Xtremesoft

Inconsistent Performance?

Why is the application's performance so unpredictable?

www.xtremesoft.com

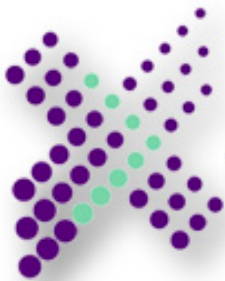# Inconsistent Performance?

Problem:

I don't know my 'typical' method durations.

You have to know,

- what is if the average duration metric
- Is it representative of the typical duration, or if the average is being skewed by 'outlier' method instances.
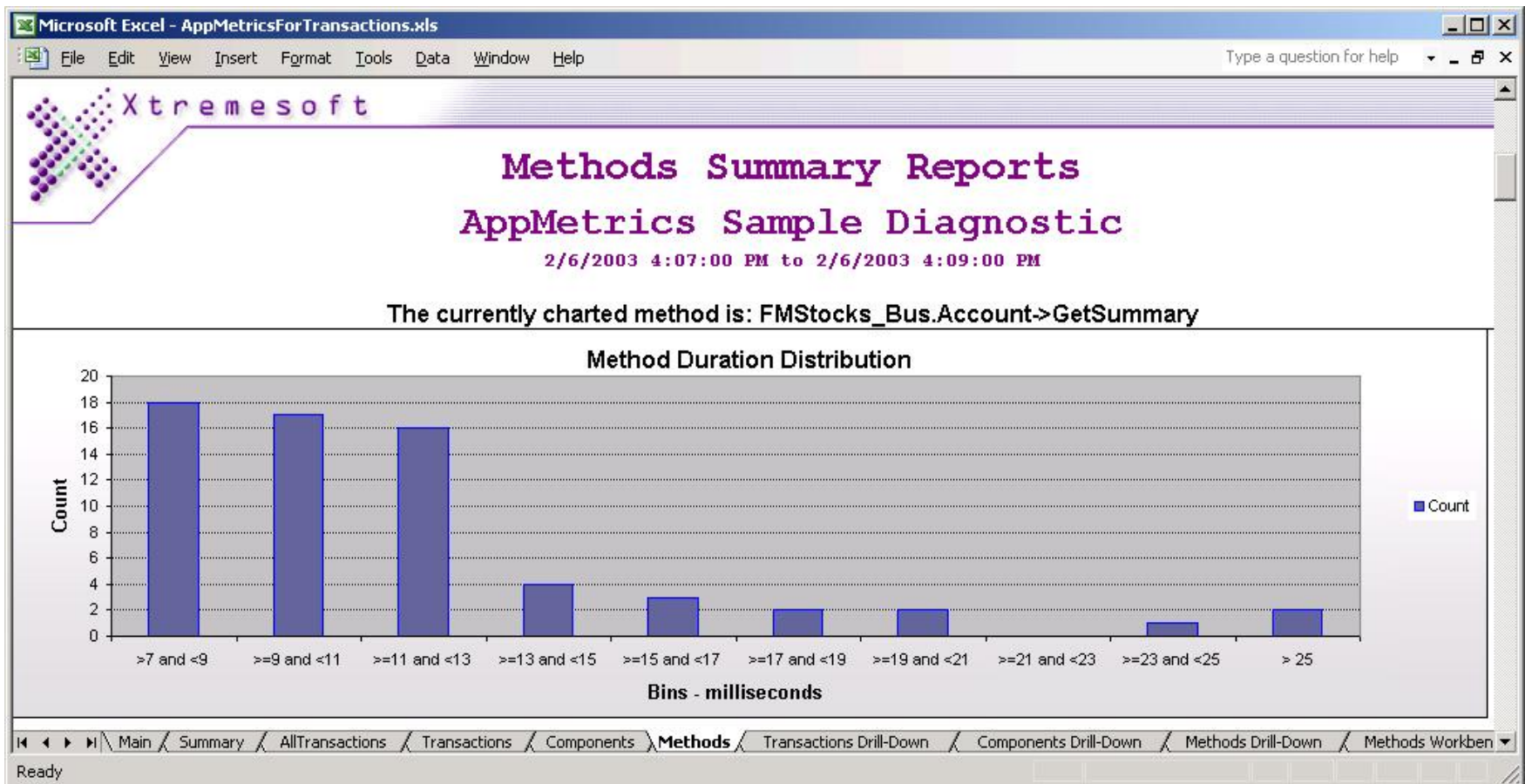
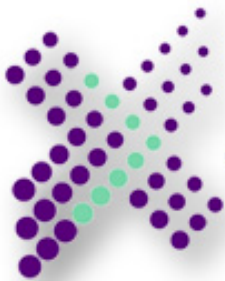If you are to identify the possible performance bottlenecks

Inconsistent Performance?

