

SNMP 안내서

JEUS 9

TMAXSOFT

저작권 공지

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1. 소개

본 장에서는 JEUS SNMP의 기본적인 개념과 구성에 대해서 알아보고, JEUS SNMP Agent와 JEUS 시스템과의 관계, JEUS JMX와의 관계 및 SNMP Agent에 메시지를 보내고 받는 SNMP Manager 애플리케이션에 대해서 간단하게 설명한다.

1.1. 개요

SNMP(Simple Network Management Protocol)는 네트워크의 여러 하드웨어 및 소프트웨어를 모니터링하기 위한 표준 프로토콜이다. JMX 1.2 스펙은 SNMP를 지원하는 프로토콜 어댑터를 제공한다. Jakarta Management 1.1 스펙은 인터넷 통신에서 네트워크나 시스템 관리 프로토콜을 사용하기 위한 MIB(Management Information Base)를 정의하고 있다.

1.2. 컴포넌트

JEUS SNMP Agent가 동작하기 위한 메인 컴포넌트는 다음과 같다.

- **JEUS SNMP Agent**

JMX MBean 서버와 통신을 하며 논리적으로 JEUS에 위치한다. JEUS SNMP Agent는 JEUS를 관리하기 위한 기반 구조를 제공하며, Jakarta Management 1.1을 구현했다. JEUS 서버의 구조에 대해서는 "JEUS Server 안내서"를 참고한다.

JEUS Management 정보 구조를 제공한다. MIB 파일명은 TMAX-JEUS9.0-MIB.mib이다.

- **SNMP Manager**

SNMP Agent와 메시지를 주고받는다.

SNMP Manager 애플리케이션이 SNMP 메시지를 전송할 때 SNMP Agent는 설정한 포트 번호를 Listen하고 있다. 해당 포트 번호로 요청이 들어오면 먼저 MIB-tree에서 OID를 찾고, 그것의 Protocol Data Unit(이하 PDU) 타입을 알아내서 JEUS JMX MBean 서버를 호출한다. 정보를 찾아내면 SNMP Manager 애플리케이션에 그 값을 리턴한다.

SNMP Agent

JEUS SNMP Agent 모듈은 SNMP를 통해 JEUS 시스템을 관리할 때 유용한 컴포넌트이다.

웹 애플리케이션 서버(Web Application Server, 이하 WAS)의 관리 프로토콜로 SNMP를 사용하기 위해 JEUS JMX MBean 서버와 통신하며 SNMP Manager 애플리케이션을 지원한다.

JEUS SNMP Agent는 다음과 같은 프로토콜을 제공한다.

- SNMPv1
- SNMPv2
- SNMPv3

JEUS SNMP Agent는 JEUS JMX 기반으로 동작한다. JEUS SNMP Agent가 검색할 수 있는 모든 정보는 JEUS JMX API를 통해 검색 가능하다. JEUS JMX API를 JEUS Management System의 Second-Level 서비스 컴포넌트로 사용하여 각각의 JEUS SNMP Agent는 JEUS 시스템의 서버와 같은 JVM 중의 하나와 연관되어 있다.

예를 들어 JMX Mbean은 EJB 엔진에 deploy된 모든 모듈에 대한 정보를 관리하고, SNMP Manager는 이 정보(JEUS SNMP OID)를 EJB 엔진에 해당하는 SNMP Agent에 전송하여 deploy된 모듈을 알 수 있다.

SNMP Agent 인스턴스는 JEUS JMX의 프로토콜 어댑터로 운영되며, SNMP Manager 애플리케이션으로부터 SNMP 패킷을 받아 처리한다. 즉, 특정 포트 번호를 계속 Listen하고 있으면서 SNMP Manager의 요청을 기다린다. Listen Port를 설정하지 않으면 동작하지 않는다.

모든 Agent 인스턴스들은 같은 방법으로 동작한다. 그러므로 각각의 Agent는 JEUS Management System의 모든 정보를 얻을 수 있다. 만일 하나 이상의 Agent 인스턴스가 한 머신에서 기동하려면, 포트 번호가 달라야 한다.



JEUS SNMP Agent를 운영하려면 SNMP Adaptor Port를 반드시 설정해야 한다.

SNMP Manager 애플리케이션

일반적으로 SNMP Manager는 시스템, 특히 통신 장비를 관리하는 애플리케이션을 나타낸다. Jakarta EE에서 SNMP Manager는 엔터프라이즈 애플리케이션, 특히 WAS와 같은 미들웨어를 관리한다.

SNMP Manager 애플리케이션은 MIB를 참조하여 SNMP Agent에서 관리 정보를 요청한다. 애플리케이션은 MIB 파일을 Parsing해서 정보의 구조를 분석하고, 관리자가 읽고 관리하기 쉽게 한다.

2. SNMP Agent 설정

본 장에서는 JEUS SNMP Agent 환경설정 방법에 대해서 설명한다.

2.1. 개요

JEUS SNMP Agent는 J2EE의 컴포넌트뿐만 아니라 엔터프라이즈 메시지 미들웨어의 특징을 가지고 있다.

- Jakarta Management 1.1 스펙을 완전하게 제공한다.
- 일반적으로 NMS 프로토콜로 사용되는 SNMPv1과 SNMPv2를 제공한다.

SNMPv1과 SNMPv2를 사용하는 모든 SNMP Manager들은 Agent를 통해서 JEUS 내부 정보를 조회할 수 있다.

- SNMP Agent와 보안 통신을 하기 위한 SNMPv3를 제공한다.

안정적으로 SNMP Agent와 통신하기 위해서는 SNMP Manager가 필요하다. SNMPv3를 사용하는 모든 SNMP Manager들은 안전하게 정보를 가져올 수 있다.

- JEUS SNMP Agent들은 각각의 JEUS JVM(서버)에서 실행할 수 있다.

2.2. SNMP Adaptor 설정

다음은 JEUS 설정 파일(domain.xml)을 통해 SNMP Agent 환경을 설정하는 방법에 대한 예시이다.

```
<server>
...
  <jmx-manager>
    ...
    <snmp-adaptor>
      <snmp-adaptor-port>8099</snmp-adaptor-port>
      <snmp-version>3</snmp-version>
      <snmp-max-packet-size>256</snmp-max-packet-size>
      <trap-demon>
        <ip-address>127.0.0.1</ip-address>
        <port>9099</port>
      </trap-demon>
      <pooling>
        <min>1</min>
        <max>5</max>
        <period>30000</period>
      </pooling>
    </snmp-adaptor>
    ...
  </jmx-manager>
  ...
</server>
```

다음은 설정 항목에 대한 설명이다.

항목	설명
Snmp Adaptor Port	SNMP 서버가 Listen하고 있는 Port를 설정한다. SNMP Manager는 이 포트 번호를 통해 Management 정보를 요청할 수 있다.
Snmp Version	Agent가 사용할 SNMP 버전을 명시한다. 1, 2, 3의 정수값으로 설정한다.
Snmp Max Packet Size	SNMP 패킷에 대한 최대값을 설정하며 최소 256Bytes부터 설정할 수 있다.
Snmp Security	보안의 적용 여부를 설정한다. 보안은 SNMPv3에서만 설정이 가능하다.
Trap Demon	장애 상황이 발생했을 때 TRAP 메시지를 보낼 서버를 설정한다. 여러 개 설정이 가능하며 설정된 모든 IP 주소(Address)로 메시지를 전송한다.
Pooling	SNMP Agent로 많은 요청이 동시에 들어오는 경우 Thread Pool을 사용하여 처리하도록 설정한다. <ul style="list-style-type: none">◦ Min, Max : Worker Thread의 최소, 최대 개수◦ Period : Worker Thread 체크 주기



Thread Pool의 동작에 대해서는 JEUS의 여러 다른 컴포넌트에서 공유하는 설정이므로 자세히 설명하지 않는다.

3. SNMP MIB

본 장에서는 SNMP MIB에 대해 설명한다.

3.1. 개요

사용자는 모든 JEUS 서버의 속성에 접근할 수 있는데 이것은 JEUS MIB에 정의되어 있다. MIB는 표준 SNMP의 한 부분이다.



MIB에 대한 자세한 내용은 www.ietf.org 사이트를 참조한다.

3.2. MIB 브라우징

JEUS MIB 파일은 다음의 디렉터리에 존재하는 TMAX-JEUS9.0-MIB.mib 파일에 정의되어 있다.

```
JEUS_HOME/lib/system
```

직접적으로 MIB 파일을 볼 수 있으며 [JEUS SNMP MIB 정보](#)에서 OID 속성값의 매핑을 확인할 수 있다.

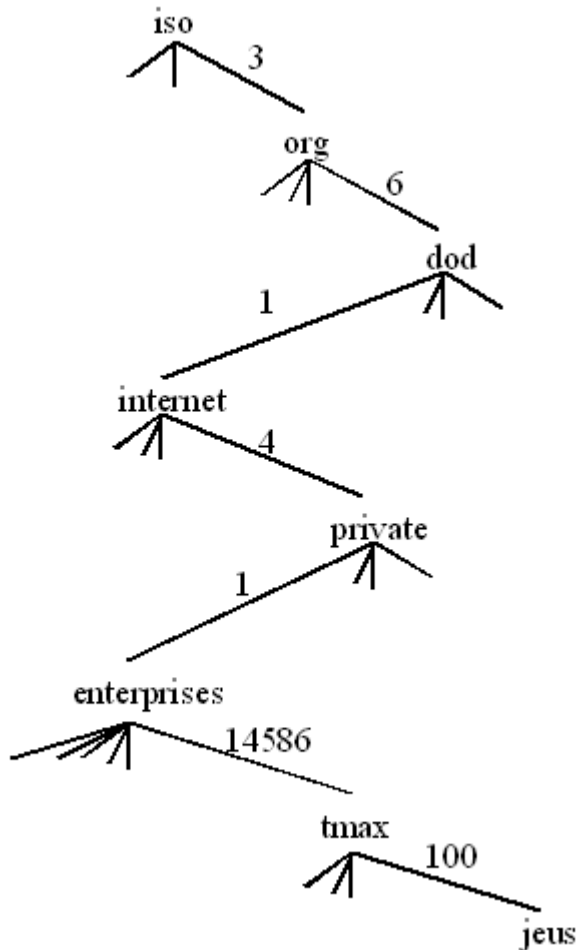
JEUS에서는 MIB 브라우저를 제공하지 않지만 3rd-Party MIB 브라우저를 사용할 수 있고, SNMP 유틸리티 벤더 대부분에서 MIB 브라우저를 제공한다.

3.3. 객체 식별(OID)

OID(Object ID)는 관리되는 객체를 구별하기 위해 정수를 나열한 것으로 OID 트리 구조를 사용해서 객체의 경로를 정의한다. OID는 MIB 파일에서 정의한다.

각 OID는 JEUS MBean의 각 속성과 매핑된다. JEUS SNMP Agent로 특정한 OID 값을 가진 SNMP 패킷을 전송하면 OID와 일치하는 정보를 리턴한다.

다음은 JEUS MIB의 OID 트리이다.



JEUS MIB의 OID

TmaxSoft의 엔터프라이즈 OID는 1.3.6.1.4.1.14586이다. 즉, 모든 JEUS 속성값의 접두어는 1.3.6.1.4.1.14586.100이 된다. 예를 들어 JEUS 서버 버전 속성값의 OID는 1.3.6.1.4.1.14586.100.3.2이다.

3.4. JEUS SNMP OID 접미어

객체열을 가져오는 표준 접미어는 다음과 같다.

접미어	설명
0	모든 객체를 가져온다.
1	전체 객체 중에서 첫 번째 객체만 가져온다.

예를 들어 1.3.6.1.4.1.14586.100.9.1.1 OID에서 1.3.6.1.4.1.14586.100.9.1은 EJB 모듈의 객체 이름의 속성을 의미하고, 1.3.6.1.4.1.14586.100.9.1.1은 첫 번째 EJB 모듈의 객체 이름을 의미한다. 그러므로 GET_NEXT 1.3.6.1.4.1.14586.100.9.1을 사용하면 1.3.6.1.4.1.14586.100.9.1.1의 결과가 아닌 1.3.6.1.4.1.14586.100.9.2의 값이 리턴된다.

JEUS SNMP Agent는 객체들의 개수를 리턴하는 특별한 OID 접미어인 "9999"를 제공한다. 예를 들어 GET 1.3.6.1.4.1.14586.100.9.1.9999라고 했을 때 JEUS에 10개의 EJB가 deploy되어 있다면 10을 리턴한다.



모든 OID 트리에 접미어가 있는 것이 아니므로 실제 OID만 탐색할 수 있다.

3.5. Static OID와 Dynamic OID

JEUS에서는 다음과 같이 2가지 OID 버전을 지원한다.

• Static OID(정적 OID)

- MIB 기반의 정보만으로 구성되는 OID이다.
- Static OID는 동일한 특성의 객체에 대해서 동일한 OID가 할당된다. 그래서 하나의 OID에 대해서 해당 객체가 여러 개 존재할 경우에는 값들이 목록으로 리턴된다.

예를 들어 JEUS에 2개의 서버가 실행되고 있을 때 서버의 이름에 해당하는 OID로 요청을 하면, [server name1, server name2]와 같이 목록이 리턴된다.

- 동일한 OID에 대해서 여러 객체가 존재할 경우 해당 객체에 대한 모니터링이 쉽지 않다.

• Dynamic OID(동적 OID)

- Dynamic OID는 객체에 대한 유일한 값을 부여하기 위해서 MIB에 의한 정보로 구성된 OID에 "."으로 구분된 32개의 숫자를 나열하여 구성된다.

(예: [MIB 기반 OID].1.2.3.4.5.--- . 31.32)

- 32자리의 ID는 객체가 생성될 때 SNMP Agent에서 동적으로 생성된다. 각각의 객체에 Dynamic OID를 부여하여 특정 객체에 대한 모니터링이 용이하다.

예를 들어서 2개의 서버를 운용 중인 JEUS에 각 서버의 Thread Pool의 최대값과 최소값을 알고 싶을 경우에 Static OID와 Dynamic OID의 차이는 다음과 같다.

• Static OID의 경우

다음의 형식으로 된 MIB 기반의 OID에 해당 객체들의 목록이 리턴된다.

[최대값에 해당하는 OID]=[maximum, maximum'], [최소값에 해당하는 OID]=[minimum, minimum']

이때 결과값의 목록에서 동일한 위치의 maximum과 minimum이 같은 서버의 값인지 보장되지 않기 때문에 같은 서버에 연관된 값을 알 수 없다(하나의 서버에 해당하는 값이 첫 번째 나올 수도 있고, 두 번째 나올 수도 있다).

• Dynamic OID의 경우

다음의 형식으로 결과값이 출력되기 때문에 특정 객체에 대한 연관된 값을 정확하게 알 수 있다.

[최대값에 해당하는 OID].[server1의 동적 생성 OID]=maximum, [최소값에 해당하는 OID].[server1의 동적 생성 OID]=minimum

JEUS에서 SNMP는 Dynamic OID를 기본으로 동작한다. Static OID로 SNMP를 사용하고 싶다면 JEUS 실행 스크립트에서 다음과 같이 실행한다.

```
-Djeus.management.snmp.dynamic=false
```

4. SNMP Manager 애플리케이션

본 장에서는 JEUS SNMP Manager 애플리케이션의 개발 및 설정 방법에 대해서 설명한다.

4.1. 개요

SNMP(SNMPv1, SNMPv2, SNMPv3) 표준을 준수하는 SNMP Manager들은 JEUS SNMP와 함께 동작할 수 있다.



SNMP에 대한 자세한 설명은 SNMP Management Framework 관련 스펙을 참조한다(Jakarta management 1.1 스펙 참조).

4.2. 간단한 SNMP 클라이언트 프로그램

애플리케이션은 필요에 따라 다양한 형태를 가지지만, 본 절에서는 SNMP4J API를 사용한 클라이언트 프로그램을 설명한다.

