

DBACockpit – the New Look and Feel for Database Monitoring and Administration

Applies to:

SAP NetWeaver 2004s SP12 and later

Summary

This document is intended to introduce the new database monitoring and administration tool for DB2 for z/OS.

The DBA Cockpit has been developed as a joint venture project across all database platforms on which SAP is running. Common concepts -- such as configuring systems that should be monitored -- are described within a separate document. This document contains specific information on how to monitor and administrate a database running on DB2 for z/OS.

Please note that this document does not replace reading “SAP Database Administration Guide for SAP NetWeaver on IBM DB2 for z/OS” for in-depth information.

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Markus is also a “SUN Certified JAVA Programmer” and has been working on a research project for “component based software engineering”.

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Introduction

The DBA Cockpit is the new tool for monitoring and administrating databases running on DB2 for z/OS. It replaces the former ABAP transaction DB2 and is therefore the central entry point for all database tasks.

The DBA Cockpit project was initiated to fulfill the following two main requirements:

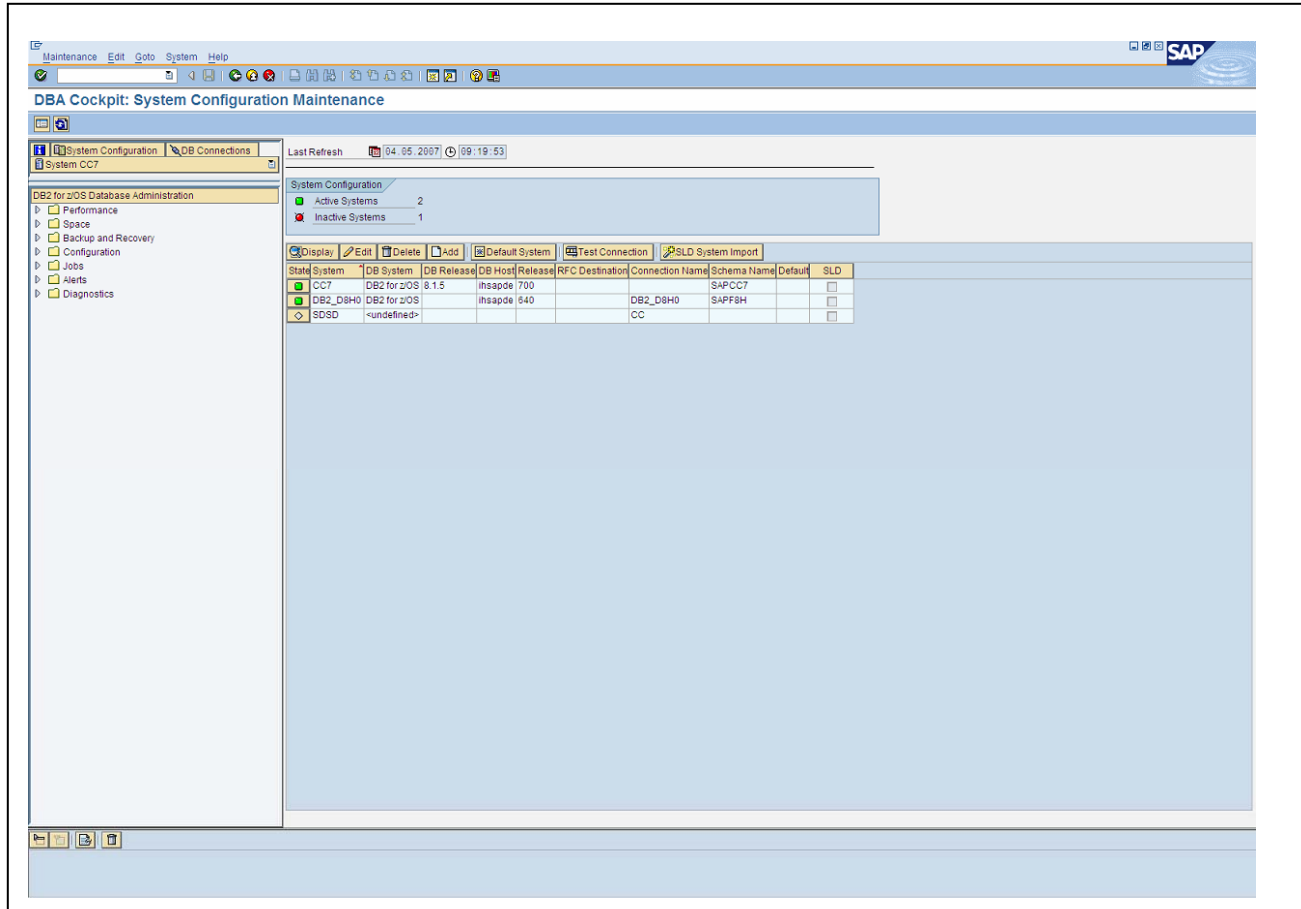
- Provide a navigation tool that allows customers to execute actions in fewer navigation steps. (A navigation tree panel provides all available actions that can be performed.)
- Create a similar look and feel across all database platforms. (Some actions, such as the Planning Calendar, look the same for all database platforms.)

