Analysis and Optimization of Data Storage using Enhanced Object Models in the .NET Framework

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Questions?

• Which middleware technology is the best Microsoft or IBM?

• What are the performance diff. between the .NET Framework 2.0 and 3.0?

• How different COM+ applications performs on different volume of data?

• Which .NET Framework to choose for small and enterprise applications?

• What is the performance difference between the .NET based application and COM+ based application?
Figure A: Controlling Object Pooling

COM+ Object Pool
Max Pool Size = 3
Minimum Pool Size = 2
Creation Timeout = 20 ms

Client 1
Create new CFoo

COM+ will create 2 new components when the application starts. This is the minimum pool size.

Client 2
Create new CFoo

COM+ will create an additional component to service Client 3. Now the pool size has reached the max.

Client 3
Create new CFoo

Client 4
Create new CFoo

Client 4 will time out after 20 milliseconds unless one of the other 3 clients releases its objects.
Interface Option

Figure B: User options for performing test
Figure C: 10% performance gain over COM+ Library application
Figure D: COM+ and non COM+ performance

<table>
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<tr>
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<th>COM+ Component</th>
<th>Non COM+ Component</th>
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<tr>
<td>Average Time</td>
<td>32</td>
<td>74</td>
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<td>% Up</td>
<td>100</td>
<td>232</td>
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**Figure E: COM+ Features comes at a cost**
Figure F: COM+ Performance on different Volume of Data
Figure G: Different application type performance on Low Volume of data
Figure H: Different application type performance on High Volume of data
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**Figure I: Microsoft COM+ Results**

[Image: NAPIER UNIVERSITY EDINBURGH]
• Which middleware technology is the best Microsoft or IBM?
  Ans. Microsoft middleware provides better results.

• What are the performance diff. between the .NET Framework 2.0 and 3.0?
  Ans. As shown in the graphs.

• How COM+ applications performs on different volume of data?
  Ans. Better on low and medium volume but performance penalty on high volume.
Answers

• What is the performance difference between the .NET based application and COM+ based application?
  Ans. As shown in the graphs.

• Which .NET Framework to choose for small and enterprise applications?
  Ans. Framework 2.0 for small and 3.0 for enterprise applications.
Thank You