SNMP4J는 오픈 소스이며, J2SE 1.4 및 이후 버전에 맞는 SNMP 구현체를 제공하고 있다. SNMP4J API를 이용한 SNMP 클라이언트 애플리케이션은 다음 단계를 수행해야 한다.

1. 정보를 가져올 SNMP 객체의 OID를 설정하고, PDU 타입을 설정한다.
2. SNMP 정보를 가져올 Target의 주소 및 포트 번호를 설정하고, SNMP 버전을 설정한다(JEUS SNMP는 UDP를 사용하기 때문에 UDPAddress를 사용).
3. SNMP 메시지 객체를 생성해서 전송할 메시지를 생성한다.
4. 메시지 전송 및 응답을 수신한다.

예제

다음은 SNMP4J API를 이용한 SNMP 클라이언트 애플리케이션 프로그램의 예제이다.

SNMP 클라이언트 애플리케이션 : <SnmplclientSample.java>

```
import java.net.*;
import java.util.*;
import org.snmp4j.*;
import org.snmp4j.PDU;
import org.snmp4j.mp.SnmpConstants;
import org.snmp4j.event.ResponseEvent;
import org.snmp4j.transport.*;
import org.snmp4j.smi.*;

public class SnmplclientSample{
    static int defaultPort = 9999;
    static String defaultIP = "127.0.0.1";
    static String defaultOID = "1.3.6.1.4.1.14586.100.2.1";
```

```

static void testGetNext(String oid) throws java.io.IOException {
    //1. Make Protocol Data Unit
    PDU pdu = new PDU();
    pdu.add(new VariableBinding(new OID(defaultOID)));
    pdu.setType(PDU.GETNEXT);

    //2. Make target
    CommunityTarget target = new CommunityTarget();
    UdpAddress targetAddress = new UdpAddress();
    targetAddress.setInetAddress(InetAddress.getByName(defaultIP));
    targetAddress.setPort(defaultPort);
    target.setAddress(targetAddress);
    target.setCommunity(new OctetString("public"));
    target.setVersion(SnmpConstants.version1);

    //3. Make SNMP Message. Simple!
    Snmp snmp = new Snmp(new DefaultUdpTransportMapping());

    //4. Send Message and Recieve Response
    snmp.listen();
    ResponseEvent response = snmp.send(pdu, target);
    if (response.getResponse() == null) {
        System.out.println("Error: There is some problems.");
    } else {
        Vector variableBindings = response.getResponse().getVariableBindings();
        for( int i = 0; i < variableBindings.size(); i++){
            System.out.println(variableBindings.get(i));
        }
    }
    snmp.close();
}

public static void main(String[] args) throws java.io.IOException {
    // get the SNMP port number
    if (args.length > 0) {
        defaultPort = Integer.parseInt (args[0]);
    }
    System.out.println ("PORT : " + defaultPort);

    // get the ip address of the machine that the SNMP agent runs on
    if (args.length > 1) {
        defaultIP = args[1];
    }
    System.out.println ("IP : " + defaultIP);

    // get the OID number that you want to get the value of
    if (args.length > 2) {
        defaultOID = args[2];
    }
    System.out.println ("OID : " + defaultOID);
    try {
        testGetNext(defaultOID);
    } catch (Exception ex) {
        System.out.println ("ex *** : " + ex);
        ex.printStackTrace ();
    }
}
}

```



SNMP4J API에 대한 자세한 내용은 [SNMP4J 공식 문서](#)를 참고한다.

5. SNMP 사용 예제

본 장에서는 JEUS SNMP Agent를 기동하는 방법과 SNMP 클라이언트 애플리케이션이 JEUS로부터 모니터링 정보를 가져오는 방법에 대해서 예제를 이용하여 설명한다.

1. 간단한 SNMP 클라이언트 프로그램에 있는 SNMP 클라이언트 예제 프로그램을 작성한 후 컴파일한다. 예제 프로그램을 컴파일하기 위해서는 SNMP4J가 필요하다. SNMP4J API는 www.snmp4j.org에서 구할 수 있다.
2. SNMP Agent 설정의 설정 항목을 참고하여 SNMP Adaptor를 설정한다. 예제 프로그램은 기본적으로 9999 포트를 사용하게 설정되어 있으므로, SNMP Adaptor Port 항목을 '9999'로 설정한다.
3. 서버를 재시작한다. SNMP Adaptor가 사용 중이라면 서버가 시작되는 도중 아래와 같은 로그를 확인할 수 있다.

```
. . .  
[2016.08.03 16:32:12][0] [adminServer-1] [SNMP-0004] The SNMP agent is ready using the port 9999.  
. . .
```



본 안내서에서는 JEUS 서버 이름을 'adminServer'로 가정한다.

4. 1번 항목에서 작성한 예제 프로그램을 실행한다. 예제 프로그램을 정상적으로 실행하기 위해서는 클래스패스에서 SNMP4J를 찾을 수 있게 설정해 놓아야 한다. 아래 실행 예제는 '/home/user1/lib' 아래에 SNMP4J.jar라는 이름으로 SNMP4J가 존재한다고 가정하였다.

```
$ java -classpath /home/user1/lib/SNMP4J.jar SnpclientSample  
PORT : 9999  
IP : 127.0.0.1  
OID : 1.3.6.1.4.1.14586.100.2.1  
1.3.6.1.4.1.14586.100.2.1.0 = [JEUS:JMXManager=adminServer,j2eeType=J2EEDomain,name=domain1]
```



예제 프로그램은 기본적으로 127.0.0.1:9999으로 접속하게 설정되어 있다. 예제 프로그램을 실행할 때 'PORT', 'IP' 순으로 인자를 주고 실행하면 다른 주소와 포트 번호로 접속할 수 있다.

Appendix A: JEUS SNMP MIB 정보

본 부록에서는 JEUS SNMP MIB에 대해 자세히 설명한다.

A.1. 개요

SNMP Manager 개발자는 개발하면서 참조할 MIB 파일이 필요하다. JEUS의 MIB 파일인 TMAX-JEUS9.0-MIB.mib 파일은 다음의 디렉터리에 위치한다.

```
JEUS_HOME/lib/system
```

이 파일에서는 JEUS SNMP MIB 파일의 내부적인 부분과 그것들의 속성값 그리고 OID의 매핑을 확인할 수 있다.

A.2. OID와 속성값의 매핑

TMAX-JEUS-MIB의 이해를 돕기 위해서 간단한 OID와 속성값의 Table을 제공한다.

매핑의 포맷은 다음과 같다.

```
[OID(그룹 이름)] [속성(속성 이름)]
```

모든 OID의 공통적인 prefix인 "1.3.6.1.4.1.14586.100."은 생략한다(TmaxSoft의 엔터프라이즈 넘버는 14586이고, JEUS 제품의 넘버는 100이다).

JEUS 4.X 버전과 달라진 점은 MIB 파일에서 중복되는 MIB 객체명이 생성되는 것을 방지하기 위해서 포맷의 **[속성 (속성 이름)]**의 앞에 **[OID(그룹 이름)]**을 입력한다.

다음은 OID와 속성값의 Table이다.

```
2.1 j2EEDomainobjectName
2.2 j2EEDomainservers
3.1 j2EEServerobjectName
3.2 j2EEServerserverVersion
3.3 j2EEServerserverVendor
3.4 j2EEServerjavaVMs
3.5 j2EEServerdeployedObjects
3.6 j2EEServerresources
3.8 j2EEServerjeusServices
3.9 j2EEServerengines
4.1 jVMobjectName
4.2 jVMjavaVersion
4.3 jVMjavaVendor
4.4 jVMnode
4.6 jVMoSName
4.7 jVMoSVersion
4.8 jVMallProperties
```

4.101 jVMheapSize-upperBound
 4.102 jVMheapSize-lowerBound
 4.103 jVMheapSize-highWaterMark
 4.104 jVMheapSize-lowWaterMark
 4.105 jVMheapSize-current
 4.111 jVMupTime-count
 4.121 jVMtotalSize-highWaterMark
 4.122 jVMtotalSize-lowWaterMark
 4.123 jVMtotalSize-current
 6.1 j2EEApplicationobjectName
 6.2 j2EEApplicationdeploymentDescriptor
 6.3 j2EEApplicationserver
 6.4 j2EEApplicationmodules
 6.5 j2EEApplicationmoduleType
 6.6 j2EEApplicationapplicationType
 6.7 j2EEApplicationjeusDeploymentPlan
 6.8 j2EEApplicationtargetModuleID
 8.1 appClientModuleobjectName
 8.2 appClientModuledeploymentDescriptor
 8.3 appClientModuleserver
 8.4 appClientModulejavaVMs
 8.5 appClientModuleapplicationType
 8.6 appClientModulemoduleType
 8.7 appClientModulejeusDeploymentPlan
 8.8 appClientModuletargetModuleID
 9.1 eJBModuleobjectName
 9.2 eJBModuledeploymentDescriptor
 9.3 eJBModuleserver
 9.4 eJBModulejavaVMs
 9.5 eJBModuleejbs
 9.6 eJBModuleejbCount
 9.7 eJBModuleclientViewPath
 9.8 eJBModulejeusDeploymentPlan
 9.9 eJBModuletargetModuleID
 9.10 eJBModulemoduleType
 9.11 eJBModuleapplicationType
 11.1 messageDrivenBeanobjectName
 11.101 messageDrivenBeancreateCount-count
 11.111 messageDrivenBeanremoveCount-count
 11.121 messageDrivenBeanrequestCount-count
 11.131 messageDrivenBeancommittedCount-count
 11.141 messageDrivenBeanrolledbackCount-count
 11.151 messageDrivenBeantimeoutRolledbackCount-count
 11.161 messageDrivenBeanmessageCount-count
 11.171 messageDrivenBeanactiveEJBBeanCount-highWaterMark
 11.172 messageDrivenBeanactiveEJBBeanCount-lowWaterMark
 11.173 messageDrivenBeanactiveEJBBeanCount-current
 11.181 messageDrivenBeantotalEJBBeanCount-highWaterMark
 11.182 messageDrivenBeantotalEJBBeanCount-lowWaterMark
 11.183 messageDrivenBeantotalEJBBeanCount-current
 12.1 entityBeanobjectName
 12.101 entityBeancreateCount-count
 12.111 entityBeanremoveCount-count
 12.121 entityBeanrequestCount-count
 12.131 entityBeancommittedCount-count
 12.141 entityBeanrolledbackCount-count
 12.151 entityBeantimeoutRolledbackCount-count
 12.161 entityBeanreadyCount-highWaterMark
 12.162 entityBeanreadyCount-lowWaterMark

12.163 entityBeanreadyCount-current
 12.171 entityBeanpooledCount-highWaterMark
 12.172 entityBeanpooledCount-lowWaterMark
 12.173 entityBeanpooledCount-current
 12.181 entityBeanautoRemovedEJBObjectCount-count
 12.191 entityBeantotalEJBBeanCount-highWaterMark
 12.192 entityBeantotalEJBBeanCount-lowWaterMark
 12.193 entityBeantotalEJBBeanCount-current
 12.201 entityBeanactiveEJBBeanCount-highWaterMark
 12.202 entityBeanactiveEJBBeanCount-lowWaterMark
 12.203 entityBeanactiveEJBBeanCount-current
 12.211 entityBeantotalThreadCount-highWaterMark
 12.212 entityBeantotalThreadCount-lowWaterMark
 12.213 entityBeantotalThreadCount-current
 12.221 entityBeanactiveThreadCount-highWaterMark
 12.222 entityBeanactiveThreadCount-lowWaterMark
 12.223 entityBeanactiveThreadCount-current
 12.231 entityBeantotalEJBObjectCount-highWaterMark
 12.232 entityBeantotalEJBObjectCount-lowWaterMark
 12.233 entityBeantotalEJBObjectCount-current
 12.241 entityBeanactiveEJBObjectCount-highWaterMark
 12.242 entityBeanactiveEJBObjectCount-lowWaterMark
 12.243 entityBeanactiveEJBObjectCount-current
 12.251 entityBeanpassiveCount-highWaterMark
 12.252 entityBeanpassiveCount-lowWaterMark
 12.253 entityBeanpassiveCount-current
 14.1 statefulSessionBeanobjectName
 14.101 statefulSessionBeancreateCount-count
 14.111 statefulSessionBeanremoveCount-count
 14.121 statefulSessionBeanrequestCount-count
 14.131 statefulSessionBeancommittedCount-count
 14.141 statefulSessionBeanrolledbackCount-count
 14.151 statefulSessionBeantimeoutRolledbackCount-count
 14.161 statefulSessionBeanmethodReadyCount-highWaterMark
 14.162 statefulSessionBeanmethodReadyCount-lowWaterMark
 14.163 statefulSessionBeanmethodReadyCount-current
 14.171 statefulSessionBeanpassiveCount-highWaterMark
 14.172 statefulSessionBeanpassiveCount-lowWaterMark
 14.173 statefulSessionBeanpassiveCount-current
 14.181 statefulSessionBeanautoRemovedEJBObjectCount-count
 14.191 statefulSessionBeantotalEJBBeanCount-highWaterMark
 14.192 statefulSessionBeantotalEJBBeanCount-lowWaterMark
 14.193 statefulSessionBeantotalEJBBeanCount-current
 14.201 statefulSessionBeanactiveEJBBeanCount-highWaterMark
 14.202 statefulSessionBeanactiveEJBBeanCount-lowWaterMark
 14.203 statefulSessionBeanactiveEJBBeanCount-current
 14.211 statefulSessionBeantotalThreadCount-highWaterMark
 14.212 statefulSessionBeantotalThreadCount-lowWaterMark
 14.213 statefulSessionBeantotalThreadCount-current
 14.221 statefulSessionBeanactiveThreadCount-highWaterMark
 14.222 statefulSessionBeanactiveThreadCount-lowWaterMark
 14.223 statefulSessionBeanactiveThreadCount-current
 14.231 statefulSessionBeantotalEJBObjectCount-highWaterMark
 14.232 statefulSessionBeantotalEJBObjectCount-lowWaterMark
 14.233 statefulSessionBeantotalEJBObjectCount-current
 14.241 statefulSessionBeanactiveEJBObjectCount-highWaterMark
 14.242 statefulSessionBeanactiveEJBObjectCount-lowWaterMark
 14.243 statefulSessionBeanactiveEJBObjectCount-current
 15.1 statelessSessionBeanobjectName

