

# Java SE Advanced

## Client Management Best Practices

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# Client Management Best Practices

1. Automate scheduled updates.
  - Plan ahead based on known schedule.
2. Collect usage information.
  - Collect real information: which applications need which old Java versions, which users need which applications.
3. Protect old versions through Deployment Rule Set.
  - Statically install old versions only as needed, protect them through Deployment Rule Sets.

# Java SE Advanced

- Same Java.
- Management & Monitoring Tools.
  - Help understand/manage client usage.
  - Help investigate production software.
- Experienced Support.
  - What information applies to this situation?
  - What information from the last 19 years does **not** apply (anymore)?



## Automate scheduled updates.

- ➔ **1. Automate scheduled updates.**
- 2. Collect usage information.
- 3. Protect old versions through DRS.

# Schedule updates

- Quarterly patch schedule for the next year:  
<http://www.oracle.com/technetwork/topics/security/alerts-086861.html>
- MSI installer
  - Customizable.
  - Automated silent installs.



# Deploy updates in timely fashion

## Customize and roll out ASAP after Critical Patch Update

If you do not:

- Clients periodically check security baseline.
- Built-in expiration a month after scheduled Critical Patch.



Clients will change behavior to decrease their attack surface.  
Java or browser will prompt or block.

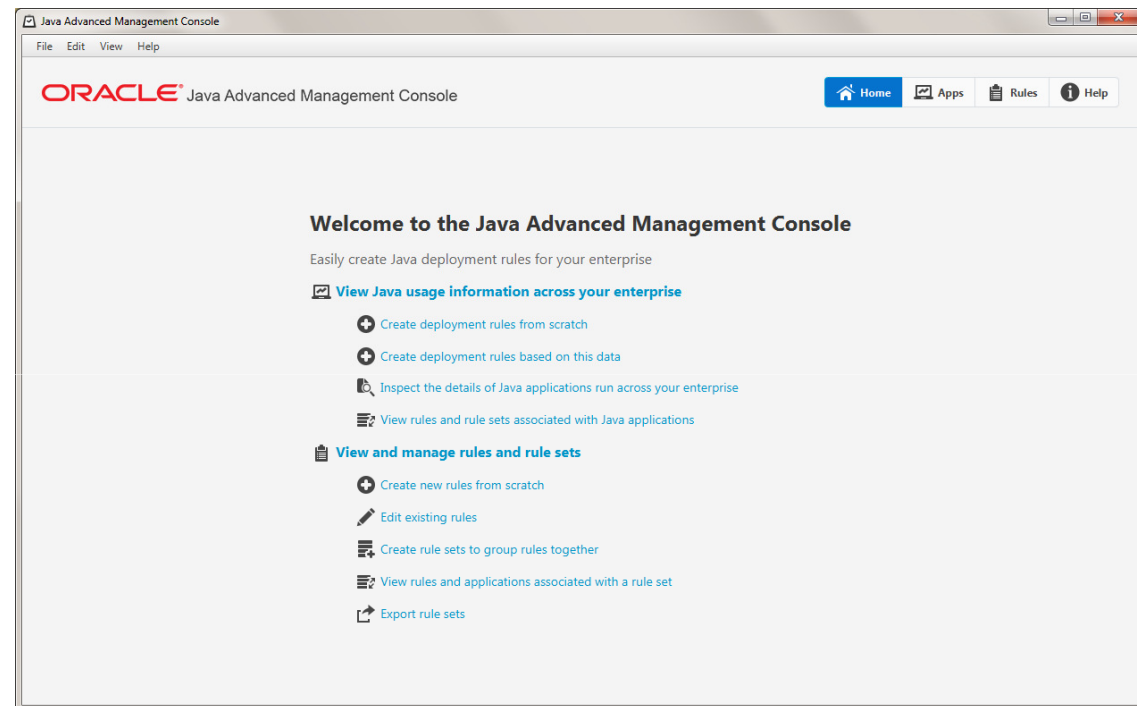
## Collect usage information.

