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OpenAccess oaScan User Guide

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Using oaScan

oaScan is an unlicensed application that scans the contents of a library, checks for inconsistencies in the OpenAccess design, technology, and DMData databases, and optionally repair the inconsistencies and save the databases.

Inconsistencies are more common with older versions of OpenAccess, such as those released earlier than April 2008. oaScan can be used to upgrade inconsistent data to current quality standards and is maintained on an ongoing basis so that OpenAccess users can continuously monitor the integrity of their data.

Recommended Methodology

Cadence recommends that you

■ Scan data that was created or modified by older versions of OpenAccess in order to identify data inconsistencies and then perform a repair to correct any inconsistencies found

■ Conduct periodic data scans in case older versions of OpenAccess are reintroduced into the design flow and repair any inconsistencies that are found

Note: You will find sample scripts on Cadence Online Support for scanning and repairing libraries.

■ Run oaScan on data as it is being checked into a global workspace from a user's local workspace when using a design management system

Some users might want to run oaScan from the Virtuoso design environment itself. Although this is not a recommended approach, a sample SKILL script for running oaScan from Virtuoso can also be found on Cadence Online Support.

oaScan Setup

oaScan is supplied with a wrapper script that can be called from

>   *oa_home*/bin/oaScan

No additional setup or configuration is necessary if oaScan is started using the wrapper script. See Appendix B, "Running OpenAccess Executables Standalone," for additional information about configuring your environment to use the oaScan wrapper script.

How oaScan Locates Libraries

The oaScan application does not use the `cds.lib` library definitions file to locate libraries. By default, oaScan scans a specified library located in the current working directory, but you can use the `-libPath` option to specify the full path to a library directory.

oaScan does not open reference libraries, and therefore, does not bind reference libraries. If a database in a specified library references a database in another library, the referenced library is not scanned. Reference libraries can be scanned separately in any order. oaScan also does not bind technology databases nor incremental technology database references. Databases are processed one at a time. When processing is complete, the database is purged from memory and the next is opened. This keeps the oaScan virtual memory footprint as small as possible.

oaScan verifies that the library directory contains a `.oalib` file. This prevents processing directories as cellviews if an incorrect directory is specified in error. oaScan has legacy support for directories that do not contain a `.oalib` file. To enable legacy support, specify the `-forceLibPath` option. See the oaScan options in the Usage Quick Reference section for more information.

Usage Quick Reference

oaScan runs from a terminal command line. The command line prototype for running oaScan is:

>   oaScan -lib *libraryName* [*options* ...]

Where *libraryName* is the name of the library to check.

oaScan Arguments

The `-lib` option is mandatory. All other arguments are optional.

`-lib` *`libraryName`*	Name of the library to scan.
	If `-libPath` is not specified, oaScan attempts to open the library at `./`*`libraryName`*.
`-libPath` *`path`*	Complete path to the library directory.
	If not specified, oaScan tries to open the library at `./`*`libraryName`*`/`.
	This option does not replace `-lib`. Both `-lib` and this option are required if the library is not contained in the current directory.
`-cell` *`cellName`*	Name of the cell to process.
	If not specified, all of the cells in the library are processed.
`-view` *`viewName`*	Name of the view to process under the cell specified by the `-cell` option or for all the cells in the library if `-cell` is not specified.
	If not specified, all views of the cell or cells are processed.
`-viewType` *`viewType`*	
	Scans only databases of the specified view type.
	Valid view types are: `maskLayout`, `netlist`, `oaHierDesign`, `schematic`, `schematicSymbol`
	If not specified, databases of all view types are processed.
`-dbType` *`databaseType`*	
	Scans only databases of this database type. Valid types are:

- `Design`: Layout, schematic, symbol, and abstract database files

- `Tech`: Technology databases

- `DMData`: `data.dm` files

If not specified, databases of all types are processed.

`-dataModel` *version*

OpenAccess data model to be considered by oaScan while processing databases. If this option is not used, data model 6 is used by default.

You can open and scan data model 5 or a lower version of the database when data model 5 is used with this option. oaScan saves such databases as data model 5 or lower after repair.

If a database is data model 6 and oaScan is using data model 5, the database is scanned if the data model policies of the database allow access, otherwise oaScan skips the processing of the database.

`-repair`

Repairs the inconsistencies found (both Errors and Warnings) and saves the updated database. If not specified, databases are only scanned for inconsistencies.

To repair inconsistencies, you must have write access to the library. It is good practice to retain a separate copy of the original library until the scan and repair process is complete.

`-fixWarnings`

This argument is deprecated. `-repair` now repairs issues of severity Warning.

`-verbose`

Logs oaScan progress showing a summary for all processed designs instead of only those that have non-empty scan results.

`-forceLibPath`

Enables use of a library directory that does not contain a `.oalib` file.

If not specified, oaScan issues an error if you specify a library directory that does not contain a `.oalib` file.

`-noWarnings`

Suppresses the output of warning messages in scan mode. This option cannot be used with `-repair`.

`-libLevelOnly`

Processes only files contained in the library directory. You cannot specify `-libLevelOnly` and `-cellLevelOnly` together.

When specified on its own, all database files at the library level are processed (for example, `tech.db` and `data.dm`).

To limit the process to just the technology database or just the library-level `data.dm`, specify the following:

`-libLevelOnly -dbType Tech`

`-libLevelOnly -dbType DMData`

`-cellLevelOnly`	Processes only cell-level files, such as `data.dm` without descending into any cellviews.
	`-cellLevelOnly` requires `-cell` to be specified. You cannot specify `-cellLevelOnly` together with either `-libLevelOnly` or `-viewType`.
`-ignoreFile` *fileName*	
	Skips the cells or cellviews specified in the given text file. Each line of the text file is of the format "*cellName* [*viewName*]".
`-reportFreeSpace` *size*	
	List files where fragmented free space is more than the specified size in MB.
`-recoveryFiles`	Scans any auto-save and critical-save recovery database files that exist for the design.
	This argument applies only for designs of type `Design`.
`-logFile` *fileName*	The name of the log file.
	If not specified, output is saved in a file called `oaScan.log`.
`-templateFile`	A file containing other oaScan options. You can specify a template file instead of entering a string of options on the command line.
`-h` | `-help`	Prints to the terminal the oaScan command line syntax and options.
`-v` | `-version`	Prints to the terminal the oaScan version information.

Checking and Repairing Inconsistencies

oaScan processes design, technology, and DMData databases to detect, report, and repair inconsistencies. Messages are written to a log file to report the types of inconsistencies or conditions found during processing. The messages describe the actions taken or the actions needed to repair the data. Appendix A, "Log File Messages" lists the messages that can be written to the log file.

To check for inconsistencies in the design, technology, and DMData databases, and to repair the inconsistencies that are found, follow these steps:

1. Check the library using scan mode by omitting the `-repair` option.

This step requires only read access to the library. After completing the scan, search the log files for lines containing the words ERROR SCAN. Such lines indicate inconsistencies in a cellview that need to be repaired.

Other issues found in scan-only mode produce messages that begin with the word ERROR, but do not contain the word SCAN. Such issues indicate problems reading cellviews or other processing issues that need to be addressed before the scan results can be considered complete.

Data inconsistencies of lesser severity are indicated by lines with the words WARNING SCAN. Repairing such issues is optional, but highly recommended.

2. If inconsistencies are found and reported in the log file, ensure that the library has write-access, and run oaScan with the `-repair` option. `-repair` repairs both Errors and Warnings.

    It is good practice to retain a copy of the original library until the scan and repair process is completed.

3. Sometimes, messages that start with the word PATCHED are reported in the log file in scan and repair mode. If such messages are reported, further steps are required to complete the repair. See Appendix A, "Log File Messages" for detailed instructions.

    If messages that start with the word ERROR are reported in the log file in scan and repair mode, work with your Cadence representative to report this to Cadence.

Return Values

oaScan uses a return value to communicate to the calling process the result of the operation. A return value of 0 means that no errors were encountered, and a nonzero value means that errors were encountered. Interpretation of the return values depends on the mode in which oaScan ran. A nonzero return value has different meanings dependent on whether oaScan

is used in repair mode. The following table explains the meanings of the return values dependent on the mode of operation.

Mode	Return Value	Interpretation
Scan only	0	No errors were encountered and no data inconsistencies detected. Inconsistencies of severity WARNING may have been detected.
	nonzero	Either inconsistencies were detected or errors encountered. Errors and inconsistencies are reported in the log file. Lines in the log file that begin with ERROR SCAN indicate that data inconsistencies were detected. Lines that begin with ERROR, but without the word SCAN, indicate that a problem occurred while running oaScan.
Scan and repair	0	No errors were encountered, and any necessary repairs were successful. Some repairs might be patch repairs, which require further user action. Check the log file for lines that begin with the word PATCHED REPAIR, note the message ID, and see Appendix A for instructions.
	nonzero	Errors were detected and reported in the log file with lines that begin with the word ERROR.

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Log File Messages

The messages written to the log file that result from inconsistent data are constructed of three elements:

- The message type

- A unique numeric message ID

- The condition found or the action taken to repair the data

In addition to the messages, when inconsistencies are found in a database, context information about the database is printed before the scan or repair messages for that database. An example of this context information is:

```
Cellview lib/mycell/schematic 'schematic':
- data model 0 saved by an app compiled against 2.2-p049 running 2.2p057
- platform aix_51_32 VisualAge_6
```

If the -verbose option is specified, the context information is logged for each design scanned even if the database does not have inconsistencies.

The table below lists the message types used in the log file and explains what they mean.

Message Type	Explanation
SCAN	Indicates that inconsistent data was found but not repaired. These types of messages occur if the -repair option is not specified when you run the command. The inconsistency or condition is reported, but no action is taken by oaScan to repair or correct the data.
FIXED	Indicates that inconsistent data was found and enough redundant data was available to fully and automatically correct the condition. These types of messages result when the -repair option is included and the library database inconsistency is repaired.