- 15.101 statelessSessionBeancreateCount-count
- 15.111 statelessSessionBeanremoveCount-count
- 15.121 statelessSessionBeanrequestCount-count
- 15.131 statelessSessionBeancommittedCount-count
- 15.141 statelessSessionBeanrolledbackCount-count
- 15.151 statelessSessionBeantimeoutRolledbackCount-count
- 15.161 statelessSessionBeanmethodReadyCount-highWaterMark
- 15.162 statelessSessionBeanmethodReadyCount-lowWaterMark
- 15.163 statelessSessionBeanmethodReadyCount-current
- 15.171 statelessSessionBeantotalEJBBeanCount-highWaterMark
- 15.172 statelessSessionBeantotalEJBBeanCount-lowWaterMark
- 15.173 statelessSessionBeantotalEJBBeanCount-current
- 15.181 statelessSessionBeanactiveEJBBeanCount-highWaterMark
- 15.182 statelessSessionBeanactiveEJBBeanCount-lowWaterMark
- 15.183 statelessSessionBeanactiveEJBBeanCount-current
- 15.191 statelessSessionBeantotalThreadCount-highWaterMark
- 15.192 statelessSessionBeantotalThreadCount-lowWaterMark
- 15.193 statelessSessionBeantotalThreadCount-current
- 15.201 statelessSessionBeanactiveThreadCount-highWaterMark
- 15.202 statelessSessionBeanactiveThreadCount-lowWaterMark
- 15.203 statelessSessionBeanactiveThreadCount-current
- 16.1 webModuleobjectName
- 16.2 webModuledeploymentDescriptor
- 16.3 webModuleserver
- 16.4 webModulejavaVMs
- 16.5 webModuleservlets
- 16.8 webModulerealDocBase
- 16.9 webModulejeusDeploymentPlan
- 16.10 webModuletargetModuleID
- 16.11 webModulemoduleType
- 16.12 webModuleapplicationType
- 16.13 webModuleautoReload
- 16.101 webModulerequestCount-count
- 16.111 webModuleallSessionsSize-count
- 16.121 webModuleactiveSessionsSize-count
- 16.131 webModulepassivateSessionsSize-count
- 16.141 webModulelocalSessionsSize-count
- 16.151 webModuleprocessingTime-count
- 17.1 servletobjectName
- 17.2 servletservletInfo
- 17.3 servletaverageExecutionTime
- 17.101 servletserviceTime-count
- 17.102 servletserviceTime-maxTime
- 17.103 servletserviceTime-minTime
- 17.104 servletserviceTime-totalTime
- 18.1 resourceAdapterModuleobjectName
- 18.2 resourceAdapterModuledeploymentDescriptor
- 18.3 resourceAdapterModuleserver
- 18.4 resourceAdapterModulejavaVMs
- 18.6 resourceAdapterModulemoduleType
- 18.7 resourceAdapterModuleapplicationType
- 18.8 resourceAdapterModulejeusDeploymentPlan
- 18.9 resourceAdapterModuletargetModuleID
- 19.1 resourceAdapterobjectName
- 21.1 javaMailResourceobjectName
- 21.2 javaMailResourceproperty
- 22.1 jCAResourceobjectName
- 23.1 jCAConnectionFactoryobjectName
- 24.1 jCAManagedConnectionFactoryobjectName

- 25.1 JDBCResourceobjectName
- 25.2 JDBCResourcejdbcDataSources
- 25.101 JDBCResourceconnectionPools-createCount-count
- 25.111 JDBCResourceconnectionPools-closeCount-count
- 25.121 JDBCResourceconnectionPools-poolSize-upperBound
- 25.122 JDBCResourceconnectionPools-poolSize-lowerBound
- 25.123 JDBCResourceconnectionPools-poolSize-highWaterMark
- 25.124 JDBCResourceconnectionPools-poolSize-lowWaterMark
- 25.125 JDBCResourceconnectionPools-poolSize-current
- 25.131 JDBCResourceconnectionPools-freePoolSize-upperBound
- 25.132 JDBCResourceconnectionPools-freePoolSize-lowerBound
- 25.133 JDBCResourceconnectionPools-freePoolSize-highWaterMark
- 25.134 JDBCResourceconnectionPools-freePoolSize-lowWaterMark
- 25.135 JDBCResourceconnectionPools-freePoolSize-current
- 25.141 JDBCResourceconnectionPools-waitingThreadCount-highWaterMark
- 25.142 JDBCResourceconnectionPools-waitingThreadCount-lowWaterMark
- 25.143 JDBCResourceconnectionPools-waitingThreadCount-current
- 25.161 JDBCResourceconnectionPools-waitTime-count
- 25.162 JDBCResourceconnectionPools-waitTime-maxTime
- 25.163 JDBCResourceconnectionPools-waitTime-minTime
- 25.164 JDBCResourceconnectionPools-waitTime-totalTime
- 25.171 JDBCResourceconnectionPools-useTime-count
- 25.172 JDBCResourceconnectionPools-useTime-maxTime
- 25.173 JDBCResourceconnectionPools-useTime-minTime
- 25.174 JDBCResourceconnectionPools-useTime-totalTime
- 25.181 JDBCResourceconnectionPools-jdbcDataSource
- 26.1 JDBCDataSourceobjectName
- 26.2 JDBCDataSourcejdbcDriver
- 26.101 JDBCDataSourcecreateCount-count
- 26.111 JDBCDataSourcecloseCount-count
- 26.121 JDBCDataSourcepoolSize-upperBound
- 26.122 JDBCDataSourcepoolSize-lowerBound
- 26.123 JDBCDataSourcepoolSize-highWaterMark
- 26.124 JDBCDataSourcepoolSize-lowWaterMark
- 26.125 JDBCDataSourcepoolSize-current
- 26.131 JDBCDataSourcefreePoolSize-upperBound
- 26.132 JDBCDataSourcefreePoolSize-lowerBound
- 26.133 JDBCDataSourcefreePoolSize-highWaterMark
- 26.134 JDBCDataSourcefreePoolSize-lowWaterMark
- 26.135 JDBCDataSourcefreePoolSize-current
- 26.141 JDBCDataSourcewaitingThreadCount-highWaterMark
- 26.142 JDBCDataSourcewaitingThreadCount-lowWaterMark
- 26.143 JDBCDataSourcewaitingThreadCount-current
- 26.161 JDBCDataSourcewaitTime-count
- 26.162 JDBCDataSourcewaitTime-maxTime
- 26.163 JDBCDataSourcewaitTime-minTime
- 26.164 JDBCDataSourcewaitTime-totalTime
- 26.171 JDBCDataSourceuseTime-count
- 26.172 JDBCDataSourceuseTime-maxTime
- 26.173 JDBCDataSourceuseTime-minTime
- 26.174 JDBCDataSourceuseTime-totalTime
- 27.1 JDBCDriverobjectName
- 28.1 JMSResourceobjectName
- 28.5 JMSResourcejMSConnectionFactoryResourceNames
- 28.6 JMSResourcejMSDestinationResourceNames
- 29.1 JNDIResourceobjectName
- 30.1 JTAResourceobjectName
- 30.3 JTAResourceactiveTimeout
- 30.4 JTAResourceprepareTimeout

30.5 jTAResourcepreparedTimeout
 30.6 jTAResourcecommitTimeout
 30.7 jTAResourcerecoveryTimeout
 30.8 jTAResourceincompleteTimeout
 30.101 jTAResourceactiveCount-count
 30.111 jTAResourcecommittedCount-count
 30.121 jTAResourcerolledbackCount-count
 30.131 jTAResourcetimeoutCount-count
 30.141 jTAResourcetimeoutRolledbackCount-count
 30.151 jTAResourceactiveTimeoutCount-count
 30.161 jTAResourceprepareTimeoutCount-count
 30.171 jTAResourcepreparedTimeoutCount-count
 30.181 jTAResourcecommitTimeoutCount-count
 30.201 jTAResourceexecutionTime-count
 30.202 jTAResourceexecutionTime-maxTime
 30.203 jTAResourceexecutionTime-minTime
 30.204 jTAResourceexecutionTime-totalTime
 32.1 uRLResourceobjectName
 32.2 uRLResourceuRLInfo
 33.1 jMSConnectionResourceobjectName
 33.2 jMSConnectionResourcejMSSessionResourceNames
 33.101 jMSConnectionResourcesessions-messageCount-count
 33.111 jMSConnectionResourcesessions-pendingMessageCount-count
 33.121 jMSConnectionResourcesessions-expiredMessageCount-count
 33.131 jMSConnectionResourcesessions-messageWaitTime-count
 33.132 jMSConnectionResourcesessions-messageWaitTime-maxTime
 33.133 jMSConnectionResourcesessions-messageWaitTime-minTime
 33.134 jMSConnectionResourcesessions-messageWaitTime-totalTime
 33.141 jMSConnectionResourcesessions-durableSubscriptionCount-count
 33.151 jMSConnectionResourcesessions-producers-destination
 33.161 jMSConnectionResourcesessions-producers-messageCount-count
 33.171 jMSConnectionResourcesessions-producers-pendingMessageCount-count
 33.181 jMSConnectionResourcesessions-producers-expiredMessageCount-count
 33.191 jMSConnectionResourcesessions-producers-messageWaitTime-count
 33.192 jMSConnectionResourcesessions-producers-messageWaitTime-maxTime
 33.193 jMSConnectionResourcesessions-producers-messageWaitTime-minTime
 33.194 jMSConnectionResourcesessions-producers-messageWaitTime-totalTime
 33.201 jMSConnectionResourcesessions-consumers-origin
 33.211 jMSConnectionResourcesessions-consumers-messageCount-count
 33.221 jMSConnectionResourcesessions-consumers-pendingMessageCount-count
 33.231 jMSConnectionResourcesessions-consumers-expiredMessageCount-count
 33.241 jMSConnectionResourcesessions-consumers-messageWaitTime-count
 33.242 jMSConnectionResourcesessions-consumers-messageWaitTime-maxTime
 33.243 jMSConnectionResourcesessions-consumers-messageWaitTime-minTime
 33.244 jMSConnectionResourcesessions-consumers-messageWaitTime-totalTime
 33.251 jMSConnectionResourcesessionCount-count
 33.261 jMSConnectionResourceconnectionConsumerCount-count
 33.271 jMSConnectionResourceconnectionConsumers-origin
 33.281 jMSConnectionResourceconnectionConsumers-messageCount-count
 33.291 jMSConnectionResourceconnectionConsumers-pendingMessageCount-count
 33.301 jMSConnectionResourceconnectionConsumers-expiredMessageCount-count
 33.401 jMSConnectionResourceconnectionConsumers-messageWaitTime-count
 33.402 jMSConnectionResourceconnectionConsumers-messageWaitTime-maxTime
 33.403 jMSConnectionResourceconnectionConsumers-messageWaitTime-minTime
 33.404 jMSConnectionResourceconnectionConsumers-messageWaitTime-totalTime
 34.1 jMSConsumerResourceobjectName
 34.101 jMSConsumerResourceorigin
 34.111 jMSConsumerResourcemessageCount-count
 34.121 jMSConsumerResourcependingMessageCount-count

34.131 jMSConsumerResourceexpiredMessageCount-count
 34.141 jMSConsumerResourcemessageWaitTime-count
 34.142 jMSConsumerResourcemessageWaitTime-maxTime
 34.143 jMSConsumerResourcemessageWaitTime-minTime
 34.144 jMSConsumerResourcemessageWaitTime-totalTime
 34.151 jMSConsumerResourcesendTime-count
 34.152 jMSConsumerResourcesendTime-maxTime
 34.153 jMSConsumerResourcesendTime-minTime
 34.154 jMSConsumerResourcesendTime-totalTime
 35.1 jMSProducerResourceobjectName
 35.6 jMSProducerResourcedestination
 35.111 jMSProducerResourcemessageCount-count
 35.121 jMSProducerResourcependingMessageCount-count
 35.131 jMSProducerResourceexpiredMessageCount-count
 35.141 jMSProducerResourcemessageWaitTime-count
 35.142 jMSProducerResourcemessageWaitTime-maxTime
 35.143 jMSProducerResourcemessageWaitTime-minTime
 35.144 jMSProducerResourcemessageWaitTime-totalTime
 35.151 jMSProducerResourcesendTime-count
 35.152 jMSProducerResourcesendTime-maxTime
 35.153 jMSProducerResourcesendTime-minTime
 35.154 jMSProducerResourcesendTime-totalTime
 36.1 jMSSessionResourceobjectName
 36.2 jMSSessionResourcejMSEndPointConsumerNames
 36.101 jMSSessionResourcemessageCount-count
 36.111 jMSSessionResourcependingMessageCount-count
 36.121 jMSSessionResourceexpiredMessageCount-count
 36.131 jMSSessionResourcemessageWaitTime-count
 36.132 jMSSessionResourcemessageWaitTime-maxTime
 36.133 jMSSessionResourcemessageWaitTime-minTime
 36.134 jMSSessionResourcemessageWaitTime-totalTime
 36.141 jMSSessionResource durableSubscriptionCount-count
 36.151 jMSSessionResourceproducers-destination
 36.161 jMSSessionResourceproducers-messageCount-count
 36.171 jMSSessionResourceproducers-pendingMessageCount-count
 36.181 jMSSessionResourceproducers-expiredMessageCount-count
 36.191 jMSSessionResourceproducers-messageWaitTime-count
 36.192 jMSSessionResourceproducers-messageWaitTime-maxTime
 36.193 jMSSessionResourceproducers-messageWaitTime-minTime
 36.194 jMSSessionResourceproducers-messageWaitTime-totalTime
 36.201 jMSSessionResourceconsumers-origin
 36.211 jMSSessionResourceconsumers-messageCount-count
 36.221 jMSSessionResourceconsumers-pendingMessageCount-count
 36.231 jMSSessionResourceconsumers-expiredMessageCount-count
 36.241 jMSSessionResourceconsumers-messageWaitTime-count
 36.242 jMSSessionResourceconsumers-messageWaitTime-maxTime
 36.243 jMSSessionResourceconsumers-messageWaitTime-minTime
 36.244 jMSSessionResourceconsumers-messageWaitTime-totalTime
 36.251 jMSSessionResourcesendTime-count
 36.252 jMSSessionResourcesendTime-maxTime
 36.253 jMSSessionResourcesendTime-minTime
 36.254 jMSSessionResourcesendTime-totalTime
 36.261 jMSSessionResourcecommitCount-count
 36.271 jMSSessionResourcerollbackCount-count
 36.281 jMSSessionResourcetransactionCount-count
 41.1 eJBEngineMoobjectName
 41.2 eJBEngineMoblockThreadCount
 53.1 threadPoolMoobjectName
 53.3 threadPoolMomin

53.5 threadPoolMomax
 53.9 threadPoolMomaxIdleTime
 53.11 threadPoolMomaxQueue
 53.14 threadPoolMomaxThreadActiveTime
 53.15 threadPoolMonotifyThreshold
 53.16 threadPoolMorestartThreshold
 53.101 threadPoolMoactiveThreadCount-count
 53.111 threadPoolMoblockThreadCount-count
 53.121 threadPoolMoallThreadCount-count
 53.131 threadPoolMomaxThreadCount-count
 53.141 threadPoolMowaitQueueCount-count
 54.1 webEngineMoobjectName
 54.3 webEngineMoconfigInfo
 54.4 webEngineMoserverStatus
 54.8 webEngineMowebtConnectionGroup
 54.11 webEngineMocheckThreadPool
 54.13 webEngineMocheckClassReload
 54.15 webEngineMocheckSession
 54.101 webEngineMofreeMemory-count
 54.111 webEngineMototalMemory-count
 55.1 webListenerMoobjectName
 55.2 webListenerMothreadPools
 55.3 webListenerMotype
 55.4 webListenerMoport
 55.6 webListenerMoreadTimeout
 55.8 webListenerMoreconnectTimeout
 55.10 webListenerMopostdataReadTimeout
 61.1 jMSClientResourceobjectName
 61.4 jMSClientResourcejMSConnectionResourceNames
 61.101 jMSClientResourceconnectionCount-count
 62.1 jMSQueueConnectionFactoryResourceobjectName
 63.1 jMSQueueDestinationResourceobjectName
 63.2 jMSQueueDestinationResourceName
 63.3 jMSQueueDestinationResourceexportName
 63.4 jMSQueueDestinationResourceType
 63.8 jMSQueueDestinationResourcedestination
 63.9 jMSQueueDestinationResourcejMSConsumerResourceNames
 63.101 jMSQueueDestinationResourcemessageCount-count
 63.111 jMSQueueDestinationResourcependingMessageCount-count
 63.121 jMSQueueDestinationResourceexpiredMessageCount-count
 63.122 jMSQueueDestinationResourcemessageWaitTime-count
 63.123 jMSQueueDestinationResourcemessageWaitTime-maxTime
 63.124 jMSQueueDestinationResourcemessageWaitTime-minTime
 63.125 jMSQueueDestinationResourcemessageWaitTime-totalTime
 63.131 jMSQueueDestinationResourcesendTime-count
 63.132 jMSQueueDestinationResourcesendTime-maxTime
 63.133 jMSQueueDestinationResourcesendTime-minTime
 63.134 jMSQueueDestinationResourcesendTime-totalTime
 64.1 jMSDurableSubscriptionResourceobjectName
 64.3 jMSDurableSubscriptionResourceclientID
 64.5 jMSDurableSubscriptionResourceremainingMessages
 64.6 jMSDurableSubscriptionResourceselector
 65.1 JMSTopicConnectionFactoryResourceobjectName
 66.1 JMSTopicDestinationResourceobjectName
 66.2 JMSTopicDestinationResourceName
 66.3 JMSTopicDestinationResourceexportName
 66.4 JMSTopicDestinationResourceType
 66.8 JMSTopicDestinationResourcedestination
 66.9 JMSTopicDestinationResourcejMSConsumerResourceNames


```

66.101 jMSTopicDestinationResourcemessageCount-count
66.111 jMSTopicDestinationResourcependingMessageCount-count
66.121 jMSTopicDestinationResourceexpiredMessageCount-count
66.122 jMSTopicDestinationResourcemessageWaitTime-count
66.123 jMSTopicDestinationResourcemessageWaitTime-maxTime
66.124 jMSTopicDestinationResourcemessageWaitTime-minTime
66.125 jMSTopicDestinationResourcemessageWaitTime-totalTime
66.131 jMSTopicDestinationResourceendTime-count
66.132 jMSTopicDestinationResourceendTime-maxTime
66.133 jMSTopicDestinationResourceendTime-minTime
66.134 jMSTopicDestinationResourceendTime-totalTime
71.1 threadPoolObjectName
101.1 subjectMoobjectName
101.2 subjectMosubjectNames
102.1 securityDomainMoobjectName
102.2 securityDomainModomainName
102.3 securityDomainMopolicy
102.4 securityDomainMosubjects
103.1 policyMoobjectName
103.2 policyMopolicyIds
104.1 securityMoobjectName
104.2 securityMocurrentDomain
104.3 securityMosecurityDomains

