

如何定位性能瓶颈

51Testing

第二十七期软件测试沙龙
(北京站)

性能数据分析

DevPartner Performance Analysis Viewer - [Demo.dpprf]

File Edit Options Window Help

All (Modules: 16 Methods: 895)

- COMPUTER - 560 (Deadlock Demo)
 - Source (8.6042%)
 - Deadlock Demo.exe (8.6042%)
 - DeadlockPhilosophersView.cpp (...)
 - DeadlockPhilosophersDoc.cpp (...)
 - MainFrm.cpp (1.4378%)
 - vector (.1879%)
 - Philosopher.cpp (.1639%)
 - MemDC.h (.1093%)
 - Chopstick.cpp (.0956%)
 - PhilDlg.cpp (.0459%)
 - DeadlockPhilosophers.cpp (.033)
 - PhilNumberDlg.cpp (.0274%)
 - PhilChooser.cpp (.0262%)
 - xmemory (.0134%)
 - new (.0019%)
 - utility (.0012%)
 - System (91.3958%)
 - Top 20 Source Methods
 - Top 20 Methods
 - Top 20 Called Source Methods
 - Top 20 Called Methods

Method List	Source [DeadlockPhilosophersView.cwp]	Session Summary						
Method Name	% in Method	% with Children	Called	Image	% in Image	Average ...	First (m	
#4749 (mfc42d.dll)	.0000	.0000	1	MFC42D.DLL	.0000	.0000	.000	
#4408 (mfc42d.dll)	.0000	87.3228	1	MFC42D.DLL	.0000	.0000	.000	
#3373 (mfc42d.dll)	.0000	.0000	1	MFC42D.DLL	.0000	.0000	.000	
#1797 (mfc42d.dll)	.0000	.0000	1	MFC42D.DLL	.0000	.0000	.000	
#3938 (mfc42d.dll)	.0000	.0000	1	MFC42D.DLL	.0000	.0000	.000	
CrtSetReportHook	.0000	.0000	1	MSVCRTD.DLL	.0019	.0006	.000	
GetCurrentProcess	.0000	.0000	1	kernel32...	.0002	.0006	.000	
GetCurrentThread	.0000	.0000	1	kernel32...	.0002	.0006	.000	
CrtSetDumpClient	.0000	.0000	1	MSVCRTD.DLL	.0020	.0006	.000	
GetThreadLocale	.0000	.0000	1	kernel32...	.0002	.0006	.000	
#3244 (mfc42d.dll)	.0000	.0000	1	MFC42D.DLL	.0001	.0006	.000	
GetCommandLineA	.0000	.0000	1	kernel32...	.0002	.0007	.000	
_p__commode	.0000	.0000	1	MSVCRTD.DLL	.0022	.0007	.000	
_p__argc	.0000	.0000	1	MSVCRTD.DLL	.0022	.0007	.000	
GetSystemTimeAsFileTime	.0000	.0000	1	kernel32...	.0002	.0007	.000	
(unknown)	.0000	.0000	1	MFC42D.DLL	.0001	.0007	.000	
_p__fmode	.0000	.0000	1	MSVCRTD.DLL	.0025	.0008	.000	
#308 (mfc42d.dll)	.0000	.0000	1	MFC42D.DLL	.0001	.0008	.000	
CrtSetReportMode	.0000	.0000	1	MSVCRTD.DLL	.0027	.0008	.000	
IsChild	.0000	.0000	1	user32.dll	.0001	.0009	.000	
_set_app_type	.0000	.0000	1	MSVCRTD.DLL	.0028	.0009	.000	
wcsncpy	.0000	.0000	1	msvcrt.dll	.1738	.0009	.000	
CheckMenuItem	.0000	.0000	1	user32.dll	.0001	.0009	.000	
GetSystemTime	.0000	.0000	1	kernel32...	.0003	.0009	.000	
#4176 (mfc42d.dll)	.0001	.0001	3	MFC42D.DLL	.0002	.0004	.000	
strtol	.0001	.0001	1	MSVCRTD.DLL	.0040	.0012	.000	
GetCommandLineW	.0001	.0001	2	kernel32...	.0004	.0006	.000	
FreeEnvironmentStringsA	.0001	.0001	1	kernel32...	.0004	.0013	.000	
GetProcessVersion	.0001	.0001	1	kernel32...	.0004	.0013	.000	
#1748 (mfc42d.dll)	.0001	.0001	2	MFC42D.DLL	.0002	.0007	.000	
free	.0001	.0001	1	msvcrt.dll	.2897	.0014	.000	
GdiValidateHandle	.0001	.0001	2	gdi32.dll	.0003	.0007	.000	
FreeSid	.0001	.0001	2	advapi32...	.1735	.0007	.000	
#4017 (mfc42d.dll)	.0001	.0001	3	MFC42D.DLL	.0003	.0005	.000	
ImmResSizeIMCC	.0001	.0004	1	imm32.dll	.3341	.0015	.000	
lstrcpynA	.0001	.0001	2	kernel32...	.0004	.0008	.000	
#734 (mfc42d.dll)	.0001	.0001	1	MFC42D.DLL	.0003	.0015	.000	
#2103 (mfc42d.dll)	.0001	.0001	2	MFC42D.DLL	.0003	.0008	.000	
#4143 (mfc42d.dll)	.0001	.0001	1	MFC42D.DLL	.0003	.0016	.000	
#3836 (mfc42d.dll)	.0001	.0005	1	MFC42D.DLL	.0003	.0016	.000	
#1100 (mfc42d.dll)	.0001	.0001	1	MFC42D.DLL	.0003	.0016	.000	
RtlReAllocateHeap	.0001	.0001	1	ntdll.dll	.0065	.0016	.000	