Message Type	Explanation
PATCHED	Indicates that inconsistent data exists for which sufficient redundant data is not available to automatically correct the condition. These types of messages result when a condition cannot be fixed or deleted, but a patch can replace the inconsistent data. The inconsistent data is replaced (patched) with documented values, making the database consistent and usable again. Subsequent user action is required to restore the data that was replaced in the patch process.

In addition to the messages contained in the log file, oaScan prints to the terminal errors and warnings that are caused by incorrect use such as invalid command line options, an invalid path specification, or an invalid directory specification. oaScan can also pass messages from the OpenAccess core, for example, due to a data model conflict.

When running oaScan, you might see the following error:

```
ERROR: (OA-99000): Cannot save superMaster because this platform requires byte-
swapping the Pcell data. Repair the library using oaScan on a compatible
platform: Solaris/SPARC and AIX are compatible; Linux and Solaris/x86 are
compatible.
```

This particular error is reported for Pcell supermasters that were created on a UNIX platform that is different from the one on which the repair is being attempted. The corrective action is to repair the data on the same platform where the supermaster was defined. OpenAccess Pcell supermasters may contain application defined data. The structure of this data is defined by the application during the save process. This application context is not available to oaScan, and, as a result, it is not possible to determine which fields, if any, in the application-defined data require byte swapping.

It is also possible that an unnumbered error message can occur due to proactive formal methods to detect potential data inconsistencies even though an inconsistency is not yet categorized. If this occurs, report the incident through your OpenAccess support channel.

If the `-repair` option is not specified, only SCAN messages are written to the log file. A sample log file message when a library is scanned but not repaired is:

```
ERROR SCAN-34: Repair needed for the route owner attribute of the shape on layer
45 purpose -1 with bBox ((6640 5705) (6720 5970)).
```

If the `-repair` option is specified, the SCAN message is omitted, and the FIXED or PATCHED prefix is prepended to each logged message. The following sections list the messages that can be written to the log file. The messages are listed for each message type in numeric order.

FIXED Messages

FIXED messages indicate that the inconsistency or condition found was repaired. No further user action is required to correct this inconsistency or condition. The repair has to be performed only once, provided subsequent edits of the design are done with up to date versions of OpenAccess. Periodic maintenance scans are suggested to ensure that inconsistencies do not recur. A log file example of a FIXED message is:

```
FIXED REPAIR-06: Repaired equivalence of nets 'req_v' and 'wrt_dat[0]' due to
instTerm membership on net 'wrt_dat[18:0]'.
```

Message Type	Id	Message
ERROR SCAN	00	Repair needed for property '%s' (value='%s') on an inconsistent %s%s.
FIXED REPAIR		Deleted property '%s' (value='%s') on an inconsistent %s%s.

Message Type	Id	Message
ERROR SCAN	01	Repair needed for property '%s' (value='%s') with an inconsistent owner reference to a %s%s.
FIXED REPAIR		Deleted property '%s' (value='%s') with an inconsistent owner reference to a %s%s.

Message Type	Id	Message
ERROR SCAN	02	Repair needed for inconsistent %s object property reference.
FIXED REPAIR		Repaired inconsistent %s object property reference.

Message Type	Id	Message
ERROR SCAN	03	Repair needed for inconsistent blockage owner references.
FIXED REPAIR		Repaired inconsistent blockage owner references.

Message Type	Id	Message
ERROR SCAN	05	Repair needed for multibit instTerm (inst:%s term:%s) with an inconsistent self reference.
FIXED REPAIR		Repaired multibit instTerm (inst:%s term:%s) with an inconsistent self reference.

Message Type	Id	Message
ERROR SCAN	06	Repair needed to the equivalence of nets '%s' and '%s' due to instTerm membership on net '%s'.
FIXED REPAIR		Repaired equivalence of nets '%s' and '%s' due to instTerm membership on net '%s'.

Message Type	Id	Message
ERROR SCAN	07	Repair needed for inconsistent bundleNet '%s'.
FIXED REPAIR		Deleted inconsistent bundleNet '%s'.

Message Type	Id	Message
ERROR SCAN	08	Repair needed for implicit bitNet '%s' with no explicit owner.
FIXED REPAIR		Deleted implicit bitNet '%s' with no explicit owner.

Message Type	Id	Message
ERROR SCAN	11	Repair needed for unreferenced oaSegStyle:
FIXED REPAIR		Deleted unreferenced oaSegStyle:

Message Type	Id	Message
ERROR SCAN		Repair needed for inconsistent %s relation on term '%s'.
FIXED REPAIR	12	Deleted inconsistent %s relation on term '%s'.

Message Type	Id	Message
ERROR SCAN		Repair needed for an inconsistent parameter reference in the %sparameter.
	13	
FIXED REPAIR		Repaired inconsistent parameter reference in the %s.

Message Type	Id	Message
ERROR SCAN		Repair needed for the top occurrence reference on all occurrence instances.
	14	
FIXED REPAIR		Deleted the top occurrence reference on all occurrence instances.

Message Type	Id	Message
ERROR SCAN		Repair needed for internal occurrence domain references.
FIXED REPAIR	15	Deleted internal occurrence domain references.

Message Type	Id	Message
ERROR SCAN		Repair needed for internal occurrence domain instance references.
	16	
FIXED REPAIR		Deleted internal occurrence domain instance references.

Message Type	Id	Message
ERROR SCAN	17	Repair needed for the lists of detailedNetworks associated with the nets in the design.
FIXED REPAIR		Repaired the lists of detailedNetworks associated with the nets in the design.

Message Type	Id	Message
ERROR SCAN	18	Repair needed for the count of blockages associated with layer number %d.
FIXED REPAIR		Repaired the count of blockages associated with layer number %d.

Message Type	Id	Message
ERROR SCAN	19	Repair needed for the reference count of layer number %d in this tech.
FIXED REPAIR		Repaired the reference count of layer number %d in this tech.

Message Type	Id	Message
ERROR SCAN	23	Repair needed for incorrect bitNet reference at index %d of busNetDef '%s'.
FIXED REPAIR		Repaired incorrect bitNet reference at index %d of busNetDef '%s'.

Message Type	Id	Message
ERROR SCAN		Repair needed for unreferenced busNetDef '%s'.
FIXED REPAIR	24	Deleted unreferenced busNetDef '%s'.

Message Type	Id	Message
ERROR SCAN		Repair needed for %s bitNet '%s' that is not referenced in a bus.
FIXED REPAIR	25	Deleted %s bitNet '%s' that is not referenced in a bus.

Message Type	Id	Message
ERROR SCAN	26	Repair needed for the operating point reference on analysisLib '%s'.
FIXED REPAIR		Repaired the operating point reference on analysisLib '%s'.

Message Type	Id	Message
ERROR SCAN	27	Repair needed for the analysisLib reference on all operating points in the design.
FIXED REPAIR		Repaired the analysisLib reference on all operating points in the design.

Message Type	Id	Message
ERROR SCAN	30	Repair needed for the connect-by-position attribute on instance '%s'.
FIXED REPAIR		Repaired the connect-by-position attribute on instance '%s'.

Message Type	Id	Message
ERROR SCAN	32	Repair needed to an inconsistency in the representation of group data.
FIXED REPAIR		Repaired the inconsistency in the representation of group data.

Message Type	Id	Message
ERROR SCAN	33	Repair needed for %s with inconsistent owner reference:
FIXED REPAIR		Deleted %s due to inconsistent owner reference:

Message Type	Id	Message
ERROR SCAN	34	Repair needed for the route owner attribute of the %s %s.
FIXED REPAIR		Repaired the route owner attribute of the %s %s.

Message Type	Id	Message
ERROR SCAN	35	Repair needed for an inconsistent %s reference in the route with bBox ((%d %d) (%d %d)).
FIXED REPAIR		Repaired an inconsistent %s reference in the route with bBox ((%d %d) (%d %d)).

Message Type	Id	Message
ERROR SCAN	36	Repair needed for an inconsistent beginConn %s reference in the route with bBox ((%d %d) (%d %d)).
FIXED REPAIR		Repaired the inconsistent beginConn %s reference in the route with bBox ((%d %d) (%d %d)).

Message Type	Id	Message
ERROR SCAN	37	Repair needed for an inconsistent endConn %s reference in the route with bBox ((%d %d) (%d %d)).
FIXED REPAIR		Repaired the inconsistent endConn %s reference in the route with bBox ((%d %d) (%d %d)).

Message Type	Id	Message
ERROR SCAN	38	Repair needed for the route connection state of %s %s.
FIXED REPAIR		Repaired the route connection state of %s %s.

Message Type	Id	Message
ERROR SCAN	39	Repair needed to reset the route connection state of %s %s.
FIXED REPAIR		Repaired (reset) the route connection state of %s %s.

Message Type	Id	Message
ERROR SCAN	41	Repair needed for unused parameter reference on %s %s.
FIXED REPAIR		Repaired the unused parameter reference on %s %s.

Message Type	Id	Message
ERROR SCAN	42	Repair needed for implicit bitTerm '%s' with no explicit owner.
FIXED REPAIR		Deleted the implicit bitTerm '%s' with no explicit owner.

Message Type	Id	Message
ERROR SCAN	43	Repair needed for incorrect bitTerm reference at index %d of busTermDef '%s'.
FIXED REPAIR		Repaired the incorrect bitTerm reference at index %d of busTermDef '%s'.

Message Type	Id	Message
ERROR SCAN	44	Repair needed for unreferenced busTermDef '%s'.
FIXED REPAIR		Deleted unreferenced busTermDef '%s'.

Message Type	Id	Message
ERROR SCAN	45	Repair needed for %s bitTerm '%s' that is not referenced in a bus.
FIXED REPAIR		Deleted %s bitTerm '%s' that is not referenced in a bus.

