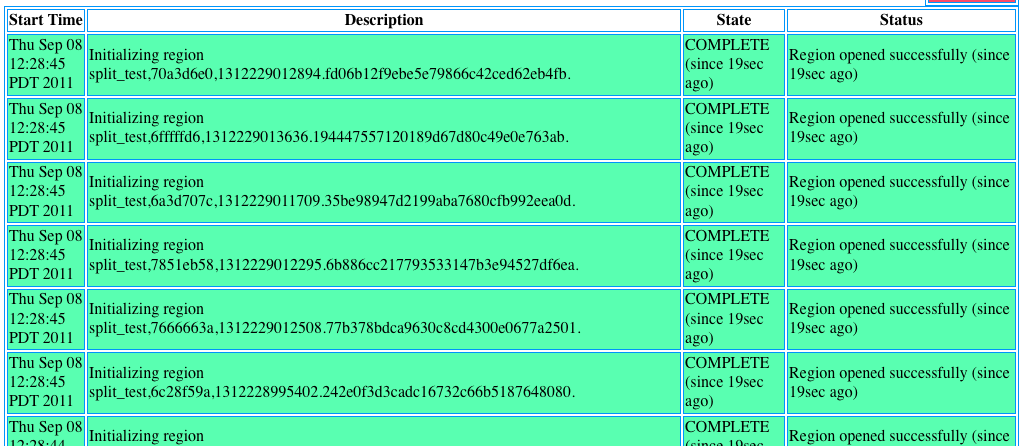
**Overview**

The HBase task monitor is a generic utility that can be used to monitor a variety of currently-running tasks on a given HBase server. Currently, it monitors two distinct types of tasks:

* General Tasks, which are long duration and infrequently-updated.
* RPC Handlers and their calls. These tasks make up an HBase version of MySQL's "show processlist."

**General Tasks**



General Tasks shown in the HTML Interface

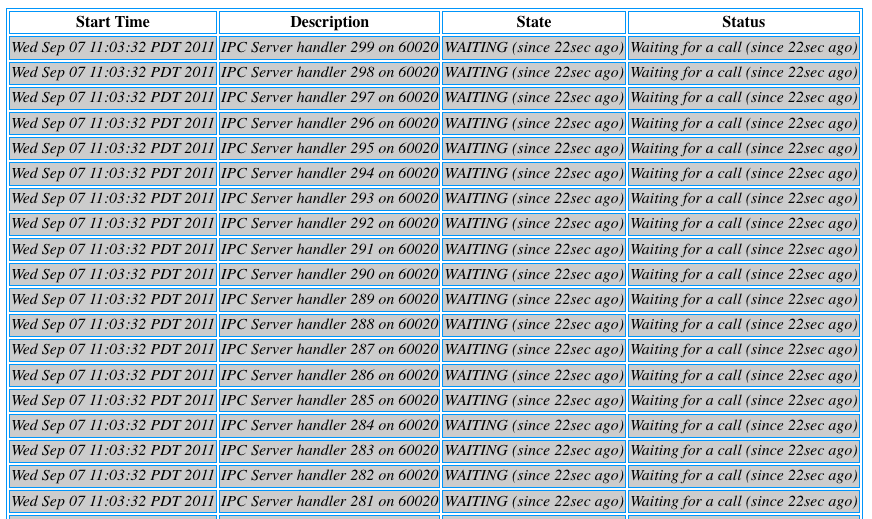
By default, the HTML View only shows tasks of this type. Among these are:

* Master/Region startups
* Compactions
* Log Splits
* etc.

When latencies have spiked or a cluster is otherwise unhealthy, it's worth taking a look at the General Task Monitor. An especially lengthy compaction or a hung region startup will be immediately obvious and could help get to the root of the issue.