The well known and widely used ABAP transaction codes, such as DB2C or DB2J, still do exist. They can be used as short cuts for navigating directly to the target action.

Quick Beginnings

System Configuration

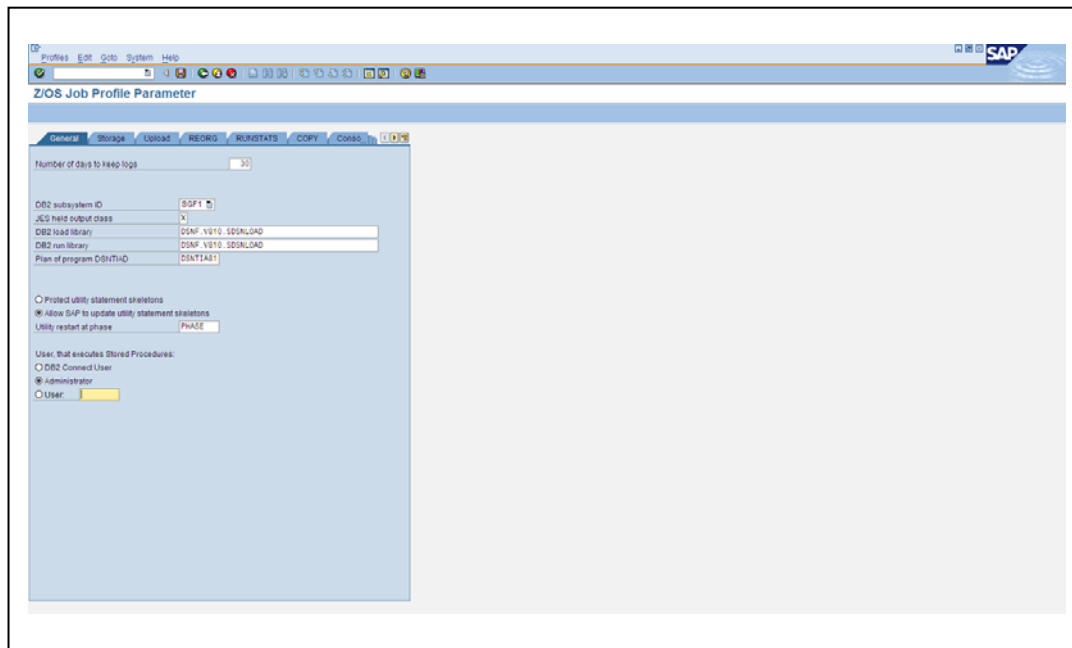
The DBA Cockpit can be launched by entering the ABAP transaction code *DBACOCKPIT*. The initial screen displays the “System Configuration Maintenance” screen. Here you can add or remove systems that should be monitored. By default, all systems that are registered within the SAP System Landscape Directory (SLD) are displayed, if the connection parameters are known to the tool.



For further information on configuring a system within the DBACockpit, I refer to the SDN article “Monitoring System Landscapes Using the DBA Cockpit”.

Setting up – JCL Settings

While working on DB2 for z/OS, submitting a JCL jobs is the common utility for performing any kind of work on DB2 for z/OS. Many of the CCMS Database monitoring and administration tasks use JCL jobs behind the scenes. For this reason, one of the first things a customer must do is set the JCL Profile Parameters. By choosing *Configuration -> JCL Settings (DB2J)*, the ABAP transaction DB2J is executed.



Setting up – SAP Collector

The stored procedure SAPCL is another very crucial step for setting up database monitoring. The DBA Cockpit uses the stored procedure SAPCL to gather DB2 performance data from Instrumentation Facility Interface (IFI). In previous releases, *rfcoscol* provided this function. Starting with SAP NetWeaver 7.0 (2004s), this has been changed and therefore the DBA Cockpit uses also this feature.