1. Automate scheduled updates.
- ➔ **2. Collect usage information.**
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# Advanced Management Console

## Administer Java clients at scale.

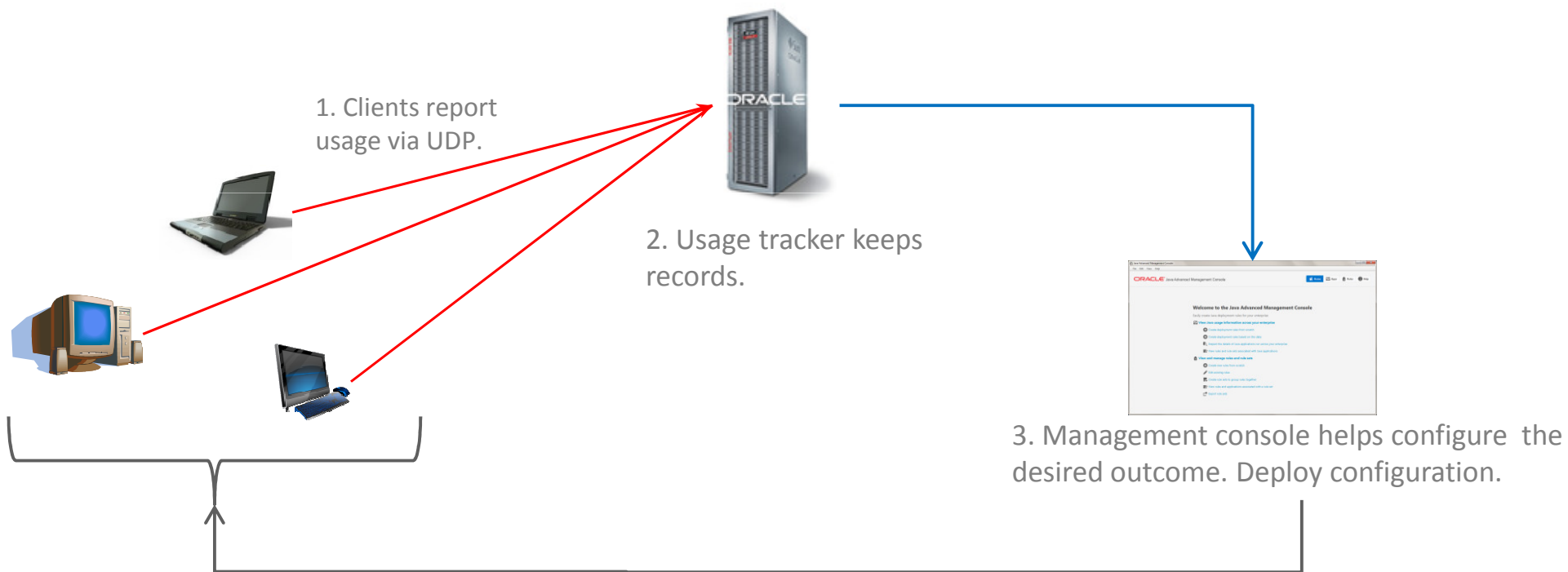
- Usage Tracking across installations
  - Tracks applications and their location.
  - Tracks which Java version was used.
- Deployment Rule Set tool
  - Control prompts: run or block.
  - Verify against usage tracking.





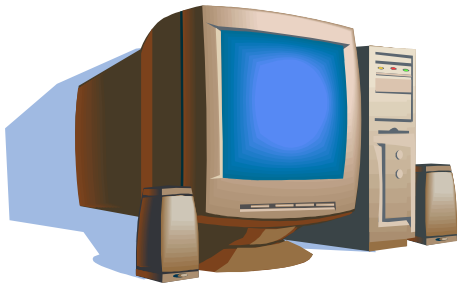
# Management Console, Collector, and Clients

**Control Java in the enterprise through real data.**



# Deployment Rule Sets

**Desktop Administrators can control multiple Java versions.**



- Many managed clients.
- Different applications need different Java versions.
  - Different users need several at once.
- Security: limiting the exposure of old versions.

## Follow-up Questions:

- Which versions do I actually need?
- Which applications need which versions?
- How do I identify those applications?
- Which users need which applications?
- How do I validate answers to the above questions?
- Once validated, how do I integrate the answers into my tool chains?