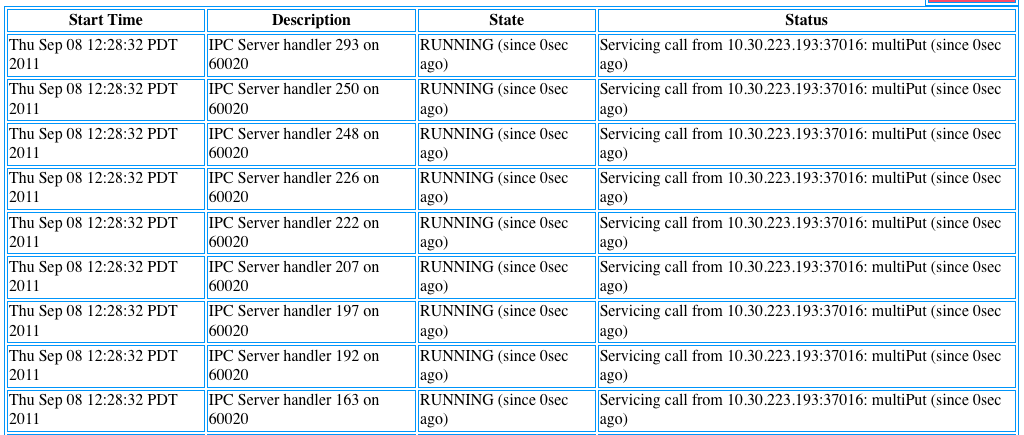
General Tasks are flushed out of the Task Monitor 60 seconds after completion, so viewing the Task Monitor's general filter will also produce recently-completed tasks.

**RPC Handlers**



List of all task monitors, which in this case happen to be idle.

All RPC handlers on a given server manage a single MonitoredRPCHandler for their entire lifetimes. On a cluster with low load, this will often all be in a "WAITING" state, which means that they are not actively servicing RPC calls. When in this state, the time spent in the state can tell the user when they last served an RPC call.



List of Active RPC Tasks in the HTML interface.

When a call arrives, the RPC handler's tasks transition to a "RUNNING" state, and they expose more detail about the individual RPC call being serviced. By browsing this view, one can tell if a server is deadlocked due to, say, hung RPC tasks locking up all available RPC handlers, or even if just a few hung RPC tasks are hogging resources and slowing down the relevant server.

**HTTP Exposure**

**HTML**

Currently, the primary way of interacting with the Task Monitor is through its HTML table interface. which is exposed on each master's and each region server's status pages. By default, these pages are accessible via <http://desired-servers-address:60010> and <http://desired-servers-address:60030>, respectively. Several filters are made available in this interface, including:

* **All Monitored Tasks** shows all tasks, including inactive RPC handlers, active RPC calls, and General Tasks.
* **Non-RPC Tasks** shows all General Tasks, excluding both active and inactive RPC handlers.
* **All RPC Handlers** shows both inactive RPC handlers and active RPC calls.
* **Active RPC Calls** shows only active RPC calls.
* **Client Operations** shows only those active RPC calls that correspond to client operations (e.g. Gets, Puts, Deletes, MultiPuts). For more detail on client operations, see the Slow Query Log documentation.

**JSON**

Once viewing any given filter, the user can also click the "View as JSON" link to see the current state of tasks under the currently active filter. This is meant mostly for scripts; administrators can request this link periodically to check on the health and activity of the servers in their cluster. The JSON structure is provided as a list of objects that each represent a single, currently active call. For example, consider the following JSON object that represents a recently-completed column family flush:

{"statustimems":1315511766156,"status":"Flush successful","starttimems":1315511763284,"description":"Flushing riley,22222222,1313786585829.4c1e3089907d026d403811ffa14794c4.","state":"COMPLETE","statetimems":1315511766156}

The following JSON object represents a currently running multiPut operation. In addition to the information seen above, we also have a fingerprint and some details of the individual puts available to us in this structure. Similar information is available for other client operations such as Gets, Deletes, Scans, and individual Puts.

{"rpcCall":{"starttimems":1315510182172,"queuetimems":1315510182171,"remoteport":37016,"method":"multiPut","params":[{"tables":{"riley":{"puts":[{"totalColumns":10,"families":{"actions":[{"timestamp":1315510182172,"qualifier":"0","vlen":388},{"timestamp":1315510182172,"qualifier":"1","vlen":439},{"timestamp":1315510182172,"qualifier":"2","vlen":701},{"timestamp":1315510182172,"qualifier":"3","vlen":645}]},"row":"f82be9b9f94639088b4a9bd788d9b02e:104699"}],"families":["actions"]}},"totalPuts":1}],"clientaddress":"10.30.223.193","packetlength":-1},"statustimems":-1,"status":"Servicing call from 10.30.223.193:37016: multiPut","starttimems":1315510112708,"description":"IPC Server handler 295 on 60020","state":"RUNNING","statetimems":-1}