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Product: Intel® Thread Checker
Version: 2.2
Document Type: How to
Operating Sys: Windows*, Linux*

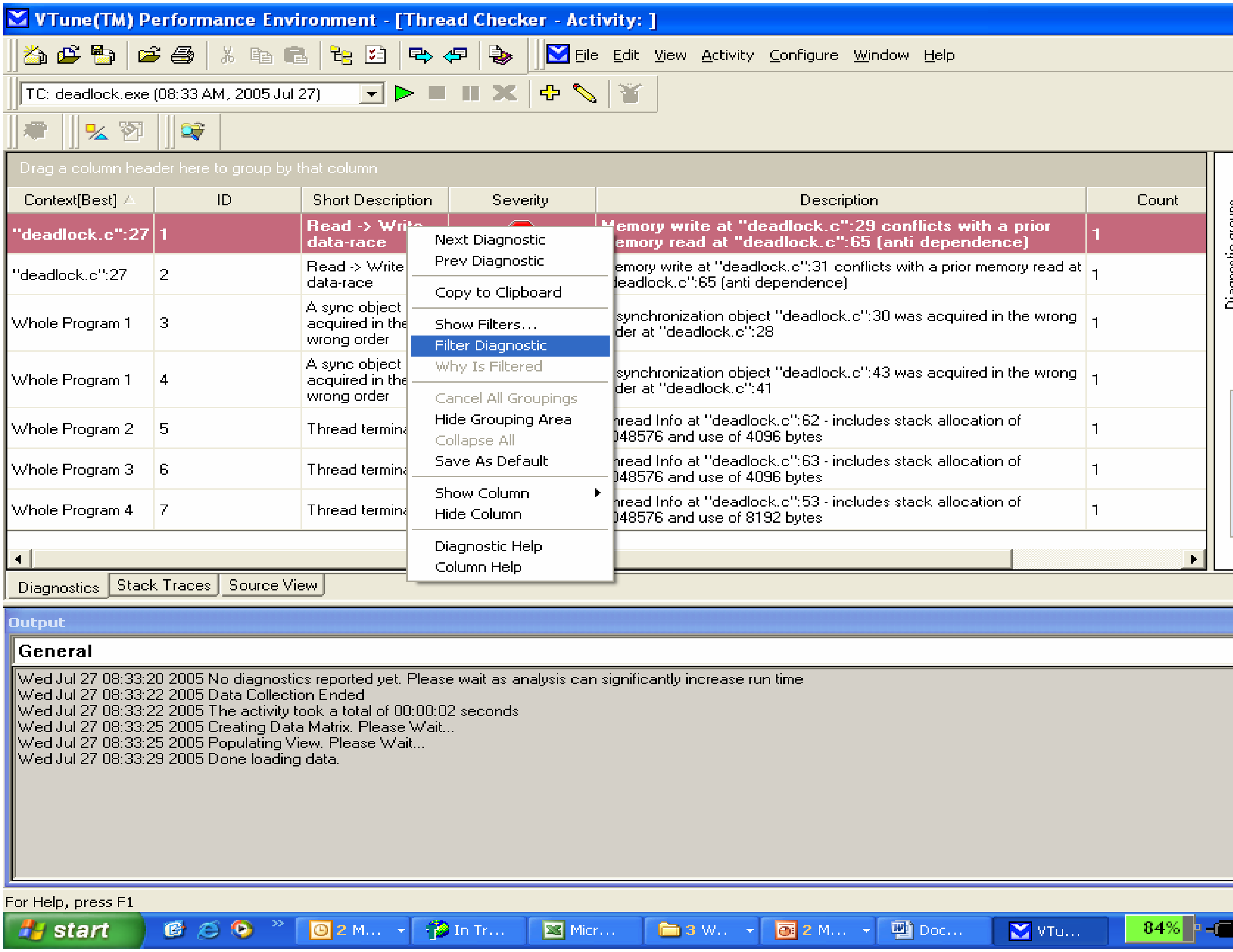
Filtering in Intel® Thread Checker 2.2

Introduction

Filtering allows you to hide benign diagnostics. It avoids seeing the same diagnostics each time you run the Intel® Thread Checker. It also makes bug reporting easy. If your component reports benign diagnostics, distribute your filters to developers using your components and Intel® Thread Checker.

Filtering a single diagnostic

Intel® Thread Checker allows you to filter a single diagnostic. To do this, right click on the diagnostic of interest and choose 'Filter Diagnostic'.

