Schedule Methods Meta

Example schedule-methods-meta can be browsed at https://github.com/apache/tomee/tree/master/examples/schedule-methods-meta

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BiAnnually

```java
package org.superbiz.corn.meta.api;

import javax.ejb.Schedule;
import java.lang.annotation.ElementType;
import java.lang.annotation.Retention;
import java.lang.annotation.RetentionPolicy;
import java.lang.annotation.Target;

@Metatype
@Target(ElementType.METHOD)
@Retention(RetentionPolicy.RUNTIME)

public @interface BiAnnually {
    public static interface $ {

        @BiAnnually
        @Schedule(second = "0", minute = "0", hour = "0", dayOfMonth = "1", month =
"1,6")
        public void method();
    }
}
```

BiMonthly

```java
package org.superbiz.corn.meta.api;

import javax.ejb.Schedule;
import java.lang.annotation.ElementType;
import java.lang.annotation.Retention;
import java.lang.annotation.RetentionPolicy;
import java.lang.annotation.Target;

@Metatype
@Target(ElementType.METHOD)
@Retention(RetentionPolicy.RUNTIME)

public @interface BiMonthly {
    public static interface $ {

        @BiMonthly
        @Schedule(second = "0", minute = "0", hour = "0", dayOfMonth = "1,15")
        public void method();
    }
}
```

Daily

```java
package org.superbiz.corn.meta.api;

import javax.ejb.Schedule;
import java.lang.annotation.ElementType;
import java.lang.annotation.Retention;
import java.lang.annotation.RetentionPolicy;
import java.lang.annotation.Target;

@Metatype
@Target(ElementType.METHOD)
@Retention(RetentionPolicy.RUNTIME)

public @interface Daily {
    public static interface $ {

        @Daily
        @Schedule(second = "0", minute = "0", hour = "0", dayOfMonth = "*")
        public void method();
    }
}
```

HarvestTime

```java
package org.superbiz.corn.meta.api;

import javax.ejb.Schedule;
import javax.ejb.Schedules;
import java.lang.annotation.ElementType;
import java.lang.annotation.Retention;
import java.lang.annotation.RetentionPolicy;
import java.lang.annotation.Target;

@Metatype
@Target(ElementType.METHOD)
@Retention(RetentionPolicy.RUNTIME)

public @interface HarvestTime {
    public static interface $ {

        @HarvestTime
        @Schedules({
                @Schedule(month = "9", dayOfMonth = "20-Last", minute = "0", hour = "8"),

                @Schedule(month = "10", dayOfMonth = "1-10", minute = "0", hour = "8")
        })
        public void method();
    }
}
```

Hourly

```java
package org.superbiz.corn.meta.api;

import javax.ejb.Schedule;
import java.lang.annotation.ElementType;
import java.lang.annotation.Retention;
import java.lang.annotation.RetentionPolicy;
import java.lang.annotation.Target;

@Metatype
@Target(ElementType.METHOD)
@Retention(RetentionPolicy.RUNTIME)

public @interface Hourly {
    public static interface $ {

        @Hourly
        @Schedule(second = "0", minute = "0", hour = "*")
        public void method();
    }
}
```

Metatype

```java
package org.superbiz.corn.meta.api;

import java.lang.annotation.ElementType;
import java.lang.annotation.Retention;
import java.lang.annotation.RetentionPolicy;
import java.lang.annotation.Target;

@Metatype
@Target(ElementType.ANNOTATION_TYPE)
@Retention(RetentionPolicy.RUNTIME)
public @interface Metatype {
}
```

Organic

```
package org.superbiz.corn.meta.api;

import javax.ejb.Lock;
import javax.ejb.LockType;
import javax.ejb.Singleton;
import java.lang.annotation.ElementType;
import java.lang.annotation.Retention;
import java.lang.annotation.RetentionPolicy;
import java.lang.annotation.Target;

@Metatype
@Target(ElementType.TYPE)
@Retention(RetentionPolicy.RUNTIME)

@Singleton
@Lock(LockType.READ)
public @interface Organic {
}
```

PlantingTime

```
package org.superbiz.corn.meta.api;

import javax.ejb.Schedule;
import javax.ejb.Schedules;
import java.lang.annotation.ElementType;
import java.lang.annotation.Retention;
import java.lang.annotation.RetentionPolicy;
import java.lang.annotation.Target;

@Metatype
@Target(ElementType.METHOD)
@Retention(RetentionPolicy.RUNTIME)

public @interface PlantingTime {
    public static interface $ {

        @PlantingTime
        @Schedules({
                @Schedule(month = "5", dayOfMonth = "20-Last", minute = "0", hour = "
8"),

                @Schedule(month = "6", dayOfMonth = "1-10", minute = "0", hour = "8")
        })
        public void method();
    }
}
```

Secondly

```java
package org.superbiz.corn.meta.api;

import javax.ejb.Schedule;
import java.lang.annotation.ElementType;
import java.lang.annotation.Retention;
import java.lang.annotation.RetentionPolicy;
import java.lang.annotation.Target;

@Metatype
@Target(ElementType.METHOD)
@Retention(RetentionPolicy.RUNTIME)

public @interface Secondly {
    public static interface $ {

        @Secondly
        @Schedule(second = "*", minute = "*", hour = "*")
        public void method();
    }
}
```

