Change Detector - Websphere Setup

Last Updat... September...

Documentation

Documentation	Comments
Change Detector Guide	Used 8.2 not 8.3 but Comments should be the same
Change DetectorRead Me	Replaced by Introscope ReadMe
Environment Performance Agent Guide	Optional Feature but likely needed for this engagement

Step 0: Pre-Install

0.1 Read Documentation

0.2 Verify Running Introscope 8.3.x

0.3 Verify Directories
- 0.3.1 Home Directory of each **Websphere Agent** to store change data.
- 0.3.2 Home Directory of **Introscope EM**
- 0.3.3 Home Directory of **Introscope Workstation**

0.4 Download Archive Files
- 0.4.1 ChangeDetector8.3.unix.tar (Binaries)
- 0.4.2 ChangeDetector8.3Docs.unix.tar (Documentation)

0.5 Determine Database Driver (JDBC/OLEB)
- 0.5.1 For UNIX
  - DB2 8.1
  - Oracle
    - 9i
    - 10g
- 0.5.2 For Windows
  - Oracle
    - 9i
    - 10g
  - SQL Server
    - 2000
    - 2005

Step 1: Installation

1.0 Repeat Steps for as Many EMs/Agents as Needed.

1.1 Stop
- Agent (before EM)
- EM (MOM in a Clustered Environment)

1.2 EM Install

1.2.1 Untar archive in temp directory

1.2.2. Copy files

Files	From Directory (untar)	Directory Location (EM/MOM)
ChangeDetectorManagementModule.jar		<Introscope_Home>/config/modules
com.wily.cdi.common.agent_server_8.2.0.jar	ChangeDetector8.2.unix.tar\product\enterprisemanager\plugins	<Introscope_Home>\product\enterprisemanager\plugins
com.wily.cdi.common.util.wasjext_8.2.0.jar	ChangeDetector8.2.unix.tar\product\enterprisemanager\plugins	<Introscope_Home>\product\enterprisemanager\plugins
com.wily.cdi.common.util_8.2.0.jar	ChangeDetector8.2.unix.tar\product\enterprisemanager\plugins	<Introscope_Home>\product\enterprisemanager\plugins
com.wily.cdi.common.workstation_server_8.2.0.jar	ChangeDetector8.2.unix.tar\product\enterprisemanager\plugins	<Introscope_Home>\product\enterprisemanager\plugins
com.wily.cdi.server_8.2.0.jar	ChangeDetector8.2.unix.tar\product\enterprisemanager\plugins	<Introscope_Home>\product\enterprisemanager\plugins

1.3 Agent Install

1.3.1 Untar archive in temp directory

1.3.2. Copy files

Files (untar)	Directory Location (Agent)
ChangeDetectorAgent.jar	<Agent_Home>\ext
ChangeDetector-config.xml	<Agent_Home>
libcdnativefile.so	<Agent_Home>

1.4 Workstation Install (On Linux only)

1.3.1 Untar archive in temp directory

1.3.2. Copy files

Files	From Directory (untar)	Directory Location (EM/MOM)
com.wily.cdi.common.util_8.2.0.jar	ChangeDetector8.2.unix.tar\ewp\plugins	<Enterprise Manager_Home>\ewp\plugins
com.wily.cd.workstation_8.2.0.jar	ChangeDetector8.2.unix.tar\ewp\plugins	<Enterprise Manager_Home>\ewp\plugins
com.wily.cdi.common.workstation_server_8.2.0.jar	ChangeDetector8.2.unix.tar\ewp\plugins	<Enterprise Manager_Home>\ewp\plugins

Step 2 Install and Configure EP Agent

2.1 Install EP Agent (not covered. (See EP Agent Guide.)

2.2 Configure EP Agent for Change Detector

2.2.1 EPA Extension (Applicable to Java Only)

Step 1 Stop each EP Agent

Step 2 Copy Change Detector Jar file
-Extract ChangeDetectorAgent.jar from Change Detector Agent tar file
- Create EPA/ext directory
- Copy ChangeDetectorAgent.jar to EPA/ext