```

A.3. TMAX-JEUS9.0-MIB.mib

```

TMAX-JEUS-MIB DEFINITIONS ::= BEGIN
IMPORTS

    enterprises, Counter
        FROM RFC1155-SMI
    OBJECT-TYPE
        FROM RFC-1212
    DisplayString
        FROM RFC1213-MIB
    TRAP-TYPE
        FROM RFC-1215;
tmax    OBJECT IDENTIFIER ::= { enterprises 14586 }

jeus    OBJECT IDENTIFIER ::= { tmax 100 }

-----

-- SNMP monitoring objects in each MBeans
-----

-----

-- j2EEDomain
-----

j2EEDomain OBJECT IDENTIFIER
    ::= { jeus 2 }

j2EEDomainobjectName    OBJECT-TYPE
    SYNTAX  DisplayString
    ACCESS  read-only

```

```

STATUS mandatory
DESCRIPTION
    "JMX-standard MBean object name"
    ::= { j2EEDomain 1 }
j2EEDomainservers OBJECT-TYPE
    SYNTAX SEQUENCE OF DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "JMX-standard object names of the J2EE Servers that this domain includes"
    ::= { j2EEDomain 2 }

-----
-- j2EEServer
-----

j2EEServer OBJECT IDENTIFIER
    ::= { jeus 3 }

j2EEServerobjectName OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "JMX-standard MBean object name"
    ::= { j2EEServer 1 }
j2EEServerserverVersion OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the version of JEUS that is being used"
    ::= { j2EEServer 2 }
j2EEServerserverVendor OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the J2EE platform vendor of this J2EE Server"
    ::= { j2EEServer 3 }
j2EEServerjavaVms OBJECT-TYPE
    SYNTAX SEQUENCE OF DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "JMX-standard object names of the JVMs on which J2EE Server is running"
    ::= { j2EEServer 4 }
j2EEServerdeployedObjects OBJECT-TYPE
    SYNTAX SEQUENCE OF DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "JMX-standard object names of the J2EE Modules that are deployed on this J2EE Server"
    ::= { j2EEServer 5 }
j2EEServerresources OBJECT-TYPE
    SYNTAX SEQUENCE OF DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION

```

```

    "JMX-standard object names of the J2EE Resources that can be used in this J2EE Server"
    ::= { j2EEServer 6 }
j2EEServerjeusServices OBJECT-TYPE
    SYNTAX SEQUENCE OF DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""
    ::= { j2EEServer 8 }
j2EEServerengines OBJECT-TYPE
    SYNTAX SEQUENCE OF DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""
    ::= { j2EEServer 9 }

-----
-- jVM
-----

jVM OBJECT IDENTIFIER
    ::= { jeus 4 }

jVMObjectName OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "JMX-standard MBean object name"
    ::= { jVM 1 }
jVMjavaVersion OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the system property value of java.version"
    ::= { jVM 2 }
jVMjavaVendor OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the system property value of java.vendor"
    ::= { jVM 3 }
jVMnode OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the host name and ip address of the machine on which this JVM is running"
    ::= { jVM 4 }
jVMoSName OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the system property value of os.name"
    ::= { jVM 6 }

```

```

jVMoSVersion      OBJECT-TYPE
    SYNTAX  DisplayString
    ACCESS  read-only
    STATUS  mandatory
    DESCRIPTION
        "the system property value of os.version"
    ::= { jVM 7 }
jVMallProperties   OBJECT-TYPE
    SYNTAX  DisplayString
    ACCESS  read-only
    STATUS  mandatory
    DESCRIPTION
        "the all system property values"
    ::= { jVM 8 }
jVMheapSize-upperBound OBJECT-TYPE
    SYNTAX  DisplayString
    ACCESS  read-only
    STATUS  mandatory
    DESCRIPTION
        ""
    ::= { jVM 101 }
jVMheapSize-lowerBound OBJECT-TYPE
    SYNTAX  DisplayString
    ACCESS  read-only
    STATUS  mandatory
    DESCRIPTION
        ""
    ::= { jVM 102 }
jVMheapSize-highWaterMark OBJECT-TYPE
    SYNTAX  DisplayString
    ACCESS  read-only
    STATUS  mandatory
    DESCRIPTION
        ""
    ::= { jVM 103 }
jVMheapSize-lowWaterMark OBJECT-TYPE
    SYNTAX  DisplayString
    ACCESS  read-only
    STATUS  mandatory
    DESCRIPTION
        ""
    ::= { jVM 104 }
jVMheapSize-current OBJECT-TYPE
    SYNTAX  DisplayString
    ACCESS  read-only
    STATUS  mandatory
    DESCRIPTION
        ""
    ::= { jVM 105 }
jVMupTime-count OBJECT-TYPE
    SYNTAX  DisplayString
    ACCESS  read-only
    STATUS  mandatory
    DESCRIPTION
        ""
    ::= { jVM 111 }
jVMtotalSize-highWaterMark OBJECT-TYPE
    SYNTAX  DisplayString
    ACCESS  read-only

```

```

STATUS mandatory
DESCRIPTION
    ""

 ::= { jVM 121 }
jVMtotalSize-lowWaterMark OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""

 ::= { jVM 122 }
jVMtotalSize-current OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""

 ::= { jVM 123 }

-----
-- j2EEApplication
-----

j2EEApplication OBJECT IDENTIFIER
 ::= { jeus 6 }

j2EEApplicationobjectName OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""

 ::= { j2EEApplication 1 }
j2EEApplicationdeploymentDescriptor OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""

 ::= { j2EEApplication 2 }
j2EEApplicationserver OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""

 ::= { j2EEApplication 3 }
j2EEApplicationmodules OBJECT-TYPE
    SYNTAX SEQUENCE OF DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""

 ::= { j2EEApplication 4 }
j2EEApplicationmoduleType OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION

```

```

""
 ::= { j2EEApplication 5 }
j2EEApplicationapplicationType OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""
 ::= { j2EEApplication 6 }
j2EEApplicationjeusDeploymentPlan OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""
 ::= { j2EEApplication 7 }
j2EEApplicationtargetModuleID OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""
 ::= { j2EEApplication 8 }

-----
-- appClientModule
-----

appClientModule OBJECT IDENTIFIER
 ::= { jeus 8 }

appClientModuleobjectName OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""
 ::= { appClientModule 1 }
appClientModuledeploymentDescriptor OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""
 ::= { appClientModule 2 }
appClientModuleserver OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""
 ::= { appClientModule 3 }
appClientModulejavaVMs OBJECT-TYPE
    SYNTAX SEQUENCE OF DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""
 ::= { appClientModule 4 }

```

```

appClientModuleapplicationType OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""

    ::= { appClientModule 5 }
appClientModulemoduleType OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""

    ::= { appClientModule 6 }
appClientModulejeusDeploymentPlan OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""

    ::= { appClientModule 7 }
appClientModuletargetModuleID OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""

    ::= { appClientModule 8 }

-----
-- eJBModule
-----

eJBModule OBJECT IDENTIFIER
    ::= { jeus 9 }

eJBModuleobjectName OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "JMX-standard MBean object name"
    ::= { eJBModule 1 }
eJBModuledeploymentDescriptor OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "XML deployment descriptor of this module"
    ::= { eJBModule 2 }
eJBModuleserver OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the name of the J2EE Server(JEUS container) on which this module is deployed"
    ::= { eJBModule 3 }
eJBModulejavaVMs OBJECT-TYPE
    SYNTAX SEQUENCE OF DisplayString

```

```

ACCESS read-only
STATUS mandatory
DESCRIPTION
    "JMX-standard object names of the JVMs on which this module is running"
::= { eJBModule 4 }
eJBModuleejbs OBJECT-TYPE
SYNTAX SEQUENCE OF DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "JMX-standard object names of the ejb components(EntityBean, StatefullSessionBean, or
StatelessSessionBean) that this EJB Module includes"
::= { eJBModule 5 }
eJBModuleejbCount OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    ""
::= { eJBModule 6 }
eJBModuleclientViewPath OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    ""
::= { eJBModule 7 }
eJBModulejeusDeploymentPlan OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    ""
::= { eJBModule 8 }
eJBModuletargetModuleID OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    ""
::= { eJBModule 9 }
eJBModulemoduleType OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    ""
::= { eJBModule 10 }
eJBModuleapplicationType OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    ""
::= { eJBModule 11 }

-----
-- messageDrivenBean
-----

```



```

messageDrivenBean OBJECT IDENTIFIER
    ::= { jeus 11 }

messageDrivenBeanObjectName OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "JMX-standard MBean object name"
    ::= { messageDrivenBean 1 }

messageDrivenBeancreateCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""
    ::= { messageDrivenBean 101 }

messageDrivenBeanremoveCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""
    ::= { messageDrivenBean 111 }

messageDrivenBeanrequestCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""
    ::= { messageDrivenBean 121 }

messageDrivenBeancommittedCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""
    ::= { messageDrivenBean 131 }

messageDrivenBeanrolledbackCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""
    ::= { messageDrivenBean 141 }

messageDrivenBeantimeoutRolledbackCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""
    ::= { messageDrivenBean 151 }

messageDrivenBeanmessageCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""

```

```

::= { messageDrivenBean 161 }
messageDrivenBeanactiveEJBBeanCount-highWaterMark OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""

::= { messageDrivenBean 171 }
messageDrivenBeanactiveEJBBeanCount-lowWaterMark OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""

::= { messageDrivenBean 172 }
messageDrivenBeanactiveEJBBeanCount-current OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""

::= { messageDrivenBean 173 }
messageDrivenBeantotalEJBBeanCount-highWaterMark OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""

::= { messageDrivenBean 181 }
messageDrivenBeantotalEJBBeanCount-lowWaterMark OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""

::= { messageDrivenBean 182 }
messageDrivenBeantotalEJBBeanCount-current OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""

::= { messageDrivenBean 183 }

-----
-- entityBean
-----

entityBean OBJECT IDENTIFIER
    ::= { jeus 12 }

entityBeanobjectName OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "JMX-standard MBean object name"
    ::= { entityBean 1 }
entityBeancreateCount-count OBJECT-TYPE

```

```

SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the number of the beans that is created by create() method"
::= { entityBean 101 }
entityBeanremoveCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the number of the beans that is removed by remove() method"
        ::= { entityBean 111 }
entityBeanrequestCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the number of the requests on this bean"
        ::= { entityBean 121 }
entityBeancommittedCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the number of the transactions that is committed"
        ::= { entityBean 131 }
entityBeanrolledbackCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the number of the transactions that is rollbacked"
        ::= { entityBean 141 }
entityBeantimeoutRolledbackCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the number of the transactions that is rollbacked by timeout"
        ::= { entityBean 151 }
entityBeanreadyCount-highWaterMark OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the highest number of the bean instances that are READY state"
        ::= { entityBean 161 }
entityBeanreadyCount-lowWaterMark OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the lowest number of the bean instances that are READY state"
        ::= { entityBean 162 }
entityBeanreadyCount-current OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory

```

```

DESCRIPTION
    "the current number of the bean instances that are READY state"
    ::= { entityBean 163 }
entityBeanpooledCount-highWaterMark OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the highest number of the bean instances that are POOLED state"
        ::= { entityBean 171 }
entityBeanpooledCount-lowWaterMark OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the lowest number of the bean instances that are POOLED state"
        ::= { entityBean 172 }
entityBeanpooledCount-current OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the current number of the bean instances that are POOLED state"
        ::= { entityBean 173 }
entityBeanautoRemovedEJBObjectCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the number of the bean instances that are removed automatically when they are passivated"
        ::= { entityBean 181 }
entityBeantotalEJBBeanCount-highWaterMark OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the highest number of the bean instances that are in the bean pool of this bean"
        ::= { entityBean 191 }
entityBeantotalEJBBeanCount-lowWaterMark OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the lowest number of the bean instances that are in the bean pool of this bean"
        ::= { entityBean 192 }
entityBeantotalEJBBeanCount-current OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the current number of the bean instances that are in the bean pool of this bean"
        ::= { entityBean 193 }
entityBeanactiveEJBBeanCount-highWaterMark OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the highest number of the bean instances that are ACTIVE state"
        ::= { entityBean 201 }

```

```

entityBeanactiveEJBBeanCount-lowWaterMark    OBJECT-TYPE
    SYNTAX  DisplayString
    ACCESS  read-only
    STATUS  mandatory
    DESCRIPTION
        "the lowest number of the bean instances that are ACTIVE state"
    ::= { entityBean 202 }
entityBeanactiveEJBBeanCount-current    OBJECT-TYPE
    SYNTAX  DisplayString
    ACCESS  read-only
    STATUS  mandatory
    DESCRIPTION
        "the current number of the bean instances that are ACTIVE state"
    ::= { entityBean 203 }
entityBeantotalThreadCount-highWaterMark    OBJECT-TYPE
    SYNTAX  DisplayString
    ACCESS  read-only
    STATUS  mandatory
    DESCRIPTION
        "the highest number of the threads that are in thread pool of this bean"
    ::= { entityBean 211 }
entityBeantotalThreadCount-lowWaterMark OBJECT-TYPE
    SYNTAX  DisplayString
    ACCESS  read-only
    STATUS  mandatory
    DESCRIPTION
        "the lowest number of the threads that are in thread pool of this bean"
    ::= { entityBean 212 }
entityBeantotalThreadCount-current    OBJECT-TYPE
    SYNTAX  DisplayString
    ACCESS  read-only
    STATUS  mandatory
    DESCRIPTION
        "the current number of the threads that are in thread pool of this bean"
    ::= { entityBean 213 }
entityBeanactiveThreadCount-highWaterMark    OBJECT-TYPE
    SYNTAX  DisplayString
    ACCESS  read-only
    STATUS  mandatory
    DESCRIPTION
        "the highest number of the threads that are being used in thread pool of this bean"
    ::= { entityBean 221 }
entityBeanactiveThreadCount-lowWaterMark    OBJECT-TYPE
    SYNTAX  DisplayString
    ACCESS  read-only
    STATUS  mandatory
    DESCRIPTION
        "the lowest number of the threads that are being used in thread pool of this bean"
    ::= { entityBean 222 }
entityBeanactiveThreadCount-current    OBJECT-TYPE
    SYNTAX  DisplayString
    ACCESS  read-only
    STATUS  mandatory
    DESCRIPTION
        "the current number of the threads that are being used in thread pool of this bean"
    ::= { entityBean 223 }
entityBeantotalEJBObjectCount-highWaterMark OBJECT-TYPE
    SYNTAX  DisplayString
    ACCESS  read-only

