 1** For the best data consistency, make sure the network is not running any administration activities that add or delete network elements. Also, make sure you are in the correct working directory, and that the CET has been installed there.



**Note** If you run CWM on the IBM AIX platform (which is not supported by NMT), you can still run the command **svp2cet**. You then need to tar the network directory, move it to your NMT platform, and untar it before running the **cet2nmt** command.

- Step 2** The **svp2cet** command extracts flat files from the SQL database and writes them in the sub-directory *ntwk\_name*. If the command fails or generates warning messages, view the file *ntwk-name/svp2cet.con* for a log of SQL extraction.

To extract the configuration from CWM, enter the following command:

```
svp2cet <netw_name> {options}
```

*netw\_name* is the name of the directory that the command creates. The directory contains data files that are used as inputs for the command shown in the next step, which builds a.cnf file. You will use this directory name again in the next step.

*swt\_rev* is the switch software revision you are using. You may need to use this option only if the CWM release is more recent than the switch software release.



**Note** It may take a long time for the extraction process to run. There is no on-screen indication that the process is running. A message appears announcing when the process is complete or another message appears if the process fails. If the process fails, delete the *ntwk\_name* directory before running the command again.

- Step 3** Enter the following command to format the above extracted data into a .cnf file named *ntwk\_name.cnf*, which you can read into NMT. If the command fails or generates warning messages, view the file *ntwk-name/cet2nmt.con* for a summary of the data analysis problems:

```
cet2nmt <netw_name> {<nmt-ver>}
```

*netw\_name* is the name of the directory you created.

**cet2nmt** has an option to extract a single domain or several domains from the CWM DB. If your CWM is monitoring multiple AutoRoute networks, or multiple PNNI peer groups, you may extract a single or multiple domains using the **-network** option. The syntax is as follows:

```
cet2nmt <myplan> -network <domain_name>
```

Multiple domain names can also be specified, as shown in the following example:

```
cet2nmt <myplan> -network <domain_name1> <domain_name2>
```

**Step 4** This step is optional.

If manual corrections are required on the output CNF file, you can make them once, and then automatically make them again with the 'adj2nmt' command. The command only updates fields that are missing from CWM or are not that reliable. The site names, and slot port information is used to match links and connections. Messages are generated for every change.

```
adj2nmt <in-file> <reference-file> <out-file> {[options]}
```

*in-file* is the most recent extraction file.

*reference-file* is the extraction with the manual changes applied

*out-file* in the input file with the same parameters changed on the output file.

Options:

- *-add*—Add links and connections that are in the reference file but missing from the input file.
- *-diffrep*—Write no output file, but generate a report about the differences of the two files.



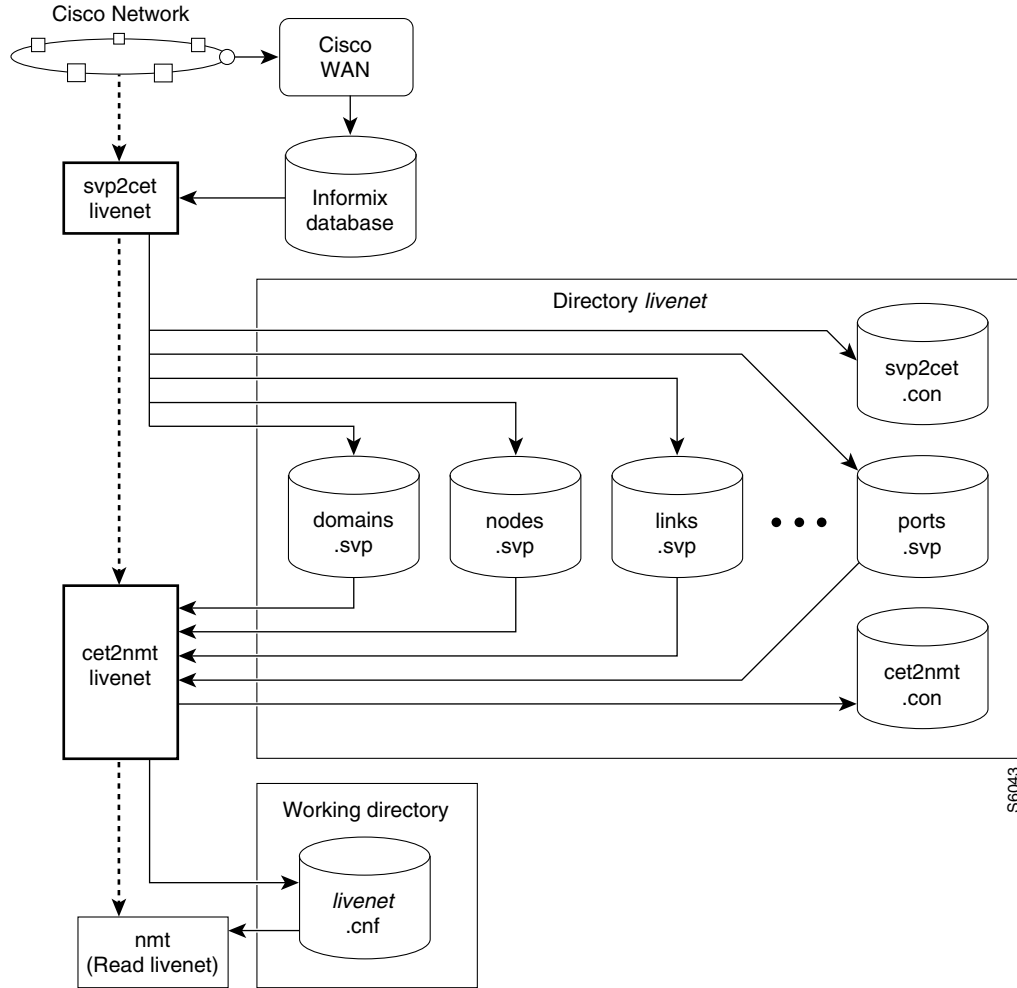
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**Note** The field update functionality and the topology compare functionality can now be called directly from the NMT menu under FILES/READ 2ND CNF.

