

## Java™ SE 6 Update Release Notes

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### Update Release Notes Index

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### Changes in 1.6.0\_14 (6u14)

The full internal version number for this update release is 1.6.0\_14-b08 (where "b" means "build"). The external version number is 6u14.

#### OlsonData 2009g

6u14 contains Olson time zone data version 2009g. For more information, refer to [Timezone Data Versions in the JRE Software](#).

#### Security Baseline

6u14 specifies the following security baselines for use with Java Plug-in technology:

JRE Family Version	Java SE Security Baseline	Java SE for Business Security Baseline
5.0	1.5.0_18	1.5.0_18
1.4.2	1.4.2_19	1.4.2_20

In December, 2008, Java SE 1.4.2 reached its end of service life with the release of 1.4.2\_19. Future revisions of Java SE 1.4.2 (1.4.2\_20 and above) include the [Access Only option](#) and are available to [Java SE for Business](#) subscribers.

For more information about the security baseline, see [Deploying Java Applets With Family JRE Versions in Java Plug-in for Internet Explorer](#).

#### Additional Supported System Configurations

For 6u14, support has been added for the following system configurations:

- Windows Server 2008 SP2
- Windows Vista with SP2

Refer to the [Supported System Configurations page](#).

#### Service Tag Support

Service Tag support on Solaris and Linux was added in version 1.6.0\_04. JRE 1.6.0\_14 extends Service Tag support to Windows. If Service Tag software has been installed on a system where JRE 1.6.0\_14 is being installed, a unique service tag is automatically created for that particular JRE instance. There is no change in the JDK/JRE installation instruction, and there is no change in the Java runtime.

Service Tag software can be downloaded from [Sun Inventory](#). JDK and JRE service tags allow installed instances of the JDK and JRE to be discovered and registered under a user's account on [Sun Connection](#).

#### Blacklist Jar Feature

Support for blacklisting signed jar files has been added to 6u14. A blacklist is a list of signed jars that contain serious security vulnerabilities that can be exploited by untrusted applets or applications. A system-wide blacklist will be distributed with each JRE release. Java Plugin and Web Start will consult this blacklist and refuse to load any class or resource contained in a jar file that's on the blacklist. By default, blacklist checking is enabled. The `deployment.security.blacklist.check` deployment configuration property can be used to toggle this behavior.

The blacklist entries are the union of the blacklist files pointed to by the `deployment.system.security.blacklist` and

`deployment.user.security.blacklist` properties. By default, `deployment.system.security.blacklist` points to the blacklist file in the `jre/lib/security` directory, and `deployment.user.security.blacklist` points to a blacklist file that contains additional entries added by a user.

The blacklist is a text file with the following format:

```
attribute : value
```

Each jar file on the blacklist is identified by the `x-Digest-Manifest` attribute where `x` is the name of the `MessageDigest` algorithm, and the value is the base64 encoded hash value of the Manifest. Comments are denoted by lines starting with the `#` (number) symbol.

Here is an example:

```
# Buggy Utilities, version 1.0
SHA1-Digest-Manifest : QONXbQg+EtN0guIOAgpUUOadhv8=
# Malware Inc., version 99.99
SHA-256-Digest-Manifest : SewaudBCZ3iXt1KX0BeFHpQiiMlxYlTvLw30w2RJfcs=
```

## Java HotSpot VM 14.0

6u14 includes version 14.0 of the Java HotSpot Virtual Machine, which provides improved reliability, serviceability and performance.

Contributing to increased performance in this release are numerous enhancements to HotSpot's optimizing compiler, more efficient SoftReference processing and improvements to Parallel Compacting garbage collection. Optionally available are two new features - **escape analysis** and **compressed object pointers**. A preliminary version of the new **Garbage First (G1)** garbage collector is also included.

- **Optimization Using Escape Analysis**

The `-XX:+DoEscapeAnalysis` option directs HotSpot to look for objects that are created and referenced by a single thread within the scope of a method compilation. Allocation is omitted for such non-escaping objects, and their fields are treated as local variables, often residing in machine registers. Synchronization on non-escaping objects is also elided.

- **Compressed Object Pointers**

The `-XX:+UseCompressedOops` option can improve performance of the 64-bit JRE when the Java object heap is less than 32 gigabytes in size. In this case, HotSpot compresses object references to 32 bits, reducing the amount of data that it must process.

- **Garbage First (G1) Garbage Collector**

Garbage First, or G1, is a low pause, server style collector. G1's primary advantages over the Concurrent Mark-Sweep (CMS) collector include incremental compaction, better predictability and ease of use.

G1 is available as early access in this release, please try it and give us feedback. Usage in production settings without a Java SE for Business support contract is not recommended.