Message Type	Id	Message
ERROR SCAN	46	Repair needed for the isSuperHeader attribute on %s %s.
FIXED REPAIR		Repaired the isSuperHeader attribute on %s %s.

Message Type	Id	Message
ERROR SCAN	47	Repair needed for the super/sub header relationships of %s %s.
FIXED REPAIR		Repaired the super/sub header relationships of %s %s.

Message Type	Id	Message
ERROR SCAN	48	Repair needed to inconsistent reference in multi-bit instTerm [net: %s instance: %s term: %s].
FIXED REPAIR		Repaired the inconsistent reference in multi-bit instTerm [net: %s instance: %s term: %s].

Message Type	Id	Message
ERROR SCAN	49	Repair needed to the vectorInstBit references associated with vectorInst '%s'.
FIXED REPAIR		Repaired the vectorInstBit references associated with vectorInst '%s'.

Message Type	Id	Message
ERROR SCAN	50	Repair needed to the free list of the %s data table.
FIXED REPAIR		Repaired the free list of the %s data table.

Message Type	Id	Message
ERROR SCAN	52	Repair needed for unreferenced viaParam in this design.
FIXED REPAIR		Deleted the unreferenced viaParam in this design.

Message Type	Id	Message
ERROR SCAN	53	Repair needed to the list of instTerms on %s '%s'.
FIXED REPAIR		Repaired the list of instTerms on %s '%s'.

Message Type	Id	Message
ERROR SCAN		Repair needed for the superHeader reference on %s %s.
FIXED REPAIR	54	Repaired the superHeader reference on %s %s.

Message Type	Id	Message
ERROR SCAN		Repair needed for the unused parameter ‰s\.
FIXED REPAIR	55	Repaired the unused parameter ‰s\.

Message Type	Id	Message
ERROR SCAN		Repair needed for the unused appData reference to a %s.
FIXED REPAIR	56	Repaired the unused appData reference to a %s.

Message Type	Id	Message
ERROR SCAN	57	Repair needed for busNetDef '%s' by making it visible in the block domain.
FIXED REPAIR		Repaired busNetDef '%s' by making it visible in the block domain.

Message Type	Id	Message
ERROR SCAN	60	Repair needed for enumProp '%s' with inconsistent enum choices.
FIXED REPAIR		Deleted enumProp '%s' that had inconsistent enum choices.

Message Type	Id	Message
ERROR SCAN	61	Repair needed for vectorInstBit '%s' with inconsistent vectorInstDef reference.
FIXED REPAIR		Repaired vectorInstBit '%s' vectorInstDef reference.

Message Type	Id	Message
ERROR SCAN	62	Repair needed to the occurrence data for the modInstHeader of inst '%s'.
FIXED REPAIR		Repaired the occurrence data for the modInstHeader of inst '%s'.

Message Type	Id	Message
ERROR SCAN	63	Repair needed for instTerm (inst:%s term:%s) with inconsistent term references.
FIXED REPAIR		Repaired the instTerm (inst:%s term:%s) that had inconsistent term references.

Message Type	Id	Message
ERROR SCAN	64	Repair needed to remove orphaned %s '%s'.
FIXED REPAIR		Deleted orphaned %s '%s'.

Message Type	Id	Message
ERROR SCAN	65	Repair needed for scanChain '%s' with inconsistent scanChainInst references.
FIXED REPAIR		Repaired scanChain '%s' by removing inconsistent scanChainInst references.

Message Type	Id	Message
ERROR SCAN	66	Repair needed for scanChainSet of scanChain '%s' with inconsistent scanChainInst references.
FIXED REPAIR		Repaired for scanChainSet of scanChain '%s' by removing inconsistent scanChainInst references.

Message Type	Id	Message
ERROR SCAN	67	Repair needed for scanChain '%s' with missing scanChainInst references.
FIXED REPAIR		Repaired scanChain '%s' by adding missing scanChainInst references.

Message Type	Id	Message
ERROR SCAN	68	Repair needed for inconsistent oaViaTopologyArrayValue type.
FIXED REPAIR		Repaired the inconsistent oaViaTopologyArrayValue type.

Message Type	Id	Message
ERROR SCAN	69	Repair needed for inconsistent oaViaTopologyArrayValue type.
FIXED REPAIR		Repaired the inconsistent oaViaTopologyArrayValue type to '%s' for '%s' in this '%s'.

Message Type	Id	Message
ERROR SCAN	71	Repair needed for property '%s' (value='%s') that has an inconsistent owner type.
FIXED REPAIR		Deleted property '%s' (value='%s') that had an inconsistent owner type.

Message Type	Id	Message
ERROR SCAN	72	Repair needed for the span of net '%s'.
FIXED REPAIR		Repaired the span of net '%s'.

Message Type	Id	Message
ERROR SCAN	73	Repair needed for an inconsistent type on the tech default constraint group.
FIXED REPAIR		Repaired the inconsistent type on the tech default constraint group.

Message Type	Id	Message
ERROR SCAN	74	Repair needed for the inconsistent default constraint group reference by the %s '%s'.
FIXED REPAIR		Repaired the inconsistent default constraint group reference by the %s '%s'.

Message Type	Id	Message
ERROR SCAN	75	Repair needed for inconsistent '%s' flag value; value is '%s' but it should be '%s'.
FIXED REPAIR		Repaired inconsistent '%s' flag value by changing it from '%s' to '%s'.

Message Type	Id	Message
ERROR SCAN	76	Repair needed because design is marked as both superMaster and subMaster.
FIXED REPAIR		Repaired design to be only a superMaster.

Message Type	Id	Message
WARNING SCAN	77	Repair needed to remove left-over parameter data from when the design was a parameterized sub-master.
FIXED REPAIR		Removed the left-over parameter data from when the design was a parameterized sub-master.

Message Type	Id	Message
ERROR SCAN	79	Repair needed for a global net entry for '%s' that has an inconsistent net reference.
FIXED REPAIR		Deleted the global net entry for '%s' that had an inconsistent net reference.

Message Type	Id	Message
ERROR SCAN	80	Repair needed for the inconsistent occInstTerm reference by term '%s' in %s.
FIXED REPAIR		Repaired the inconsistent occInstTerm reference by term '%s' in %s.

Message Type	Id	Message
ERROR SCAN	81	Repair needed to update the %s autoNamed with '%s%d' to have the name '%s%d'.
FIXED REPAIR		Repaired the %s that had the old autoName '%s%d' with the new autoName '%s%d'.

Message Type	Id	Message
ERROR SCAN	82	Repair needed for all autoNamed %s objects.
FIXED REPAIR		Repaired all autoNamed %s objects.

Message Type	Id	Message
ERROR SCAN	83	Repair needed for unreferenced next child sparse attribute in detailed parasitic network for index %d.
FIXED REPAIR		Repaired unreferenced next child sparse attribute in detailed parasitic network for index %d.

Message Type	Id	Message
ERROR SCAN	84	Repair needed for unreferenced first child sparse attribute in detailed parasitic network for index %d.
FIXED REPAIR		Repaired unreferenced first child sparse attribute in detailed parasitic network for index %d.

Message Type	Id	Message
ERROR SCAN	85	Repair needed for unreferenced bbox sparse attribute in detailed parasitic network for index %d.
FIXED REPAIR		Repaired for unreferenced bbox child sparse attribute in detailed parasitic network for index %d.

Message Type	Id	Message
ERROR SCAN	86	Repair needed for the inconsistent reference to viaDef '%s' by the viaDefArrayValue.
FIXED REPAIR		Repaired the inconsistent reference to viaDef '%s' by the viaDefArrayValue.

Message Type	Id	Message
ERROR SCAN	87	Repair needed for the scalarized busNet '%s' to remove it from the block domain.
FIXED REPAIR		Repaired the scalarized busNet '%s' by removing it from the block domain.

Message Type	Id	Message
ERROR SCAN	88	Repair needed for the constraintGroup '%s' that has an inconsistent owner reference to %s.
FIXED REPAIR		Deleted constraintGroup '%s' that had an inconsistent owner reference to %s.

Message Type	Id	Message
ERROR SCAN	89	Repair needed for inconsistent vectorInstDef '%s', which has no vectorInsts or vectorInstBits.
FIXED REPAIR		Deleted the inconsistent vectorInstDef '%s', which had no vectorInsts or vectorInstBits.

Message Type	Id	Message
ERROR SCAN	90	Repair needed for inconsistent implicit vectorInstBit '%s', which has no vectorInstDef.
FIXED REPAIR		Deleted implicit vectorInstBit '%s', which had no vectorInstDef.

Message Type	Id	Message
ERROR SCAN		Repair needed for inconsistent appData pointer '%s' of %s.
FIXED REPAIR	91	Deleted the inconsistent appData pointer '%s' of %s.

Message Type	Id	Message
ERROR SCAN	92	Repair needed for inconsistent appData pointer '%s' of %s on %s.
FIXED REPAIR		Deleted the inconsistent appData pointer '%s' of %s on %s.

Message Type	Id	Message
ERROR SCAN		Repair needed for inconsistent appData reference on %s.
FIXED REPAIR	93	Repaired the inconsistent appData reference on %s.

Message Type	Id	Message
ERROR SCAN		Repair needed for unused appData '%s' of %s.
FIXED REPAIR	94	Repaired the unused appData '%s' of %s.

Message Type	Id	Message
ERROR SCAN	95	Repair needed for the inconsistent bitIndex of the implicit vectorInstBit '%s'.
FIXED REPAIR		Repaired the inconsistent bitIndex of the implicit vectorInstBit '%s'.

Message Type	Id	Message
ERROR SCAN		Repair needed for the inBundle state of the bitNet '%s'.
FIXED REPAIR	96	Repaired the inBundle state of the bitNet '%s'.

