Overview of the DII COE 4.0 Kernel

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On April 2, the Defense Information Systems Agency (DISA) released version 4.0 of the Defense Information Infrastructure Common Operating Environment (DII COE). Since the release is only eight months away from the millennium, fielding systems on this new version of the COE becomes prohibitive because of the amount of time it takes to complete year 2000 testing. As a result, COE 4.0 was released as a “developer’s release” or “beta release” so that the services and agencies have ample time to become familiar with the new version and to provide DISA with problem reports. By releasing COE 4.0 as a “beta release,” more developers will be able to provide input to DISA to help build a stable COE 4.1, scheduled for release in October 1999.

With the 4.0 release, a modified kernel architecture and many functional enhancements to COE provided the software dominate improvements found in this new version. The 4.0 kernel incorporates a number of new items that improve performance and provide for greater flexibility in configuring and deploying DII COE-compliant systems. These items require changes to how developers construct future segments, and how integrators, site administrators, and security managers interact with the system. 3.x segment formats will continue to be supported in the 4.x series, however, the new 4.0 kernel does provide new capabilities that a developer can opt to take advantage of for future segment development.

This paper provides an overview of the 4.0 kernel changes specifically addressing 1) account and profile management, 2) common data store, 3) services, 4) features, and 5) bindings. The amount of detail that is presented here is intentionally kept to a minimum so that the reader becomes familiar with the changes made and why they were made, not necessarily how to write software that relies on kernel services. Detailed documentation is available with the COE 4.0 release.

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