常用指标

% of Method 列

 执行当前语句及其调用的method耗时占执行整个method的百分比

% in Method 列

 执行该Method耗时占整个session的百分比

% in Image列

 执行该Method耗时占image中所有Method执行的百分比

常用指标

%with Children 列

 执行该Method以及子函数耗时占整个session的百分比

Average 列

 在整个会话期间，执行该method的平均时间

Average with Children列

 在整个会话期间，执行该method及其子method的平均时间

常用指标

Called 列

☞ 方法被调用的次数

Child Methods

☞ 被该Method调用的Method

Count 列

☞ 该语句被执行的次数

Cycle

☞ CPU完成一个时钟周期的时间，对于150MHZ的处理器来说，需要消耗

常用指标

■ First列

■ 该方法收集首次执行时间

■ Method

■ 你的程序中用到的函数和方法

■ Method 列

■ 该行调用的Method的个数

■ Image列

■ 包含该方法的Image

常用指标

Maximum

Method执行最大耗时

Minimum

Method执行最少耗时

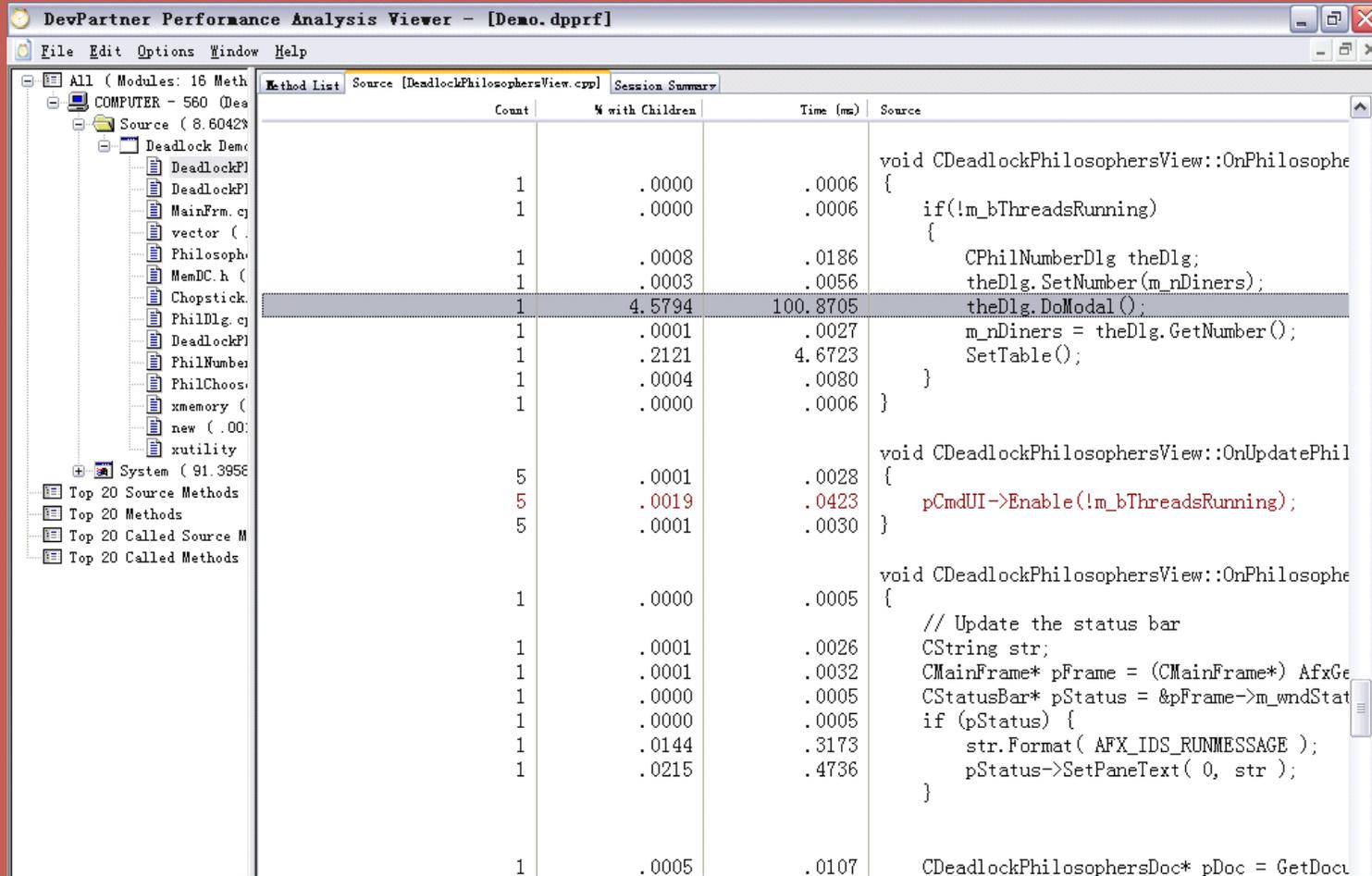
Real 列

函数执行的真实时间，包括函数等待关联函数返回值的时间

