JMX + mbeans + jconsole

- Managed Beans

- JMX agent

- Remote management

Java Management Extensions (JMX)

The JMX technology provides a simple, standard way of managing resources such as applications, devices, and services.

The JMX technology is dynamic, you can use it to monitor and manage resources as they are created, installed and implemented.

You can also use the JMX technology to monitor and manage the JVM.

JMX technology

Using the Java Management Extensions technology, a given resource is instrumented by one or more Java objects known as Managed Beans.

These MBeans are registered in a core-managed object server, known as an MBean server.

Agent

JMX agent is a standard management agent that directly controls resources and makes them available to remote management applications.

The core component of a JMX agent is the MBean server

Remote connection

jconsole via Java Remote Method Invocation (Java RMI)

MBeans

JavaBeans are classes that encapsulate many objects into a single object (the bean).

- serializable,

- have a zero-argument constructor,

- allow access to properties using getter and setter methods.

An MBean is a managed Java object, that follows the design patterns set forth in the JMX specification.

MBeans expose a management interface that consists of the following:

- A set of readable or writable attributes, or both.

- A set of invokable operations.

- A self-description.