```

```

STATUS mandatory
DESCRIPTION
    "the highest number of the objects that are in connection pool of this bean"
::= { entityBean 231 }
entityBeantotalEJBObjectCount-lowWaterMark OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the lowest number of the objects that are in connection pool of this bean"
::= { entityBean 232 }
entityBeantotalEJBObjectCount-current OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the current number of the objects that are in connection pool of this bean"
::= { entityBean 233 }
entityBeanactiveEJBObjectCount-highWaterMark OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the highest number of the objects that are being used in connection pool of this bean"
::= { entityBean 241 }
entityBeanactiveEJBObjectCount-lowWaterMark OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the lowest number of the objects that are being used in connection pool of this bean"
::= { entityBean 242 }
entityBeanactiveEJBObjectCount-current OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the current number of the objects that are being used in connection pool of this bean"
::= { entityBean 243 }
entityBeanpassiveCount-highWaterMark OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the highest number of the bean instances that are passivated"
::= { entityBean 251 }
entityBeanpassiveCount-lowWaterMark OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the lowest number of the bean instances that are passivated"
::= { entityBean 252 }
entityBeanpassiveCount-current OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the current number of the bean instances that are passivated"

```

```

 ::= { entityBean 253 }

-----
-- statefulSessionBean
-----

statefulSessionBean OBJECT IDENTIFIER
 ::= { jeus 14 }

statefulSessionBeanobjectName OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "JMX-standard MBean object name"
    ::= { statefulSessionBean 1 }
statefulSessionBeancreateCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the number of the beans that is created by create() method"
    ::= { statefulSessionBean 101 }
statefulSessionBeanremoveCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the number of the beans that is removed by remove() method"
    ::= { statefulSessionBean 111 }
statefulSessionBeanrequestCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the number of the requests on this bean"
    ::= { statefulSessionBean 121 }
statefulSessionBeancommittedCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the number of the transactions that is committed"
    ::= { statefulSessionBean 131 }
statefulSessionBeanrolledbackCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the number of the transactions that is rollbacked"
    ::= { statefulSessionBean 141 }
statefulSessionBeantimeoutRolledbackCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the number of the transactions that is rollbacked by timeout"
    ::= { statefulSessionBean 151 }
statefulSessionBeanmethodReadyCount-highWaterMark OBJECT-TYPE

```

```

SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the highest number of the beans that are METHOD-READY state"
    ::= { statefulSessionBean 161 }
statefulSessionBeanmethodReadyCount-lowWaterMark OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the lowest number of the beans that are METHOD-READY state"
        ::= { statefulSessionBean 162 }
statefulSessionBeanmethodReadyCount-current OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the current number of the beans that are METHOD-READY state"
        ::= { statefulSessionBean 163 }
statefulSessionBeanpassiveCount-highWaterMark OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the highest number of the bean instances that are passivated"
        ::= { statefulSessionBean 171 }
statefulSessionBeanpassiveCount-lowWaterMark OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the lowest number of the bean instances that are passivated"
        ::= { statefulSessionBean 172 }
statefulSessionBeanpassiveCount-current OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the current number of the bean instances that are passivated"
        ::= { statefulSessionBean 173 }
statefulSessionBeanautoRemovedEJBObjectCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the number of the bean instances that are removed automatically when they are passivated"
        ::= { statefulSessionBean 181 }
statefulSessionBeantotalEJBBeanCount-highWaterMark OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the highest number of the bean instances that are in the bean pool of this bean"
        ::= { statefulSessionBean 191 }
statefulSessionBeantotalEJBBeanCount-lowWaterMark OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory

```



```

DESCRIPTION
    "the lowest number of the bean instances that are in the bean pool of this bean"
 ::= { statefulSessionBean 192 }
statefulSessionBeantotalEJBBeanCount-current OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the current number of the bean instances that are in the bean pool of this bean"
 ::= { statefulSessionBean 193 }
statefulSessionBeanactiveEJBBeanCount-highWaterMark OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the highest number of the bean instances that are ACTIVE state"
 ::= { statefulSessionBean 201 }
statefulSessionBeanactiveEJBBeanCount-lowWaterMark OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the lowest number of the bean instances that are ACTIVE state"
 ::= { statefulSessionBean 202 }
statefulSessionBeanactiveEJBBeanCount-current OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the current number of the bean instances that are ACTIVE state"
 ::= { statefulSessionBean 203 }
statefulSessionBeantotalThreadCount-highWaterMark OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the highest number of the threads that are in thread pool of this bean"
 ::= { statefulSessionBean 211 }
statefulSessionBeantotalThreadCount-lowWaterMark OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the lowest number of the threads that are in thread pool of this bean"
 ::= { statefulSessionBean 212 }
statefulSessionBeantotalThreadCount-current OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the current number of the threads that are in thread pool of this bean"
 ::= { statefulSessionBean 213 }
statefulSessionBeanactiveThreadCount-highWaterMark OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the highest number of the threads that are being used in thread pool of this bean"
 ::= { statefulSessionBean 221 }

```

```

statefulSessionBeanactiveThreadCount-lowWaterMark    OBJECT-TYPE
    SYNTAX  DisplayString
    ACCESS  read-only
    STATUS  mandatory
    DESCRIPTION
        "the lowest number of the threads that are being used in thread pool of this bean"
    ::= { statefulSessionBean 222 }
statefulSessionBeanactiveThreadCount-current          OBJECT-TYPE
    SYNTAX  DisplayString
    ACCESS  read-only
    STATUS  mandatory
    DESCRIPTION
        "the current number of the threads that are being used in thread pool of this bean"
    ::= { statefulSessionBean 223 }
statefulSessionBeantotalEJBObjectCount-highWaterMark OBJECT-TYPE
    SYNTAX  DisplayString
    ACCESS  read-only
    STATUS  mandatory
    DESCRIPTION
        "the highest number of the objects that are in connection pool of this bean"
    ::= { statefulSessionBean 231 }
statefulSessionBeantotalEJBObjectCount-lowWaterMark  OBJECT-TYPE
    SYNTAX  DisplayString
    ACCESS  read-only
    STATUS  mandatory
    DESCRIPTION
        "the lowest number of the objects that are in connection pool of this bean"
    ::= { statefulSessionBean 232 }
statefulSessionBeantotalEJBObjectCount-current       OBJECT-TYPE
    SYNTAX  DisplayString
    ACCESS  read-only
    STATUS  mandatory
    DESCRIPTION
        "the current number of the objects that are in connection pool of this bean"
    ::= { statefulSessionBean 233 }
statefulSessionBeanactiveEJBObjectCount-highWaterMark OBJECT-TYPE
    SYNTAX  DisplayString
    ACCESS  read-only
    STATUS  mandatory
    DESCRIPTION
        "the highest number of the objects that are being used in connection pool of this bean"
    ::= { statefulSessionBean 241 }
statefulSessionBeanactiveEJBObjectCount-lowWaterMark OBJECT-TYPE
    SYNTAX  DisplayString
    ACCESS  read-only
    STATUS  mandatory
    DESCRIPTION
        "the lowest number of the objects that are being used in connection pool of this bean"
    ::= { statefulSessionBean 242 }
statefulSessionBeanactiveEJBObjectCount-current      OBJECT-TYPE
    SYNTAX  DisplayString
    ACCESS  read-only
    STATUS  mandatory
    DESCRIPTION
        "the current number of the objects that are being used in connection pool of this bean"
    ::= { statefulSessionBean 243 }

-----
-- statelessSessionBean

```

```

-----

statelessSessionBean OBJECT IDENTIFIER
 ::= { jeus 15 }

statelessSessionBeanobjectName OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "JMX-standard MBean object name"
    ::= { statelessSessionBean 1 }

statelessSessionBeancreateCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the number of the beans that is created by create() method"
    ::= { statelessSessionBean 101 }

statelessSessionBeanremoveCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the number of the beans that is removed by remove() method"
    ::= { statelessSessionBean 111 }

statelessSessionBeanrequestCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the number of the requests on this bean"
    ::= { statelessSessionBean 121 }

statelessSessionBeancommittedCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the number of the transactions that is committed"
    ::= { statelessSessionBean 131 }

statelessSessionBeanrolledbackCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the number of the transactions that is rollbacked"
    ::= { statelessSessionBean 141 }

statelessSessionBeantimeoutRolledbackCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the number of the transactions that is rollbacked by timeout"
    ::= { statelessSessionBean 151 }

statelessSessionBeanmethodReadyCount-highWaterMark OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION

```

```

        "the highest number of the beans that are METHOD-READY state"
        ::= { statelessSessionBean 161 }
statelessSessionBeanmethodReadyCount-lowWaterMark OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the lowest number of the beans that are METHOD-READY state"
        ::= { statelessSessionBean 162 }
statelessSessionBeanmethodReadyCount-current OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the current number of the beans that are METHOD-READY state"
        ::= { statelessSessionBean 163 }
statelessSessionBeantotalEJBBeanCount-highWaterMark OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the highest number of the bean instances that are in the bean pool of this bean"
        ::= { statelessSessionBean 171 }
statelessSessionBeantotalEJBBeanCount-lowWaterMark OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the lowest number of the bean instances that are in the bean pool of this bean"
        ::= { statelessSessionBean 172 }
statelessSessionBeantotalEJBBeanCount-current OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the current number of the bean instances that are in the bean pool of this bean"
        ::= { statelessSessionBean 173 }
statelessSessionBeanactiveEJBBeanCount-highWaterMark OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the highest number of the bean instances that are ACTIVE state"
        ::= { statelessSessionBean 181 }
statelessSessionBeanactiveEJBBeanCount-lowWaterMark OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the lowest number of the bean instances that are ACTIVE state"
        ::= { statelessSessionBean 182 }
statelessSessionBeanactiveEJBBeanCount-current OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the current number of the bean instances that are ACTIVE state"
        ::= { statelessSessionBean 183 }
statelessSessionBeantotalThreadCount-highWaterMark OBJECT-TYPE

```

```

SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the highest number of the threads that are in thread pool of this bean"
::= { statelessSessionBean 191 }
statelessSessionBeantotalThreadCount-lowWaterMark OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the lowest number of the threads that are in thread pool of this bean"
    ::= { statelessSessionBean 192 }
statelessSessionBeantotalThreadCount-current OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the current number of the threads that are in thread pool of this bean"
    ::= { statelessSessionBean 193 }
statelessSessionBeanactiveThreadCount-highWaterMark OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the highest number of the threads that are being used in thread pool of this bean"
    ::= { statelessSessionBean 201 }
statelessSessionBeanactiveThreadCount-lowWaterMark OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the lowest number of the threads that are being used in thread pool of this bean"
    ::= { statelessSessionBean 202 }
statelessSessionBeanactiveThreadCount-current OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the current number of the threads that are being used in thread pool of this bean"
    ::= { statelessSessionBean 203 }

-----
-- webModule
-----

webModule OBJECT IDENTIFIER
    ::= { jeus 16 }

webModuleobjectName OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "JMX-standard MBean object name"
    ::= { webModule 1 }
webModuledeploymentDescriptor OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only

```

```

STATUS mandatory
DESCRIPTION
    "XML deployment descriptor of this module"
::= { webModule 2 }
webModuleserver OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the name of the J2EE Server(JEUS container) on which this module is deployed"
::= { webModule 3 }
webModulejavaVMs OBJECT-TYPE
SYNTAX SEQUENCE OF DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "JMX-standard object names of the JVMs on which this module is running"
::= { webModule 4 }
webModuleservlets OBJECT-TYPE
SYNTAX SEQUENCE OF DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "JMX-standard object names of the Servlets that this Web Module includes"
::= { webModule 5 }
webModulerealDocBase OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    ""
::= { webModule 8 }
webModulejeusDeploymentPlan OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    ""
::= { webModule 9 }
webModuletargetModuleID OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    ""
::= { webModule 10 }
webModulemoduleType OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    ""
::= { webModule 11 }
webModuleapplicationType OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    ""

```

```

 ::= { webModule 12 }
webModuleautoReload OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-write
    STATUS mandatory
    DESCRIPTION
        ""

 ::= { webModule 13 }
webModulerequestCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the number of the requests on this web module"
 ::= { webModule 101 }
webModuleallSessionsSize-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the number of the all sessions that is registered on the session server that this Web Module
is using"
 ::= { webModule 111 }
webModuleactiveSessionsSize-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the number of the active sessions that is registered on the session server that this Web
Module is using"
 ::= { webModule 121 }
webModulepassivateSessionsSize-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the number of the passivated sessions that is registered on the session server that this Web
Module is using"
 ::= { webModule 131 }
webModulelocalSessionsSize-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the number of the local sessions that is not related to the session server that this Web
Module is using"
 ::= { webModule 141 }
webModuleprocessingTime-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""

 ::= { webModule 151 }

-----
-- servlet
-----

```

```

servlet OBJECT IDENTIFIER
 ::= { jeus 17 }

servletObjectName OBJECT-TYPE
 SYNTAX DisplayString
 ACCESS read-only
 STATUS mandatory
 DESCRIPTION
 "JMX-standard MBean object name"
 ::= { servlet 1 }

servletServletInfo OBJECT-TYPE
 SYNTAX DisplayString
 ACCESS read-only
 STATUS mandatory
 DESCRIPTION
 "the general information of the servlets that is deployed"
 ::= { servlet 2 }

servletAverageExecutionTime OBJECT-TYPE
 SYNTAX DisplayString
 ACCESS read-only
 STATUS mandatory
 DESCRIPTION
 "the average execution time of the servlets that is deplyed in milliseconds"
 ::= { servlet 3 }

servletServiceTime-count OBJECT-TYPE
 SYNTAX DisplayString
 ACCESS read-only
 STATUS mandatory
 DESCRIPTION
 "the number of times that Servlet serves"
 ::= { servlet 101 }

servletServiceTime-maxTime OBJECT-TYPE
 SYNTAX DisplayString
 ACCESS read-only
 STATUS mandatory
 DESCRIPTION
 "the longest time that Servlet serves"
 ::= { servlet 102 }

servletServiceTime-minTime OBJECT-TYPE
 SYNTAX DisplayString
 ACCESS read-only
 STATUS mandatory
 DESCRIPTION
 "the shortest time that Servlet serves"
 ::= { servlet 103 }

servletServiceTime-totalTime OBJECT-TYPE
 SYNTAX DisplayString
 ACCESS read-only
 STATUS mandatory
 DESCRIPTION
 "the total time that Servlet serves"
 ::= { servlet 104 }

-----
-- resourceAdapterModule
-----

resourceAdapterModule OBJECT IDENTIFIER
 ::= { jeus 18 }

```



```

resourceAdapterModuleObjectName OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""

    ::= { resourceAdapterModule 1 }
resourceAdapterModuledeploymentDescriptor OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""

    ::= { resourceAdapterModule 2 }
resourceAdapterModuleserver OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""

    ::= { resourceAdapterModule 3 }
resourceAdapterModulejavaVMs OBJECT-TYPE
    SYNTAX SEQUENCE OF DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""

    ::= { resourceAdapterModule 4 }
resourceAdapterModulemoduleType OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""

    ::= { resourceAdapterModule 6 }
resourceAdapterModuleapplicationType OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""

    ::= { resourceAdapterModule 7 }
resourceAdapterModulejeusDeploymentPlan OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""

    ::= { resourceAdapterModule 8 }
resourceAdapterModuletargetModuleID OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""

    ::= { resourceAdapterModule 9 }