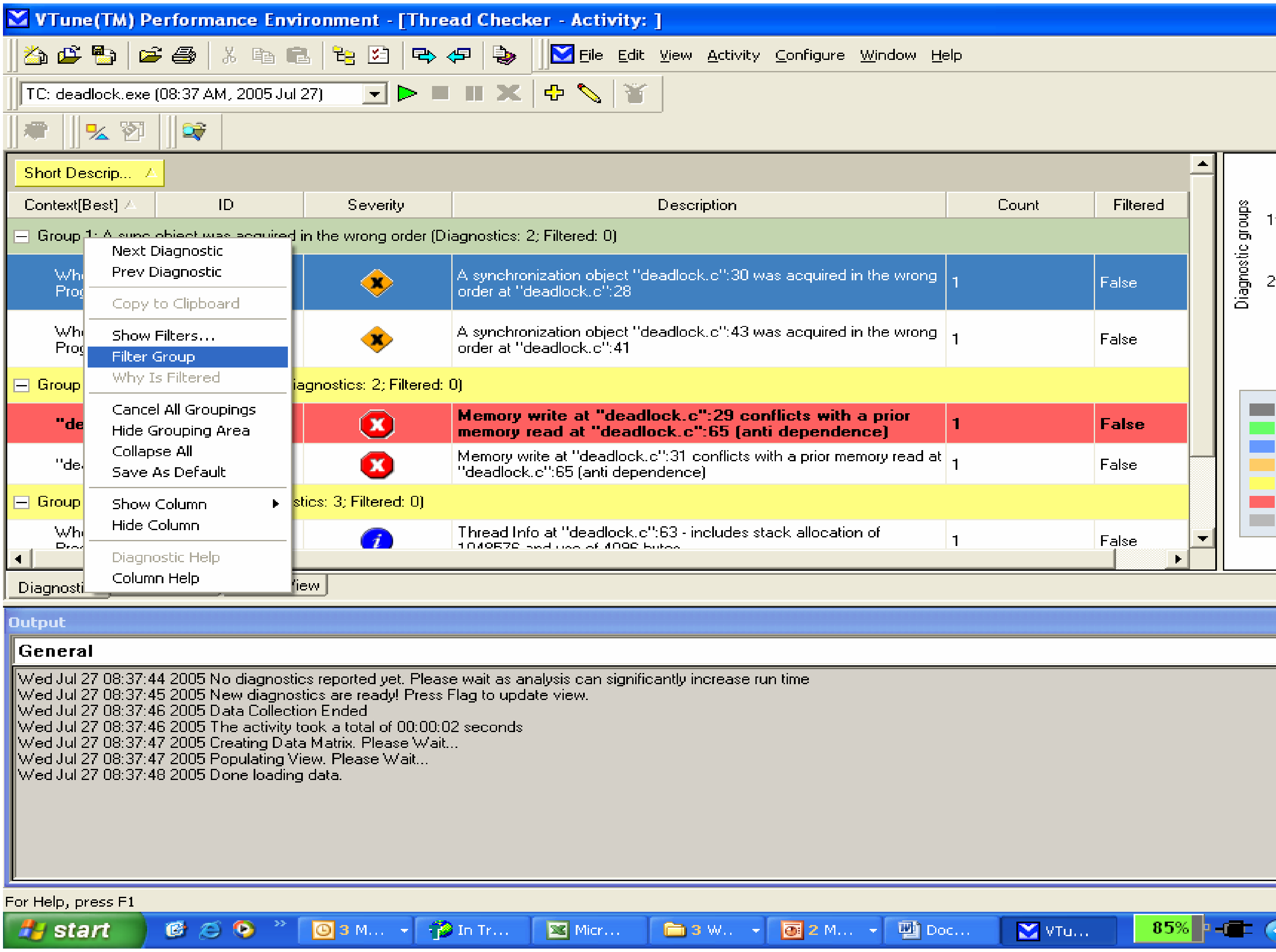


Context[Best]	ID	Short Description	Severity	Description	Count
"deadlock.c":27	1	Read -> Wri data-race		emory write at "deadlock.c":29 conflicts with a prior emory read at "deadlock.c":65 (anti dependence)	1
"deadlock.c":27	2	Read -> Write data-race		emory write at "deadlock.c":31 conflicts with a prior memory read at deadlock.c":65 (anti dependence)	1
Whole Program 1	3	A sync object acquired in the wrong order		synchronization object "deadlock.c":30 was acquired in the wrong der at "deadlock.c":28	1
Whole Program 1	4	A sync object acquired in the wrong order		synchronization object "deadlock.c":43 was acquired in the wrong der at "deadlock.c":41	1
Whole Program 2	5	Thread termin		hread Info at "deadlock.c":62 - includes stack allocation of 048576 and use of 4096 bytes	1
Whole Program 3	6	Thread termin		hread Info at "deadlock.c":63 - includes stack allocation of 048576 and use of 4096 bytes	1
Whole Program 4	7	Thread termin		hread Info at "deadlock.c":53 - includes stack allocation of 048576 and use of 8192 bytes	1

```
Wed Jul 27 08:33:20 2005 No diagnostics reported yet. Please wait as analysis can significantly increase run time
Wed Jul 27 08:33:22 2005 Data Collection Ended
Wed Jul 27 08:33:22 2005 The activity took a total of 00:00:02 seconds
Wed Jul 27 08:33:25 2005 Creating Data Matrix. Please Wait...
Wed Jul 27 08:33:25 2005 Populating View. Please Wait...
Wed Jul 27 08:33:29 2005 Done loading data.
```

