Java EE Management API 2.0

JSR 373

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October 27, 2015

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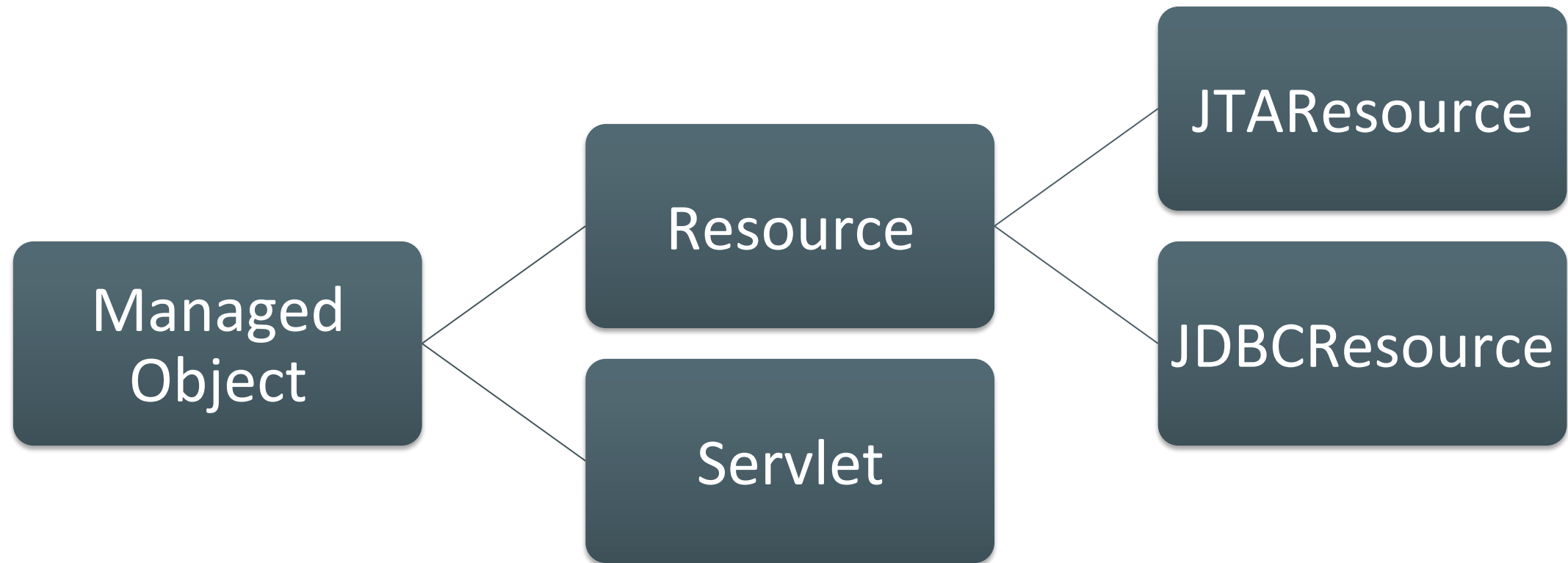
3

