CoreDX DDS Memory Analysis ™

TWINOAKS
COMPUTING INC.
PRACTICAL MIDDLEWARE EXPERTISE

CoreDX ™
DDS

BENEFITS

- **Reduces development and integration costs**
- **Supports complex network configurations**
- **Real time insight into DDS deployments**
- **Test verification tool for DDS communications**

Twin Oaks offers Free CoreDX DDS IR&D Licenses to qualified research projects and institutions.

CDX-755

CoreDX DDS Memory Analysis ™

A communications middleware like **CoreDX DDS**™ is a critical infrastructure component in your system. CoreDX DDS provides valuable flexibility and powerful communication benefits to your system, but also introduces a black box where you do not have access or insight into resource utilization.

When you take advantage of a communication middleware component, it is important to understand how much memory that component will require. This is particularly challenging with a DDS component, where the architecture of entities, data definitions, and configuration of communication behavior all effect the amount of memory required and used by DDS. How do you gain insight into the resource utilization of a "black box" component?

The **CoreDX DDS Memory Analysis Tool** opens a window into the memory usage of that black box component. This powerful tool uses instrumentation throughout the CoreDX DDS libraries that track and report all memory usage, providing you with valuable information necessary to architect your system.

Benefits of CoreDX DDS Memory Analysis

The CoreDX DDS Memory Analysis Tool allows you to:

- **Understand** implicitly the memory requirements of the CoreDX DDS infrastructure
- Make **better architecture decisions** by monitoring how memory usage changes when your system's architecture, data, and communications change
- Selectively choose hardware to meet the **definitive memory requirements** of your system, including CoreDX DDS
- Know when your system will require additional or upgraded hardware to support new requirements and growth

Ordering Instructions

Get started by visiting our website and downloading the 30-day Full Featured CoreDX DDS Evaluation software. During the download process, you can indicate that you are interested in the University or IR&D License Program.

Download an evaluation: http://www.twinoakscomputing.com/coredx/download

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Understanding Memory Consumption

The Importance of Memory

System memory is a resource critical to the operation and performance of any software system. System memory impacts performance, stability, deployment, and scalability of software systems. Performance dramatically degrades and stability suffers as memory pages are swapped to disk and applications fail to allocate memory.

Plan Early, Monitor Often

In any software development process, changes in design and implementation will happen throughout development phases, and in many cases, these changes will be due to memory utilization and limitations. The cost growth of rework in later phases makes it important to plan and monitor resource usage throughout the development process. This is only possible if there are tools to estimate usage (for those architecture and design phases), and measure usage (during the implementation and test phases).

CoreDX Memory Analysis Features

Enable instrumentation inside the CoreDX DDS libraries to track all memory usage within the CoreDX DDS code. This instrumentation captures:

- Amount of memory allocated / de-allocated
- When each allocation / de-allocation occurred
- Where (in what DDS Entity or component) each allocation / de-allocation occurred

All of this detailed information is captured in table form, allowing unlimited access to different views and displays. You control how to filter and manage this data to get the information you need. For example:

- *When* memory is allocated (and de-allocated)
- *Who* (which DDS component) allocates memory
- *Where* the most memory is consumed
- *Deterministic* qualities of the memory usage

CoreDX Memory Analysis Specifications

The CoreDX DDS Memory Analysis Tool is **available on all** Operating Systems & Hardware Platforms supported by CoreDX DDS

The CoreDX DDS Memory Analysis Tool comes bundled with any CoreDX DDS Source Code license, at **no additional cost**.

About Twin Oaks Computing

Twin Oaks Computing, Inc. provides state-of-the-art engineering in support of high-performance communications, including device drivers, communication protocols, inter-process communications, network services, and secure environments. Our unique company culture allows us to be agile and provide superior responsiveness to our customers, and our extensive domain experience is essential to our customers' ability to perform their missions. We are committed to being a premier source of quality high-performance communications technologies for use in DoD and commercial applications.

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