Health Check of Siebel Servers

Detailed Technical Design

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1. Health Check of Siebel Servers

1.1 Objective

Health Check is one of the activities performed by Siebel Administrators periodically or after any deployment, to monitor and check the status of servers and the components in the server. During the deployment of SRFs or deployment of Static files in the server we are required to stop/start or restart the servers at some point. Since the servers are restarted it becomes necessary to check if every component on the server is properly up and everything is working fine. To perform this activity Automated Health check is introduced in the Deployment Pipeline. Adding the Health Check Job in the deployment adds the following benefits:

a. Notifies Administrators about the Status of Siebel servers.
b. Notifies Administrators about the Status of different Siebel components inside each server.
c. Notifies Administrators about the Status of Tasks running on the Servers
d. Gives an overview of Table Space of Siebel Environment to the administrator.
e. Notifies Administrators about the running RCRs on Siebel Environment (currently disabled as not required in Dev. environment).
f. Notifies Administrators about the queued up emails on SiebelEnvironment (currently disabled as not required in Dev. Environment).

1.2 Current Setup

You need to take care of the following point with respect to the current setup of the HealthCheck job:

a. To run the Health Check Utility you need to make sure that you have Java JDK version 1.7 or higher on server.
b. The directory consists of the following input files which must be present at this path for the job to function correctly:
   (i) HealthCheck.bat
   (ii) listComptask.txt
   (iii) rcr.sql
   (iv) queuedmail.sql
   (v) tablespace.sql
   (vi) ReportGen.java
   (vii) ReportGen.class
c. During Execution the HealthCheck job generates the following Log Files:
   (i) server.txt – Siebel Log
   (ii) listserver.txt – Siebel Log
   (iii) Error.html – Created by ReportGen.java
   (iv) listcomp.txt – Siebel Log
   (v) listtask.txt - Siebel Log
   (vi) queuedmailspool.txt – SQL Log
   (vii) rcrspool.txt – SQL Log
   (viii) tablespace.txt – SQL Log

d. The output of the job is a consolidated HTML report HealthCheckFinal.html which is sent as an email to the Siebel Administrators.

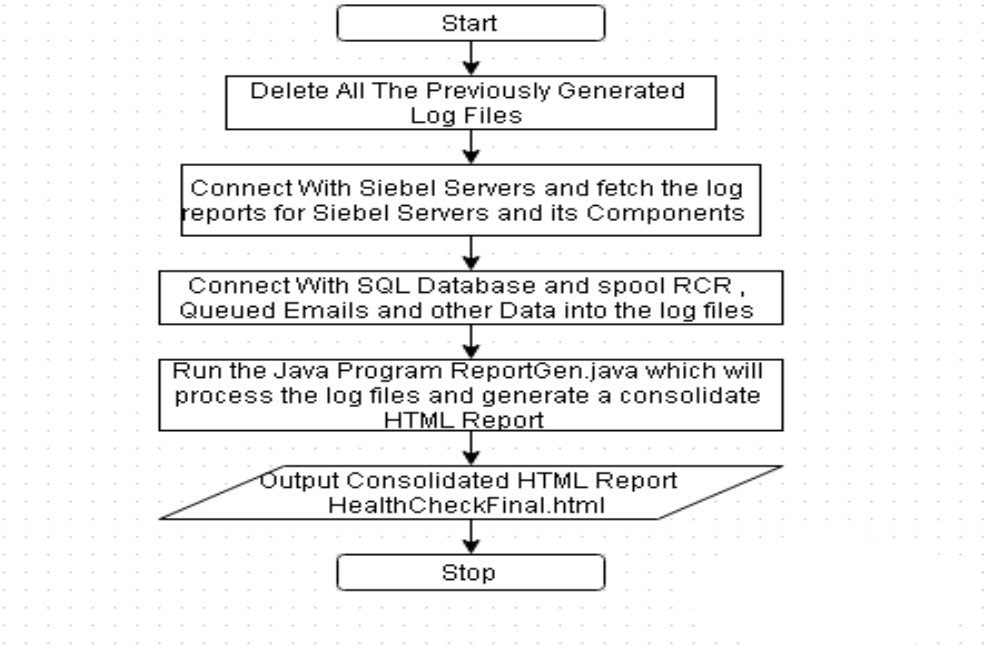
1.3 Health Check Job

The HealthCheck Job basically triggers the HealthCheck.bat files kept on the server which takes few other inputs and generate a consolidate HTML report which is sent as an email to the Administrators. To have a better clarity on the Health Check Job we will discuss this under the following sections:

a. **The HealthCheck.bat File**
b. **ReportGen.java – the JAVA Utility to generate the Final Report**
c. **HealthCheck Report**