Filtering a diagnostic group

Intel® Thread Checker allows you to filter a diagnostic group. Before filtering the group, group the diagnostics, by dragging any column of interest. In the example below we have grouped by ‘Short Description’. After that right click on the group and choose ‘Filter Group’



Context[Best]	ID	Severity	Description	Count	Filtered
Group 1: A sync object was acquired in the wrong order (Diagnostics: 2; Filtered: 0)					
Wh Prog			A synchronization object "deadlock.c":30 was acquired in the wrong order at "deadlock.c":28	1	False
Wh Prog			A synchronization object "deadlock.c":43 was acquired in the wrong order at "deadlock.c":41	1	False
Group	iagnostics: 2; Filtered: 0)				
"de			**Memory write at "deadlock.c":29 conflicts with a prior memory read at "deadlock.c":65 (anti dependence)**	**1**	**False**
"de			Memory write at "deadlock.c":31 conflicts with a prior memory read at "deadlock.c":65 (anti dependence)	1	False
Group	stics: 3; Filtered: 0)				
Wh Pro			Thread Info at "deadlock.c":63 - includes stack allocation of 1048576 and use of 4096 bytes	1	False

```
Wed Jul 27 08:37:44 2005 No diagnostics reported yet. Please wait as analysis can significantly increase run time
Wed Jul 27 08:37:45 2005 New diagnostics are ready! Press Flag to update view.
Wed Jul 27 08:37:46 2005 Data Collection Ended
Wed Jul 27 08:37:46 2005 The activity took a total of 00:00:02 seconds
Wed Jul 27 08:37:47 2005 Creating Data Matrix. Please Wait...
Wed Jul 27 08:37:47 2005 Populating View. Please Wait...
Wed Jul 27 08:37:48 2005 Done loading data.
```