This means that if you want to monitor a DB2 Subsystem on which SAP NetWeaver 7.0 (2004s) or higher is already running, you do not have to perform any further steps on the server side. If you want to monitor an older system, you must carry out the following steps:

Installing Stored Procedure SAPCL

The executable of the stored procedure SAPCL and its database request module need to be placed in a directory in the UNIX System Services on z/OS. These files are:

- sapdb2cl (the executable of the stored procedure)

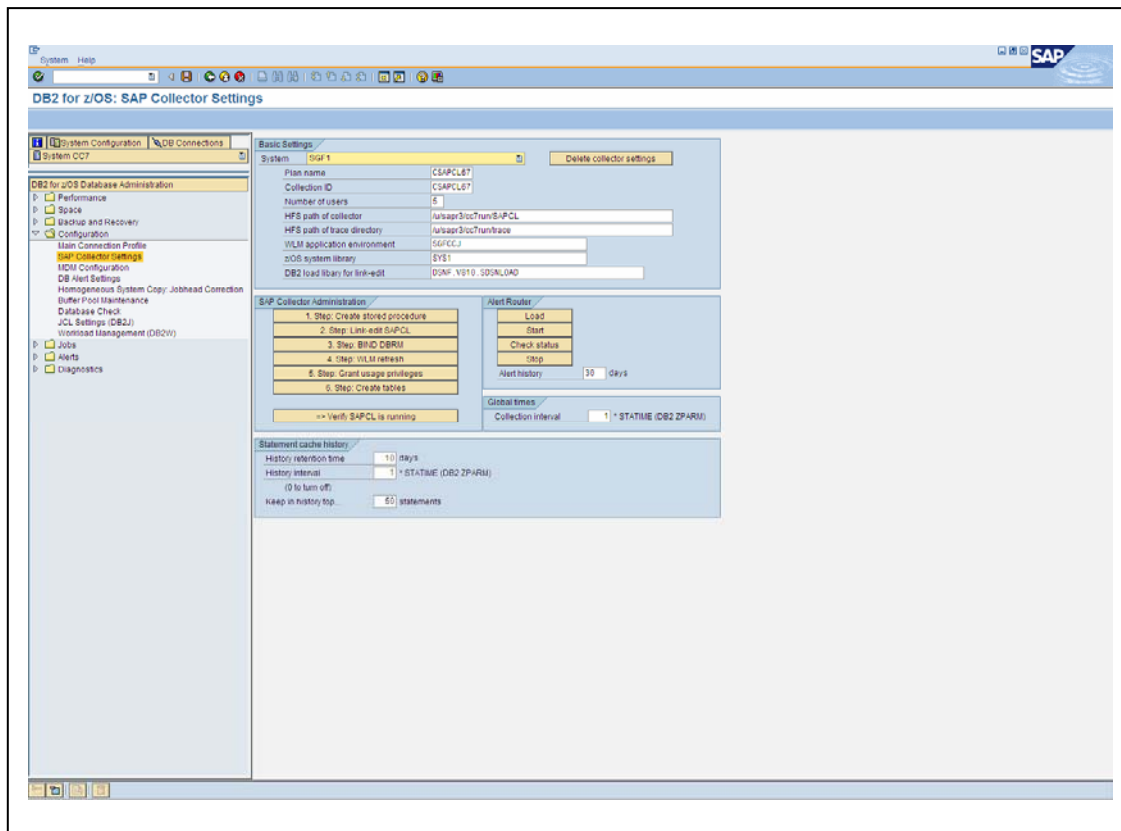
- DBRM.db2cldb (its database request module)

Procedure for Installing SAPCL Executables

To install SAPCL executables:

1. Download SAPCL from the SAP Service Marketplace at <http://service.sap.com/swdc>.
2. Create a directory <sapcl_dir> in z/OS UNIX System Services HFS.
3. Download version of SAPDB2CL.SAR from the SAP Service Marketplace as well and place and unpack to directory <sapcl_dir>.

Once these steps have been completed, SAPCL can be installed by launching the action *SAP Collector settings*. After specifying the settings, you can trigger the buttons.



Setting up – Alert Router

SAPCL also serves as a database alert router that catches DB2 alerts through the IFI interface of DB2. Since catching exception events is a waiting task, SAPCL starts a separate alert router thread for each DB2 subsystem and for each system. This thread exclusively listens to DB2 alerts.

Each alert router thread connects to the DB2 subsystem for which the exception events should be collected and starts an appropriate statistics trace. The statistic trace is assigned to an OP buffer, into which DB2 writes the exception events. When an event occurs, DB2 informs the alert router thread that reads the OP buffer. After this call, the OP buffer is emptied by DB2.