Message Type	Id	Message
ERROR SCAN		Repair needed for the instTerm with inconsistent instance reference (%s).
	97	
FIXED REPAIR		Deleted the instTerm with inconsistent instance reference (%s).

Message Type	Id	Message
ERROR SCAN		Repair needed for implicit vectorInstBit '%s' with an invalid bitIndex.
	98	
FIXED REPAIR		Deleted the implicit vectorInstBit '%s' with an invalid bitIndex.

Message Type	Id	Message
ERROR SCAN		Repair needed to move instance '%s' to the correct type of instHeader (%s/%s/%s).
	99	
FIXED REPAIR		Repair instance '%s' by moving it from a subHeader to a regular instHeader (%s/%s/%s).

Message Type	Id	Message
ERROR SCAN		Repair needed for the canonical reference of net '%s'.
FIXED REPAIR	100	Repaired the canonical reference of net '%s'.

Message Type	Id	Message
ERROR SCAN		Repair needed for the marker data in this database%s.
FIXED REPAIR	101	Repaired the marker data in this database%s.

Message Type	Id	Message
ERROR SCAN		Repair needed for term '%s' with inconsistent net connections.
FIXED REPAIR	102	Repaired term '%s' with inconsistent net connections.

Message Type	Id	Message
ERROR SCAN		Repair needed for the marker references.
FIXED REPAIR	103	Repaired the marker references in this database.

Message Type	Id	Message
ERROR SCAN		Repair needed for the inBundle state of the bitTerm '%s'.
FIXED REPAIR	104	Repaired the inBundle state of the bitTerm '%s'.

Message Type	Id	Message
ERROR SCAN		Repair needed to clean up unreferenced oaValue data.
FIXED REPAIR	105	Deleted unreferenced oaValue data.

Message Type	Id	Message
ERROR SCAN		Repair needed or the def of vectorInst %s.
FIXED REPAIR	107	Repaired the def for the vectorInst %s.

Message Type	Id	Message
ERROR SCAN		Repair needed for vectorInst '%s' with inconsistent vectorInstDef reference.
FIXED REPAIR	108	Repaired vectorInst '%s' vectorInstDef reference.

Message Type	Id	Message
ERROR SCAN		Repair needed to clean up enums data on deleted oaEnumProp objects.
FIXED REPAIR	109	Repaired deleted enums data on deleted oaEnumProp objects.

Message Type	Id	Message
ERROR SCAN		Repair needed to clean up value data on deleted oaAppProp objects.
FIXED REPAIR	110	Repaired deleted value data on deleted oaAppProp objects.

Message Type	Id	Message
ERROR SCAN		Repair needed for bus term '%s' with inconsistent busTermDef reference.
FIXED REPAIR	111	Repaired bus term '%s' busTermDef reference.

Message Type	Id	Message
ERROR SCAN	112	Repair needed for %s bitTerm '%s' with inconsistent busTermDef reference.
FIXED REPAIR		Repaired %s bitTerm '%s' busTermDef reference.

Message Type	Id	Message
ERROR SCAN	113	Repair needed for object of type '%s' which has a zero area bBox at (%d %d).
FIXED REPAIR		Deleted object of type '%s' which has a zero area bBox at (%d %d).

Message Type	Id	Message
ERROR SCAN	114	Repair needed for object of type '%s' which has a zero area bBox with [layer:%d purp:%d at (%d %d)].
FIXED REPAIR		Deleted object of type '%s' which has a zero area bBox with [layer:%d purp:%d at (%d %d).

Message Type	Id	Message
ERROR SCAN	116	Repair needed for scanChain '%s' with an inconsistent %s reference.
FIXED REPAIR		Repaired scanChain '%s' by setting its %s reference to NULL.

Message Type	Id	Message
ERROR SCAN		Repair needed for the marker references when there are no markers.
	117	
FIXED REPAIR		Repaired the invalid marker references in this database.

Message Type	Id	Message
ERROR SCAN		Repair needed for constraint group definition '%s' with an incorrect reference count.
	118	
FIXED REPAIR		Repaired the constraint group definition '%s' to have the correct reference count.

Message Type	Id	Message
ERROR SCAN		Repair needed for hierarchical group definition '%s' saved as a flat group definition.
	119	
FIXED REPAIR		Deleted the hierarchical group definition '%s' and the groups associated with it.

Message Type	Id	Message
ERROR SCAN		Repair needed for flat group definition '%s' saved as a hierarchical group definition.
	120	
FIXED REPAIR		Deleted the flat group definition '%s' and the groups associated with it.

Message Type	Id	Message
ERROR SCAN	121	Repair needed for hierarchical group definition '%s' with inconsistent recursive flag; value is '%s' but it should be '%s'.
FIXED REPAIR		Repaired the hierarchical group definition '%s' with inconsistent recursive flag by changing value from '%s' to '%s'.

Message Type	Id	Message
ERROR SCAN	122	Repair needed for the flag on figGroup '%s' that implies it has markers.
FIXED REPAIR		Repaired the flag on figGroup '%s' that implied it had markers.

Message Type	Id	Message
ERROR SCAN	123	Repair needed for the flag on figGroup '%s' that implies it has text displays.
FIXED REPAIR		Repaired the flag on figGroup '%s' that implied it had text displays.

Message Type	Id	Message
ERROR SCAN	124	Repair needed for the flag on figGroup '%s' that implies it has constraints.
FIXED REPAIR		Repaired the flag on figGroup '%s' that implied it had constraints.

Message Type	Id	Message
ERROR SCAN	125	Repair needed for the module '%s' with an inconsistent occurrence.
FIXED REPAIR		Deleted module '%s' with an inconsistent occurrence.

Message Type	Id	Message
ERROR SCAN	126	Repair needed for the order of the members in constraintGroup '%s'.
FIXED REPAIR		Repaired the ordering of the members in constraintGroup '%s'.

Message Type	Id	Message
ERROR SCAN	127	Repair needed for the hasConstraint state of a '%s'.
FIXED REPAIR		Repaired the hasConstraint state of a '%s'.

Message Type	Id	Message
ERROR SCAN	128	Repair needed for the instHeader of '%s/%s/%s' that has no associated instances or sub-headers.
FIXED REPAIR		Deleted instHeader of '%s/%s/%s' that had no associated instances or sub-headers.

Message Type	Id	Message
ERROR SCAN	129	Repair needed to make all object occurrence data consistent.
FIXED REPAIR		Repaired all object occurrence data.

Message Type	Id	Message
ERROR SCAN	130	Repair needed for global occNet '%s' missing from the set of global nets with the same name.
FIXED REPAIR		Repaired a global occNet '%s' by adding it to the set of global nets with the same name.

Message Type	Id	Message
ERROR SCAN	131	Repair needed to update the span of occNets associated with global net '%s'.
FIXED REPAIR		Repaired the span of occNets associated with global net '%s'.

Message Type	Id	Message
ERROR SCAN	132	Repair needed for invalid member '%s' of net '%s'.
FIXED REPAIR		Repaired invalid member '%s' of net '%s'.

Message Type	Id	Message
ERROR SCAN	133	Repair needed for instTerm (inst:%s term:%s) with an invalid net connection.
FIXED REPAIR		Repaired instTerm (inst:%s term:%s) that had an invalid net connection.

Message Type	Id	Message
ERROR SCAN	134	Repair needed for canonical reference of net '%s'.
FIXED REPAIR		Repaired net '%s' to reference canonical net '%s'.

Message Type	Id	Message
ERROR SCAN	135	Repair needed for groupDef '%s' with inconsistent group type reference.
FIXED REPAIR		Repaired groupDef '%s' to have appropriate group type reference.

Message Type	Id	Message
ERROR SCAN	136	Repair needed for global occNet '%s' with inconsistent pointer to the head of the global span.
FIXED REPAIR		Repaired global occNet '%s' by resetting the pointer to the head of the global span.

Message Type	Id	Message
ERROR SCAN	137	Repair needed for the top module scoping of an occurrence of module '%s'
FIXED REPAIR		Repaired the top module scoping of an occurrence of module '%s'.

Message Type	Id	Message
ERROR SCAN	138	Repair needed for the association of the top occurrence to the top block.
FIXED REPAIR		Repaired the association of the top occurrence with the top block.

Message Type	Id	Message
ERROR SCAN	139	Repair needed for explicit bitNet '%s' with inconsistent busNetDef reference.
FIXED REPAIR		Repaired explicit bitNet '%s' busNetDef reference.

Message Type	Id	Message
ERROR SCAN	140	Repair needed for layer constraint reference count on the layerHeader for layer number %d.
FIXED REPAIR		Repaired the layer constraint reference count on the layerHeader for layer number %d.

Message Type	Id	Message
ERROR SCAN	141	Repair required for unreferenced layerHeader of layer number %d.
FIXED REPAIR		Removed unreferenced layerHeader of layer number %d.

Message Type	Id	Message
ERROR SCAN	143	Repair required for a viaDefArrayValue with inconsistent viaDef references.
FIXED REPAIR		Repaired a viaDefArrayValue by removing inconsistent viaDef references.

Message Type	Id	Message
ERROR SCAN	144	Repair required for inconsistent reference to viaDef '%s' from a viaDefArrayValue.
FIXED REPAIR		Repaired inconsistent reference to viaDef '%s' from a viaDefArrayValue.

Message Type	Id	Message
ERROR SCAN	145	Repair needed for reference to invalid param.
FIXED REPAIR		Removed reference to invalid param.

Message Type	Id	Message
ERROR SCAN	146	Repair needed for the built-in constraintGroup '%s' tech header linkage.
FIXED REPAIR		Repaired the built-in constraintGroup '%s' tech header linkage.

Message Type	Id	Message
ERROR SCAN	147	Repair needed for the superHeader of '%s/%s/%s' that has no associated instances but has sub-headers.
FIXED REPAIR		Deleted instHeader of '%s/%s/%s' that had no associated instances but has sub-headers.