FarmerBrown

```java
package org.superbiz.corn.meta;

import org.superbiz.corn.meta.api.HarvestTime;
import org.superbiz.corn.meta.api.Organic;
import org.superbiz.corn.meta.api.PlantingTime;
import org.superbiz.corn.meta.api.Secondly;

import java.util.concurrent.atomic.AtomicInteger;

/**
 * This is where we schedule all of Farmer Brown's corn jobs
 *
 * @version $Revision$ $Date$
 */
@Organic
public class FarmerBrown {

    private final AtomicInteger checks = new AtomicInteger();

    @PlantingTime
    private void plantTheCorn() {
        // Dig out the planter!!!
    }

    @HarvestTime
    private void harvestTheCorn() {
        // Dig out the combine!!!
    }

    @Secondly
    private void checkOnTheDaughters() {
        checks.incrementAndGet();
    }

    public int getChecks() {
        return checks.get();
    }
}
```

FarmerBrownTest

```
package org.superbiz.corn.meta;

import junit.framework.TestCase;

import javax.ejb.embeddable.EJBContainer;
import javax.naming.Context;

import static java.util.concurrent.TimeUnit.SECONDS;

/**
 * @version $Revision$ $Date$
 */
public class FarmerBrownTest extends TestCase {

    public void test() throws Exception {

        final Context context = EJBContainer.createEJBContainer().getContext();

        final FarmerBrown farmerBrown = (FarmerBrown) context.lookup(
"java:global/schedule-methods-meta/FarmerBrown");

        // Give Farmer brown a chance to do some work
        Thread.sleep(SECONDS.toMillis(5));

        assertTrue(farmerBrown.getChecks() > 4);
    }
}
```

Running

```
-------------------------------------------------------
 T E S T S
-------------------------------------------------------
Running org.superbiz.corn.meta.FarmerBrownTest
Apache OpenEJB 4.0.0-beta-1    build: 20111002-04:06
http://tomee.apache.org/
INFO - openejb.home = /Users/dblevins/examples/schedule-methods-meta
INFO - openejb.base = /Users/dblevins/examples/schedule-methods-meta
INFO - Using 'javax.ejb.embeddable.EJBContainer=true'
INFO - Configuring Service(id=Default Security Service, type=SecurityService,
provider-id=Default Security Service)
INFO - Configuring Service(id=Default Transaction Manager, type=TransactionManager,
provider-id=Default Transaction Manager)
INFO - Found EjbModule in classpath: /Users/dblevins/examples/schedule-methods-
meta/target/classes
INFO - Beginning load: /Users/dblevins/examples/schedule-methods-meta/target/classes
INFO - Configuring enterprise application: /Users/dblevins/examples/schedule-methods-
```

```
meta
INFO - Configuring Service(id=Default Singleton Container, type=Container, provider-
id=Default Singleton Container)
INFO - Auto-creating a container for bean FarmerBrown: Container(type=SINGLETON,
id=Default Singleton Container)
INFO - Configuring Service(id=Default Managed Container, type=Container, provider-
id=Default Managed Container)
INFO - Auto-creating a container for bean org.superbiz.corn.meta.FarmerBrownTest:
Container(type=MANAGED, id=Default Managed Container)
INFO - Enterprise application "/Users/dblevins/examples/schedule-methods-meta" loaded.
INFO - Assembling app: /Users/dblevins/examples/schedule-methods-meta
INFO - Jndi(name="java:global/schedule-methods-
meta/FarmerBrown!org.superbiz.corn.meta.FarmerBrown")
INFO - Jndi(name="java:global/schedule-methods-meta/FarmerBrown")
INFO -
Jndi(name="java:global/EjbModule1809441479/org.superbiz.corn.meta.FarmerBrownTest!org.
superbiz.corn.meta.FarmerBrownTest")
INFO -
Jndi(name="java:global/EjbModule1809441479/org.superbiz.corn.meta.FarmerBrownTest")
INFO - Created Ejb(deployment-id=org.superbiz.corn.meta.FarmerBrownTest, ejb-
name=org.superbiz.corn.meta.FarmerBrownTest, container=Default Managed Container)
INFO - Created Ejb(deployment-id=FarmerBrown, ejb-name=FarmerBrown, container=Default
Singleton Container)
INFO - Started Ejb(deployment-id=org.superbiz.corn.meta.FarmerBrownTest, ejb-
name=org.superbiz.corn.meta.FarmerBrownTest, container=Default Managed Container)
INFO - Started Ejb(deployment-id=FarmerBrown, ejb-name=FarmerBrown, container=Default
Singleton Container)
INFO - Deployed Application(path=/Users/dblevins/examples/schedule-methods-meta)
Tests run: 1, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 6.166 sec

Results :

Tests run: 1, Failures: 0, Errors: 0, Skipped: 0
```