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This process is illustrated in [Figure 9-1](#).

Figure 9-1 CET Schematic Overview



## Other CET Commands

There are several other CET commands that may help you more effectively use the software:

- **svp\_dmp.** Use this command to if the CET generates a defective .cnf file. This command should be run immediately after you run the **svp2cet** command. This command dumps the data from CWM tables into a series of .dmp files. These files can be analyzed by your Cisco customer support representative. Enter this command as in the following example:

```
svp_dmp netw_name
```

*netw\_name* is the name of the network.

- **svp\_rev**—Use this command to find out the CWM revision level.
- **swt\_rev**—Use this command to find out the software revision level of your switches.

- **adj2nmt**—Use this command to recreate manual changes on previous extractions to current extractions.
- **sniffcnf *ntwk\_name***—Use this command to obtain an on-screen summary of the network topology. This is useful for a high-level check that the data extraction was successful.

The following CET installation commands are not required to run unless NMT was installed as stand-alone:

- **cetlink**— Use this command to copy the necessary CET files to your project directory. You can invoke it by running the command `$CETHOME/cetlink`
- **cetrel**—Use this command to remove the CET software from your project directory.

To obtain help about any of the CET commands, enter the command followed by `-h`, for example, `cet2nmt -h`.

## AIX Platform Support

If you have CWM installed on an AIX platform, run the **svp2cet** command on that platform and run the rest of the process on a support UNIX platform. Install the NMT on both the CWM AIX platform and a standard platform. After running the **svp2cet** command, copy the entire subdirectory with the plan name you entered to your working directory on the standard platform. Then, run the **cet2nmt** command to complete the extraction process.

To move the entire sub directory, use the UNIX tar command, then transfer the tar command in binary mode and untar it on the standard platform.

## Troubleshooting CET

Occasionally, CET will execute successfully, but the resulting extract will be incomplete. If CET fails during the **svp2cet** command, look at the earliest error in the `svp2cet.con` file. The table below lists some common problems, and what to do about them.

<b>Symptom</b>	Links are missing
<b>Probable Causes</b>	Incomplete data in SV+ database.
<b>Solution</b>	View the file named <i>maybe_links.sv</i> . This file contains possible links based on incomplete data. If the missing links are in this file, add them to the <i>links.svp</i> file, and rerun <b>cet2nmt</b> .

<b>Symptom</b>	Connections are missing.
<b>Probable Causes</b>	Incomplete data in SV+ database.
<b>Solution</b>	<p>CWM 9.2 or higher: View the files that begin with the word <i>extra</i>. These contain connection segments that are in the data base, but which were not collected because they were not part of an end-to-end connection.</p> <p>SV+ 7.0 - SV+ 9.1: View the files <i>maybe.voice.svp</i>, <i>maybe_data.svp</i>, <i>maybe_frame.svp</i>, and <i>maybe_atm.svp</i>.</p> <p>If you find the connections, try rerunning <b>svp2cet</b> and <b>cet2nmt</b>.</p> <p>If this doesn't succeed, contact WAN Manager support.</p>

