Innovus Parasitic Extraction

setExtractRCMode

extractRC

Extracts resistance and capacitance for the interconnects and stores the results in an RC database. Optionally, an ASCII report file can be generated. Use this command after performing early global routing or final routing, and after using the setExtractRCMode command.

rcOut

Reads the parasitic database and outputs the parasitics in the Standard Parasitic Exchange Format (SPEF).

-rc_corner rcCornerName

Specifies the RC corner that is used to generate the parasitic output file in the multi-corner flow.

-spef fileName

Specifies the name of the SPEF output file.

If you add .gz as a suffix, the rcOut command automatically compresses the generated file.

-view viewName

Specifies that the RC corner associated with the specified view is used to generate the output SPEF file in the multi-corner flow.

setExtractRCMode –coupled true -engine postRoute -effortLevel high
extractRC
rcOut -spef <>

innovus #> setExtractRCMode -coupled true -engine postRoute -effortLevel low
WARN: (IMPEXT-3493): The design extraction status has been reset by set_analysis_view/update_rc_corner or setExtractRCMode command. The **parasitic data can be regenerated either by extracting the design using the **extractRC** command or by **loading the SPEF or RCDB file(s)**. To prevent resetting of the extraction status, avoid changing extraction modes.
Type 'man IMPEXT-3493' for more detail.

innovus #> setExtractRCMode -coupled true -engine postRoute -effortLevel low
innovus #> **extractRC**
extractDetailRC Option : -outfile /tmp/innovus_temp_11922_myserver_anon_VQSYM3/dtmf_recvr_core_11922_Tt7AaL.**rcdb.d** -basic
RC Mode: PostRoute -effortLevel low [Basic CapTable, LEF Resistances]

RC Corner Indexes	0	1	2	3	4	5
Capacitance Scaling Factor	1.20000	1.20000	1.00000	0.80000	0.80000	1.00000
Coupling Cap. Scaling Factor	1.20000	1.20000	1.00000	0.80000	0.80000	1.00000
Resistance Scaling Factor	1.00000	1.20000	1.20000	1.00000	0.80000	0.80000
Clock Cap. Scaling Factor	1.20000	1.20000	1.00000	0.80000	0.80000	1.00000
Clock Res. Scaling Factor	1.00000	1.20000	1.20000	1.00000	0.80000	0.80000

Shrink Factor : 1.00000

Initializing multi-corner resistance tables ...
Checking LVS Completed (CPU Time= 0:00:00.0 MEM= 1166.6M)
Extracted 10.0016% (CPU Time= 0:00:00.3 MEM= 1241.7M)

prompt $ ls /tmp/innovus_temp_11922_myserver_anon_VQSYM3/dtmf_recvr_core_11922_Tt7AaL.rcdb.d
crx.data.gz dtmf_recvr_core.namemap.gz dtmf_recvr_core.namemap.gz.stat dtmf_recvr_core.rc.001 header.da
node.map.001 offset.table term.loc

Notice: extractRC will overwrite the previous **.rcdb.d**

read_parasitics

Reads SPEF and RCDB-based RC parasitics information and already created RCDBs in the software. For hierarchical designs, use this command to read top-level as well as block-level parasitic information.
Note: The following are important aspects to be considered for using this command:
The RCDB parasitic file must have the **.rcdb.d** extension.
The RCDB-based parasitic data that is provided as input to this command must be the one that was saved in the same major release of the software. The command will not read the RCDB data saved in a previous release. For example, if you provide RCDB saved in the 10.1.x release of the software as input to the read_parasitics command i n the 11 software release, then it cannot be read.
Only the RCDB parasitic data on systems that are same as those used for saving the data can be read. For example, if the data is saved on Linux in 64-bit mode, you can only restore it on Linux 64-bit mode.

spefIn

Loads resistors and capacitors for the interconnects in SPEF into the Innovus database to calculate delays or build a timing graph. Use this command to read in a SPEF file generated by a third-party extraction tool.
Note: You can use this command to load a SPEF file, which is compressed (.gzip) format.
Note: This command supports multi-threaded SPEF reading. The number of CPUs can be specified using the standard use model of Innovus.
-rc_corner list_of_rc_corners
Annotates the parasitics to the predefined RC corners for multi-corner analysis. You can specify a list of RC corners to be annotated. If you want to use SPEF information when calculating delays in multi-mode multi-corner analysis (MMMC) mode, you must annotate the parasitics for all RC corners in the design.

read_spef

innovus CUI, voltus legacy/CUI, tempus legacy/CUI only

saveDesign

-rc
Saves RC extraction data, including data for incremental extraction. By default, Innovus does not automatically save RC extraction data to save disk space and run-time.
The -rc parameter does not save RC extraction data if the design is not extracted or if you extract the data using the preRoute extraction engine.

saveDesign ECO_INIT_11_optSetup_postECO.enc	saveDesign toy.enc -rc
$ ll ECO_INIT_11_optSetup_postECO.enc.dat/ |tr -s ' ' | cut -d " " -f 9	$ ll toy.enc.dat/ |tr -s ' ' | cut -d " " -f 9
AAE	AAE
dtmf_recvr_core.aae.settings	dtmf_recvr_core.aae.settings
dtmf_recvr_core.apa	dtmf_recvr_core.apa
dtmf_recvr_core.db.da.gz	dtmf_recvr_core.db.da.gz
dtmf_recvr_core.dbinfo	dtmf_recvr_core.dbinfo
dtmf_recvr_core.fp.gz	dtmf_recvr_core.fp.gz
dtmf_recvr_core.fp.spr.gz	dtmf_recvr_core.fp.spr.gz
dtmf_recvr_core.globals	dtmf_recvr_core.globals
dtmf_recvr_core.init	dtmf_recvr_core.init
dtmf_recvr_core.marker.gz	dtmf_recvr_core.marker.gz
dtmf_recvr_core.metric.gz	dtmf_recvr_core.metric.gz
dtmf_recvr_core.mode	dtmf_recvr_core.mode
dtmf_recvr_core.opconds	dtmf_recvr_core.opconds
dtmf_recvr_core.pg.gz	dtmf_recvr_core.pg.gz
dtmf_recvr_core.place.gz	dtmf_recvr_core.place.gz
dtmf_recvr_core_power_constraints.tcl	dtmf_recvr_core_power_constraints.tcl
dtmf_recvr_core.prop	dtmf_recvr_core.prop
	dtmf_recvr_core.rcdb.d
dtmf_recvr_core.route.congmap.gz	dtmf_recvr_core.route.congmap.gz
dtmf_recvr_core.route.gz	dtmf_recvr_core.route.gz
dtmf_recvr_core.symtbl.gz	dtmf_recvr_core.symtbl.gz
dtmf_recvr_core.tcz	dtmf_recvr_core.tcz
gui.pref.tcl	gui.pref.tcl
inn.cmd.gz	inn.cmd.gz
libs	libs
mmmc	mmmc
vbin	vbin
viewDefinition.tcl	viewDefinition.tcl