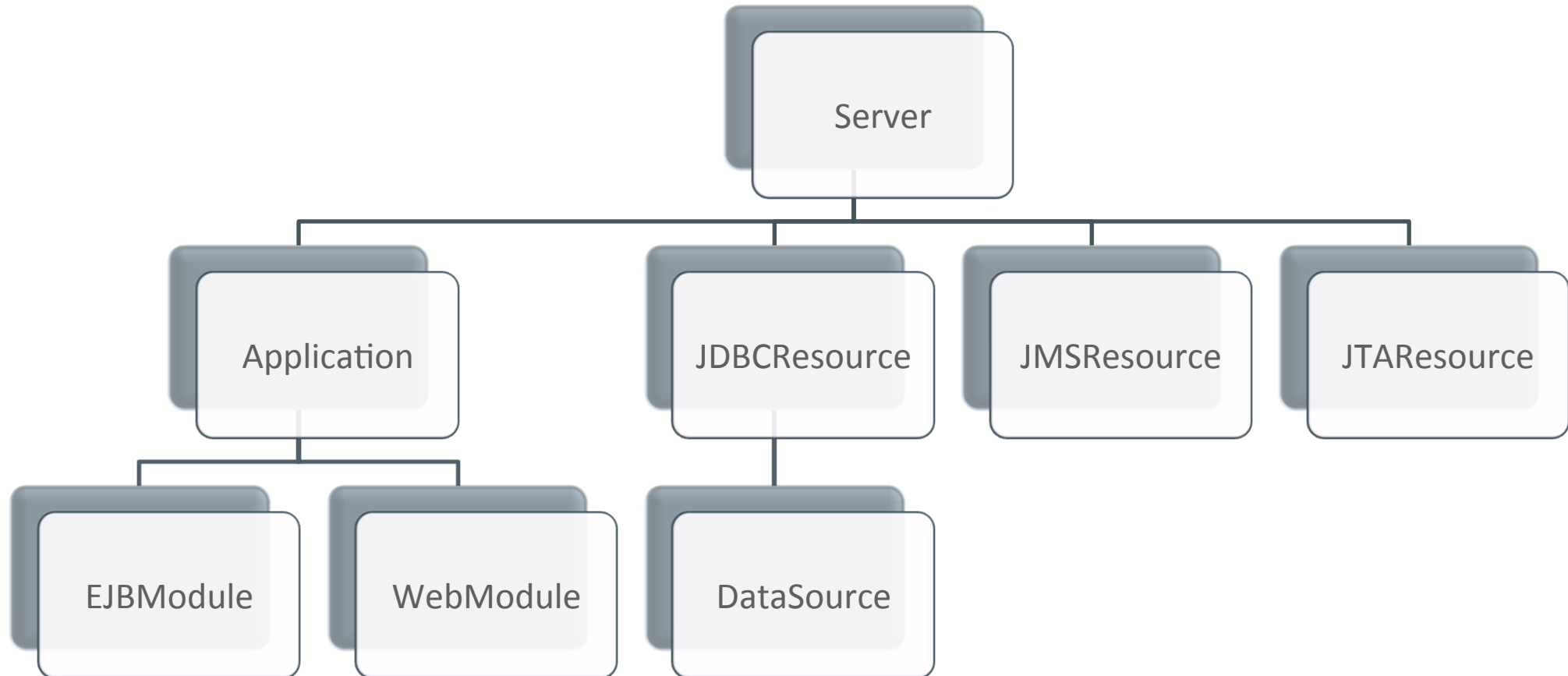# JSR 77: J2EE Management

2002

2006

What is it about?

- Hierarchical, unclosed set of Managed Objects

```
Managed
Object
        ── Resource ── JTAResource
                   ── JDBCResource
        ── Servlet
```

What is it about?

- Hierarchical, unclosed set of Managed Objects

What is it about?

- Hierarchical, unclosed set of Managed Objects

- Events
  - Source
  - Time stamp
  - Sequence number
  - Type
  - Message
  - Data

What is it about?

- Hierarchical, unclosed set of Managed Objects

- Events

- State management

STARTING	Start
RUNNING	Start recursive
STOPPED	Stop
STOPPING	
FAILED	

What is it about?

- Hierarchical, unclosed set of Managed Objects

- Events

- State management

- Performance monitoring
  - Statistic
    - Time
    - Range
    - Boundary
    - Count

What is it about?

- Hierarchical, unclosed set of Managed Objects

- Events

- State management

- Performance monitoring

- MEJB + JMX + SNMP + CIM

JSR 88: Java EE Application Deployment

2002

2006

2013 In Java EE 7

CREATE THE FUTURE

✔
- REST API for management of Java EE platform
- Extends JSR 77

?
- Supports some deployment use-cases
- Define new managed resources

✘
- Next JMX version
- JMX adapter
- Extends JSR 88

Feedback form

http://tinyurl.com/jsr373

Management resources

http://…/domain/[name]

http://…/domain/Domain

Management resources

http://.../domain/[name]/[type]/[name]/

http://.../domain/Domain/server/one/

JavaOne
ORACLE

Management resources

http://.../domain/[name]/[type]/[name]/…

http://.../domain/Domain/server/one/application/foo

Q: [Warm Up] Do you prefer type resource in plural or singular?

A. Singular (…/server/MyServer/application/MyApp)
B. Plural (…/servers/MyServer/applications/MyApp)

The [name] is NOT an OBJECT_NAME

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Operation is just another resource

http://.../domain/Domain/server/one/stop

GET

- Attributes
- Sub-resources (URIs)
- Template (URI)

POST

- Updates attributes
- Execute operation

PUT

- Creates new named resource

DELETE

- Deletes named resource

Q: Which HTTP method should be used to create new managed resource?

Please consider, that user usually does not want to specify all attributes of the new resource. Default values will be used for unspecified attributes.

A. PUT

B. POST

C. Both

D. None ☺

No query parameters, just JSON data

```
"links": [
    {
        "rel": "parent",
        "href": "http://localhost/domains/main/servers/one"
    },
    {
        "rel": "self",
        "href": "http://localhost/domains/main/servers/one/resources/default-mail"
    },
    {
        "rel": "help",
        "href": "http://localhost/templates/javamail"
    }
],

"notes": null,
"JNDIName": "/ms",
"sessionUsername": "admin",
"name": "ms"
```

Type resource MUST provide help/template URL

Type managed resources

- Domain
- Server
- Application
- AppClientModule
- EJBModule
- WebModule
- ResourceAdapterModule
- EntityBean
- StatefulSessionBean

- StatelessSessionBean
- MessageDrivenBean
- Servlet
- ResourceAdapter
- JavaMailResource
- JCAResource
- JDBCResource
- JDBCDataSource
- JDBCDriver

- JMSResource
- JNDIResource
- JTAResource
- RMI_IIOPResource
- URLResource
- JVM

Q: Which managed resource we should add on the standard list?

```
Please, comment.
```

Events: Polling / Long Polling / Web-sockets

Psssst. HTTP 2 server push???

Events: Polling / SSE* / Web-sockets

*Server-Sent Events

- event: starting
- id: 1
- data: {
- data: "links": [
- data: {
- data: "rel": "source",
- data: "href": "http://localhost/domains/main/servers/one"
- data: }
- data:],
- data: "message": "Server one starting.",
- data: }

- event: created
- id: 2
- data: …

Q: What technology should be used for the eventing?

A. `Polling`

B. `Long polling`

C. `Server-Sent Events`

D. `WebSockets`

E. `Other`

Application Deployment

Hic sunt leones!

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Q: How much can this standard help you in your everyday work?

A. N/A - I don't work with Java EE servers.

B. [] - I have all I need in my server.

C. [*] - I don't see the actual use case, but it is somehow promising.

D. [**] - It can help me.

E. [***] - It will help me.

F. [****] - It can solve some of my existing issues.

G. [*****] - Must have.

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