<b>Symptom</b>	Informix Error 862 (cannot open file for run)
<b>Probable Causes</b>	<p><b>cetlink</b> has not been run.</p> <p>User is executing CET from a subdirectory</p> <p>CET installation did not execute properly.</p>
<b>Solution</b>	<p>Make sure this directory contains cetbin:</p> <pre>ls -l cetbin</pre> <p>if cetbin is not there, run <b>cetlink</b></p> <p>See if all required subdirectories and programs are in cetbin. If they are not there, you must reinstall CET.</p>

<b>Symptom</b>	<p>Informix Error 529 (Cannot attach to shared memory)</p> <p>Informix Error 123 (ISAM error: No shared memory)</p>
<b>Probable Causes</b>	Informix DB is not on line.
<b>Solution</b>	<ol style="list-style-type: none"> <li>1 Become the Superuser INFORMIX</li> <li>2 Type <b>cd</b></li> <li>3 Type <b>tbmonitor</b>, or <b>bin/tbmonitor</b></li> <li>4 In <i>tbmonitor</i>, select <b>mode</b>. This will confirm that the database is off-line.</li> <li>5 Select <b>start-up</b>. The database is brought from off-line to quiescent.</li> <li>6 Select <b>on-line</b>. This brings the database on-line</li> <li>7 Select <b>exit</b> to exit <i>mode</i>.</li> <li>8 Select <b>exit</b> to exit <i>tb monitor</i></li> <li>9 Exit informix</li> </ol>

<b>Symptom</b>	Informix Error 217 (Column [name of column] not found in any table in the query)
<b>Probable Causes</b>	CWM release and the Informix Database are incompatible. In other words, a new sv+ has been installed, but is not in use
<b>Solution</b>	Use the <i>swt_rev</i> option on the <b>svp2cet</b> command.

<b>Symptom</b>	Informix Error 564 (Cannot sort rows) and/or Informix Error 407 (Error number 0 received from <i>sql_exec</i> process) The above error(s) are also combined with a unix <i>error: /:write failed</i> , file system is full
<b>Probable Causes</b>	There is not enough empty space in the /tmp partition, where informix does its sorting work
<b>Solution</b>	If there are files called <i>textnmn.0</i> , then space can be recovered by closing the shell tools. If this still doesn't work, space can be cleared by copying info and files to other partitions (then erasing them from /tmp)

<b>Symptom</b>	Informix Error 229 (Cannot open or create a temporary file) and/or Informix Error 162 (ISAM error: BLOB space does not exist)
<b>Probable Causes</b>	The Informix database is full or almost full, or the temporary space directory is not writable or full
<b>Solution</b>	Check that the directory defined by the DBTEMP environment variable is writable by this account. If DBTEMP is not defined, check the /tmp directory. The problem could also be that there is no more free disk space in the temporary directory. If you have error 162, have TAC increase the user's Informix database size.

<b>Symptom</b>	REXX Error 48: Failure in System Service
<b>Probable Causes</b>	Not enough memory available. This usually refers to swap-space. (To see how much swap space is available, use the <i>pstat -s</i> or <i>swap -s</i> command. To see how much memory is available, use the <i>dmesg   grep avail mem</i> command)
<b>Solution</b>	Close all other applications that use a lot of memory, such as Sun's file manager or Netscape.

<b>Symptom</b>	REXX Error 41: Bad Arithmetic Conversion
<b>Probable Causes</b>	The input data contained a blank rather than a digit.
<b>Solution</b>	No workaround. Contact Network Modeling for help.

<b>Symptom</b>	The following error message is displayed:  DB not found.  Console file from the <b>svp2cet</b> command shows some queries and then SQL error 802
<b>Probable Causes</b>	The CWM is a newer version than NMT, and has tables or fields that NMT does not recognize.
<b>Solution</b>	Upgrade NMT to a later version that supports that version of CWM.
<b>Symptom</b>	The <b>cet2nmt</b> command displays the following error:  REXX: Service not available
<b>Probable Causes</b>	The command ran out of memory.
<b>Solution</b>	Reconfigure your system to use more swap space on disk.
<b>Symptom</b>	The %UTIL values extracted are bad.
<b>Probable Causes</b>	You are using CWM 9.2.09 and do not have patch 10 applied.
<b>Solution</b>	Apply patch 10 to CWM.
<b>Symptom</b>	The CET installation says that CWM is not installed, and you know that it is installed.
<b>Probable Causes</b>	The NMT version is too old for the CWM version, or the CWM is installed in a non standard way with a different DB name.
<b>Solution</b>	Upgrade NMT to a later version that supports that version of CWM.