Message Type	Id	Message
ERROR SCAN	148	Repair needed for an inst subheader with invalid firstParam reference.
FIXED REPAIR		Repaired firstParam reference on inst subheader.

Message Type	Id	Message
ERROR SCAN	150	Repair required for inconsistent global occurrence net data.
FIXED REPAIR		Repaired the inconsistent global occurrence net data.

Message Type	Id	Message
ERROR SCAN	151	Repair needed to correct the number of parameters in this %s.
FIXED REPAIR		Repaired the number of parameters in this %s.

Message Type	Id	Message
ERROR SCAN	152	Repair needed to correct domain state of several occInstTerms.
FIXED REPAIR		Repaired domain state of several occInstTerms.

Message Type	Id	Message
ERROR SCAN	153	Repair needed to the flag implying group membership on shape with [layer:%d purp:%d bBox:((%d %d) (%d %d))].
FIXED REPAIR		Repaired the flag implying group membership on shape with [layer:%d purp:%d bBox:((%d %d) (%d %d))].

Message Type	Id	Message
ERROR SCAN	154	Repair needed for duplicated property '%s' (value='%s') on a %s%s.
FIXED REPAIR		Deleted duplicated property '%s' (value='%s') on a %s%s.

Message Type	Id	Message
ERROR SCAN	155	Repair needed to remove the instTerms on physical pin instance '%s'.
FIXED REPAIR		Removed the instTerms on physical pin instance '%s'.

Message Type	Id	Message
ERROR SCAN	156	Repair needed to correct the owner references on all blockages.
FIXED REPAIR		Repaired the owner references on all blockages.

Message Type	Id	Message
ERROR SCAN	157	Repair needed for the in-top hierarchy state of occurrence %s.
FIXED REPAIR		Repaired the in-top hierarchy state of occurrence %s.

Message Type	Id	Message
WARNING SCAN	158	Repair needed for the layer/purpose pair reference count on the layerHeader for layer number %d.
FIXED REPAIR		Repaired the layer/purpose pair reference count on the layerHeader for layer number %d.

Message Type	Id	Message
ERROR SCAN	159	Repair needed to fix oaValueArrayValues with inconsistent values.
FIXED REPAIR		Repaired oaValueArrayValues by removing inconsistent values.

Message Type	Id	Message
ERROR SCAN	160	Repair needed to update the isOwned state of one or more oaValues owned by a %s.
FIXED REPAIR		Repaired the isOwned state of one or more oaValues owned by a %s.

Message Type	Id	Message
ERROR SCAN	161	Repair needed so that oaValues in %ss have no more than one owner.
FIXED REPAIR		Repaired oaValues in %ss to have only one owner.

Message Type	Id	Message
ERROR SCAN	162	Repair needed to remove oaValueArrayValues whose contents reference inconsistent oaValues.
FIXED REPAIR		Deleted the oaValueArrayValues whose contents referenced inconsistent oaValues.

Message Type	Id	Message
ERROR SCAN	164	Repair needed for the %dth figGroup member with an inconsistent figure reference in figGroup '%s'.
FIXED REPAIR		Removed the %dth figGroup member with an inconsistent figure reference from figGroup '%s'.

Message Type	Id	Message
ERROR SCAN	165	Repair needed for the marker with the [message '%s', short message '%s'] which has inconsistent points data.
FIXED REPAIR		Repaired the marker with the message [message '%s', short message '%s'] which has inconsistent points data.

Message Type	Id	Message
ERROR SCAN	166	Repair needed for the inconsistent count of vias associated with the viaHeader of the viaDef '%s'.
FIXED REPAIR		Repaired the count of vias associated with the viaHeader of the viaDef '%s'.

Message Type	Id	Message
ERROR SCAN	167	Repair needed for the top module '%s' with an inconsistent occurrence.
FIXED REPAIR		Repaired the top module '%s' with an inconsistent occurrence.

Message Type	Id	Message
ERROR SCAN	168	Repair needed for a viaHeader of viaDef '%s' that has no associated vias, viaDefArray or viaTopologyArray.
FIXED REPAIR		Deleted a viaHeader of viaDef '%s' that had no associated vias, viaDefArray or viaTopologyArray.

Message Type	Id	Message
ERROR SCAN	169	Repair needed for the SuperHeader<->SubHeader relation of a viaHeader of viaDef '%s'.
FIXED REPAIR		Repaired the SuperHeader<->SubHeader relation of a viaHeader of viaDef '%s'.

Message Type	Id	Message
ERROR SCAN	170	Repair needed for %s assignment '%s' with an inconsistent instance reference.
FIXED REPAIR		Deleted the %s assignment '%s' with an inconsistent instance reference.

Message Type	Id	Message
ERROR SCAN	171	Repair needed to update the %s with an invalid name reference %d to have the autoName '%s%d'.
FIXED REPAIR		Repaired the %s with an invalid name reference %d to have the autoName '%s%d'.

Message Type	Id	Message
ERROR SCAN	172	Repair needed for the linkage of term '%s' to other busTerms in its busTermDef.
FIXED REPAIR		Repaired the linkage of term '%s' to other busTerms in its busTermDef.

Message Type	Id	Message
ERROR SCAN	173	Repair needed for incorrect busTerm reference on busTermDef '%s'.
FIXED REPAIR		Repaired the incorrect busTerm reference on busTermDef '%s'.

Message Type	Id	Message
ERROR SCAN	174	Repair needed for instance '%s' with inconsistent instTerm references.
FIXED REPAIR		Repaired instance '%s' with inconsistent instTerm references.

Message Type	Id	Message
ERROR SCAN	175	Repair needed for property '%s' (value='%s') with an inconsistent reference to parent property '%s'.
FIXED REPAIR		Repaired property '%s' (value='%s') reference to parent property '%s'.

Message Type	Id	Message
ERROR SCAN	176	Repair needed for markers with inconsistent references to non-existent data%s.
FIXED REPAIR		Repaired markers with inconsistent references to non-existent data%s.

Message Type	Id	Message
ERROR SCAN	177	Repair needed for inconsistent data entry in database slot %d (type='%s').
FIXED REPAIR		Repaired inconsistent data entry in database slot %d (type='%s').

Message Type	Id	Message
ERROR SCAN	178	Repair needed for net '%s' with inconsistent instTerm reference.
FIXED REPAIR		Repaired inconsistent instTerm reference for net '%s'.

Message Type	Id	Message
ERROR SCAN	180	Repair needed to remove multiple entries referencing %s fig with [bbox:((%d %d) (%d %d))] from figGroup '%s'.
FIXED REPAIR		Repaired figGroup '%s' by removing duplicate entry of a %s fig [bbox:((%d %d) (%d %d))].

Message Type	Id	Message
ERROR SCAN	181	Repair needed for inconsistent membership reference of constraint group '%s'.
FIXED REPAIR		Repaired inconsistent membership reference of constraint group '%s'.

Message Type	Id	Message
ERROR SCAN	182	Repair needed to remove instTerms with inconsistent instance references.
FIXED REPAIR		Removed instTerms with inconsistent instance references.

Message Type	Id	Message
ERROR SCAN	183	Repair needed for an inconsistent IntraPointerAppDef '%s' of a %s.
FIXED REPAIR		Repaired the inconsistent IntraPointerAppDef '%s' of a %s.

Message Type	Id	Message
ERROR SCAN	184	Repair needed for an inconsistent InterPointerAppDef '%s' of %s on %s.
FIXED REPAIR		Repaired the inconsistent InterPointerAppDef '%s' of %s on %s.

Message Type	Id	Message
ERROR SCAN	185	Repair needed for an inconsistent userUnits value for the '%s' viewType.
FIXED REPAIR		Removed the inconsistent userUnits value from the '%s' viewType.

Message Type	Id	Message
ERROR SCAN	186	Repair needed to remove constraint '%s' that has an inconsistent definition reference.
FIXED REPAIR		Deleted constraint '%s' that had an inconsistent definition reference.

Message Type	Id	Message
ERROR SCAN	187	Repair needed for %s via '%s' and its reference to viaHeader (%s/%s/%s).
FIXED REPAIR		Repaired %s via '%s' and its reference to viaHeader (%s/%s/%s).

Message Type	Id	Message
ERROR SCAN	188	Repair needed for detailedNetworks associated with inconsistent nets in the design.
FIXED REPAIR		Repaired or removed detailedNetworks associated with inconsistent nets in the design.

Message Type	Id	Message
ERROR SCAN		Repair needed for detailedNetworks that do not exist on disk.
FIXED REPAIR	189	Deleted detailedNetworks that do not exist on disk.

Message Type	Id	Message
ERROR SCAN		Repair needed to reset %s '%s' to be physical-only.
FIXED REPAIR	191	Repaired %s '%s' to be physical-only.

Message Type	Id	Message
WARNING SCAN	193	Repair needed to fix the number of module instances on the instHeader of '%s/%s/%s'.
FIXED REPAIR		Repaired the number of module instances on the instHeader of '%s/%s/%s'.

Message Type	Id	Message
ERROR SCAN		Repair needed to fix the marker references for %d markers.
FIXED REPAIR	194	Repaired %d markers that had invalid references to objects.

Message Type	Id	Message
ERROR SCAN	195	Repair needed to fix the inconsistent %s path name '%s' to '%s' in the master occurrence of instance '%s'.
FIXED REPAIR		Changed the inconsistent %s path name '%s' to '%s' in the master occurrence of instance '%s'.

Message Type	Id	Message
ERROR SCAN	198	Repair needed to remove a %s %s from an occurrence-only net.
FIXED REPAIR		Removed a %s %s from an occurrence-only net.

Message Type	Id	Message
ERROR SCAN	200	Repair needed for a '%s' shape on layer:%d, purp:%d with an inverted bBox ((%d %d) (%d %d)). It will be deleted on repair.
FIXED REPAIR		Deleted the '%s' shape on layer:%d, purp:%d which had an inverted bBox ((%d %d) (%d %d)).