```

```

-- resourceAdapter
-----

resourceAdapter OBJECT IDENTIFIER
    ::= { jeus 19 }

resourceAdapterObjectName OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""
    ::= { resourceAdapter 1 }

-----

-- javaMailResource
-----

javaMailResource OBJECT IDENTIFIER
    ::= { jeus 21 }

javaMailResourceObjectName OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""
    ::= { javaMailResource 1 }

javaMailResourceproperty OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""
    ::= { javaMailResource 2 }

-----

-- jCAResource
-----

jCAResource OBJECT IDENTIFIER
    ::= { jeus 22 }

jCAResourceObjectName OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""
    ::= { jCAResource 1 }

-----

-- jCAConnectionFactory
-----

jCAConnectionFactory OBJECT IDENTIFIER
    ::= { jeus 23 }

jCAConnectionFactoryObjectName OBJECT-TYPE

```

```

SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    ""
::= { jCAConnectionFactory 1 }

-----
-- jCAManagedConnectionFactory
-----

jCAManagedConnectionFactory OBJECT IDENTIFIER
::= { jeus 24 }

jCAManagedConnectionFactoryobjectName OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    ""
::= { jCAManagedConnectionFactory 1 }

-----
-- jDBCResource
-----

jDBCResource OBJECT IDENTIFIER
::= { jeus 25 }

jDBCResourceobjectName OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "JMX-standard MBean object name"
::= { jDBCResource 1 }

jDBCResourcejdbcDataSources OBJECT-TYPE
SYNTAX SEQUENCE OF DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "JMX-standard object names of JDBC Data Sources that is related to this JDBC Resource"
::= { jDBCResource 2 }

jDBCResourceconnectionPools-createCount-count OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the number of the connected connections in the connection pool of each JDBC Data Sources
that is related to this JDBC Resource"
::= { jDBCResource 101 }

jDBCResourceconnectionPools-closeCount-count OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the number of the disconnected connections in the connection pool of each JDBC Data Sources
that is related to this JDBC Resource"
::= { jDBCResource 111 }

```

```

jdbcResourceconnectionPools-poolSize-upperBound OBJECT-TYPE
    SYNTAX  DisplayString
    ACCESS  read-only
    STATUS  mandatory
    DESCRIPTION
        "the max value that is configured to be upper bound of the pool size of the connection pool
of each JDBC Data Sources that is related to this JDBC Resource"
    ::= { jdbcResource 121 }
jdbcResourceconnectionPools-poolSize-lowerBound OBJECT-TYPE
    SYNTAX  DisplayString
    ACCESS  read-only
    STATUS  mandatory
    DESCRIPTION
        "the min value that is configured to be lower bound of the pool size of the connection pool
of each JDBC Data Sources that is related to this JDBC Resource"
    ::= { jdbcResource 122 }
jdbcResourceconnectionPools-poolSize-highWaterMark OBJECT-TYPE
    SYNTAX  DisplayString
    ACCESS  read-only
    STATUS  mandatory
    DESCRIPTION
        "the highest value of the pool size of the connection pool of each JDBC Data Sources that is
related to this JDBC Resource"
    ::= { jdbcResource 123 }
jdbcResourceconnectionPools-poolSize-lowWaterMark OBJECT-TYPE
    SYNTAX  DisplayString
    ACCESS  read-only
    STATUS  mandatory
    DESCRIPTION
        "the lowest value of the pool size of the connection pool of each JDBC Data Sources that is
related to this JDBC Resource"
    ::= { jdbcResource 124 }
jdbcResourceconnectionPools-poolSize-current OBJECT-TYPE
    SYNTAX  DisplayString
    ACCESS  read-only
    STATUS  mandatory
    DESCRIPTION
        "the current value of the pool size of the connection pool of each JDBC Data Sources that is
related to this JDBC Resource"
    ::= { jdbcResource 125 }
jdbcResourceconnectionPools-freePoolSize-upperBound OBJECT-TYPE
    SYNTAX  DisplayString
    ACCESS  read-only
    STATUS  mandatory
    DESCRIPTION
        "the upper bound of the free connections in the connection pool of each JDBC Data Sources
that is related to this JDBC Resource (It is equal to the connectionPools-PoolSize-UpperBound)"
    ::= { jdbcResource 131 }
jdbcResourceconnectionPools-freePoolSize-lowerBound OBJECT-TYPE
    SYNTAX  DisplayString
    ACCESS  read-only
    STATUS  mandatory
    DESCRIPTION
        "the lower bound of the free connections in the connection pool of each JDBC Data Sources
that is related to this JDBC Resource (It is set to be 0)"
    ::= { jdbcResource 132 }
jdbcResourceconnectionPools-freePoolSize-highWaterMark OBJECT-TYPE
    SYNTAX  DisplayString
    ACCESS  read-only

```

```

STATUS mandatory
DESCRIPTION
    "the highest number of the free connections in the connection pool of each JDBC Data Source
that is related to this JDBC Resource"
::= { jdbcResource 133 }
jdbcResourceconnectionPools-freePoolSize-lowWaterMark OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the lowest number of the free connections in the connection pool of each JDBC Data Source
that is related to this JDBC Resource"
::= { jdbcResource 134 }
jdbcResourceconnectionPools-freePoolSize-current OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the current number of the free connections in the connection pool of each JDBC Data Source
that is related to this JDBC Resource"
::= { jdbcResource 135 }
jdbcResourceconnectionPools-waitingThreadCount-highWaterMark OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the highest number of the threads, which are waiting to get connections from the connection
pool of each JDBC Data Sources that is related to this JDBC Resource"
::= { jdbcResource 141 }
jdbcResourceconnectionPools-waitingThreadCount-lowWaterMark OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the lowest number of the threads, which are waiting to get connections from the connection
pool of each JDBC Data Sources that is related to this JDBC Resource"
::= { jdbcResource 142 }
jdbcResourceconnectionPools-waitingThreadCount-current OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the current number of the threads, which are waiting to get connections from the connection
pool of each JDBC Data Sources that is related to this JDBC Resource"
::= { jdbcResource 143 }
jdbcResourceconnectionPools-waitTime-count OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the waiting time to get connection available in connection pool"
::= { jdbcResource 161 }
jdbcResourceconnectionPools-waitTime-maxTime OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the maximum waiting time to get connection available in connection pool"
::= { jdbcResource 162 }

```

```

jDBCResourceconnectionPools-waitTime-minTime OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the minimum waiting time to get connection available in connection pool"
    ::= { jDBCResource 163 }
jDBCResourceconnectionPools-waitTime-totalTime OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the total waiting time to get connection available in connection pool"
    ::= { jDBCResource 164 }
jDBCResourceconnectionPools-useTime-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the time to use connection"
    ::= { jDBCResource 171 }
jDBCResourceconnectionPools-useTime-maxTime OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the maximum time to use connection"
    ::= { jDBCResource 172 }
jDBCResourceconnectionPools-useTime-minTime OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the minimum time to use connection"
    ::= { jDBCResource 173 }
jDBCResourceconnectionPools-useTime-totalTime OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the total time to use connection"
    ::= { jDBCResource 174 }
jDBCResourceconnectionPools-jdbcDataSource OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "JMX-standard object name of JDBC datasource of each connectios in this connection pool"
    ::= { jDBCResource 181 }

-----
-- jDBCDataSource
-----

jDBCDataSource OBJECT IDENTIFIER
    ::= { jeus 26 }

jDBCDataSourceObjectName OBJECT-TYPE
    SYNTAX DisplayString

```

```

ACCESS read-only
STATUS mandatory
DESCRIPTION
    "JMX-standard MBean object name"
::= { jdbcDataSource 1 }
jdbcDataSourcejdbcDriver OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "JMX-standard object name of the JDBC Driver that is related to this JDBC Data Source"
::= { jdbcDataSource 2 }
jdbcDataSourcecreateCount-count OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the number of the connected connections to this JDBC Data Source"
::= { jdbcDataSource 101 }
jdbcDataSourcecloseCount-count OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the number of the disconnected connections to this JDBC Data Source"
::= { jdbcDataSource 111 }
jdbcDataSourcepoolSize-upperBound OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the max value that is configured to be upper bound of the pool size of the connection pool
of this JDBC Data Source"
::= { jdbcDataSource 121 }
jdbcDataSourcepoolSize-lowerBound OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the min value that is configured to be lower bound of the pool size of the connection pool
of this JDBC Data Source"
::= { jdbcDataSource 122 }
jdbcDataSourcepoolSize-highWaterMark OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the highest value of the pool size of the connection pool of this JDBC Data Source"
::= { jdbcDataSource 123 }
jdbcDataSourcepoolSize-lowWaterMark OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the lowest value of the pool size of the connection pool of this JDBC Data Source"
::= { jdbcDataSource 124 }
jdbcDataSourcepoolSize-current OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only

```

```

STATUS mandatory
DESCRIPTION
    "the current value of the pool size of the connection pool of this JDBC Data Source"
::= { jdbcDataSource 125 }
jdbcDataSourcefreePoolSize-upperBound OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the upper bound of the free connections in the connection pool of this JDBC Data Source (It
is equal to the poolSize-UpperBound)"
::= { jdbcDataSource 131 }
jdbcDataSourcefreePoolSize-lowerBound OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the lower bound of the free connections in the connection pool of this JDBC Data Source (It
is set to be 0)"
::= { jdbcDataSource 132 }
jdbcDataSourcefreePoolSize-highWaterMark OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the highest number of the free connections in the connection pool of this JDBC Data Source"
::= { jdbcDataSource 133 }
jdbcDataSourcefreePoolSize-lowWaterMark OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the lowest number of the free connections in the connection pool of this JDBC Data Source"
::= { jdbcDataSource 134 }
jdbcDataSourcefreePoolSize-current OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the current number of the free connections in the connection pool of this JDBC Data Source"
::= { jdbcDataSource 135 }
jdbcDataSourcewaitingThreadCount-highWaterMark OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the highest number of the threads, which are waiting to get connections from the connection
pool of this JDBC Data Source"
::= { jdbcDataSource 141 }
jdbcDataSourcewaitingThreadCount-lowWaterMark OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the lowest number of the threads, which are waiting to get connections from the connection
pool of this JDBC Data Source"
::= { jdbcDataSource 142 }
jdbcDataSourcewaitingThreadCount-current OBJECT-TYPE
SYNTAX DisplayString

```



```

ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the current number of the threads, which are waiting to get connections from the connection
pool of this JDBC Data Source"
::= { jdbcDataSource 143 }
jdbcDataSourcewaitTime-count OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the total number of requests that are waiting to get connections from the connection pool of
this JDBC Data Source"
::= { jdbcDataSource 161 }
jdbcDataSourcewaitTime-maxTime OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the longest time for waiting to get connections from the connection pool of this JDBC Data
Source"
::= { jdbcDataSource 162 }
jdbcDataSourcewaitTime-minTime OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the shortest time for waiting to get connections from the connection pool of this JDBC Data
Source"
::= { jdbcDataSource 163 }
jdbcDataSourcewaitTime-totalTime OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the total time for waiting to get connections from the connection pool of this JDBC Data
Source"
::= { jdbcDataSource 164 }
jdbcDataSourceuseTime-count OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the total number of requests that use connections from the connection pool of this JDBC Data
Source"
::= { jdbcDataSource 171 }
jdbcDataSourceuseTime-maxTime OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the longest time for using connections from the connection pool of this JDBC Data Source"
::= { jdbcDataSource 172 }
jdbcDataSourceuseTime-minTime OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the shortest time for using connections from the connection pool of this JDBC Data Source"

```

```

::= { jdbcDataSource 173 }
jdbcDataSource.useTime-totalTime OBJECT-TYPE
    SYNTAX  DisplayString
    ACCESS  read-only
    STATUS  mandatory
    DESCRIPTION
        "the total time for using connections from the connection pool of this JDBC Data Source"
    ::= { jdbcDataSource 174 }

-----
-- jdbcDriver
-----

jdbcDriver OBJECT IDENTIFIER
    ::= { jeus 27 }

jdbcDriverObjectName OBJECT-TYPE
    SYNTAX  DisplayString
    ACCESS  read-only
    STATUS  mandatory
    DESCRIPTION
        "JMX-standard MBean object name"
    ::= { jdbcDriver 1 }

-----
-- jmsResource
-----

jmsResource OBJECT IDENTIFIER
    ::= { jeus 28 }

jmsResourceObjectName OBJECT-TYPE
    SYNTAX  DisplayString
    ACCESS  read-only
    STATUS  mandatory
    DESCRIPTION
        "JMX-standard MBean object name"
    ::= { jmsResource 1 }
jmsResource.jmsConnectionFactoryResourceNames OBJECT-TYPE
    SYNTAX  SEQUENCE OF DisplayString
    ACCESS  read-only
    STATUS  mandatory
    DESCRIPTION
        "the list of the names of JMS connection factory resources that are belong to this JMS
Resource"
    ::= { jmsResource 5 }
jmsResource.jmsDestinationResourceNames OBJECT-TYPE
    SYNTAX  SEQUENCE OF DisplayString
    ACCESS  read-only
    STATUS  mandatory
    DESCRIPTION
        "the list of the names of JMS destination resources that are belong to this JMS Resource"
    ::= { jmsResource 6 }

-----
-- jndiResource
-----

jndiResource OBJECT IDENTIFIER

```

```

 ::= { jeus 29 }

jNDIResourceobjectName OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""
    ::= { jNDIResource 1 }

-----
-- jTAResource
-----

jTAResource OBJECT IDENTIFIER
    ::= { jeus 30 }

jTAResourceobjectName OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "JMX-standard MBean object name"
    ::= { jTAResource 1 }
jTAResourceactiveTimeout OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-write
    STATUS mandatory
    DESCRIPTION
        ""
    ::= { jTAResource 3 }
jTAResourceprepareTimeout OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-write
    STATUS mandatory
    DESCRIPTION
        ""
    ::= { jTAResource 4 }
jTAResourcepreparedTimeout OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-write
    STATUS mandatory
    DESCRIPTION
        ""
    ::= { jTAResource 5 }
jTAResourcecommitTimeout OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-write
    STATUS mandatory
    DESCRIPTION
        ""
    ::= { jTAResource 6 }
jTAResourcerecoveryTimeout OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-write
    STATUS mandatory
    DESCRIPTION
        ""
    ::= { jTAResource 7 }

```

```

jTAResourceincompleteTimeout OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-write
    STATUS mandatory
    DESCRIPTION
        ""
    ::= { jTAResource 8 }
jTAResourceactiveCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the number of the transactions that are active"
    ::= { jTAResource 101 }
jTAResourcecommittedCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the number of the transactions that are committed"
    ::= { jTAResource 111 }
jTAResourcerolledbackCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the number of the transactions that are rolledback"
    ::= { jTAResource 121 }
jTAResourcetimeoutCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the number of the transactions that cause time-out"
    ::= { jTAResource 131 }
jTAResourcetimeoutRolledbackCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the number of the transactions that is rolledback by timeout"
    ::= { jTAResource 141 }
jTAResourceactiveTimeoutCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the number of the transactions that cause active time-out"
    ::= { jTAResource 151 }
jTAResourceprepareTimeoutCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the number of the transactions that cause time-out for prepare message"
    ::= { jTAResource 161 }
jTAResourcepreparedTimeoutCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only

```

```

STATUS mandatory
DESCRIPTION
    "the number of the transactions that cause time-out for the global design message originated
from the root coordinator"
    ::= { jTAResource 171 }
jTAResourcecommitTimeoutCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the number of the transactions that cause time-out for the root coordinator to receive the
response from the sub-coordinator"
        ::= { jTAResource 181 }
jTAResourceexecutionTime-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the number of the requests that execute transactions"
        ::= { jTAResource 201 }
jTAResourceexecutionTime-maxTime OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the longest execution time for all transactions"
        ::= { jTAResource 202 }
jTAResourceexecutionTime-minTime OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the shortest execution time for all transactions"
        ::= { jTAResource 203 }
jTAResourceexecutionTime-totalTime OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the total execution time for all transactions"
        ::= { jTAResource 204 }

-----
-- uRLResource
-----

uRLResource OBJECT IDENTIFIER
    ::= { jeus 32 }

uRLResourceobjectName OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""
    ::= { uRLResource 1 }
uRLResourceuRLInfo OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only