To try G1, specify these command line options:

```
-XX:+UnlockExperimentalVMOptions -XX:+UseG1GC
```

In addition, the following options can be used to affect G1's behaviour:

- To set the max GC pause time goal in milliseconds that G1 will attempt to meet:

```
-XX:MaxGCPauseMillis=<X>
```

- To set the time interval over which GC pauses totaling up to `MaxGCPauseMillis` may take place:

```
-XX:GCPauseIntervalMillis=<X>
```

For more information about G1 (how it operates, more options, etc.) see [Java HotSpot Garbage Collection](#).

## Improvement TreeMap Iteration

6u14 includes an experimental implementation of `java.util.TreeMap` that can improve the performance of applications that iterate over `TreeMaps` very frequently. This implementation is used when running with the `-XX:+AggressiveOpts` option.

## JAX WS 2.1.6 and JAXB 2.1.10

JAX-WS 2.1.6 and JAXB 2.1.10 are integrated into JDK 6u14. You can find more details about the new features in the [JAX-WS 2.1.6 changelog](#) and in the [JAXB 2.1.10 changelog](#).

Refer also to [CR 6803688](#).

### JavaDB 10.4.2.1

6u14 contains the new 10.4.2.1 version of Java DB.

### Java VisualVM Updates

6u14 contains the following updates to Java VisualVM:

- CPU usage and GC activity graph in the Monitor tab
- Table view in the Threads tab
- Command line options: --openpid, --openjmx, --openfile
- Compare Memory Snapshots action in the context menu
- Copy To Clipboard / Save To File buttons in the About dialog
- Monitoring IBM JVM via JMX connection
- Based on NetBeans Platform 6.5 and NetBeans Profiler 6.5
- Faster computation of references, and improved readability of path to GC root in HeapWalker
- Improved integration of the Visual GC tool

Click for a list of [Java VisualVM bug fixes](#) related to this release.

### Issue with JDK Silent Installation

Prior to 6u14, the JDK installer was never fully supported silently. One of the side effects of silent JDK installation is that it does not install the public JRE. It used to cache/install a jre.msi file. Apparently some users have been using the jre.msi without our documentation or approval. As of 6u14, we no longer cache the file.

As a workaround to the JDK not installing the public JRE when in silent mode, we recommend also bundling up and launching the stand-alone JRE installer from the [java.sun.com](#) download site.

We intend to provide full silent JDK installer support in 6u15, under the following CR: [6845077 - silent JDK should install JRE/Java DB silently](#)

### Possible Issue for Java Web Start Applications

In 6u14 Java Web Start, if you specify an insecure Java system property in a sandbox JNLP file, Java Web Start fails to launch and notifies that JARs in the sandbox JNLP file are not signed.

A workaround is to remove the insecure property (which was ignored by all previous versions of Java Web Start). Refer to CR [6845294](#)

### Bug Fixes

This feature release does not contain any new fixes for security vulnerabilities to its previous release, Java SE 6 Update 13. Users who have Java SE 6 Update 13 have the latest security fixes and do not need to upgrade to this release to be current on security fixes.

Bug fixes are listed in the following table.

BugId	Category	Subcategory	Description
<a href="#">6459804</a>	hotspot	compiler1	Want client (c1) compiler for x86_64 (amd64) for faster start-up
<a href="#">6498878</a>	hotspot	compiler1	client compiler crashes on windows when dealing with breakpoint instructions
<a href="#">6384206</a>	hotspot	compiler2	Phis which are later unneeded are impairing our ability to inline based on static types
<a href="#">6462850</a>	hotspot	compiler2	generate biased locking code in C2 ideal graph
<a href="#">6480694</a>	hotspot	compiler2	Add G1 support in C2
<a href="#">6480696</a>	hotspot	compiler2	Add G1 support on x86
<a href="#">6480697</a>	hotspot	compiler2	Add G1 support for amd64/emt64 platforms
<a href="#">6532536</a>	hotspot	compiler2	Optimize arraycopy stubs for Intel cpus
<a href="#">6604014</a>	hotspot	compiler2	add support for ideal graph visualizer
<a href="#">6614330</a>	hotspot	compiler2	Node::dump(n) does not print full node's graph for specified depth.
<a href="#">6621084</a>	hotspot	compiler2	ciMethodBlocks::split_block_at is broken for methods with exception handler
<a href="#">6621094</a>	hotspot	compiler2	PrintOptoAssembly is broken for oops information in DebugInfo