Message Type	Id	Message
ERROR SCAN	201	Repair needed for a %s '%s' ('%s/%s/%s') @(%d, %d) which has an inverted bBox ((%d %d) (%d %d)). It will be deleted on repair.
FIXED REPAIR		Deleted the %s '%s' ('%s/%s/%s') @(%d, %d) which had an inverted bBox ((%d %d) (%d %d)).

Message Type	Id	Message
ERROR SCAN	202	Repair needed for a %s with viaDef '%s' @(%d, %d) which has an inverted bBox ((%d %d) (%d %d)). It will be deleted on repair.
FIXED REPAIR		Deleted the %s with viaDef '%s' @(%d, %d) which had an inverted bBox ((%d %d) (%d %d)).

Message Type	Id	Message
ERROR SCAN	203	Repair needed for a Row '%s' @(%d, %d) which has an inverted bBox ((%d %d) (%d %d)). It will be deleted on repair.
FIXED REPAIR		Deleted the Row '%s' @(%d, %d) which had an inverted bBox ((%d %d) (%d %d)).

Message Type	Id	Message
ERROR SCAN	204	Repair needed to re-sort the per-layer color-shift information.
FIXED REPAIR		Repaired and re-sorted the per-layer color-shift information.

Message Type	Id	Message
WARNING SCAN	205	Repair needed to remove duplicate %s on %s with the property name '%s' (%d duplications); keep value='%s', duplicate value='%s'.
FIXED REPAIR		Removed duplicate %s on %s with the property name '%s' (%d duplications); kept value='%s', removed value='%s'.

Message Type	Id	Message
ERROR SCAN	207	Repair needed for an inconsistent empty route (index %d).
FIXED REPAIR		Repaired an inconsistent empty route (index %d).

Message Type	Id	Message
ERROR SCAN	208	Repair needed for the %s with an inconsistent reference to a %s.
FIXED REPAIR		Repaired the %s with an inconsistent reference to a %s.

Message Type	Id	Message
ERROR SCAN	209	Repair needed for the %s with an inconsistent reference to group %s.
FIXED REPAIR		Repaired the %s with an inconsistent reference to group %s.

Message Type	Id	Message
ERROR SCAN	210	Repair needed for a groupMember in group '%s' with an inconsistent %s reference.
FIXED REPAIR		Removed a groupMember in group '%s' with an inconsistent %s reference.

Message Type	Id	Message
ERROR SCAN	211	Repair needed to remove unreferenced appDef data %s from a %s.
FIXED REPAIR		Removed unreferenced appDef data %s from a %s.

Message Type	Id	Message
ERROR SCAN	212	Repair needed to remove an inconsistent property reference from '%s'.
FIXED REPAIR		Repaired the property reference for '%s'.

Message Type	Id	Message
ERROR SCAN	213	Repair needed for an inconsistent appData free list on %s objects.
FIXED REPAIR		Repaired the appData free list on %s objects.

Message Type	Id	Message
ERROR SCAN	214	Repair needed for duplicate entries in the database table of contents.
FIXED REPAIR		Repaired duplicated entries in the database table of contents.

Message Type	Id	Message
ERROR SCAN	215	Repair needed for inconsistent occurrence domain references in the database table of contents.
FIXED REPAIR		Deleted internal occurrence domain references in the database table of contents.

Message Type	Id	Message
ERROR SCAN		Repair needed for inconsistent sigType on net '%s'.
FIXED REPAIR	216	Repaired the inconsistent sigType on net '%s' by setting the sigType to "signal".

Message Type	Id	Message
ERROR SCAN		Repair needed to remove constraint parameters with an inconsistent owner state.
FIXED REPAIR	217	Removed constraint parameters with an inconsistent owner state.

Message Type	Id	Message
ERROR SCAN		Repair needed to fix the instTerm information on %s '%s'.
FIXED REPAIR	218	Reset the instTerm information on %s '%s'.

Message Type	Id	Message
ERROR SCAN		Repair needed for inconsistent route objects table specification: %s.
FIXED REPAIR	219	Repaired inconsistent route objects table specification: %s.

Message Type	Id	Message
ERROR SCAN		Repair needed for inconsistent unreferenced instTerm data.%s
FIXED REPAIR	220	Removed inconsistent unreferenced instTerm data.%s

Message Type	Id	Message
ERROR SCAN	221	Repair needed to remove obsolete detailed network reference on net '%s'.
FIXED REPAIR		Removed obsolete detailed network reference on net '%s'.

Message Type	Id	Message
ERROR SCAN	222	Repair needed to fix a module that is inconsistently named.
FIXED REPAIR		Repaired a module with an inconsistent name by naming it '%s'.

Message Type	Id	Message
ERROR SCAN	223	Repair needed for a groupMember in group '%s' with an inconsistent group reference.
FIXED REPAIR		Repaired a groupMember in group '%s' with an inconsistent group reference.

Message Type	Id	Message
ERROR SCAN	224	Repair needed for group '%s' with an inconsistent group member reference.
FIXED REPAIR		Repaired group '%s' with an inconsistent group member reference.

Message Type	Id	Message
WARNING SCAN	225	Repair needed to add the data model %u '%s' feature to the database.
FIXED REPAIR		Repaired the database by adding the data model %u '%s' feature.

Message Type	Id	Message
WARNING SCAN	226	Repair needed to remove the data model %u '%s' feature from the database.
FIXED REPAIR		Repaired the database by removing the data model %u '%s' feature.

Message Type	Id	Message
ERROR SCAN	227	Repair needed on list of groups with name '%s' and domain '%s'.
FIXED REPAIR		Repaired list of groups with name '%s' and domain '%s'.

Message Type	Id	Message
ERROR SCAN	230	Repair needed for multi-bit instTerm (inst:%s term:%s) with an inconsistent '%s' flag.
FIXED REPAIR		Repaired multi-bit instTerm (inst:%s term:%s) with an inconsistent '%s' flag.

Message Type	Id	Message
ERROR SCAN	231	Repair needed to remove all pin data because there are no corresponding terminals in the design.
FIXED REPAIR		Removed all pin data because there are no corresponding terminals in the design.

Message Type	Id	Message
ERROR SCAN	232	Repair needed for the block override terminal preferences for terminal '%s'.
FIXED REPAIR		Repaired the block override terminal preferences for terminal '%s'.

Message Type	Id	Message
ERROR SCAN	233	Repair needed to remove the implicit, scalarized, degenerate busNet '%s' (occurrence:%d) from the block domain.
FIXED REPAIR		Removed the implicit, scalarized, degenerate busNet '%s' (occurrence:%d) from the block domain.

Message Type	Id	Message
ERROR SCAN	234	Repair needed to fix the width of the name data (is %u, should be %u) so that pre-22.50 applications can read the data.
FIXED REPAIR		Repaired the width of the name data (was %u, now %u) so pre-22.50 applications can read the data.

Message Type	Id	Message
ERROR SCAN	235	Repair needed for duplicated AppObject data with the name '%s' that have the ID:%llu.
FIXED REPAIR		Removed duplicated AppObject data with the name '%s' that have the ID:%llu.

Message Type	Id	Message
WARNING SCAN	236	Repair needed to adjust data IDs of several AppObjects.
FIXED REPAIR		Adjusted the data IDs of several AppObjects.

Message Type	Id	Message
ERROR SCAN	237	Repair needed for a duplicate member data ID entry 0x%llx in the %s table of contents.
FIXED REPAIR		Removed a duplicate member data ID entry 0x%llx from the %s table of contents.

Message Type	Id	Message
ERROR SCAN	238	Repair needed for an assignment on inst '%s' with an inconsistent name.
FIXED REPAIR		Removed an assignment on inst '%s' with an inconsistent name.

Message Type	Id	Message
ERROR SCAN		Repair needed for the next subHeader reference on %s '%s'.
FIXED REPAIR	239	Repaired the next subHeader reference on %s '%s'.

Message Type	Id	Message
ERROR SCAN	240	Repair needed for a techHeader with a recursive self-reference to library '%s'.
FIXED REPAIR		Removed a techHeader with a recursive self-reference to library '%s'.

Message Type	Id	Message
ERROR SCAN	242	Repair needed for obsolete occNet data and the parasitic network references to them.
FIXED REPAIR		Removed obsolete occNet data and the parasitic network references to them.

Message Type	Id	Message
ERROR SCAN	243	Repair needed for group '%s' with inconsistent group-with-same-name reference to group '%s'.
FIXED REPAIR		Removed group '%s' group-with-same-name reference to group '%s'.

Message Type	Id	Message
ERROR SCAN	244	Repair needed for group '%s' with a group-with-same-name reference to a deleted group.
FIXED REPAIR		Removed group '%s' group-with-same-name reference to a deleted group.

Message Type	Id	Message
ERROR SCAN	245	Repair needed to remove %d inconsistent oaNode connections.
FIXED REPAIR		Removed %d inconsistent oaNode connections.

Message Type	Id	Message
ERROR SCAN	246	Repair needed for a groupMember of group '%s' in an inconsistent next-on '%s' list.
FIXED REPAIR		Repaired a groupMember of group '%s' in an inconsistent next-on '%s' list.

Message Type	Id	Message
ERROR SCAN	247	Repair needed for a groupMember of group '%s' not in any valid in-group list.
FIXED REPAIR		Removed a groupMember of group '%s' not in any valid in-group list.

Message Type	Id	Message
ERROR SCAN	248	Repair needed for groupDef '%s' with an inconsistent first group reference.
FIXED REPAIR		Repaired groupDef '%s' by resetting the first group reference.

Message Type	Id	Message
ERROR SCAN	249	Repair needed for group '%s' with an inconsistent group-in-groupDef list.
FIXED REPAIR		Repaired group '%s' by rebuilding its group-in-groupDef list.