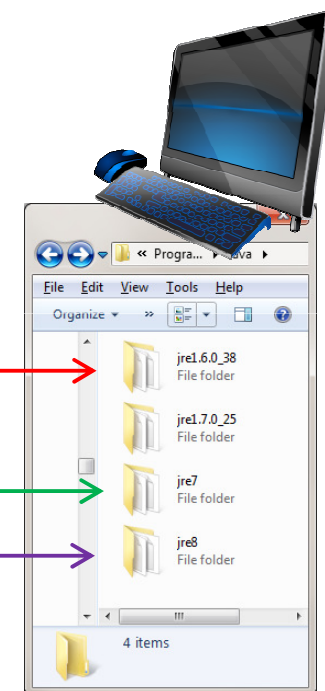
# Control Compatibility

**“This needs Java 8, that needs 6 update 38, those needs 7, etc.”**

Application A

Application B

Application C



## Follow-up Questions:

- How do I identify these applications across many users?
- Once identified, how do I know which needs which Java version?
- After associating application to Java version, how do I manage the compatibility across many users?

# Track and use real data

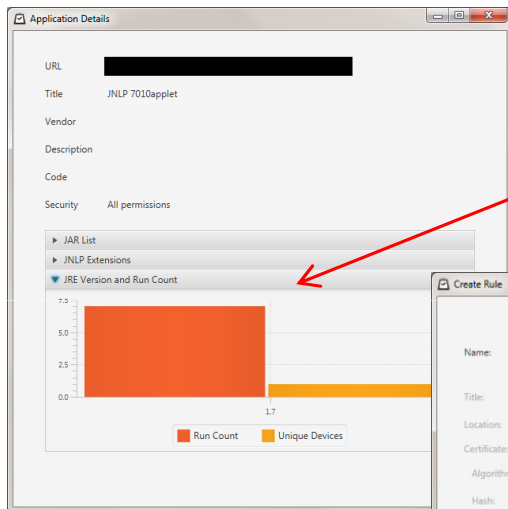
- Run count:
  - How important is this application?
  - How many people need it?
- URL / Codebase:
  - Where is this application?
- Java Version:
  - Which version is the right one?
- Etc.

The screenshot shows the Oracle Java Advanced Management Console interface. At the top, there is a navigation bar with 'Home', 'Apps', 'Rules', and 'Help' buttons. Below this is a search bar with a 'filter' dropdown and a 'Search' button. The main content area displays a table with the following columns: 'Runs', 'URL', 'Java Version', 'Title', and 'Vendor'. The table contains 20 rows of data, with the 6th row highlighted in blue. The data in the table is as follows:

Runs	URL	Java Version	Title	Vendor
8	http://www.services.toshiba.co.jp/1600701641-476/Application17.jnlp	1.7		International Corp.
1	http://dhcp-vpnpool-10-175-253-253.vpn.oracle.com/1600702096-735/Application16.jnlp	1.8.0_26		Global Ltd
3	http://dhcp-vpnpool-10-175-253-253.vpn.oracle.com/1600702236-873/Application4.jnlp	1.9-ea	JNLP 8180applet	Vendor
1	http://www.ibm.com/1600702260-120/index.html	1.6		
6	http://sourceforge.net/1600702298-728/Application13.jnlp	1.6		Global Ltd
1	http://dhcp-vpnpool-10-175-253-253.vpn.oracle.com/1600702312-814/Application22.jnlp	1.6		
1	http://www.services.toshiba.co.jp/1600702362-258/Application21.jnlp	1.8.0_84		
4	http://www.services.toshiba.co.jp/1600702374-562/Application14.jnlp	1.6	App 3188application	
6	http://www.ibm.com/1600702389-615/Application26.jnlp	1.6.0_13	JNLP 6288application	Vendor
7	http://www.services.toshiba.co.jp/1600702437-357/Application20.jnlp	1.8.0_66		Vendor
5	http://www.ibm.com/1600702478-981/Application5.jnlp	1.6.0_14		
5	http://sourceforge.net/1600702574-481/Application27.jnlp	1.6.0_43		Vendor
2	http://www.services.toshiba.co.jp/1600702695-676/Application11.jnlp	1.8		
7	http://sourceforge.net/1600702768-237/Application21.jnlp	1.7	App 8170application	
7	http://www.ibm.com/1600702870-935/Application10.jnlp	1.8		Global Ltd
2	http://sourceforge.net/1600702984-353/Application13.jnlp	1.7	JNLP 8304applet	
8	http://sourceforge.net/1600703064-305/Application11.jnlp	1.8.0_85		
3	http://www.ibm.com/1600703090-664/Application22.jnlp	1.9-ea	JNLP 5399application	Vendor
8	http://dhcp-vpnpool-10-175-253-253.vpn.oracle.com/1600703177-434/Application20.jnlp	1.7		

