

1 Hackystat CBR features

In CBR the case base consists of information concerning the failures of the system and their symptoms (problem description), a case solution and the case outcome. First it is to analyze the given system and identify metrics, called CBR features that can cause problems and system failures. The CBR features can take possible values of a certain type. For example for boolean features one can use the so called overlap distance (Wilson and Martinez 1997). For categorial features, similiarity tables, that list the tables are created.

1.1 Sensorbase features

| Feature | Possible Values | Description | Implementation |
|---------------------|----------------------------------|--|---|
| reachable | Yes/No | indicates wheter the service is reachable over network (Yes) or not (NO) | REST API GET {host}/ping |
| request latency | None/ Low/ Normal/ High | Depending on caching, this feature indicates if the service responds in a reasonable time | Measuring time of the REST API GET {host}/ping call |
| adequate heap size | Adequate / Not Adequate | indicates if the JVM heap size of the service exceeds 80% | ? Some JVM Monitoring tool ? |
| excessive heap size | Excessive / Not Excessive | indicates if the services uses to much heap size, for example if after N requests heap size is less than 40% | ? Some JVM Monitoring tool ? |
| db latency | None/ Low/ Normal/ High | indactes wheter a db operation latency exceeds M milliseconds | JAMon |

1.2 Daily Project Data features

| Feature | Possible Values | Description | Implementation |
|---------------------|----------------------------------|--|---|
| reachable | Yes/No | indicates wheter the service is reachable over network (Yes) or not (NO) | REST API GET {host}/ping |
| request latency | None/ Low/ Normal/ High | Depending on caching, this feature indicates if the service responds in a reasonable time | Measuring time of the REST API GET {host}/ping call |
| adequate heap size | Adequate / Not Adequate | indicates if the JVM heap size of the service exceeds 80% | ? Some JVM Monitoring tool ? |
| excessive heap size | Excessive / Not Excessive | indicates if the services uses to much heap size, for example if after N requests heap size is less than 40% | ? Some JVM Monitoring tool ? |

1.3 Telemetry

| Feature | Possible Values | Description | Implementation |
|---------------------|----------------------------------|--|---|
| reachable | Yes/No | indicates wheter the service is reachable over network (Yes) or not (NO) | REST API GET {host}/ping |
| request latency | None/ Low/ Normal/ High | Depending on caching, this feature indicates if the service responds in a reasonable time | Measuring time of the REST API GET {host}/ping call |
| adequate heap size | Adequate / Not Adequate | indicates if the JVM heap size of the service exceeds 80% | ? Some JVM Monitoring tool ? |
| excessive heap size | Excessive / Not Excessive | indicates if the services uses to much heap size, for example if after N requests heap size is less than 40% | ? Some JVM Monitoring tool ? |

1.4 Project Browser

| Feature | Possible Values | Description | Implementation |
|---------------------|----------------------------------|--|---|
| reachable | Yes/No | indicates wheter the service is reachable over network (Yes) or not (NO) | REST API GET {host}/ping |
| request latency | None/ Low/ Normal/ High | Depending on caching, this feature indicates if the service responds in a reasonable time | Measuring time of the REST API GET {host}/ping call |
| adequate heap size | Adequate / Not Adequate | indicates if the JVM heap size of the service exceeds 80% | ? Some JVM Monitoring tool ? |
| excessive heap size | Excessive / Not Excessive | indicates if the services uses to much heap size, for example if after N requests heap size is less than 40% | ? Some JVM Monitoring tool ? |

1.5 Tickertape

| Feature | Possible Values | Description | Implementation |
|---------------------|----------------------------------|--|---|
| reachable | Yes/No | indicates wheter the service is reachable over network (Yes) or not (NO) | REST API GET {host}/ping |
| request latency | None/ Low/ Normal/ High | Depending on caching, this feature indicates if the service responds in a reasonable time | Measuring time of the REST API GET {host}/ping call |
| adequate heap size | Adequate / Not Adequate | indicates if the JVM heap size of the service exceeds 80% | ? Some JVM Monitoring tool ? |
| excessive heap size | Excessive / Not Excessive | indicates if the services uses to much heap size, for example if after N requests heap size is less than 40% | ? Some JVM Monitoring tool ? |