Continuous Integration

- Projects
- Build Chains
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Apache Ignite uses TeamCity (TC) to provide continuous integration and unit/integration testing. Server is available at http://ci.ignite.apache.org/

Projects

TC contains several projects for different Apache Ignite version(s), actual versions development is done in Ignite Tests 2.4+ (Java 8)

Previous version test projects:

<table>
<thead>
<tr>
<th>Version</th>
<th>Project</th>
<th>Java</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.4...</td>
<td><a href="https://ci.ignite.apache.org/project.html?projectId=IgniteTests24Java8&amp;tab=projectOverview">https://ci.ignite.apache.org/project.html?projectId=IgniteTests24Java8&amp;tab=projectOverview</a></td>
<td>8</td>
</tr>
<tr>
<td>2.0...2.3</td>
<td><a href="https://ci.ignite.apache.org/project.html?projectId=IgniteTests20&amp;tab=projectOverview">https://ci.ignite.apache.org/project.html?projectId=IgniteTests20&amp;tab=projectOverview</a></td>
<td>7</td>
</tr>
<tr>
<td>1.6...1.9</td>
<td><a href="https://ci.ignite.apache.org/project.html?projectId=IgniteTests&amp;tab=projectOverview">https://ci.ignite.apache.org/project.html?projectId=IgniteTests&amp;tab=projectOverview</a></td>
<td>7</td>
</tr>
</tbody>
</table>

Build Chains

Ignite is tested using approximate 90 build configurations (in terms of TC) for testing. Each build configuration has 1 or more (root) test suites to start. These suites group tests around Ignite feature and/or module. Each (root) test suite has a lot of suites (JUnit), each JUnit suit consist from tests.

Example of full test naming:


where IgniteStandByClusterSuite - grouping suite, IgniteStandByClusterSuite - JUnit suite, IgniteStandByClusterSuite - test method.

Build configurations can be started individually or using build chain.

Build chains are used like composite project to summarize results of each run configuration results.

There are several chains for testing different features in Ignite (Persistent Data Store, SQL, .NET, CPP etc)

Run All Basic and Run All

There are also 2 common chains. Run All includes all actual valid tests to be executed for PR checks, also Run All is triggered by schedule triggers for master and release branches.

Always use Run All chain to check PR before merge

Run Basic is subset of RunAll, but includes fastest and stable tests to be used to check each commit to master
For Run All Basic chain VCS triggers are enabled. There is EMail notification send if contributor changes were included in build which failed.

Approximate parameters for tests to be suitable to each group can be found in table below.

<table>
<thead>
<tr>
<th></th>
<th>Build Configuration Max execution time</th>
<th>Test Execution Time</th>
<th>Fail Rate for suite</th>
<th>Fail Rate For Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run All Basic</td>
<td>30 min</td>
<td>&lt; 3 %</td>
<td>&lt; 1%</td>
<td></td>
</tr>
<tr>
<td>Run All</td>
<td>2h</td>
<td>&lt; 3 min</td>
<td>&lt; 30%</td>
<td>&lt; 10%</td>
</tr>
</tbody>
</table>

Make sure your TeamCity user is correctly matched with github user.

There is Make TeamCity Green Again process running in the Ignite community to make following target parameters better.