1.3.1 HealthCheck.bat

The Job for HealthCheck simply triggers the HealthCheck.bat script which is kept on the Dev Servers. This job is forced to run on the server for which we need to do the HealthCheck. The Healthcheck.bat works on the below logic (refer Flowchart):



The HealthCheck.bat script connects with Siebel and SQL Database to spool following data into the log files:

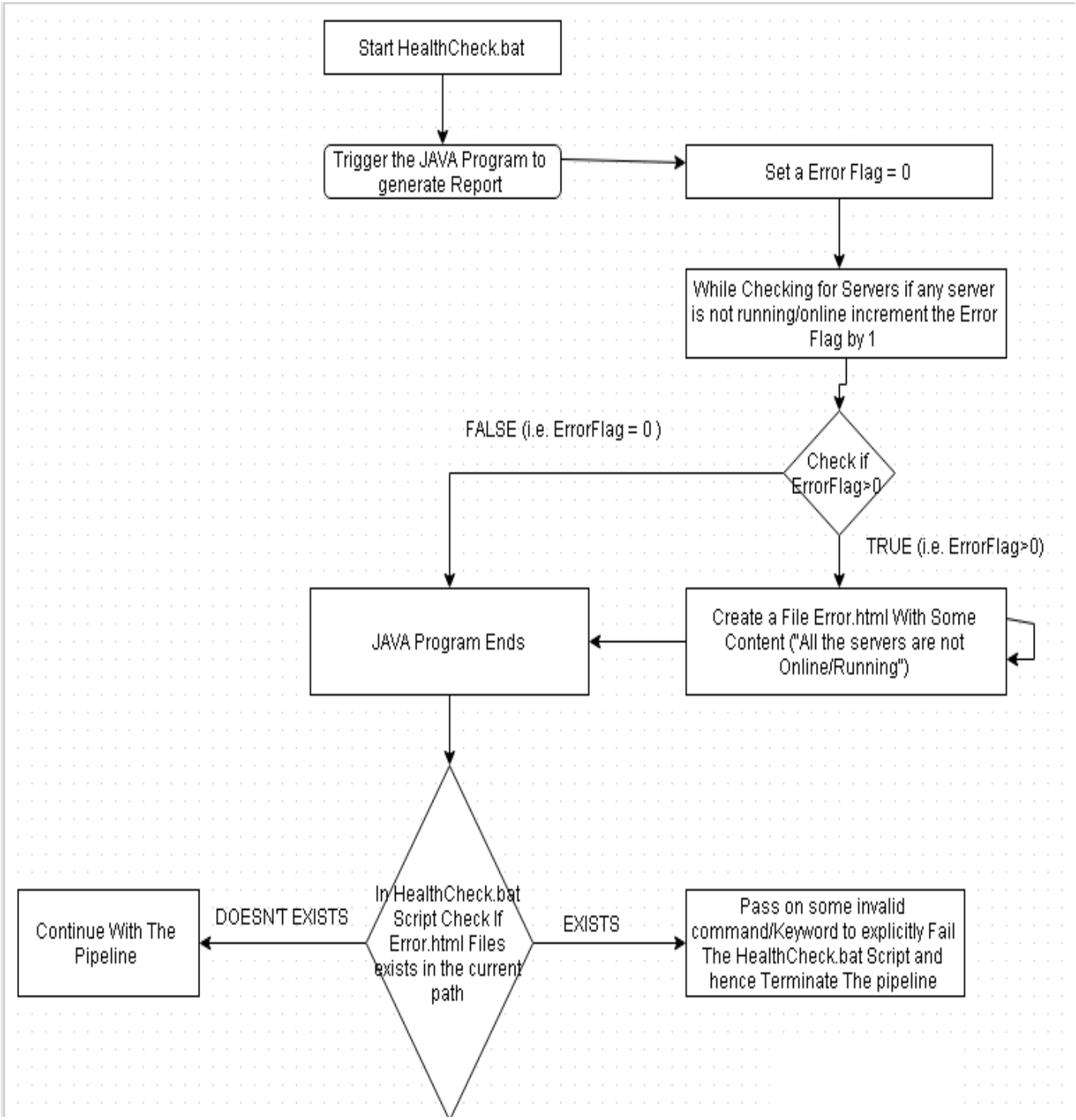
a. Siebel Server Details
b. Components Details
c. Details of tasks running on each server
d. Details of Running RCRs (Disabled for Dev environment)
e. Details of queued up emails (Disabled for Dev Environment)
f. Details of Table Space