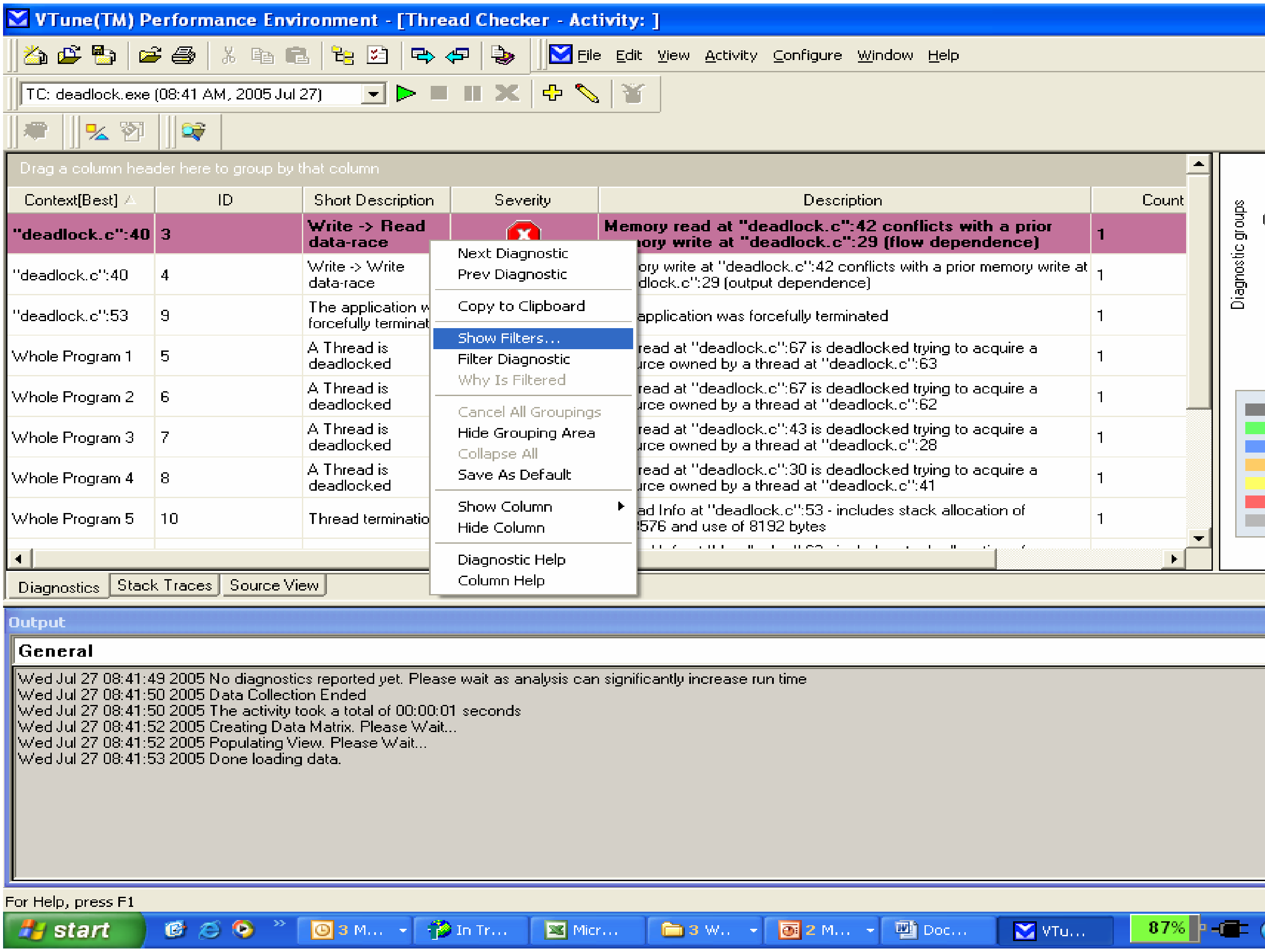
Transferring files

Filters may be shared between projects and or activities and may even be transferred across systems

To transfer filter, you have to save the filter(s) to a file. This file may be moved from system to system. Filters can also be loaded into another activity .To do this, first run the activity and then “append” a filter file to the selected activity. If multiple files are appended they become merged into a single file for the selected activity

Saving filters

Filters can be saved and then appended later to the same activity or to the other activity. After you filtered a single diagnostic or a group diagnostics, and you decide to save the filters, right click on any diagnostics and choose ‘Show Filters…’ , which will open up a dialog box which will allow you to save or append the filters. If you are saving the filter, the filters will have a extension of .flt. You can also append the .flt file



Context[Best]	ID	Short Description	Severity	Description	Count
"deadlock.c":40	3	Write -> Read data-race	✖	Memory read at "deadlock.c":42 conflicts with a prior …ory write at "deadlock.c":29 (flow dependence)	1
"deadlock.c":40	4	Write -> Write data-race		…ory write at "deadlock.c":42 conflicts with a prior memory write at …dlock.c":29 (output dependence)	1
"deadlock.c":53	9	The application w… forcefully terminat…		…application was forcefully terminated	1
Whole Program 1	5	A Thread is deadlocked		…read at "deadlock.c":67 is deadlocked trying to acquire a …urce owned by a thread at "deadlock.c":63	1
Whole Program 2	6	A Thread is deadlocked		…read at "deadlock.c":67 is deadlocked trying to acquire a …urce owned by a thread at "deadlock.c":62	1
Whole Program 3	7	A Thread is deadlocked		…read at "deadlock.c":43 is deadlocked trying to acquire a …urce owned by a thread at "deadlock.c":28	1
Whole Program 4	8	A Thread is deadlocked		…read at "deadlock.c":30 is deadlocked trying to acquire a …urce owned by a thread at "deadlock.c":41	1
Whole Program 5	10	Thread terminatio…		…ad Info at "deadlock.c":53 - includes stack allocation of …576 and use of 8192 bytes	1

```
Wed Jul 27 08:41:49 2005 No diagnostics reported yet. Please wait as analysis can significantly increase run time
Wed Jul 27 08:41:50 2005 Data Collection Ended
Wed Jul 27 08:41:50 2005 The activity took a total of 00:00:01 seconds
Wed Jul 27 08:41:52 2005 Creating Data Matrix. Please Wait...
Wed Jul 27 08:41:52 2005 Populating View. Please Wait...
Wed Jul 27 08:41:53 2005 Done loading data.
```

Conclusion

Filtering is a feature which will allow you to hide diagnostics which do not matter to you most. It will also allow you to save and append filters which allow the flexibility to transfer filters.