Sterling Integrator®

System Maintenance Overview

Version 5.1

Sterling Commerce

An IBM Company

Contents

Sterling Integrator System Maintenance Overview

It is very important to the review the daily operations of your Sterling Integrator. You should use the *System Maintenance Checklist* on a daily basis to ensure that your system is operating properly.

Use the System Maintenance Checklist to:

• Ensure that business processes are running and completing within your Service Level Agreement (SLA)
• Ensure that scheduled are enabled and running on time without error
• Ensure business process life spans are set correctly
• Ensure your controllers are active
• Ensure that your adapters are enabled
• Determine if the database is growing out of control
• Review Queuewatcher for spikes in load and ensure that no back log occurs that is sustained for hours in the queues
• Review log monitoring
• Review thread dumps and thread counts
• If you have a cluster, verify cluster nodes are communicating properly

The *System Maintenance Checklist* is intended to be used by the Sterling Integrator Administrator.

System Maintenance Checklist

	System Maintenance Checklist
1.	Ensure the following Business Process Schedules are enabled and that they are running at their scheduled increments:

Schedule	Business Process to Review for Errors	Schedule Increment	Business Process Objective
Schedule_BPRecovery	recovery.bpml	Every 45 minutes	Finish without error.
Schedule_IndexBusinessProcessService	Schedule_IndexBusiness ProcessService	Every 10 minutes	Process less than 5,000 and finish without error.
Schedule_PurgeService	Schedule_PurgeService	Every 10 minutes	Finish without error.
Schedule_BackupService	Schedule_BackupService	Once per day	Set Maximum Number of Days per Backup Set to something larger than the oldest message in the system. By default, backup is configured to backup 2 days of data at a time, starting with the oldest data in the system. Ensure it finishes without error and the Cutoff Date is not in the past.
Schedule_AssociateBPsToDocs	Schedule_AssociateBPsToDocs	Every 30 minutes	Process less than 1,000 and finish without error.

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Schedule	**Business Process to Review for Errors**	**Schedule Increment**	**Business Process Objective**
Schedule_BPExpirator	TimeoutEvent	Every 15 minutes	Finish without error.
ScheduleBPLinkagePurgeService	ScheduleBPLinkagePurgeService	Once per day	Finish without error.
Schedule_MailboxEvaluateAllAutomaticRules or Schedule_MailboxEvaluateAllAutomatic RulesSubMin	Schedule_MailboxEvaluateAllAutomaticRules or Schedule_MailboxEvaluateAllAutomatic RulesSubMin	Every 1 minute	Finish without error (if used).

2	Ensure all the business processes are moved out and being recovered. Review the state of your business processes: • Active • Halted • Halting • Waiting • Waiting On IO • Interrupted Man • Interrupted Auto Navigate to **Administration Menu > Operations > System > Troubleshooter**. Click **Business Process Usage**.
3	Ensure all the necessary controllers are active. Navigate to **Administration Menu > Operations > System > Troubleshooter**. Click **Controllers**.
4	Review the JDBC pool sizes to ensuring the database does not exceed the maximum size defined in jdbc.properties by the *.maxsize setting. Navigate to **Administration Menu > Operations > System > Troubleshooter**. Click **Database Usage**.
5	Ensure all necessary adapters are enabled. Navigate to **Administration Menu > Operations > System > Troubleshooter**. Click **Adapters**.
6	Ensure all necessary perimeter servers are enabled. Navigate to **Administration Menu > Operations > System > Troubleshooter**. Click **Perimeter Server Status**.
7	Review business process life span settings to ensure they are correct. Settings include: • How long the business process should remain in the system • How long trackable business process information remains in the system • How long business process (instances) should remain in system • Should expired business processes be archived or purged Navigate to **Operations > Archive Manager**.
8	Monitor table row counts through DBStats report (with increased load, increased counts are expected).
9	Review logs for problems by looking for any of the following: • ERROR

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	• OutofMemory • Exception (in some cases)

10	Review the system for thread dumps and heap dumps.
	
	• On IBM JDK Linux systems such as AIX, Red Hat Linux and Suse Linux, routinely check for the existence of thread dumps and heap dumps. Presence of these files indicates there is an issue. If the following files are found, they will need investigation.
	
	  • For UNIX, check for javacore* and hprof*.* files in the /*install_dir*/install/noapp/bin directory.
	
	  • For Windows, check for javacore in the *install_dir*\install\noapp\bin and hprof files in the noapp.exe.log file.

11	Review the system for spikes in load and ensure that no back log occurs that is sustained for hours in the queues. Navigate to http://server:port/queueWatcher.
12	Verify Cluster Information, perform a simple communication test to verify the nodes are communicating properly using sample BP (add for extra nodes as needed). For more information, see the *Sample Cluster Test Business Process*.

