ModelEngine

+getModel(timeSlice)
+updateModel(currentModel)
+loadModelFromCache(timeSlice)

Decisor

+evaluateChange(model)
+evaluateModel(model)

instance: ModelEngine

Maverick: Decisor

cache: ICache

K8sClient: IContainerClient

InfluxdbClient: IMetricsClient

ElasticClient: ILogsClient

ZipkinClient: IMessagesClient

Influxdb

Elasticsearch

Zipkin

Kubernetes

uApp

«Interface»
IContainerClient

+getServices(timeInterval)
+getReplicas(timeInterval)
+getHosts(timeInterval)
+updateApplication(action)

«Interface»
ICache

+loadCache(timeInterval)
+blockCache()
+clearCache()

«Interface»
IMessageClient

+getOperations(serviceName, timeInterval)
+getMessages(operation, timeInterval)
+getMessages(replicaId, timeInterval)
+getTraces(firstReplicaCaller, timeInterval)

«Interface»
ILogsClient

«Interface»
IMetricsClient

+getHostMetric(metricName, aggregationFunction, replica, timeInterval)
+getReplicaMetric(metricName, aggregationFunction, replica, timeInterval)

interaction Adaptation Behavior (syncing uApp and model)

| uApp | storage | *Client | IContainerClient | cache | modelEngine | decisor |

1 : event

2 : updateCache(timeinterval)

3 : getEvents(timeinterval)

4 : fillingCache

5 : updateModel

6 : evaluateChange

7 : checkDependencies

8 : updateModel

9 : updateApplication

10 : applyChange

interaction Adaptation Behavior (adaptation rule installed in decisor)

uApp	*Client	IContainerClient	cache	modelEngine	decisor

1 : evaluateModel

2 : getModel

3 :

4 : checkDependencies

5 : updateModel

6 : update

7 : updateApplication

8 : applyChange

9 : updateCache