# Control Prompts and Compatibility

## Identify which Java versions are needed



- Inspect applications to see environments.
- Guided rules to control dialog prompts and compatibility.

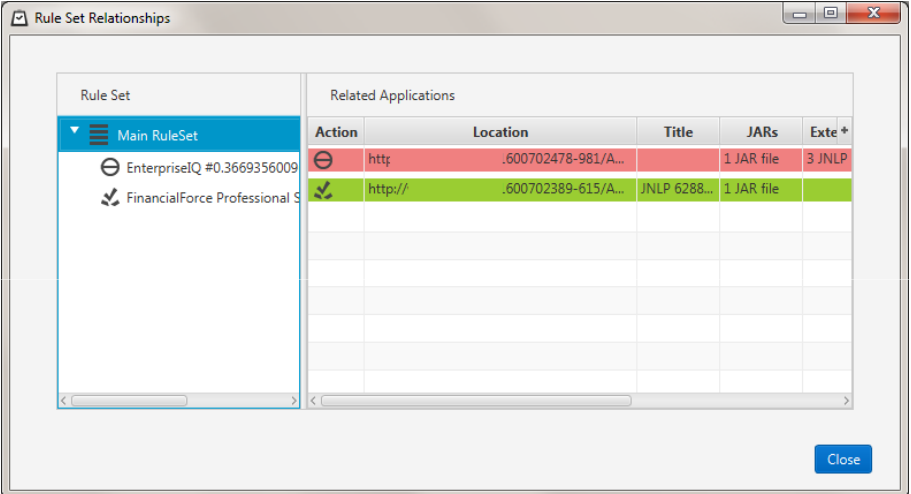
The 'Create Rule' dialog box is shown with the 'Automatic Rule' tab selected. The 'Rule Action' is set to 'run'. Under the 'Version' section, the 'API level' is selected and set to '1.7\*', with the 'or later' checkbox unchecked. Other options like 'SECURE', 'SECURE + API level', 'Product', and 'Latest available JRE' are also visible but not selected.

– “Run on Java 1.7 without prompting.”

# Validate rules against Tracking System

## Ensure correctness before user testing

- Compare whitelist / blacklist to real data.
  - “Did I do what I intended?”



The screenshot shows a window titled "Rule Set Relationships". On the left, there is a tree view under "Rule Set" with "Main RuleSet" expanded, showing "EnterpriseIQ #0.3669356009" and "FinancialForce Professional S...". On the right, there is a table titled "Related Applications" with columns: Action, Location, Title, JARs, and Exte +.