After the log files are generated the script calls the Smart Java Program which is designed to read the log files and fetch specific content from it to generate a Final HealthCheck Report. This final HealthCheck Report is mailed to the Siebel administrators along with the log files as attachment. After this Java program is completed the Window script check for Error.html file. If it finds the file the windows

executes an invalid command to explicitly fail the Script and discontinue the pipeline, however the Final Health Check Report is still emailed to the Siebel administrators.

1.3.2 ReportGen.Java – The Report Generating Utility Program

The ReportGen.Java is a Smart Java Program designed and coded to read the log files generated by the Windows Batch Script. This program fetches specific and relevant contents from the log files to generate a very interactive and consolidated HTML report. While generating the HTML the Java program also check the status of components and servers. If the status is Not Online/Stopped the status is written in Red Colour and if it is Online/Running the status is written in Green colour in all the other cases it is written in normal black colour.This Java program is also designed to generate an Error.html file if in case any of the servers is not running. The purpose of generating this file was to break the Deployment Pipeline in between and avoid sending false notification to the users if in case any of the servers is not up or running. This algorithm to break the pipeline works on the below logic.



1.3.3 Health Check Status Email

The Health check Email is the final email notification sent to all the Siebel administrators. The Email takes its contents from the HealthCheckfinal.html which is generated by ReportGen.java. The Email notification also contains the Raw Log files as attachments generated during the execution of windows Batch script. These can be used by admins for more detailed information about the server. The Email recipients, subject, content, attachments and other details are configured in the Job.

The Health Check Status Email is divided into the Following sections:

a. List and status of servers
b. List and status of All components on each server

c. List and status of all the tasks
d. List and status of all the running RCRs (this section of code is commented for Dev Environments)
e. List of all the queued up Emails (this section of code is commented for Dev Environments)
f. Details of Table space for that environment

1.4 Troubleshooting Jobs

If you have setup everything correctly as per the configuration tips there are very less chances that any error would arrive. In case any of the error comes up you may refer to the below troubleshooting tips and also check if you have configured everything correctly.

1.4.1 ERROR: File 'HealthCheck/HealthCheckFinal.html' does not exist

There might be situations where you might receive an error in email notification saying the HealthCheckFinal.html does not exist.

1.4.1.1 With SQL Logs Attached

In such cases the Siebel Administrators might receive a notification email like this:

Looking at the Error it is clear that the Script could not find the HealthCheckFinal.html. The most probable reason that appears from the above screenshot is that Script was not able to connect with the Siebel Servers as we can see that other SQL logs (queuedmailsspool.txt, rcrspool.txt, tablespace.txt) are generated but not the Siebel logs (to differentiate between SQL and Siebel Logs refer section 1.2.b). The possible reasons could be

a. The Enterprise Server is down/not running.
b. Incorrect sadmin credentials in HealthCheck.bat
c. Incorrect Server Names in HealthCheck.bat
d. Incorrect Gateway IP in HealthCheck.bat
e. Missing input file listComptask.txt

1.4.1.2 With Siebel Logs Attached

A similar situation might arise when you may have all the Siebel logs but not the SQL Logs. In such a case it is possible that script was not able to connect with the SQL Database. To troubleshoot this check for the following points:

a. SQL credentials in HealthCheck.bat
b. SQL database services might not be up.
c. Missing input file queuedmail.sql, tablespace.sql, rcr.sql

1.4.1.3 With Both Siebel and SQL Logs attached

In the latter case it is possible that the Java program ReportGen.java has failed to run. This will happen in one of the following scenarios:

a. Java JDK 1.7 or higher not available.
b. ReportGen.java missing.
c. Windows bat script not pointing to correct JAVA JDK 1.7 or higher path.ssf