Sample Cluster Test Business Process

You can use the following example business process to test your cluster environment.

```
<process name="Cluster_Mandatory12121212">
  <rule name="queuesRemaining">
    <condition>queueCounter&lt;10</condition>
  </rule>
  <sequence name="wrapper">
    <assign name="Assign" to="queueCounter">1</assign>
    <sequence name="main">
      <choice name="starter">
        <select>
          <case ref="queuesRemaining" activity="sub"/>
          <case ref="queuesRemaining" negative="true" activity="complete"/>
        </select>
        <sequence name="sub">
          <operation name="Execution Control Service">
            <participant name="ExecutionControlService"/>
            <output message="ExecCtrlServiceTypeInputMessage">
              <assign to="queueName" from="queueCounter"></assign>
              <assign to="." from="*"></assign>
            </output>
            <input message="inmsg">
              <assign to="." from="*"></assign>
            </input>
          </operation>
          <sequence name="block">
    <operation name="Sleepy1">
      <participant name="TestSleepService"/>
      <output message="Xout">
        <assign to="SLEEP_INTERVAL">1</assign>
        <assign to="mandatoryNode">node1</assign>
        <assign to="." from="*"></assign>
      </output>
      <input message="Xin">
        <assign to="." from="*"></assign>
      </input>
    </operation>

 <operation name="Sleepy2">
```

```xml
      <participant name="TestSleepService"/>
      <output message="Xout">
        <assign to="SLEEP_INTERVAL">1</assign>
        <assign to="mandatoryNode">node2</assign>
        <assign to="." from="*"></assign>
      </output>
      <input message="Xin">
        <assign to="." from="*"></assign>
      </input>
    </operation>
    <operation name="Sleepy3">
      <participant name="TestSleepService"/>
      <output message="Xout">
        <assign to="SLEEP_INTERVAL">1</assign>
        <assign to="mandatoryNode">node1</assign>
        <assign to="." from="*"></assign>
      </output>
      <input message="Xin">
        <assign to="." from="*"></assign>
      </input>
    </operation>
    <operation name="Sleepy4">
      <participant name="TestSleepService"/>
      <output message="Xout">
        <assign to="SLEEP_INTERVAL">1</assign>
        <assign to="mandatoryNode">node2</assign>
        <assign to="." from="*"></assign>
      </output>
      <input message="Xin">
        <assign to="." from="*"></assign>
      </input>
    </operation>
    <operation name="Sleepy5">
      <participant name="TestSleepService"/>
      <output message="Xout">
        <assign to="SLEEP_INTERVAL">1</assign>
        <assign to="mandatoryNode">node1</assign>
        <assign to="." from="*"></assign>
      </output>
      <input message="Xin">
        <assign to="." from="*"></assign>
      </input>
    </operation>

<operation name="Sleepy6">
      <participant name="TestSleepService"/>
      <output message="Xout">
        <assign to="SLEEP_INTERVAL">1</assign>
        <assign to="mandatoryNode">node2</assign>
        <assign to="." from="*"></assign>
      </output>
      <input message="Xin">
        <assign to="." from="*"></assign>
      </input>
```

```
        </operation>
        <operation name="Sleepy7">
          <participant name="TestSleepService"/>
          <output message="Xout">
            <assign to="SLEEP_INTERVAL">1</assign>
            <assign to="mandatoryNode">node1</assign>
            <assign to="." from="*"></assign>
          </output>
          <input message="Xin">
            <assign to="." from="*"></assign>
          </input>
        </operation>
        <operation name="Sleepy8">
          <participant name="TestSleepService"/>
          <output message="Xout">
            <assign to="SLEEP_INTERVAL">1</assign>
            <assign to="mandatoryNode">node2</assign>
            <assign to="." from="*"></assign>
          </output>
          <input message="Xin">
            <assign to="." from="*"></assign>
          </input>
        </operation>
            </sequence>
             <assign name="Assign" to="queueCounter" from="queueCounter + 1"></assign>

              <repeat name="repeater" ref="main"/>
            </sequence>
            <sequence name="complete">
              <operation name="Sleep Service">
                <participant name="SleepService"/>
                <output message="SleepServiceInputMessage">
                  <assign to="SLEEP_INTERVAL">2</assign>
                  <assign to="." from="*"></assign>
                </output>
                <input message="inmsg">
                  <assign to="." from="*"></assign>
                </input>
              </operation>
            </sequence>
          </choice>
        </sequence>
      </sequence>
</process>
```