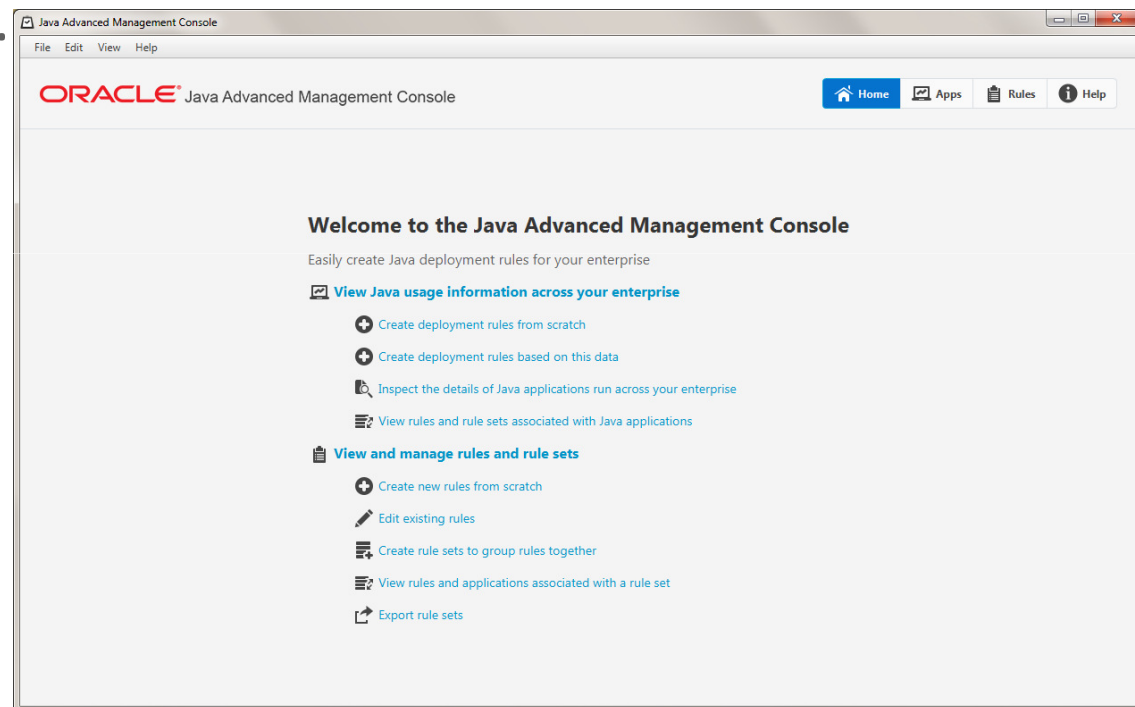
Action	Location	Title	JARs	Exte +
⊖	http: .600702478-981/A...		1 JAR file	3 JNLP
⊕	http:// .600702389-615/A...	JNLP 6288...	1 JAR file	

A "Close" button is located at the bottom right of the window.

# Advanced Management Console

**Desktop Administrator can manage Java at scale.**

- Usage Tracking across installations.
  - Tracks applications and their location.
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- Deployment Rule Set tool
  - Control prompts: run or block.
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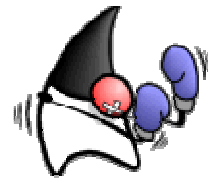
## Protect old versions through DRS.

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# Isolating old Java versions

- Do not connect old Java versions to current internet.
  - Public: stay with scheduled critical patches of supported versions.
  - SE Advanced: provides critical patches for end-of-public-life JREs.
- Control compatibility through Deployment Rule Sets.
  - Use old version only for identified applications/users.



Major Release	GA Date	End of Public Updates Notification	End of Public Updates
5.0	May 2004	Apr 2008	Oct 2009
6	Dec 2006	Feb 2011	Feb 2013
7	July 2011	March 2014	April 2015*
8	March 2014	TBD	March 2017*

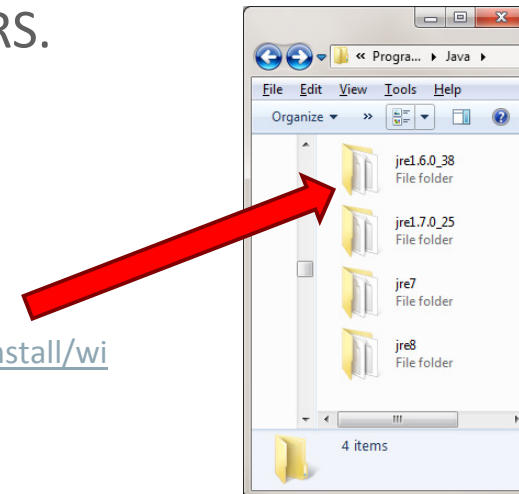
<http://www.oracle.com/technetwork/java/eol-135779.html>

# Statically install old versions

## Only as needed.

- Regular “patch-in-place” of public version.
- Old version must be on system to be used.
  - Static Installation keeps it separate.
  - Current public version protects older version through DRS.

[http://docs.oracle.com/javase/8/docs/technotes/guides/install/windows\\_installer\\_options.html#static\\_installation](http://docs.oracle.com/javase/8/docs/technotes/guides/install/windows_installer_options.html#static_installation)



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