



VERIFICATION ACADEMY

# UVM Basics

## *Reporting*

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## The Report Macros

```
`uvm_info    ("id", "message", verbosity)
`uvm_warning("id", "message")
`uvm_error   ("id", "message")
`uvm_fatal   ("id", "message")
```

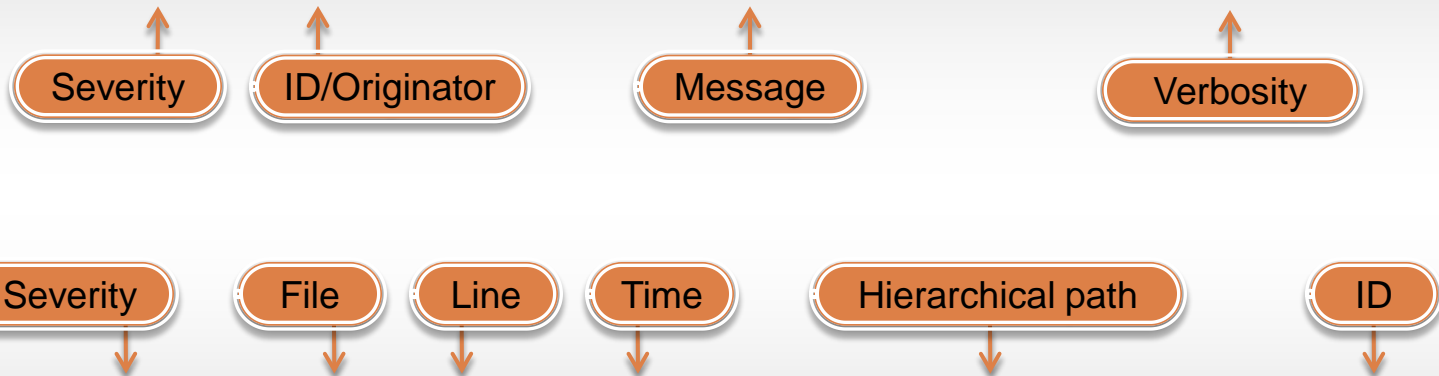
- From uvm\_component
- From uvm\_sequence
- From SystemVerilog module



## Details of the Report

```
function void write(my_transaction t);
```

```
  `uvm_info("ja", "Transaction received", UVM_NONE)
```




```
# UVM_INFO eg.sv(110) @ 100: uvm_test_top.m_env.m_driver [ja]  
Transaction received
```





## Controlling Verbosity

<code>`uvm_info("id", "message 1", UVM_NONE)</code>	Always appear
<code>`uvm_info("id", "message 2", UVM_LOW)</code>	
<code>`uvm_info("id", "message 3", UVM_MEDIUM)</code>	
<code>`uvm_info("id", "message 4", UVM_HIGH)</code>	
<code>`uvm_info("id", "message 5", UVM_FULL)</code>	Usually filtered out



`uvm_top.set_report_verbosity_level_hier(UVM_LOW);`



Top-level component



Applies to entire hierarchy



Output if verbosity  $\leq$  UVM\_LOW



## Setting Actions

```
uvm_top.set_report_severity_action_hier(  
    UVM_INFO, UVM_NO_ACTION);
```



All info messages



Suppress messages

```
uvm_top.set_report_id_action_hier(  
    "ja", UVM_NO_ACTION);
```



Suppress all messages with ID = "ja"



## Some Common Actions

UVM\_NO\_ACTION

Do nothing

UVM\_DISPLAY

Send report to standard output (default)

UVM\_LOG

Send report to a file

UVM\_COUNT

Stop simulation when max count is reached (error)

UVM\_EXIT

Finish simulation immediately (fatal)

UVM\_STOP

Call \$stop



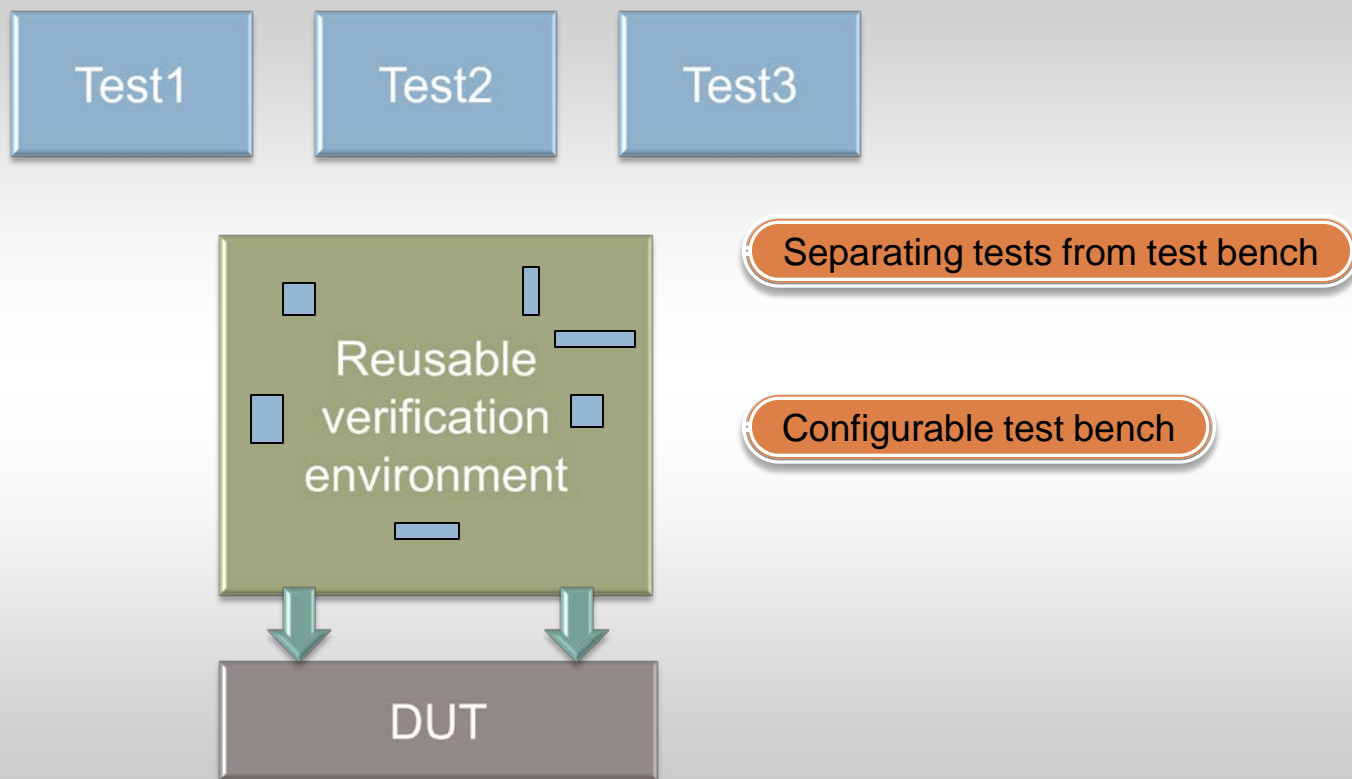
## Redirecting Reports to a File

```
file_h = $fopen("my.log", "w");  
  
uvm_top.set_report_default_file_hier(file_h);  
  
uvm_top.set_report_severity_action_hier(  
    UVM_INFO, UVM_DISPLAY + UVM_LOG);
```

**\_hier method must be called after build\_phase**



## Summary 1









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