```

```

STATUS mandatory
DESCRIPTION
    ""
 ::= { uRLResource 2 }

-----
-- jMSConnectionResource
-----

jMSConnectionResource OBJECT IDENTIFIER
 ::= { jeus 33 }

jMSConnectionResourceobjectName OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "JMX-standard MBean object name"
    ::= { jMSConnectionResource 1 }
jMSConnectionResourcejMSSessionResourceNames OBJECT-TYPE
    SYNTAX SEQUENCE OF DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "JMX-standard object names of the session resource that is created by this connection"
    ::= { jMSConnectionResource 2 }
jMSConnectionResourcesessions-messageCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the number of the messages that are processed in each sessions"
    ::= { jMSConnectionResource 101 }
jMSConnectionResourcesessions-pendingMessageCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the number of the messages that reside in this session without acknowledgement"
    ::= { jMSConnectionResource 111 }
jMSConnectionResourcesessions-expiredMessageCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the number of the messages that are expired in each sessions"
    ::= { jMSConnectionResource 121 }
jMSConnectionResourcesessions-messageWaitTime-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the period of time between when it creates message and when it delivers message"
    ::= { jMSConnectionResource 131 }
jMSConnectionResourcesessions-messageWaitTime-maxTime OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION

```

```

        "the maximum period of time between when it creates message and when it delivers message"
        ::= { jMSConnectionResource 132 }
jMSConnectionResourcesessions-messageWaitTime-minTime OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the minimum period of time between when it creates message and when it delivers message"
        ::= { jMSConnectionResource 133 }
jMSConnectionResourcesessions-messageWaitTime-totalTime OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the total period of time between when it creates message and when it delivers message"
        ::= { jMSConnectionResource 134 }
jMSConnectionResourcesessions-durableSubscriptionCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the number of the durable subscribers that are created in each sessions"
        ::= { jMSConnectionResource 141 }
jMSConnectionResourcesessions-producers-destination OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "name of the destination to which each producers send messages"
        ::= { jMSConnectionResource 151 }
jMSConnectionResourcesessions-producers-messageCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the number of the messages that are processed in each producers"
        ::= { jMSConnectionResource 161 }
jMSConnectionResourcesessions-producers-pendingMessageCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the number of the messages that reside in each producers without acknowledgement"
        ::= { jMSConnectionResource 171 }
jMSConnectionResourcesessions-producers-expiredMessageCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the number of the messages that are expired in each producers"
        ::= { jMSConnectionResource 181 }
jMSConnectionResourcesessions-producers-messageWaitTime-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the period of time between when it creates message and when it delivers message"
        ::= { jMSConnectionResource 191 }
jMSConnectionResourcesessions-producers-messageWaitTime-maxTime OBJECT-TYPE

```

```

SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the maximum period of time between when it creates message and when it delivers message"
::= { jMSConnectionResource 192 }
jMSConnectionResourcesessions-producers-messageWaitTime-minTime OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the minimum period of time between when it creates message and when it delivers message"
::= { jMSConnectionResource 193 }
jMSConnectionResourcesessions-producers-messageWaitTime-totalTime OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the total period of time between when it creates message and when it delivers message"
::= { jMSConnectionResource 194 }
jMSConnectionResourcesessions-consumers-origin OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "name of the destination that each consumers connect to"
::= { jMSConnectionResource 201 }
jMSConnectionResourcesessions-consumers-messageCount-count OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the number of the messages that are processed in each consumers"
::= { jMSConnectionResource 211 }
jMSConnectionResourcesessions-consumers-pendingMessageCount-count OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the number of the messages that reside in each consumers without acknowledgement"
::= { jMSConnectionResource 221 }
jMSConnectionResourcesessions-consumers-expiredMessageCount-count OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the number of the messages that are expired in each consumers"
::= { jMSConnectionResource 231 }
jMSConnectionResourcesessions-consumers-messageWaitTime-count OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the period of time between when it creates message and when it delivers message"
::= { jMSConnectionResource 241 }
jMSConnectionResourcesessions-consumers-messageWaitTime-maxTime OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory

```



```

DESCRIPTION
    "the maximum period of time between when it creates message and when it delivers message"
    ::= { jMSConnectionResource 242 }
jMSConnectionResourceSessions-consumers-messageWaitTime-minTime OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the minimum period of time between when it creates message and when it delivers message"
        ::= { jMSConnectionResource 243 }
jMSConnectionResourceSessions-consumers-messageWaitTime-totalTime OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the total period of time between when it creates message and when it delivers message"
        ::= { jMSConnectionResource 244 }
jMSConnectionResourceSessionCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the number of the sessions that are created by this connection"
        ::= { jMSConnectionResource 251 }
jMSConnectionResourceConnectionConsumerCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""
        ::= { jMSConnectionResource 261 }
jMSConnectionResourceConnectionConsumers-origin OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""
        ::= { jMSConnectionResource 271 }
jMSConnectionResourceConnectionConsumers-messageCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""
        ::= { jMSConnectionResource 281 }
jMSConnectionResourceConnectionConsumers-pendingMessageCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""
        ::= { jMSConnectionResource 291 }
jMSConnectionResourceConnectionConsumers-expiredMessageCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""
        ::= { jMSConnectionResource 301 }

```

```

jMSConnectionResourceconnectionConsumers-messageWaitTime-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""

    ::= { jMSConnectionResource 401 }
jMSConnectionResourceconnectionConsumers-messageWaitTime-maxTime OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""

    ::= { jMSConnectionResource 402 }
jMSConnectionResourceconnectionConsumers-messageWaitTime-minTime OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""

    ::= { jMSConnectionResource 403 }
jMSConnectionResourceconnectionConsumers-messageWaitTime-totalTime OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""

    ::= { jMSConnectionResource 404 }

-----
-- jMSConsumerResource
-----

jMSConsumerResource OBJECT IDENTIFIER
    ::= { jeus 34 }

jMSConsumerResourceobjectName OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "JMX-standard MBean object name"
    ::= { jMSConsumerResource 1 }
jMSConsumerResourceorigin OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "name of the destination that consumer connects to"
    ::= { jMSConsumerResource 101 }
jMSConsumerResourcemessageCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the number of the messages that are processed in this consumer"
    ::= { jMSConsumerResource 111 }
jMSConsumerResourcependingMessageCount-count OBJECT-TYPE
    SYNTAX DisplayString

```

```

ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the number of the messages that reside in this consumer without acknowledgement"
::= { jMSConsumerResource 121 }
jMSConsumerResourceexpiredMessageCount-count OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the number of the messages that are expired in this consumer"
::= { jMSConsumerResource 131 }
jMSConsumerResourcemessageWaitTime-count OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the period of time between when it creates message and when it delivers message"
::= { jMSConsumerResource 141 }
jMSConsumerResourcemessageWaitTime-maxTime OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the maximum period of time between when it creates message and when it delivers message"
::= { jMSConsumerResource 142 }
jMSConsumerResourcemessageWaitTime-minTime OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the minimum period of time between when it creates message and when it delivers message"
::= { jMSConsumerResource 143 }
jMSConsumerResourcemessageWaitTime-totalTime OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the total period of time between when it creates message and when it delivers message"
::= { jMSConsumerResource 144 }
jMSConsumerResourcesendTime-count OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the period of time to delivers messages"
::= { jMSConsumerResource 151 }
jMSConsumerResourcesendTime-maxTime OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the maximum period of time to delivers messages"
::= { jMSConsumerResource 152 }
jMSConsumerResourcesendTime-minTime OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION

```

```

        "the minimum period of time to delivers messages"
        ::= { jMSConsumerResource 153 }
jMSConsumerResourcesendTime-totalTime OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the total period of time to delivers messages"
        ::= { jMSConsumerResource 154 }

-----
-- jMSProducerResource
-----

jMSProducerResource OBJECT IDENTIFIER
    ::= { jeus 35 }

jMSProducerResourceobjectName OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "JMX-standard MBean object name"
        ::= { jMSProducerResource 1 }
jMSProducerResourcesdestination OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "name of the destination to which this producer sends messages"
        ::= { jMSProducerResource 6 }
jMSProducerResourcesmessageCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the number of the messages that are processed in this producer"
        ::= { jMSProducerResource 111 }
jMSProducerResourcespendingMessageCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the number of the messages that reside in this producer without acknowledgement"
        ::= { jMSProducerResource 121 }
jMSProducerResourcesexpiredMessageCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the number of the messages that are expired in this producer"
        ::= { jMSProducerResource 131 }
jMSProducerResourcesmessageWaitTime-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the period of time between when it creates message and when it delivers message"
        ::= { jMSProducerResource 141 }

```

```

jMSProducerResourceWaitTime-maxTime OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the maximum period of time between when it creates message and when it delivers message"
    ::= { jMSProducerResource 142 }
jMSProducerResourceWaitTime-minTime OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the minimum period of time between when it creates message and when it delivers message"
    ::= { jMSProducerResource 143 }
jMSProducerResourceWaitTime-totalTime OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the total period of time between when it creates message and when it delivers message"
    ::= { jMSProducerResource 144 }
jMSProducerResourceSendTime-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the period of time to delivers messages"
    ::= { jMSProducerResource 151 }
jMSProducerResourceSendTime-maxTime OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the maximum period of time to delivers messages"
    ::= { jMSProducerResource 152 }
jMSProducerResourceSendTime-minTime OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the minimum period of time to delivers messages"
    ::= { jMSProducerResource 153 }
jMSProducerResourceSendTime-totalTime OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the total period of time to delivers messages"
    ::= { jMSProducerResource 154 }

-----
-- jMSSessionResource
-----

jMSSessionResource OBJECT IDENTIFIER
    ::= { jeus 36 }

jMSSessionResourceObjectName OBJECT-TYPE
    SYNTAX DisplayString

```

```

ACCESS read-only
STATUS mandatory
DESCRIPTION
    "JMX-standard MBean object name"
::= { jMSSessionResource 1 }
jMSSessionResourcejMSEndPointConsumerNames OBJECT-TYPE
SYNTAX SEQUENCE OF DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "JMX-standard object names of consumers that are created by this session"
::= { jMSSessionResource 2 }
jMSSessionResourcmessageCount-count OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the number of the messages that are processed in this session"
::= { jMSSessionResource 101 }
jMSSessionResourcependingMessageCount-count OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the number of the messages that resides in this session without acknowledgement"
::= { jMSSessionResource 111 }
jMSSessionResourceexpiredMessageCount-count OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the number of the messages that are expired in this session"
::= { jMSSessionResource 121 }
jMSSessionResourcmessageWaitTime-count OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the period of time between when it creates message and when it delivers message"
::= { jMSSessionResource 131 }
jMSSessionResourcmessageWaitTime-maxTime OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the maximum period of time between when it creates message and when it delivers message"
::= { jMSSessionResource 132 }
jMSSessionResourcmessageWaitTime-minTime OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the minimum period of time between when it creates message and when it delivers message"
::= { jMSSessionResource 133 }
jMSSessionResourcmessageWaitTime-totalTime OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION

```

```

        "the total period of time between when it creates message and when it delivers message"
        ::= { jMSSessionResource 134 }
jMSSessionResourceDurableSubscriptionCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the number of the durable subscribers that are created in this sessions"
        ::= { jMSSessionResource 141 }
jMSSessionResourceProducers-destination OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "name of the destination to which each producers send messages"
        ::= { jMSSessionResource 151 }
jMSSessionResourceProducers-messageCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the number of the messages that are processed in this producer"
        ::= { jMSSessionResource 161 }
jMSSessionResourceProducers-pendingMessageCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the number of the messages that reside in each producers without acknowledgement"
        ::= { jMSSessionResource 171 }
jMSSessionResourceProducers-expiredMessageCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the number of the messages that are expired in each producers"
        ::= { jMSSessionResource 181 }
jMSSessionResourceProducers-messageWaitTime-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the period of time between when it creates message and when it delivers message"
        ::= { jMSSessionResource 191 }
jMSSessionResourceProducers-messageWaitTime-maxTime OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the maximum period of time between when it creates message and when it delivers message"
        ::= { jMSSessionResource 192 }
jMSSessionResourceProducers-messageWaitTime-minTime OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the minimum period of time between when it creates message and when it delivers message"
        ::= { jMSSessionResource 193 }
jMSSessionResourceProducers-messageWaitTime-totalTime OBJECT-TYPE

```

```

SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the total period of time between when it creates message and when it delivers message"
::= { jMSSessionResource 194 }
jMSSessionResourceconsumers-origin OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "name of the destination that each consumers connect to"
    ::= { jMSSessionResource 201 }
jMSSessionResourceconsumers-messageCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the number of the messages that are processed in each consumer"
    ::= { jMSSessionResource 211 }
jMSSessionResourceconsumers-pendingMessageCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the number of the messages that reside in each consumers without acknowledgement"
    ::= { jMSSessionResource 221 }
jMSSessionResourceconsumers-expiredMessageCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the number of the messages that are expired in each consumers"
    ::= { jMSSessionResource 231 }
jMSSessionResourceconsumers-messageWaitTime-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the period of time between when it creates message and when it delivers message"
    ::= { jMSSessionResource 241 }
jMSSessionResourceconsumers-messageWaitTime-maxTime OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the maximum period of time between when it creates message and when it delivers message"
    ::= { jMSSessionResource 242 }
jMSSessionResourceconsumers-messageWaitTime-minTime OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the minimum period of time between when it creates message and when it delivers message"
    ::= { jMSSessionResource 243 }
jMSSessionResourceconsumers-messageWaitTime-totalTime OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory

```



```

DESCRIPTION
    "the total period of time between when it creates message and when it delivers message"
 ::= { jMSSessionResource 244 }
jMSSessionResourcesendTime-count    OBJECT-TYPE
SYNTAX  DisplayString
ACCESS  read-only
STATUS  mandatory
DESCRIPTION
    "the period of time to delivers messages"
 ::= { jMSSessionResource 251 }
jMSSessionResourcesendTime-maxTime  OBJECT-TYPE
SYNTAX  DisplayString
ACCESS  read-only
STATUS  mandatory
DESCRIPTION
    "the maximum period of time to delivers messages"
 ::= { jMSSessionResource 252 }
jMSSessionResourcesendTime-minTime  OBJECT-TYPE
SYNTAX  DisplayString
ACCESS  read-only
STATUS  mandatory
DESCRIPTION
    "the minimum period of time to delivers messages"
 ::= { jMSSessionResource 253 }
jMSSessionResourcesendTime-totalTime OBJECT-TYPE
SYNTAX  DisplayString
ACCESS  read-only
STATUS  mandatory
DESCRIPTION
    "the total period of time to delivers messages"
 ::= { jMSSessionResource 254 }
jMSSessionResourcecommitCount-count OBJECT-TYPE
SYNTAX  DisplayString
ACCESS  read-only
STATUS  mandatory
DESCRIPTION
    ""
 ::= { jMSSessionResource 261 }
jMSSessionResourcerollbackCount-count OBJECT-TYPE
SYNTAX  DisplayString
ACCESS  read-only
STATUS  mandatory
DESCRIPTION
    ""
 ::= { jMSSessionResource 271 }
jMSSessionResourcetransactionCount-count OBJECT-TYPE
SYNTAX  DisplayString
ACCESS  read-only
STATUS  mandatory
DESCRIPTION
    ""
 ::= { jMSSessionResource 281 }

-----
-- eJBEngineMo
-----

eJBEngineMo OBJECT IDENTIFIER
 ::= { jeus 41 }