Time列

该语句以及它所调用的方法的平均执行时

代码行



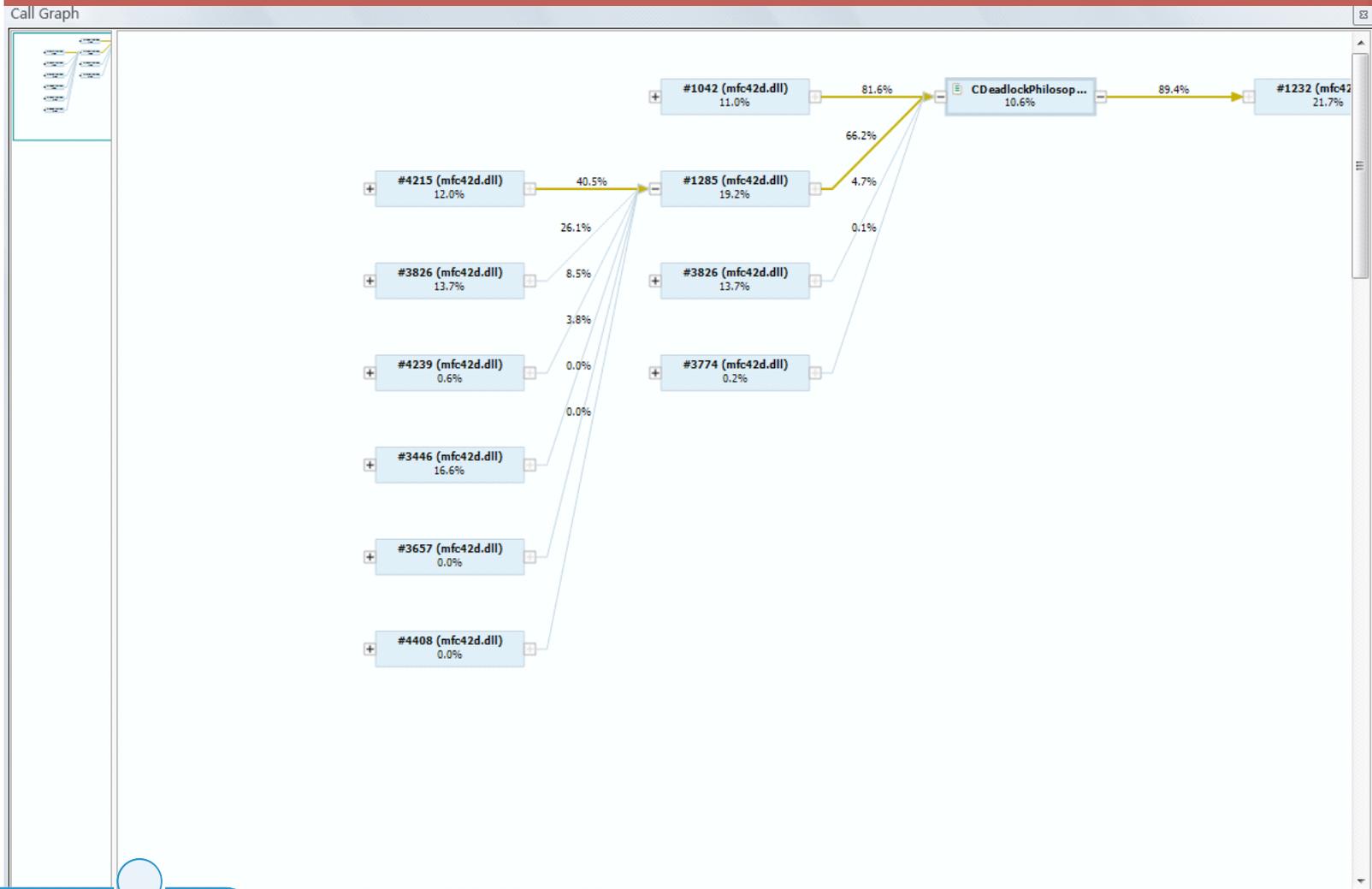
DevPartner Performance Analysis Viewer - [Demo.dpprf]

File Edit Options Window Help

Method List Source [DeadlockPhilosophersView.cpp] Session Summary

	Count	% with Children	Time (ms)	Source
				void CDeadlockPhilosophersView::OnPhilosophe
	1	.0000	.0006	{
	1	.0000	.0006	if(!m_bThreadsRunning)
				{
	1	.0008	.0186	CPhilNumberDlg theDlg;
	1	.0003	.0056	theDlg.SetNumber(m_nDiners);
	1	4.5794	100.8705	theDlg.DoModal();
	1	.0001	.0027	m_nDiners = theDlg.GetNumber();
	1	.2121	4.6723	SetTable();
	1	.0004	.0080	}
	1	.0000	.0006	}
				void CDeadlockPhilosophersView::OnUpdatePhil
	5	.0001	.0028	{
	5	.0019	.0423	pCmdUI->Enable(!m_bThreadsRunning);
	5	.0001	.0030	}
				void CDeadlockPhilosophersView::OnPhilosophe
	1	.0000	.0005	{
	1	.0001	.0026	// Update the status bar
	1	.0001	.0032	CString str;
	1	.0000	.0005	CMainFrame* pFrame = (CMainFrame*) AfxGe
	1	.0000	.0005	CStatusBar* pStatus = &pFrame->m_wndStat
	1	.0000	.0005	if (pStatus) {
	1	.0144	.3173	str.Format(AFX_IDS_RUNMESSAGE);
	1	.0215	.4736	pStatus->SetPaneText(0, str);
				}
	1	.0005	.0107	CDeadlockPhilosophersDoc* pDoc = GetDocu

路径分析



覆盖率

DevPartner Coverage Analysis Viewer - [Deadlock DemoSnap.dpcov]

File Edit Options Window Help

All (9.1681% of 7,068 lines)