Step 3 Define EPAgent.properties
-Edit IntroscopeEPAgent.properties
- Define introscope.agent.extensions.directory to be the absolute path of the /ext directory
- Define introscope.changeDetector.agentID property such as introscope.changeDetector.agentID=ChangeDetectorEPA

2.2.2 EPA Plugin (Applicable to Java Only)

Step 1 Stop each EP Agent

Step 2 Copy Change Detector Jar file
-Extract ChangeDetectorAgent.jar from Change Detector Agent tar file
- Create EPA/ext directory
- Copy ChangeDetectorAgent.jar to EPA/ext

Step 3 Define EPAgent.properties
-Edit IntroscopeEPAgent.properties
- Define introscope.agent.extensions.directory to be the absolute path of the /ext directory
- Define introscope.changeDetector.agentID property such as introscope.changeDetector.agentID=ChangeDetectorEPA

Step 4 Define Plugin

-Edit IntroscopeEPAgent.properties, define the pluigin that sends ChangeDetector data. For example:

Command	Function
introscope.epagent.plugins.stateless.names=CHANGEDETECTOR	specifies the name of the ChangeDetector pAagin.
introscope.epagent.stateless.CHANGEDETECTOR.command=java <ep-EPAgent Home>/ext/changedetector ChangeDetectorEPA	specifies the command to run the ChangeDetector pAagin.
introscope.epagent.stateless.CHANGEDETECTOR.delayInSeconds=60	specifies the frequency, in seconds, that the EPA runs the ChangeDetector pAagin.

Step 3: Configuration

Datasources
A **datasource** is a group of resources whose type is defined by the datasource type—for example, files, database table column values, or runtime class instances. A resource is identified by its name, for example C:\Introscope8\Introscope Enterprise Manager.exe, the buffer_ovrd column name in a database, or java.lang.System. A datasource can have many resources; resources can have many values, but only one value at a time.
+ Note Resource names within a datasource must be unique.

The datasources you specify in the configuration file appear in the Changes tab in the Investigator for ChangeDetector-enabled Agents. Each datasource definition must be enclosed within the datasource-type tagsand contain the attributes name and class. The name can be anything, and is referenced later in the configuration file. The class attribute defines which class is used to parse any datasource-instance definitions for this type of datasource. The class must implement thecom.wily.cdi.agent.config.IDataSourceConfig interface. The ChangeDetector8.2.unix.tar file contains a number of datasources are available to use. To take full advantage of the datasource-type elements, you also define datasource-instance elements. Each of the elements corresponds to a physical datasource that the Agent monitors.

+ Note A datasource instance cannot contain multiple resources with the same name—for example, a duplicate file with the same full path and name in the same datasource instance is invalid, as is a javaenv property with the same name. All data in ChangeDetector is organized by datasource instance.

3.0 Glossary

3.1 General Steps

3.1.1 Configure Multiple Change Detector Files
- Edit IntroscopeAgent.profile -> introscope.changeDetector.profileDir=<path to ChangeDetector files>
- The default value for this property is <path to IntroscopeAgent.profile>/ChangeDetector_profiles.

3.2.1 Using the ChangeDetector Configuration Wizard

Step 1: Extract Config Wizard File
Extract the contents from ChangeDetectorConfigWizard8.2.zip to a directory.

Step 2: Run Configuration Wizard

Add Datasources (Can also Change or Remove Datasources)
-Select Java Platform
-Select New Data Source Configuration File
- Add Datasources to current Datasources
- Add Data Source Type (Java Class Monitor, Database, File System Monitor , Java System Property see child node for more details)
- Do a Save As to save XML File

Configuring Datasource Types

Configure Java Class Monitor
- Enter Datasource name
- Click Next
- Add Classes per Iterations and Delays between Iteration Values
- Add New Exclude Element (to narrow scan)
-Click Next
-Add Include Patterns (exceptions to exclusion)
-Click Next
- Keep Repeating Exclude/Include patterns until done.

