



HPC User Forum - 2012

Altair Knows HPC



Altair is the only company that...

makes HPC Tools



develops HPC Apps

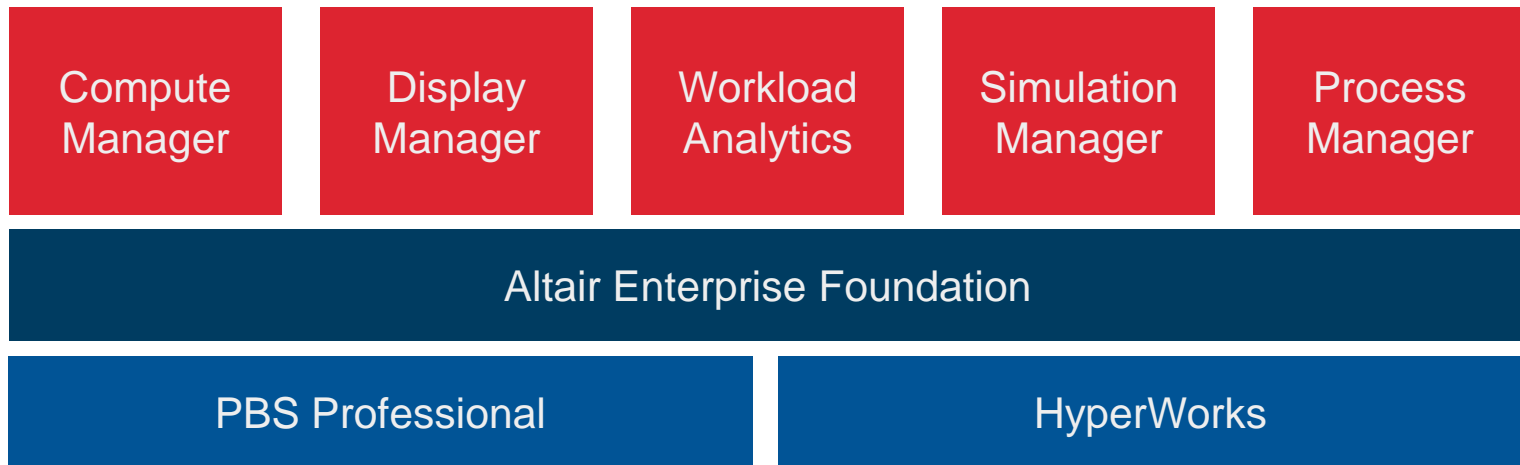


and uses HPC Apps!



**500 Altair engineers worldwide
use HPC every day for
real-world modeling
& simulation**

Complete Simulation Lifecycle Management



PBS Professional



Scalability & Performance

- Proven to ~100,000 cores on multiple vendor's platforms

Security & Reliability

- Only globally EAL3+ security certified solution

End-user Productivity

- Compute Manager – Makes HPC services easy to use

Policy-driven Scheduling

- Scheduling formula enables any policy, simply
- 'Top N Backfill' ensures the most important jobs are not delayed by backfilling
- Dynamic OS Provisioning (based on workload)
- Advance reservations
- Topology-aware scheduling

Enterprise Visibility

- Estimated job start times and completed job history
- PBS Analytics

Open Architecture Extensibility

- New plug-in "hooks" architecture



PBS Professional



- Maximize System Utilization
- Minimize Time to Results
- Maximize Job Throughput
- Advanced Capabilities
 - Dynamic OS Provisioning
 - Based on Workload
 - Green Provisioning™
 - Configurable Power Management Policies
 - Potentially Significant Energy Savings
 - Comes with Professional Services
 - GPGPU Scheduling
- Policy based Workload Management
- Flexible, Customizable & Extendible
- Mature and Reliable Technology



Schedule | Prioritize | Scale

Compute Manager

Run, Monitor and Manage

- Makes HPC Services Easy to Use
- Application Aware Portal
- Job Submission
- Job Monitoring
- Remote File Access
 - During Job Execution
- Job Management
- Data Management
 - Upload Input Data
 - Download Results Files