- COMPUTER - 2708 (Deadlock Demo)
- Source (9.1681% of 7,068 lines)
 - Deadlock Demo.exe (9.1681% of 7,068 lines)
 - afxutils.h (.0000% of 24 lines)
 - objbase.h (.0000% of 24 lines)
 - wchar.h (.0000% of 276 lines)
 - stdexcept (.0000% of 24 lines)
 - xlocale (.0000% of 1,512 lines)
 - xiosbase (.0000% of 24 lines)
 - utility (.0000% of 768 lines)
 - istream (.0000% of 48 lines)
 - iosfwd (.0000% of 24 lines)
 - ostream (.0000% of 96 lines)
 - xlocnum (.0000% of 12 lines)
 - IndivParamsDlg.cpp (.0000% of 24 lines)
 - PhilChooser.cpp (.0000% of 27 lines)
 - StoryDlg.cpp (.0000% of 11 lines)
 - xutility (2.6258% of 457 lines)
 - vector (6.1072% of 2,538 lines)
 - new (8.3333% of 12 lines)
 - xmemory (8.6614% of 381 lines)
 - Philosopher.cpp (36.0000% of 200 lines)
 - DeadlockPhilosophers.cpp (56.0000% of 200 lines)
 - DeadlockPhilosophersView.cpp (59.3529% of 200 lines)
 - MainFrm.cpp (60.0000% of 30 lines)
 - DeadlockPhilosophersDoc.cpp (66.4063% of 200 lines)
 - PhilDlg.cpp (73.5294% of 34 lines)
 - Chopstick.cpp (78.5714% of 14 lines)
 - PhilNumberDlg.cpp (82.6087% of 23 lines)
 - MemDC.h (82.7586% of 29 lines)

155 of 2538 lines executed (6.1072%)

57 of 898 methods called (6.3474%)

Method List | Source[PhilChooser.cpp] | Session Summary

Method Name	% Covered	Called	# Lines Not Exec...	# Lines Executed	Total # Lines	Image
std::vector<bool, class...	.0000	0	4	0	4	Deadlock... ve
std::vector<bool, class...	.0000	0	4	0	4	Deadlock... ve
std::vector<bool, class...	.0000	0	1	0	1	Deadlock... ve
std::vector<bool, class...	.0000	0	1	0	1	Deadlock... ve
std::vector<bool, class...	.0000	0	8	0	8	Deadlock... ve
std::vector<bool, class...	.0000	0	10	0	10	Deadlock... ve
std::vector<bool, class...	.0000	0	1	0	1	Deadlock... ve
std::vector<bool, class...	.0000	0	3	0	3	Deadlock... ve
std::vector<bool, class...	.0000	0	1	0	1	Deadlock... ve
std::vector<bool, class...	.0000	0	2	0	2	Deadlock... ve
std::vector<bool, class...	.0000	0	3	0	3	Deadlock... ve
std::vector<bool, class...	.0000	0	3	0	3	Deadlock... ve
std::vector<bool, class...	.0000	0	1	0	1	Deadlock... ve
std::vector<bool, class...	.0000	0	2	0	2	Deadlock... ve
std::vector<bool, class...	.0000	0	3	0	3	Deadlock... ve
std::vector<bool, class...	.0000	0	3	0	3	Deadlock... ve
std::vector<bool, class...	.0000	0	1	0	1	Deadlock... ve
std::vector<bool, class...	.0000	0	1	0	1	Deadlock... ve
std::vector<bool, class...	.0000	0	2	0	2	Deadlock... ve
std::vector<bool, class...	.0000	0	2	0	2	Deadlock... ve
std::vector<bool, class...	.0000	0	4	0	4	Deadlock... ve
std::vector<bool, class...	.0000	0	2	0	2	Deadlock... ve
std::vector<bool, class...	.0000	0	1	0	1	Deadlock... ve
std::vector<bool, class...	.0000	0	2	0	2	Deadlock... ve
std::vector<bool, class...	.0000	0	1	0	1	Deadlock... ve
std::vector<bool, class...	.0000	0	1	0	1	Deadlock... ve
std::vector<bool, class...	.0000	0	2	0	2	Deadlock... ve
std::vector<bool, class...	.0000	0	1	0	1	Deadlock... ve
std::vector<bool, class...	.0000	0	2	0	2	Deadlock... ve
std::vector<bool, class...	.0000	0	2	0	2	Deadlock... ve
std::vector<bool, class...	.0000	0	1	0	1	Deadlock... ve
std::vector<bool, class...	.0000	0	4	0	4	Deadlock... ve

Methods Not Covered

Methods Less Than 20% Covered

Over 30 Lines, Less Than 10% Covered