Solution: Method Duration Distribution Report

The Method Duration Distribution Report creates 10 evenly-sized 'bins', and displays the count of method instances that fell into each bin during the selected time window. This provides a view of the typical durations of methods, with an indication of the quantity of outliers -
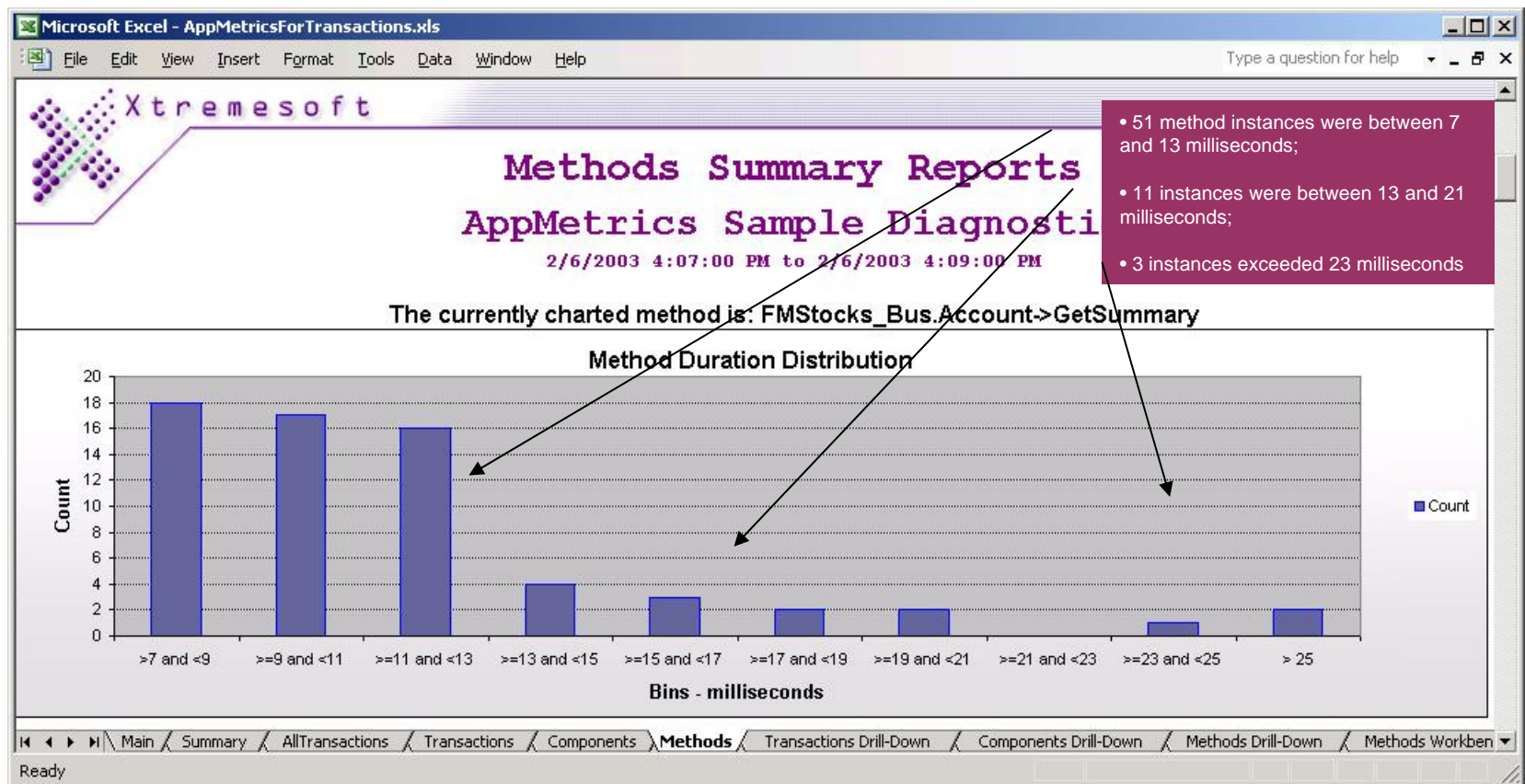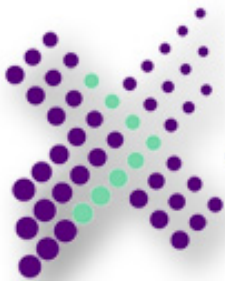
Inconsistent Performance?

