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Windows Vista's Upgrade Architecture

Upgrade is a viable alternative to clean install

With the release of Windows Vista, Microsoft is delivering a viable alternative to clean install: upgrading. And upgrading to Vista no longer leaves traces of the old operating system. This because clean installation actions are an integer part of the Vista upgrading process. "Upgrades to Windows Vista are no longer a merge with the old OS. First, Windows Vista's setup gathers old OS settings and user settings and data and stores them. Then it wipes away the old OS and applies the new operating system image (via the Image Based Setup). Next, setup applies stored settings and data to this clean install based on per-component logic in manifests and plug-ins, which magically brings back your applications and data in a brand new OS. Your registry and file system are free of goo that is no longer needed by Windows Vista," revealed Bilal Aslam, Microsoft Program Manager. Additionally, with the componentization of Windows Vista, all the operating system's components have XML manifests for descriptions. "Feature teams can write scripts in these manifests that describe rules for migrating data. This is a cheap, powerful way for feature teams to design and maintain their own upgrade logic. The upgrade engine also calls a few specialized 'upgrade plug-ins' (COM DLLs) that can perform more intricate tasks using APIs provided by setup to perform common gather and apply tasks," added Aslam. In fact, the componentized Vista and the component manifests enable the operating system to be upgraded, be it for future releases of Windows or for the various editions of Vista. "Thanks to component manifests, Windows Vista can describe its entire 'state' to another operating system, including higher SKUs of Windows Vista! Setup extracts state information using the manifests present in the downlevel operating system," Aslam said.