## Remote CET Extracts

If you wish to obtain a CET extract from a CWM or SV+ Informix database located on another workstation, you may not need to install NMT or CET on the remote platform. You may be able to issue the **svp2cet** command on your workstation and return the data from the remote platform to your workstation.

A remote CET extract is possible only in the following circumstance:

- You must have NMT Release 9.2.0.7, or higher.
- You must know the hostname of the remote host. You may need to know the IP address of the remote host.
- Your local host workstation must be able to access the remote host. That is, you must be able to successfully ping the remote host, either by hostname or by IP address, from your local host.

- Informix 7.2, or higher, must be installed on both your local host and the remote host. (If CWM or SV+, release 9.2 or higher, is installed on either host, you have met the requirement for that host.)
- You must know the password to the svplus user ID at the remote host.




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**Note** You cannot obtain a remote CET extract from a PC.

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To configure the workstations for remote data extraction, follow these steps:

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**Step 1** Set the environment variable INFORMIXSERVER to the hostname of the remote host. That is, issue the following Unix command: `setenv INFORMIXSERVER <remotehostname>`

**Step 2** Setup your local host with an Informix sqlhosts entry for the remote host.

- Edit your `/usr/users/informix72/etc/sqlhosts` file.
- Add a new entry of the following form (filling in the blanks): `<remotehostname> ontlitpc <remotehostaddr> informix_istar`




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**Note** `<remotehostaddr>` is the IP address of the remote host; but, if you can ping the remote host by name, you can alternatively use the hostname of the remote host. Whichever you choose, use the same `remotehostaddr` in the two steps below.

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**Step 3** Setup your local host for “friendly” ftp access to the remote host’s svplus userid.

- Edit (or create) the `.netrc` file in your home directory.
- Add a new entry of the following form (filling in the blanks): `machine <remotehostaddr> login svplus password <password>`




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**Note** `<password>` is the password to the svplus account at the remote host. Therefore, your `.netrc` file should not allow others to read it. You can use the Unix command, `chmod 600 ~/.netrc`

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**Step 4** Setup the svplus userid on the remote host to allow remote shell access from your local host:

- Remotely log on to the remote host as user svplus:
 

```
rlogin <remotehostaddr> -l svplus
```
- Edit (or create) the `.rhosts` file in the svplus home directory.
- Add a new entry of the following form:
 

```
<localhostname> <yourlocaluserid>
```




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**Note** `<localhostname>` must be the official name of your host, not one of its nicknames. If you don’t know it, execute the command, “who am i”, after you have logged on to the remote host. Your official host name will appear within parentheses ().

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To check whether your setup is correct, run the **svp-rev** and **swt-rev** commands. If both commands work correctly, your setup is correct.

## Troubleshooting

<b>Symptom</b>	A command returns Informix error 23101: Unable to load locale categories.
<b>Probable Causes</b>	The INFORMIXDIR environment variable is not set correctly
<b>Solution</b>	Either issue the command, unsetenv INFORMIXDIR, or the command, setenv INFORMIXDIR /usr/users/informix.
<b>Symptom</b>	A command returns Informix error 930: Cannot connect to database server <remotehostname>
<b>Probable Causes</b>	Either Informix is not installed on the remote host, or the INFORMIXSERVER environment variable has been set incorrectly.
<b>Solution</b>	If Informix is installed, perform Step 1 of the Setup Procedure.
<b>Symptom</b>	A command returns Informix error 25596: The INFORMIXSERVER value is not listed in the sqlhosts file or the Registry.
<b>Probable Causes</b>	Informix sqlhosts file has not been updated.
<b>Solution</b>	Perform Step 2 in the Setup Procedure.
<b>Symptom</b>	A command returns Informix error 951: Incorrect password or user <yourlocaluserID> is not known on the database server.
<b>Probable Causes</b>	The local host doesn't have "friendly" access to the remote host.
<b>Solution</b>	Perform Step 2 of the Setup Procedure, making sure that the <remotehostaddr> used is the same as that used in the sqlhosts file of Step 3 the setup procedure.
<b>Symptom</b>	A command returns the message: Cisco Wan Manager (StrataView Plus) on host <hostname> is either not installed or not accessible
<b>Probable Causes</b>	The remote host does not allow remote shell access.
<b>Solution</b>	Perform Step 4 the setup procedure.

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<b>Symptom</b>	Command returns Informix error 908
<b>Probable Causes</b>	The remote CWM site is not up and running.
<b>Solution</b>	Verify the remote CWM site is running and can be pinged from your site.

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