Altair Enterprise

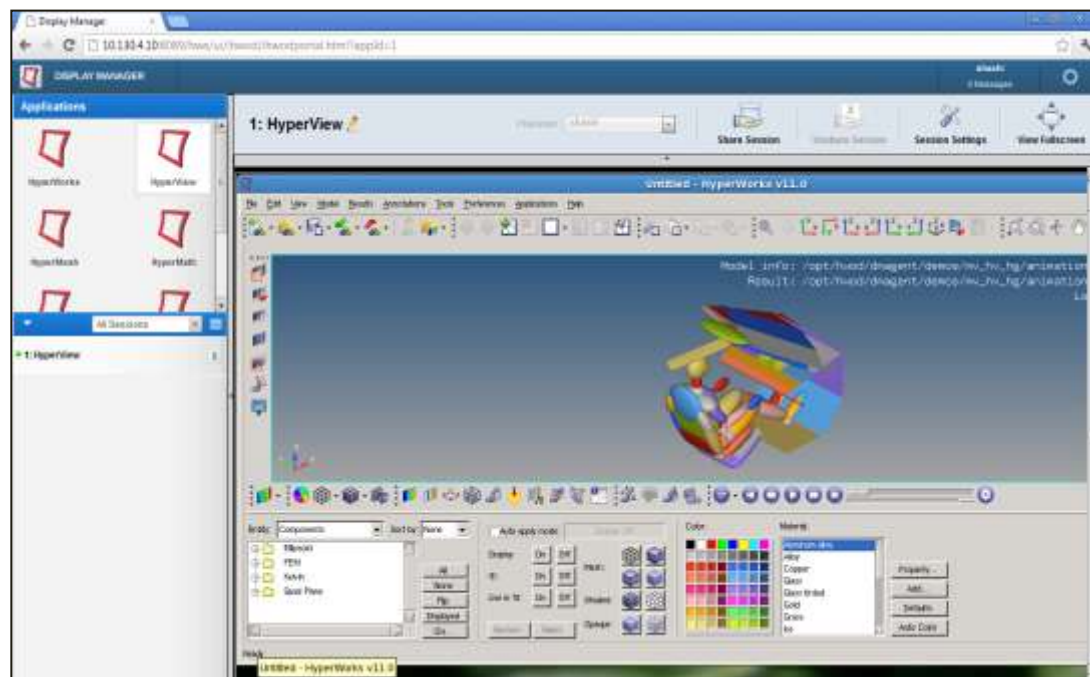
Increasing the pace of Product Innovation

Compute
Manager

Display Manager

Server Side Visualization

- **Access** to native HM and HV and interactive products **through the Web!**
- Build and analyze models/results **remotely** without transferring huge files
- **Collaborate** with team members by sharing models/results remotely



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Increasing the pace of Product Innovation

Display
Manager

Simulation Manager



Manage

Projects, Simulations, Solver Jobs, Goals, Results

Evaluate

Goals against set targets

Compare

Versions and variants of Projects, Simulations, Process, Goals

Connect

Local, Remote, PDM Resources

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Increasing the pace of Product Innovation

Simulation
Manager

Process Manager

Capture and Automate Enterprise Processes

- Aggregate and execute personal processes as a single task as part of a web-based Enterprise process
- Each enterprise task is data-aware and it can be defined as a micro-app w/ input and output
- Capture and re-use Knowledge



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Increasing the pace of Product Innovation

Process
Manager

Web-based Accounting & Analytics Portal



PBS Analytics

- Visualize Historical Usage Data
 - Jobs, Applications, Users...
- Built in Report Library
 - Report Customisation
- Allocate Costs and Plan Ahead
- Capacity Planning
- Publish Reports
- Export to Customer's Billing System

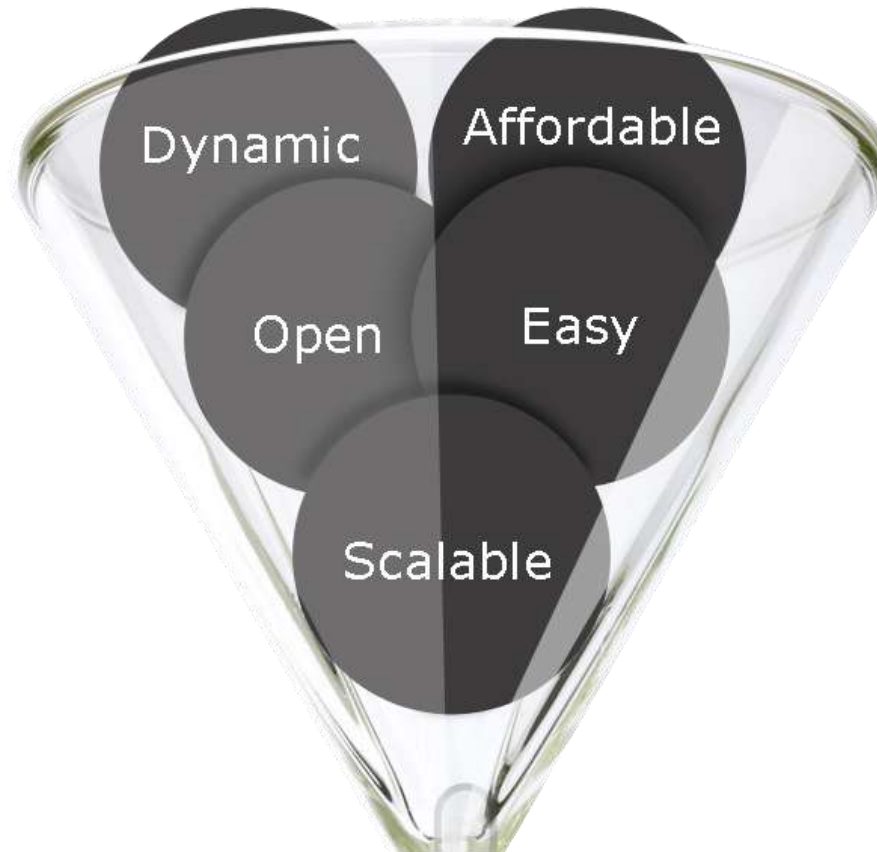


Altair Enterprise

Increasing the pace of Product Innovation

Workload
Analytics

Thank You!



Altair Enterprise

Increasing the pace of Product Innovation

Compute
Manager

Display
Manager

Simulation
Manager

Process
Manager

Workload
Analytics