Message Type	Id	Message
ERROR SCAN	252	Repair needed to fix the storage of all groups named '%s'.
FIXED REPAIR		Repaired the storage for all groups named '%s'.

Message Type	Id	Message
ERROR SCAN	253	Repair needed to remove inconsistent '%s' data.
FIXED REPAIR		Removed inconsistent '%s' data.

Message Type	Id	Message
ERROR SCAN	254	Repair needed for a duplicated constraintGroup owned by a '%s' (domain '%s').
FIXED REPAIR		Removed a duplicated constraintGroup owned by a '%s' (domain '%s').

Message Type	Id	Message
ERROR SCAN	257	Repair needed for a %s instance with an inconsistent path name reference (name should be '%s').
FIXED REPAIR		Repaired the path name reference for a %s instance (path name is %s).

Message Type	Id	Message
ERROR SCAN	258	Repair needed for segStyle with negative variable extension(s) on pathSeg [layer:%d purp:%d %s bBox:((%d %d) (%d %d))].
FIXED REPAIR		Repaired the segStyle with negative variable extension(s) on pathSeg [layer:%d purp:%d %s bBox:((%d %d) (%d %d))] by adjusting the endPoint(s) of the pathSeg and changing the extension type(s) to truncate. The boundary of the pathSeg is unchanged.

Message Type	Id	Message
ERROR SCAN	260	Repair needed for the inconsistent inter/intra pointer appDef free list on %s objects.
FIXED REPAIR		Repaired the inter/intra pointer appDef free list on %s objects.

Message Type	Id	Message
ERROR SCAN	262	Repair needed for the %s that conflicts with a %s of the same name.
FIXED REPAIR		Removed the %s that conflicts with a %s of the same name.

Message Type	Id	Message
ERROR SCAN	263	Repair needed for the linkage of net '%s' to other busNets in its busNetDef.
FIXED REPAIR		Repaired the linkage of net '%s' to other busNets in its busNetDef.

Message Type	Id	Message
ERROR SCAN	264	Repair needed for busTermDef '%s' by making it visible in the block domain.
FIXED REPAIR		Repaired busTermDef '%s' by making it visible in the block domain.

Message Type	Id	Message
ERROR SCAN	265	Repair needed for busNet '%s' with an inconsistent busNetDef reference.
FIXED REPAIR		Repaired busNet '%s' with an inconsistent busNetDef reference.

Message Type	Id	Message
ERROR SCAN	266	Repair needed to correct an internal state on the %s with the default name '%s'.
FIXED REPAIR		Repaired the internal state value on the %s with the default name '%s'.

Message Type	Id	Message
ERROR SCAN		Repair needed to remove orphaned detailedNetworks.
FIXED REPAIR	271	Removed orphaned detailedNetworks.

Message Type	Id	Message
ERROR SCAN		Repair needed for the list of figGroup members on figGroup '%s'.
FIXED REPAIR	272	Rebuilt the list of figGroup members on figGroup '%s'.

Message Type	Id	Message
ERROR SCAN		Repair needed for a constraintGroup member on a deleted ConstraintGroup.
FIXED REPAIR	273	Destroyed the constraintGroup member on deleted constraintGroup.

Message Type	Id	Message
ERROR SCAN		Repair needed for constraintGroup member referring to a mismatched ConstraintGroup '%s'.
FIXED REPAIR	274	Destroyed the constraintGroup member referring to a mismatched constraintGroup '%s'.

Message Type	Id	Message
WARNING SCAN	275	Can reduce file size and improve performance by removing empty %s data.
FIXED REPAIR		Removed empty %s data.

Message Type	Id	Message
WARNING SCAN	276	Repair needed for figGroup member with index %d, containing a %s, that refers to a non-existent figGroup.
FIXED REPAIR		Removed the figGroup member with index %d, containing a %s, that referred to a non-existent figGroup.

Message Type	Id	Message
WARNING SCAN	277	Repair needed for figGroup member with index %d, containing a %s, that refers to empty figGroup '%s'.
FIXED REPAIR		Removed the figGroup member with index %d, containing a %s, that referred to empty figGroup '%s'.

PATCHED Messages

PATCHED messages occur when a database inconsistency cannot be automatically repaired due to a lack of redundant information. These conditions require additional actions by the user. Each message listed below is followed by instructions that indicate the actions you must take for the patch that occurred. This action must be performed only once, provided subsequent edits of the design are done with up to date versions of OpenAccess. Periodic maintenance scans are suggested to ensure that inconsistencies do not recur. A log file example of a PATCHED message is:

```
PATCHED REPAIR-78: Patched the design so that it can be redefined as a
superMaster.
```

Message Type	Id	Message
ERROR SCAN	04	Repair needed for inconsistent layer reference on %s (%s) with points.
PATCHED REPAIR		Patched layer number %d for inconsistent layer reference on %s (%s) with points.

➤ Instructions: The layer number of the named layer was changed to #238 for the named viaDef. Replace layer number 238 with the intended layer number.

Message Type	Id	Message
ERROR SCAN	09	Repair needed for segStyle on pathSeg [layer:%d purp:%d %s bBox:((%d %d) (%d %d))].
PATCHED REPAIR		Patched segStyle on pathSeg [layer:%d purp:%d %s bBox:((%d %d) (%d %d))] using oaSegStyle(w:100 beginStyle:truncate endStyle:truncate); new bBox is ((%d %d) (%d %d)).

➤ Instructions: The segStyle for the specified oaPathSeg was changed as indicated. Change the segStyle to the required values.

Message Type	Id	Message
ERROR SCAN	10	Repair needed for segStyle on pathSeg [layer:%d purp:%s %s bBox:((%d %d) (%d %d))].
PATCHED REPAIR		Patched segStyle on pathSeg [layer:%d purp:%s %s bBox:((%d %d) (%d %d))] using oaSegStyle(w:100 beginStyle:truncate endStyle:truncate); new bBox is ((%d %d) (%d %d)).

➤ Instructions: The segStyle for the specified oaPathSeg was changed as indicated. Change the segStyle to the required values.

Message Type	Id	Message
ERROR SCAN	20	Repair needed for inconsistent %s reference by viaDef %s.
PATCHED REPAIR		Patched inconsistent %s reference by viaDef %s to layer number %d.

➤ Instructions: The layer on the specified layer of the specified viaDef was changed to #238. Change the layer to the required layer number.

Message Type	Id	Message
ERROR SCAN	21	Repair needed for inconsistent %s reference by standard viaDef %s.
PATCHED REPAIR		Patched inconsistent %s reference by standard viaDef %s to layer number %d.

➤ Instructions: The layer on the specified layer of the specified oaStdViaDef was changed to #238. Change the layer to the required layer number.

Message Type	Id	Message
ERROR SCAN	22	Repair needed for the order of tech references maintained by the techHeaders.
PATCHED REPAIR		Patched the order of tech references maintained by the techHeaders.

➤ Instructions: The order of technology library references was changed as indicated. Update the references to the required order.

Message Type	Id	Message
ERROR SCAN	28	Repair needed for the analysisLib reference on all operating points in the design.
PATCHED REPAIR		Patched all operating points to a special analysisLib '%s':

➤ Instructions: The analysis library for all oaOpPoints was changed to the value indicated. Change the analysis library to the required value.

Message Type	Id	Message
ERROR SCAN	29	Repair needed for constraintGroup '%s' link to the tech in library '%s'.
PATCHED REPAIR		Patched constraintGroup '%s' link to reference the tech in library '%s'.

➤ Instructions: The specified oaConstraintGroup should reference the technology database in the library indicated. Update the constraintGroup to reference the correct technology database.

Message Type	Id	Message
ERROR SCAN	40	Repair needed for the points of polygon with [layer:%d purp:%d bBox:((%d %d) (%d %d)) numPts:%d].
PATCHED REPAIR		Patched the points of polygon originally with [layer%d purp:%d to [layer%d purp:%d bBox:((%d %d) (%d %d)) numPts:%d].

➤ Instructions: The points of the specified polygon were changed to the polygon's bbox and the purpose was changed to #239. Change the points and purpose to the required values.

Message Type	Id	Message
ERROR SCAN	51	Repair needed for the viaParam reference in stdViaVariant '%s' (viaDef '%s').
PATCHED REPAIR		Patched the viaParam reference in stdViaVariant '%s' (viaDef '%s') using viaParam with cutLayer %d.

➤ Instructions: The oaViaParam for the specified oaStdViaVariant was changed to default values, except the cut layer, which was changed to #238. Change the stdViaVariant's viaParam to the required values.

Message Type	Id	Message
ERROR SCAN	58	Repair needed for enumProp '%s'; value='%s' is not one of the enum choices.
PATCHED REPAIR		Patched enumProp '%s'; changed value='%s' to value='%s' from its enum choices.

➤ Instructions: The value of the specified oaEnumProp was changed to the string indicated. Change the string to the required value.

Message Type	Id	Message
ERROR SCAN	59	Repair needed to enum list with inconsistent entry for enumProp '%s'.
PATCHED REPAIR		Patched enum list by removing inconsistent entries for enumProp '%s'.

➤ Instructions: One or more entries were removed from the list of values of the indicated enumProp. Change the list to the required values.

Message Type	Id	Message
ERROR SCAN	70	Repair needed for inconsistent oaViaTopologyArrayValue type.
PATCHED REPAIR		Patched the inconsistent oaViaTopologyArrayValue type to '%s' in this '%s'.

➤ Instructions: The viaTopologyArrayValue type was changed to the indicated value in the indicated database. Change the type to the required value.

Message Type	Id	Message
ERROR SCAN	78	Repair needed because the design is marked as a subMaster when it should be a superMaster.
PATCHED REPAIR		Patched the superMaster design to be a regular, non-parameterized design.

➤ Instructions: The design was changed to be a non-Pcell design. Update the design to be a Pcell design.