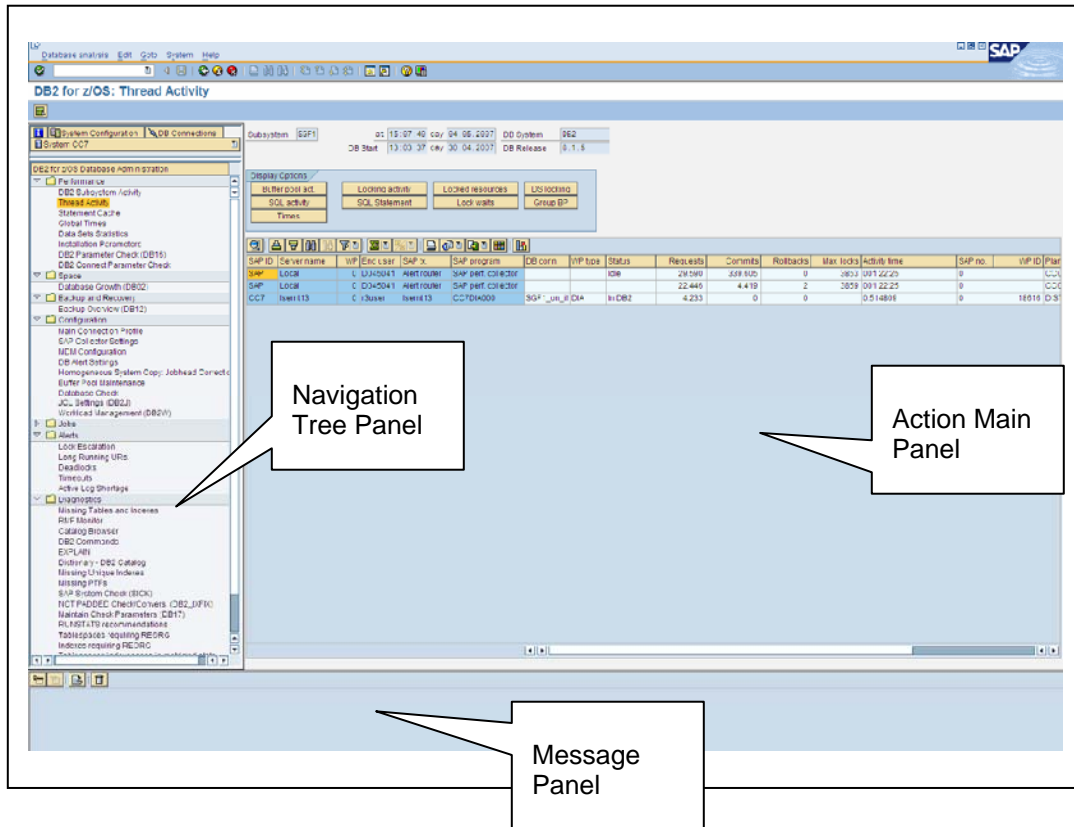
You need to set up the Alert Router by pressing the *LOAD* button of the panel *Alert Router*. Afterwards, the Alter Router can be started by pressing the *START* button. All the described actions can be launched right from the *SAP Collector Settings* screen.

Note that setting up an Alert Router for data sharing systems works differently on remote systems then on local systems. In case of a local DB2 Data Sharing system, an Alert Router will be set up on each DB2 member within the data sharing group. In contrast to this, on remote data sharing systems, the Alert Router will only be started on the DB2 member for whom the DBCON entry has been configured. This means that you have to configure a DBCON entry for each DB2 member and set up the Alert Router individually on remote data sharing systems!

Monitoring and Administration of DB2 for z/OS

Various monitoring and administration features are offered through the DBA Cockpit. Those features are categorized into Performance, Space, Backup and Recovery, Configuration, Jobs, Alerts and Diagnostics.

By simply launching the action task on the left hand side, the target task is displayed within the main right hand side panel. The following sample action illustrates the layout concept. The example shows the *Thread Activity* in the main action panel. If necessary, messages are displayed in bottom message panel.



The DBA Cockpit also offers the option for monitoring and administrating databases on remote system. Note that some of the actions listed in the navigation frame are disabled for remote systems.

Related Content

- SAP Note 1027452 - DB2 z/OS CCMS: DBACOCKPIT (<http://service.sap.com/sap/support/notes/1027452>)
- SAP Note 958252 - DB2-z/OS: SAPCL FAQ (<http://service.sap.com/sap/support/notes/958252>)
- SDN Article “DBA Cockpit – General Concept”
- SAP Database Administration Guide for SAP NetWeaver on IBM for DB2 for z/OS (<http://service.sap.com/~sapidb/011000358700002040342006E>)

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