

Enterprise Computing Community - ECC 2010

Enterprise Systems Operating Systems and Middleware

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June 13 - 15, 2010



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Topics Covered	Comments
<p>Typical large systems middleware</p> <ul style="list-style-type: none">•Transaction managers•Database managers•Related Supporting products:<ul style="list-style-type: none">–Utilities–Workload schedulers–Source code management systems–Others?	
<p>Optimum placement of function in a multi-tier server environment</p> <ul style="list-style-type: none">–Computing platforms each have strengths and weaknesses–Computing platform choice should be based on application and function requirements matched to platform characteristics	

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Topics Covered	Comments
<p>Avoiding system bottlenecks and single points of failure</p> <ul style="list-style-type: none">–Today’s elegant design is tomorrow’s bottleneck as hardware, software and systems continue to evolve	
<p>Adding/Updating System Components</p> <ul style="list-style-type: none">–It’s not a big “install shield”–What are the tools and processes used to install new software, preventative maintenance, corrective maintenance, etc.	

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Topics Covered	Comments
<p>Techniques to sustain high server utilization:</p> <ul style="list-style-type: none">–Why is this important? (in order not to waste resources – anyone have SETI on their PC?)–Mixed workloads and priorities or importance–Efficient context switching and task selection (dispatching)	
<p>Dynamic workload routing and balancing</p> <ul style="list-style-type: none">–Concept of mixed workloads–Multiple image cooperation	

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Topics Covered	Comments
Virtualization of servers and other resources	
Extreme Software compatibility (prolong useful life of software) –Why is this important? –What are the design and coding techniques that can be used to achieve ‘extreme compatibility’? (e.g. compatibility PTFs)	
Enterprise Systems Management and Administration	

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Topics Covered	Comments
Reliability <ul style="list-style-type: none">–Recovery, retry, percolation–Error isolation to the smallest entity–Avoiding sympathy sickness	
Availability <ul style="list-style-type: none">–Configuring HW/SW for no single point of failure–Automatic restart for key software	
Error Detection, Problem Determination and Error Recovery <ul style="list-style-type: none">–What to do when an error is encountered–Meaningful error messages/ actions – dumps, traces, traps	

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Topics Covered	Comments
Avoiding errors –Predictive failure analysis and dealing with ‘soft’ errors	
First Failure Data Capture and Failure Isolation –Designing for data capture that will gather sufficient data to be able to resolve the problem – i.e. avoiding ‘re-creates’	
Deadlock detection and resolution	
Other Topics? Other courses?	

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