Message Type	Id	Message
ERROR SCAN	106	Repair needed for the points of path with [layer:%d purp:%d bBox:((%d %d) (%d %d)) numPts:%d].
PATCHED REPAIR		Patched the points of path originally with [layer:%d purp:%d] to [layer:%d purp:%d bBox:((%d %d) (%d %d)) numPts:%d].

➤ Instructions: The points of the path were reset based on its original bbox. The purpose is reset to #239. Change the points and purpose as required.

Message Type	Id	Message
ERROR SCAN	115	Repair needed for the points of '%s' with [bBox:((%d %d) (%d %d))].
PATCHED REPAIR		Patched the points of '%s' [bBox:((%d %d) (%d %d))].

➤ Instructions: The point Array for the object of the indicated type was reset to the object's bounding box. Update the object's point Array to the required value.

Message Type	Id	Message
ERROR SCAN	142	Patch required for instance '%s' at origin {%d, %d} with incorrect header.
PATCHED REPAIR		Patched instance '%s' at origin {%d, %d} to be instance of dummy design patchLib/patchCell/patchView.

➤ Instructions: The master of the instance indicated by name was reset to a cellView called patchLib/patchCell/patchView. Update the instance to point to the desired cellView master.

Message Type	Id	Message
ERROR SCAN	149	Patch required for instance '%s' with inconsistent header.
PATCHED REPAIR		Patched the instance '%s' with inst header of '%s/%s/%s'.

➤ Instructions: The parameters of the Pcell instance indicated were updated to the Pcell master default values. Update the Pcell instance to the desired parameter values.

Message Type	Id	Message
ERROR SCAN	163	Repair needed to remove oaValueArrayValues whose contents reference inconsistent oaValues.
PATCHED REPAIR		Patched the oaValueArrayValue owned by a '%s' which contained inconsistent values.
		Added an oaStringValue 'oaScan patched: empty value array value' to the oaValueArrayValue.

➤ Instructions: An oaValueArrayValue had an inconsistent entry. The entry was removed and replaced with an oaStringValue. The value of the oaStringValue is "oaScan patched: empty value array value". Iterate over all values in the database to locate the oaValueArrayValue that contains this oaStringValue and replace it with the desired oaValue.

Message Type	Id	Message
ERROR SCAN	179	Repair needed for figGroup '%s' to remove a %s fig with [bbox:((%d %d) (%d %d))] that is in figGroup '%s'.
PATCHED REPAIR		Patched figGroup '%s' by removing the entry of a %s fig with [bbox:((%d %d) (%d %d))].

➤ Instructions: Update the figures in the figGroup as required.

Message Type	Id	Message
ERROR SCAN	190	Repair needed for the %s via with an inconsistent viaHeader reference. Via is located @(%d, %d) with offset (%d, %d) and rotation %s.
PATCHED REPAIR		Patched %s via @(%d, %d) with offset (%d, %d) and rotation %s which had an inconsistent viaHeader reference.

➤ Instructions: A via in the layout had an inconsistent viaDef reference. A new viaHeader has been created and associated with this via. Locate the via at the specified location in the layout and set it to the desired viaDef.

Message Type	Id	Message
ERROR SCAN	192	Repair needed for vectorInstBit %s due to overflow.
PATCHED REPAIR		Patched vectorInstBit %s by adjusting its bitIndex to %d.

➤ Instructions: The bit index of the instance with the specified name has been patched. Open the cellView and update the index to the desired value.

Message Type	Id	Message
ERROR SCAN	196	Repair needed for %d inconsistent detailedNetworks(s) on the set of analysis points '%s'.
PATCHED REPAIR		Removed %d inconsistent detailedNetwork(s) on the set of analysis points '%s'.

➤ Instructions: Inconsistent parasitic data was removed from the cellView. Run extraction on the cellView again to recreate the parasitic data.

Message Type	Id	Message
ERROR SCAN	197	Repair needed for extraneous %s data with index '%d'.
PATCHED REPAIR		Removed extraneous %s data with index '%d'.

➤ Instructions: Recreate the data as needed.

Message Type	Id	Message
ERROR SCAN	199	Repair needed for the patched stdVia @(%d, %d), xform:[(%d, %d) %s] whose viaHeader has inconsistent parameters.
PATCHED REPAIR		Repaired the patched stdVia @(%d, %d), xform:[(%d, %d) %s] whose viaHeader had inconsistent parameters.

➤ Instructions: A via in the layout had an inconsistent viaDef reference. A new viaHeader has been created and associated with this via. Locate the via at the specified location in the layout and set it to the desired viaDef.

Message Type	Id	Message
ERROR SCAN	206	Repair needed to the %s value on arrayInst '%s' [dx:%d dy:%d numRows: %u numCols: %u origin: (%d, %d)].
PATCHED REPAIR		Patched the %s value by setting it to 1 on arrayInst '%s' [dx:%d dy:%d numRows: %u numCols: %u origin: (%d, %d)].

➤ Instructions: The number of columns or rows for the affected arrayInstance was 0, which is invalid. The patch changed the invalid value to 1. Set the number of rows or columns to the desired value, which must be greater than 0.

Message Type	Id	Message
ERROR SCAN	228	Repair needed for the empty Pcell evaluator name in this superMaster.
PATCHED REPAIR		Patched the empty Pcell evaluator name by giving it the value '__UNKNOWN__'.

➤ Instructions: Recompile the Pcell to reset the evaluator name to the desired value.

Message Type	Id	Message
ERROR SCAN	241	Detected self-recursion on %s '%s'.
PATCHED REPAIR		Patched the self-recursion on %s '%s'.

➤ Instructions: The cell name of the instance that caused the hierarchical loop has been modified. The modified value is printed out by oaScan during the repair. Update the cell name of the instance to the correct value.

Message Type	Id	Message
ERROR SCAN	250	Repair needed for the stdVia data because there are no viaHeaders in the design.
PATCHED REPAIR		Patched the stdVia data to reference the dummy ViaDef '%s'.

➤ Instructions: Vias were patched to use the dummy via definition given in the message. These vias must now be updated to use the desired via definition.

Message Type	Id	Message
ERROR SCAN	251	Repair needed for the customVia data because there are no viaHeaders in the design.
PATCHED REPAIR		Patched the customVia data to reference the dummy ViaDef '%s' and master '%s/%s%s'.

➤ Instructions: Vias were patched to use the dummy via definition given in the message. These vias must now be updated to use the desired via definition.

Message Type	Id	Message
ERROR SCAN	255	Repair needed for a %s instance with an inconsistent path name reference (name should be '%s').
PATCHED REPAIR		Patched a %s instance with an inconsistent name reference with the name '%s'.

➤ Instructions: The instance name was updated to use the provisional name given in the message. Update the instance name to the desired value.

Message Type	Id	Message
ERROR SCAN	259	Repair needed to break this hierarchy of %s sensitivity: term '%s' is sensitive to term '%s' and term '%s' is sensitive to term '%s'.
PATCHED REPAIR		Removed the %s sensitivity hierarchy by leaving term '%s' sensitive to term '%s' and removing the sensitivity between terms '%s' and '%s'.

➤ Instructions: OpenAccess incorrectly allowed a chain of terminals to be ground sensitive to each other. This fix breaks those illegal chains. Review the power/ground sensitivity changes made to your terminals by oaScan and update them as needed.

Message Type	Id	Message
ERROR SCAN	261	Repair needed for arrayInst '%s' that has no arrayInst data.
PATCHED REPAIR		Patched instance '%s' by changing it from an arrayInst to a scalarInst.

➤ Instructions: The mosaic with the specified name has been converted into a regular instance with the same name. Review the instance and convert it back into a mosaic as needed.

Message Type	Id	Message
ERROR SCAN	267	Repair needed for the block sitePattern with inconsistent orientation values.
PATCHED REPAIR		Patched the block sitePattern inconsistent orientation values with the value R0.

➤ Instructions: The orientation was reset to R0. Update the orientation to the desired value.

Message Type	Id	Message
ERROR SCAN	268	Repair needed for row '%s' at (%d %d) with an inconsistent orientation value.
PATCHED REPAIR		Patched row '%s' at (%d %d) with the orientation value R0.

➤ Instructions: The orientation was reset to R0. Update the orientation to the desired value.

Message Type	Id	Message
ERROR SCAN	269	Repair needed for row '%s' at (%d %d) with an inconsistent site orientation value.
PATCHED REPAIR		Patched row '%s' at (%d %d) with the site orientation value R0.

➤ Instructions: The orientation was reset to R0. Update the orientation to the desired value.

Message Type	Id	Message
ERROR SCAN	270	Repair needed for the %s shape at (%d %d) with an inconsistent orientation value.
PATCHED REPAIR		Patch the %s shape at (%d %d) with an orientation value R0.

➤ Instructions: The orientation was reset to R0. Update the orientation to the desired value.

B

Running OpenAccess Executables Standalone

To run OpenAccess binaries standalone outside of the Cadence environment, append the path to the wrapper scripts for the OpenAccess binaries to your `PATH` variable.

For example, append `oa_install_dir/bin` to your `PATH` variable, where `oa_install_dir` is the path to your OpenAccess installation directory. The wrapper scripts for the OpenAccess binaries automatically set your shared library path.

You might want to set your shared library path manually, for example, to create your own wrapper scripts. Set the shared library environment variable according to your platform as shown in the following table.

You can use the `oaGetLibPath` script, available in the `oa_install_dir/bin` directory, to return the path to the libraries on your platform.

Requirement for Linux Platforms

To run OpenAccess binaries standalone outside of the Cadence environment on a Linux platform, you must have the gcc shared libraries in your library search path. If you have not installed the appropriate gcc compiler, you must set the `LD_LIBRARY_PATH` environment variable as specified below:

`cadence_install_dir/tools.lnx86/lib/64bit`

Where `cadence_install_dir` is the path to your Cadence product installation directory.