Solution: Method Duration Distribution Report

The Method Duration Distribution Report creates 10 evenly-sized 'bins', and displays the count of method instances that fell into each bin during the selected time window. This provides a view of the typical method durations of methods in production, with an indication of the quantity of outliers -

Inconsistent Performance?

Solution: Method Aggregate Report

A variety of aggregate metrics are supplied for each of the observed methods during the test window. Here the report is sorted by Average Duration.

•This method was, on average, the third slowest amongst those observed

Methods Summary Reports

AppMetrics Sample Diagnostic

2/6/2003 4:07:00 PM to 2/6/2003 4:09:00 PM

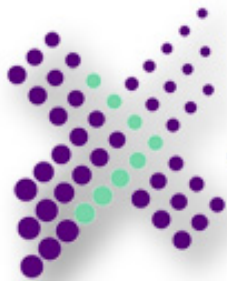The currently charted method is: FMStocks_Bus.Account->GetSummary

Name	Duration (ms)					Completed		
	Average	Minimum	Maximum	Std Deviation	Variance	Total	Successful	Exceptions
FMStocks_Bus.Broker->SellStock	37.9	25.4	112.4	11.6	133.6	130	130	0
FMStocks_Bus.Broker->BuyStock	29.4	17.7	67.8	10.5	110.8	129	129	0
FMStocks_Bus.Account->GetSummary	11.8	7.3	29.6	4.5	20.6	65	65	0
FMStocks_Bus.Account->ListPositions	10.6	7.7	26.1	3.0	8.9	129	129	0
FMStocks_DB.Tx->AddBuyOrder	9.4	3.9	35.4	6.6	43.0	129	129	0
FMStocks_Bus.Account->VerifyLogin	8.8	6.4	15.9	2.1	4.3	64	64	0
FMStocks_DB.Tx->AddSellOrder	8.2	3.6	34.0	4.7	22.5	130	130	0
FMStocks_Bus.Account->ListPositionsForSale	8.2	5.6	24.6	2.9	8.2	129	129	0
FMStocks_Bus.Ticker->VerifySymbol	6.9	4.6	22.1	2.5	6.1	129	129	0
FMStocks_DB.Position->ListSummary	6.8	5.0	23.3	2.2	5.0	129	129	0
FMStocks_DB.Position->ListForAdjustment	6.2	3.4	33.1	3.9	15.0	130	130	0
FMStocks_DB.DBHelper->RunSPReturnRS_RW	5.9	3.3	32.9	3.9	15.0	130	130	0
FMStocks_DB.Account->Summary	5.5	3.7	18.3	2.4	5.6	65	65	0
FMStocks_DB.DBHelper->RunSPReturnInteger	5.4	2.1	35.2	4.1	16.8	906	906	0
FMStocks_DB.Ticker->GetPrice	5.3	2.4	24.0	2.8	8.1	259	259	0
FMStocks_DB.DBHelper->RunSPReturnRS	5.1	2.7	23.2	2.4	5.7	323	323	0
FMStocks_DB.Position->ListForSale	4.3	2.9	15.7	2.2	4.8	129	129	0
FMStocks_DB.Broker->Buy	4.1	3.1	12.4	1.4	1.8	129	129	0
FMStocks_DB.Account->VerifyUser	4.0	3.0	9.5	1.0	1.0	64	64	0
FMStocks_DB.Broker->Sell	3.5	2.7	9.7	1.2	1.4	130	130	0
FMStocks_DB.Ticker->VerifySymbol	3.2	2.2	11.8	1.1	1.3	129	129	0
FMStocks_DB.DBHelper->GetConnectionString	1.0	0.7	2.3	0.3	0.1	64	64	0

Inconsistent Performance?

Solution: Method Aggregate Report

A variety of aggregate metrics are supplied for each of the observed methods during the test window. Here the report is sorted by Standard Deviation

• Four other methods had a higher standard deviation in their durations, that is, 4 others had less consistent durations during the test period

Methods Summary Reports
AppMetrics Sample Diagnostic
2/6/2003 4:07:00 PM to 2/6/2003 4:09:00 PM

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FMStocks_Bus.Account->GetSummary	11.8	7.3	29.6	4.5	20.6	65	65	0
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Main / Summary / AllTransactions / Transactions / Components / **Methods** / Transactions Drill-Down / Components Drill-Down / Methods Drill-Down / Methods Worl

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Our Customers tell us that:

"We accomplished a BIG performance gain - the final code runs 7 times faster (about 14%) than the original one."