Configure Database Monitor
- Enter a datasource bane
- Click next
- Enter database information (JDBC driver, JDBC driver classpath, JDBC URL
  Username
  Password
  Confirm Password
  Schedule Type (Repititive or Post-startup)
  Repetition Interval

Configure File System Monitor
- Enter Datasource Name
- Click Next
-Add new scan-directory
- Click Next
- Enter Direct Name and Select options Recursive, FileSet, and Enabled
- Click New and add an Exclude Pattern
- Add Include Pattern
- Add Information - Files per Iteration, Delays per Iteration Files, Max File Size to Upload
  Max Files to
  Explode Archives
  Archives Per Iteration
  Delays Between Archives Iteration
- Add Addition Filesets as Needed
- Otherwise Click Done With This and Next.

Configure Java System Property Monitor
- Enter a Datasource name
- Click next
-- Add new Exclude Element
- Add new Include Element
- Repeat as Needed (Click Next)
- When Finished Click Done

3.2.2 Modifying Change Detector Configuration File

Step 0: Using System or Introscope Agent in Configuration File

You can use system properties or Introscope Agent profile properties as values in any XML attribute in the configuration files (see Sample Configuration Files on page 95). This lets you use properties that are resolved at runtime in the ChangeDetector configuration file. If both system and Introscope Agent profile properties are provided for a value, the system properties take precedence.. Here is an example:
<scan-directory name="${APPLICATION_HOME}/bin" recursive="true" fileset="default"/>
In this example, ${APPLICATION_HOME} is replaced with its current value at runtime.
+ Note Values for these properties must map to valid system or Introscope Agent profile properties at runtime.

Step 1 : Modify ChangeDetectorconfig.xml

Configure the Datasource type

Database Monitor

Configuration Parameters
-Name
-type=database
- driver
- driverClasspath
-url
- username
- password
- isCaseTool
Notes: You can define two top-level elements within a datasource-instance element of type database: sql and schedule.(repetitive,poststartup)

File System Monitor

Configuration Parameters
-Name
-Type=fs
-Property (explodeArchiveFiles, delayBetweenIterations, filesPerIteration, delayBetweenArchiveIterations, archiveFilesPerIteration, maxFileSizeToUpload, usedDigest,
-Fileset (exclude and include-fileset)
-Scandirectory

Java Class Monitor

Configuration Parameters
- Name
- Type=classmonitor
- delayBetweenIterations
- classesPerIteration

Java System Property

Configuration Parameters
-Name
-Type=javaenv
-exclude
- include

Step 2: Setting ChangeDetector Agent ID and path to configuration (optional)

Back up the IntroscopeAgent.profile in each ChangeDetector-extended Agent instance to a separate directory, using an easy-to=remember new name== for example, IntroscopeAgentBackup.profile.

Set in IntroscopeAgent.profile
Set introscope.changeDetector.agentID=<ChangeDetector agent ID>.

Edit introscopeAgent.profile on each ChangeDetector-extended Agent instance to include the path to the configuration file, including the file name: introscope.changeDetector.profile=<path to ChangeDetector-config.xml>.

Step A: Configuring ChangeDetector in a load balanced environment (Special Case) – See Docs

Step B: Configuring ChangeDetector for the Agent Failover mechanism (Special Case) - See Docs

Step 4 Verify Installation

4.1 Restart EM and Application

4.2 Verify Change Detector Extension is Running
- look for messages coming from IntroscopeAgent.ChangeDetector in the Agent's log files.
- look for messages coming from Manager.ServerBean in the server's output.

4.3 Verify ChangeDetector Workstation Extension is Running
- Open anew Introscope Investigator and confirming that the Changes tab is present.
- In the Workstation:
  - ensure that metrics are coming from the Enterprise Manager and from the Agent.
  - If ChangeDetector is correctly installed, you see a ChangeDetector node in the Investigator under the Agent and Enterprise Manager node.