```

```

eJBEngineMoobjectName OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "JMX-standard MBean object name"
    ::= { eJBEngineMo 1 }
eJBEngineMoblockThreadCount OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the number of the blocked threads of this EJB Engine"
    ::= { eJBEngineMo 2 }

-----
-- threadPoolMo
-----

threadPoolMo OBJECT IDENTIFIER
    ::= { jeus 53 }

threadPoolMoobjectName OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "JMX-standard MBean object name"
    ::= { threadPoolMo 1 }
threadPoolMomin OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-write
    STATUS mandatory
    DESCRIPTION
        ""
    ::= { threadPoolMo 3 }
threadPoolMomax OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-write
    STATUS mandatory
    DESCRIPTION
        ""
    ::= { threadPoolMo 5 }
threadPoolMomaxIdleTime OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-write
    STATUS mandatory
    DESCRIPTION
        ""
    ::= { threadPoolMo 9 }
threadPoolMomaxQueue OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-write
    STATUS mandatory
    DESCRIPTION
        ""
    ::= { threadPoolMo 11 }
threadPoolMomaxThreadActiveTime OBJECT-TYPE

```

```

SYNTAX DisplayString
ACCESS read-write
STATUS mandatory
DESCRIPTION
    ""

::= { threadPoolMo 14 }
threadPoolMonotifyThreshold OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-write
    STATUS mandatory
    DESCRIPTION
        ""

::= { threadPoolMo 15 }
threadPoolMorestartThreshold OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-write
    STATUS mandatory
    DESCRIPTION
        ""

::= { threadPoolMo 16 }
threadPoolMoactiveThreadCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the number of the threads that are being used in thread pool of this Thread Pool"

::= { threadPoolMo 101 }
threadPoolMoblockThreadCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the number of the threads that are blocked in thread pool of this Thread Pool"

::= { threadPoolMo 111 }
threadPoolMoallThreadCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the number of all threads that are in thread pool of this Thread Pool"

::= { threadPoolMo 121 }
threadPoolMomaxThreadCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""

::= { threadPoolMo 131 }
threadPoolMowaitQueueCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""

::= { threadPoolMo 141 }

-----
-- webEngineMo
-----

```

```

webEngineMo OBJECT IDENTIFIER
    ::= { jeus 54 }

webEngineMoobjectName OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "JMX-standard MBean object name"
    ::= { webEngineMo 1 }
webEngineMoconfigInfo OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the contents of the configuration file(WEBMain.xml) of this Web Engine"
    ::= { webEngineMo 3 }
webEngineMoserverStatus OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the status of the session server that is configured in this Web Engine"
    ::= { webEngineMo 4 }
webEngineMowebtConnectionGroup OBJECT-TYPE
    SYNTAX SEQUENCE OF DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""
    ::= { webEngineMo 8 }
webEngineMocheckThreadPool OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-write
    STATUS mandatory
    DESCRIPTION
        ""
    ::= { webEngineMo 11 }
webEngineMocheckClassReload OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-write
    STATUS mandatory
    DESCRIPTION
        ""
    ::= { webEngineMo 13 }
webEngineMocheckSession OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-write
    STATUS mandatory
    DESCRIPTION
        ""
    ::= { webEngineMo 15 }
webEngineMofreeMemory-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""

```

```

 ::= { webEngineMo 101 }
webEngineMototalMemory-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""
    ::= { webEngineMo 111 }

-----
-- webListenerMo
-----

webListenerMo OBJECT IDENTIFIER
    ::= { jeus 55 }

webListenerMoobjectName OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "JMX-standard MBean object name"
    ::= { webListenerMo 1 }
webListenerMothreadPools OBJECT-TYPE
    SYNTAX SEQUENCE OF DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "JMX-standard object names of the Thread Pools that is registered on this Web Listener"
    ::= { webListenerMo 2 }
webListenerMotype OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the type of this Web Listener"
    ::= { webListenerMo 3 }
webListenerMoport OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""
    ::= { webListenerMo 4 }
webListenerMoreadTimeout OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-write
    STATUS mandatory
    DESCRIPTION
        ""
    ::= { webListenerMo 6 }
webListenerMoreconnectTimeout OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-write
    STATUS mandatory
    DESCRIPTION
        ""
    ::= { webListenerMo 8 }
webListenerMopostdataReadTimeout OBJECT-TYPE

```

```

SYNTAX   DisplayString
ACCESS   read-write
STATUS   mandatory
DESCRIPTION
    ""

 ::= { webListenerMo 10 }

-----
-- jMSClientResource
-----

jMSClientResource OBJECT IDENTIFIER
 ::= { jeus 61 }

jMSClientResourceobjectName OBJECT-TYPE
    SYNTAX   DisplayString
    ACCESS   read-only
    STATUS   mandatory
    DESCRIPTION
        "JMX-standard MBean object name"
    ::= { jMSClientResource 1 }
jMSClientResourcejMSConnectionResourceNames OBJECT-TYPE
    SYNTAX   SEQUENCE OF DisplayString
    ACCESS   read-only
    STATUS   mandatory
    DESCRIPTION
        "JMX-standard object names of the connections that are created by JMS clients"
    ::= { jMSClientResource 4 }
jMSClientResourceconnectionCount-count OBJECT-TYPE
    SYNTAX   DisplayString
    ACCESS   read-only
    STATUS   mandatory
    DESCRIPTION
        "the number of the connections that are created by JMS clients"
    ::= { jMSClientResource 101 }

-----
-- jMSQueueConnectionFactoryResource
-----

jMSQueueConnectionFactoryResource OBJECT IDENTIFIER
 ::= { jeus 62 }

jMSQueueConnectionFactoryResourceobjectName OBJECT-TYPE
    SYNTAX   DisplayString
    ACCESS   read-only
    STATUS   mandatory
    DESCRIPTION
        "JMX-standard MBean object name"
    ::= { jMSQueueConnectionFactoryResource 1 }

-----
-- jMSQueueDestinationResource
-----

jMSQueueDestinationResource OBJECT IDENTIFIER
 ::= { jeus 63 }

jMSQueueDestinationResourceobjectName OBJECT-TYPE

```

```

SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "JMX-standard MBean object name"
::= { jMSQueueDestinationResource 1 }
jMSQueueDestinationResourceName OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the name of this JMS Destination"
::= { jMSQueueDestinationResource 2 }
jMSQueueDestinationResourceexportName OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the JNDI export name of this JMS Destination"
::= { jMSQueueDestinationResource 3 }
jMSQueueDestinationResourcecetype OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the type of this JMS Destination"
::= { jMSQueueDestinationResource 4 }
jMSQueueDestinationResourcedestination OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "the reference of the DestinationImpl object, which has destination information"
::= { jMSQueueDestinationResource 8 }
jMSQueueDestinationResourcejMSConsumerResourceNames OBJECT-TYPE
SYNTAX SEQUENCE OF DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    "names of JMS clients that belong to JMS Destination"
::= { jMSQueueDestinationResource 9 }
jMSQueueDestinationResourcemessageCount-count OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    ""
::= { jMSQueueDestinationResource 101 }
jMSQueueDestinationResourcependingMessageCount-count OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
    ""
::= { jMSQueueDestinationResource 111 }
jMSQueueDestinationResourceexpiredMessageCount-count OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory

```

```

DESCRIPTION
    ""

    ::= { jMSQueueDestinationResource 121 }
jMSQueueDestinationResourcemessageWaitTime-count    OBJECT-TYPE
    SYNTAX  DisplayString
    ACCESS  read-only
    STATUS  mandatory
    DESCRIPTION
        ""

    ::= { jMSQueueDestinationResource 122 }
jMSQueueDestinationResourcemessageWaitTime-maxTime  OBJECT-TYPE
    SYNTAX  DisplayString
    ACCESS  read-only
    STATUS  mandatory
    DESCRIPTION
        ""

    ::= { jMSQueueDestinationResource 123 }
jMSQueueDestinationResourcemessageWaitTime-minTime  OBJECT-TYPE
    SYNTAX  DisplayString
    ACCESS  read-only
    STATUS  mandatory
    DESCRIPTION
        ""

    ::= { jMSQueueDestinationResource 124 }
jMSQueueDestinationResourcemessageWaitTime-totalTime  OBJECT-TYPE
    SYNTAX  DisplayString
    ACCESS  read-only
    STATUS  mandatory
    DESCRIPTION
        ""

    ::= { jMSQueueDestinationResource 125 }
jMSQueueDestinationResourcesendTime-count    OBJECT-TYPE
    SYNTAX  DisplayString
    ACCESS  read-only
    STATUS  mandatory
    DESCRIPTION
        ""

    ::= { jMSQueueDestinationResource 131 }
jMSQueueDestinationResourcesendTime-maxTime  OBJECT-TYPE
    SYNTAX  DisplayString
    ACCESS  read-only
    STATUS  mandatory
    DESCRIPTION
        ""

    ::= { jMSQueueDestinationResource 132 }
jMSQueueDestinationResourcesendTime-minTime  OBJECT-TYPE
    SYNTAX  DisplayString
    ACCESS  read-only
    STATUS  mandatory
    DESCRIPTION
        ""

    ::= { jMSQueueDestinationResource 133 }
jMSQueueDestinationResourcesendTime-totalTime  OBJECT-TYPE
    SYNTAX  DisplayString
    ACCESS  read-only
    STATUS  mandatory
    DESCRIPTION
        ""

    ::= { jMSQueueDestinationResource 134 }

```



```

-----
-- jMSDurableSubscriptionResource
-----

jMSDurableSubscriptionResource OBJECT IDENTIFIER
 ::= { jeus 64 }

jMSDurableSubscriptionResourceobjectName OBJECT-TYPE
 SYNTAX DisplayString
 ACCESS read-only
 STATUS mandatory
 DESCRIPTION
  "JMX-standard MBean object name"
 ::= { jMSDurableSubscriptionResource 1 }
jMSDurableSubscriptionResourceclientID OBJECT-TYPE
 SYNTAX DisplayString
 ACCESS read-only
 STATUS mandatory
 DESCRIPTION
  "the client ID of JMS Durable Subscriber"
 ::= { jMSDurableSubscriptionResource 3 }
jMSDurableSubscriptionResourceremainingMessages OBJECT-TYPE
 SYNTAX DisplayString
 ACCESS read-only
 STATUS mandatory
 DESCRIPTION
  "the number of the messages which are alive in durable subscriber"
 ::= { jMSDurableSubscriptionResource 5 }
jMSDurableSubscriptionResourceselector OBJECT-TYPE
 SYNTAX DisplayString
 ACCESS read-only
 STATUS mandatory
 DESCRIPTION
  "selector value which is configured in durable subscriber"
 ::= { jMSDurableSubscriptionResource 6 }

-----
-- jMSTopicConnectionFactoryResource
-----

jMSTopicConnectionFactoryResource OBJECT IDENTIFIER
 ::= { jeus 65 }

jMSTopicConnectionFactoryResourceobjectName OBJECT-TYPE
 SYNTAX DisplayString
 ACCESS read-only
 STATUS mandatory
 DESCRIPTION
  "JMX-standard MBean object name"
 ::= { jMSTopicConnectionFactoryResource 1 }

-----
-- jMSTopicDestinationResource
-----

jMSTopicDestinationResource OBJECT IDENTIFIER
 ::= { jeus 66 }

```

```

jMSTopicDestinationResourceobjectName OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "JMX-standard MBean object name"
    ::= { jMSTopicDestinationResource 1 }
jMSTopicDestinationResourcecname OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the name of this JMS Destination"
    ::= { jMSTopicDestinationResource 2 }
jMSTopicDestinationResourceexportName OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the JNDI export name of this JMS Destination"
    ::= { jMSTopicDestinationResource 3 }
jMSTopicDestinationResourcetype OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the type of this JMS Destination"
    ::= { jMSTopicDestinationResource 4 }
jMSTopicDestinationResourcedestination OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "the reference of the DestinationImpl object, which has destination information"
    ::= { jMSTopicDestinationResource 8 }
jMSTopicDestinationResourcejMSConsumerResourceNames OBJECT-TYPE
    SYNTAX SEQUENCE OF DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "names of JMS clients that belong to JMS Destination"
    ::= { jMSTopicDestinationResource 9 }
jMSTopicDestinationResourcemessageCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""
    ::= { jMSTopicDestinationResource 101 }
jMSTopicDestinationResourcependingMessageCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""
    ::= { jMSTopicDestinationResource 111 }
jMSTopicDestinationResourceexpiredMessageCount-count OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only

```

```

STATUS mandatory
DESCRIPTION
"""

 ::= { jMSTopicDestinationResource 121 }
jMSTopicDestinationResourcemessageWaitTime-count OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
"""

 ::= { jMSTopicDestinationResource 122 }
jMSTopicDestinationResourcemessageWaitTime-maxTime OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
"""

 ::= { jMSTopicDestinationResource 123 }
jMSTopicDestinationResourcemessageWaitTime-minTime OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
"""

 ::= { jMSTopicDestinationResource 124 }
jMSTopicDestinationResourcemessageWaitTime-totalTime OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
"""

 ::= { jMSTopicDestinationResource 125 }
jMSTopicDestinationResourcesendTime-count OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
"""

 ::= { jMSTopicDestinationResource 131 }
jMSTopicDestinationResourcesendTime-maxTime OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
"""

 ::= { jMSTopicDestinationResource 132 }
jMSTopicDestinationResourcesendTime-minTime OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
"""

 ::= { jMSTopicDestinationResource 133 }
jMSTopicDestinationResourcesendTime-totalTime OBJECT-TYPE
SYNTAX DisplayString
ACCESS read-only
STATUS mandatory
DESCRIPTION
"""

```

```
 ::= { jMSTopicDestinationResource 134 }
```

```
-----  
-- threadPool  
-----
```

```
threadPool OBJECT IDENTIFIER  
 ::= { jeus 71 }
```

```
threadPoolObjectName OBJECT-TYPE  
    SYNTAX DisplayString  
    ACCESS read-only  
    STATUS mandatory  
    DESCRIPTION  
        ""  
    ::= { threadPool 1 }
```

```
-----  
-- subjectMo  
-----
```

```
subjectMo OBJECT IDENTIFIER  
 ::= { jeus 101 }
```

```
subjectMoObjectName OBJECT-TYPE  
    SYNTAX DisplayString  
    ACCESS read-only  
    STATUS mandatory  
    DESCRIPTION  
        ""  
    ::= { subjectMo 1 }
```

```
subjectMosubjectNames OBJECT-TYPE  
    SYNTAX DisplayString  
    ACCESS read-only  
    STATUS mandatory  
    DESCRIPTION  
        ""  
    ::= { subjectMo 2 }
```

```
-----  
-- securityDomainMo  
-----
```

```
securityDomainMo OBJECT IDENTIFIER  
 ::= { jeus 102 }
```

```
securityDomainMoObjectName OBJECT-TYPE  
    SYNTAX DisplayString  
    ACCESS read-only  
    STATUS mandatory  
    DESCRIPTION  
        ""  
    ::= { securityDomainMo 1 }
```

```
securityDomainModomainName OBJECT-TYPE  
    SYNTAX DisplayString  
    ACCESS read-only  
    STATUS mandatory  
    DESCRIPTION  
        ""
```

```

        ::= { securityDomainMo 2 }
securityDomainMopolicy OBJECT-TYPE
    SYNTAX SEQUENCE OF DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""

        ::= { securityDomainMo 3 }
securityDomainMosubjects OBJECT-TYPE
    SYNTAX SEQUENCE OF DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""

        ::= { securityDomainMo 4 }

-----
-- policyMo
-----

policyMo OBJECT IDENTIFIER
    ::= { jeus 103 }

policyMoobjectName OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""

        ::= { policyMo 1 }
policyMopolicyIds OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""

        ::= { policyMo 2 }

-----
-- securityMo
-----

securityMo OBJECT IDENTIFIER
    ::= { jeus 104 }

securityMoobjectName OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""

        ::= { securityMo 1 }
securityMocurrentDomain OBJECT-TYPE
    SYNTAX DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""

        ::= { securityMo 2 }

```

```
securityMosecurityDomains OBJECT-TYPE
    SYNTAX SEQUENCE OF DisplayString
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        ""
    ::= { securityMo 3 }

END
```