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set_dft_configuration

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NAME

set_dft_configuration

Sets the DFT configuration for the current design.

SYNTAX

```
status set_dft_configuration
    [-scan enable | disable]
    [-fix_clock enable | disable]
    [-fix_set enable | disable]
    [-fix_reset enable | disable]
    [-fix_xpropagation enable | disable]
    [-fix_bus enable | disable]
    [-fix_bidirectional enable | disable]
    [-testability enable | disable]
    [-test_points enable | disable]
    [-wrapper enable | disable]
    [-boundary enable | disable]
    [-bsd enable | disable]
    [-clock_controller enable | disable]
    [-mode_decoding_style binary | one_hot]
    [-scan_compression enable | disable]
    [-streaming_compression enable | disable]
    [-pipeline_scan_data enable | disable]
    [-connect_clock_gating enable | disable]
    [-integration enable | disable]
    [-power_control enable | disable]
    [-ieee_1500 enable | disable]
    [-control_points enable | disable]
    [-observe_points enable | disable]
```

ARGUMENTS

-scan enable | disable

Enables or disables scan insertion.

The default is **enable**.

-fix_clock enable | disable

Enables or disables clock AutoFixing. By default, clocks are not AutoFixed.

-fix_set enable | disable

Enables or disables asynchronous set AutoFixing. By default, asynchronous set signals are not AutoFixed.

-fix_reset enable | disable

Enables or disables asynchronous reset AutoFixing. By default, asynchronous resets are not AutoFixed.

-fix_xpropagation enable | disable

Enables or disables X-propagation AutoFixing. By default, X-propagation is not AutoFixed.

-fix_bus enable | disable

Enables or disables three-state bus AutoFixing. By default, three-state buses are AutoFixed.

-fix_bidirectional enable | disable

Enables or disables bidirectional pad AutoFixing. By default, bidirectional pads are AutoFixed.

-testability enable | disable

Enables or disables the testability test-point client, which consists of:

- SpyGlass automatic test-point insertion
 - Configured with the **set_testability_configuration** command
 - Requires a SpyGlass license
- User-defined test-point insertion
 - Configured with the **set_test_point_element** command
 - Requires a DFTMAX license

This option, along with the **set_testability_configuration** command, replaces the deprecated **test_points** client. If the **-testability** option is enabled, those deprecated commands and options are ignored.

-test_points enable | disable

Enables or disables legacy automatic test point insertion. By default, it is disabled. When enabled, to automatically insert test points, you must also configure one or more test point targets with the **set_test_point_configuration** command.

This feature has been deprecated; use the **testability** test-point client instead.

A DFTMAX license is required to enable this feature.

-wrapper enable | disable

Enables or disables the Core wrapper and Shadow LogicDFT utilities. The specifications for the utilities are set with the **set_wrapper_configuration** command.

-boundary enable | disable

Enables or disables the integration of BIST or scan cores using ANSI/IEEE Std 1149.1-1 compliant boundary-scan circuitry. The newly-synthesized circuitry is unmapped, and must be mapped using the **compile** command.

-bsd enable | disable

Enables or disables the insertion of IEEE Std 1149.1/1149.6 compliant boundary-scan circuitry.

-clock_controller enable | disable

Enables or disables the clock controller for on chip clocking.

-mode_decoding_style binary | one_hot

Specifies the type of port decoding to be used for the test modes controller. Allowed values are **binary** and **one_hot**. Specify **binary** to decode ports for the test controller, or **one_hot** to not decode ports for the test controller. If *n* test modes are specified for the design, specifying **binary** allows mode architecting to

use $\text{ceiling}(\log_2(n))$ ports for the test controller. The **one_hot** mode decoding style allows mode architecting to use $n-1$ ports for the test controller.

The default value is **binary**.

-scan_compression enable | disable

Enables or disables the insertion of combinational or serialized scan compression structures.

-streaming_compression enable | disable

Enables or disables the insertion of streaming scan compression structures.

-pipeline_scan_data enable | disable

Enables or disables the insertion of pipeline scan data registers to scan chains. By default, the pipeline scan data utility is disabled.

-connect_clock_gating enable | disable

Enables or disables checking for unconnected test pins of clock-gating cells during **dft_drc** and their connection in **insert_dft**. The default value is **enable**.

-integration enable | disable

Enables or disables the core integration functionality.

-power_control enable | disable

Enables or disables the power controller override functionality.

The power controller override functionality is disabled by default.

When enabled, the **insert_dft** command inserts a wrapper chain override logic along the control signal outputs of the specified power controller block, inside the level of hierarchy that contains the specified power controller block.

This logic is known as the power controller override logic. This logic allows critical power control signals, such as power switch control, isolation control and state retention control signals, to be controlled during test mode without the need for manually-created power controller initialization vectors. It also provides observability of the power controller outputs for improved test coverage.

-ieee_1500 enable | disable

Enables or disables the IEEE 1500 test-mode control functionality.

Use this option to enable both the DFT-inserted IEEE 1500 controller flow and the existing IEEE 1500 controller flow.

DESCRIPTION

The **set_dft_configuration** command specifies the DFT configuration for a design. The DFT configuration is specific to the current design. If you change the DFT configuration and then change the current design, your changes are no longer visible.

Use the **report_dft_configuration** command to display the current DFT configuration of the design.

Use the **reset_dft_configuration** command to reset the current DFT configuration on the design.

Setting the **set_dft_configuration** command with the **-scan disable -clock_gating enable** options and running the **insert_dft** command results in clock-gating cell routing only.

EXAMPLES

The following command enables the clock Autofix utility:

```
prompt> set_dft_configuration -fix_clock enable
```

The following command disables the check for unconnected test pins of clock-gating cells during **dft_drc** and their connection in **insert_dft**:

```
prompt> set_dft_configuration -connect_clock_gating disable
```

SEE ALSO

```
insert_dft(2)  
report_dft_configuration(2)  
set_autofix_configuration(2)  
set_autofix_element(2)  
set_dft_signal(2)  
set_testability_configuration(2)  
set_test_point_configuration(2)
```