BugId	Category	Subcategory	Description
6621098	hotspot	compiler2	** HeapWordSize" for TrackedInitializationLimit is missing in set_output_for_allocation()
6625997	hotspot	compiler2	CastPP, CheckCastPP and Proj nodes are not dead loop safe
6633953	hotspot	compiler2	type2aelembytes[T_ADDRESS] should be 8 bytes in 64 bit VM
6646019	hotspot	compiler2	array subscript expressions become top() with -d64
6646020	hotspot	compiler2	assert(in_bb(n),"must be in block") in -Xcomp mode
6649622	hotspot	compiler2	HotSpot Biased locking needs tuning on latest CPUs
6650373	hotspot	compiler2	Assert in methodOopDesc::make_adapters().
6653858	hotspot	compiler2	dynamic languages need to be able to load anonymous classes
6662967	hotspot	compiler2	Optimize I2D conversion on x86
6663848	hotspot	compiler2	assert(i < Max(),"oob") in C2 with -Xcomp
6663908	hotspot	compiler2	NegativeArraySizeException is not thrown
6666343	hotspot	compiler2	Compile::has_loops not always set correctly
6667573	hotspot	compiler2	Use set_req_X() in AddPNode::Ideal() for iterative GVN
6667580	hotspot	compiler2	Optimize CmpP for allocations
6667581	hotspot	compiler2	Don't generate initialization (by 0) code for arrays with size 0
6667588	hotspot	compiler2	Don't generate duplicated CMP for float/double values
6667595	hotspot	compiler2	Set probability FAIR for pre-, post- loops and ALWAYS for main loop
6667605	hotspot	compiler2	Escape Analysis: always inline java constructors with EA
6667610	hotspot	compiler2	Escape Analysis: retry compilation without EA if it fails
6667612	hotspot	compiler2	Escape Analysis: disable loop cloning if it has a scalar replaceable allocation
6667615	hotspot	compiler2	Escape Analysis: extend MDO to cache arguments escape state
6667618	hotspot	compiler2	Disable LoadL->ConvL2I ==> LoadI optimization
6667620	hotspot	compiler2	Escape Analysis: fix reallocation and relocking scalar replaced objects during deoptimization
6670459	hotspot	compiler2	Fix Node::dump() performance
6671250	hotspot	compiler2	In Parse::do_if() old Cmp node 'c' should be replaced with new one after BoolNode transformation.
6671807	hotspot	compiler2	Escape Analysis: Add new ideal node to represent the state of a scalarized object at a safepoint
6672848	hotspot	compiler2	Escape Analysis: improve lock elimination with EA
6673473	hotspot	compiler2	Escape Analysis: Add the instance's field information to PhiNode.
6674588	hotspot	compiler2	Escape Analysis: Improve Escape Analysis code
6674600	hotspot	compiler2	Escape Analysis: Optimize memory graph for instance's fields
6676462	hotspot	compiler2	JVM sometimes would suddenly consume significant amount of memory
6676841	hotspot	compiler2	ClearArrayNode::Identity is incorrect for 64-bit
6680594	hotspot	compiler2	Load + Load isn't canonicalized leading to missed GVN opportunities
6680665	hotspot	compiler2	bytecode Escape Analyzer produces incorrect escape information for methods without oop arguments
6681646	hotspot	compiler2	Relocking of a scalar replaced object during deoptimization is broken.

BugId	Category	Subcategory	Description
6682236	hotspot	compiler2	C2 hits ideal nodes limit during IGVN optimization with EA
6684385	hotspot	compiler2	Loop unswitching crashes without LoopNode
6684714	hotspot	compiler2	Optimize EA Connection Graph build performance
6686791	hotspot	compiler2	Side effect in NumberFormat tests with -server -Xcomp (all platforms, 6u5 perf release b01)
6689060	hotspot	compiler2	Escape Analysis does not work with Compressed Oops
6692301	hotspot	compiler2	Side effect in NumberFormat tests with -server -Xcomp (all platforms, 6u5 perf release b01)
6695810	hotspot	compiler2	null oop passed to encode_heap_oop_not_null
6697236	hotspot	compiler2	missing Identity for "(X+Y) - X" into Y
6697238	hotspot	compiler2	missing dependencies for precompiled headers with platform dependent includes
6700047	hotspot	compiler2	C2 failed in idom_no_update
6700102	hotspot	compiler2	c2 assertion "counter_changed,"failed dependencies, but counter didn't change")" with AggressiveOpts
6701887	hotspot	compiler2	JDK7 server VM in endless loop between Node::dominates and Node::find_exact_control
6703888	hotspot	compiler2	Compressed Oops: use the 32-bits gap after class in a object
6703890	hotspot	compiler2	Compressed Oops: add LoadNkClass node to generate narrow oops (32-bits) compare instructions
6705887	hotspot	compiler2	Compressed Oops: generate x64 addressing and implicit null checks with narrow oops
6706829	hotspot	compiler2	Compressed Oops: add debug info for narrow oops
6708714	hotspot	compiler2	Optimize long LShift on 32-bits x86
6709093	hotspot	compiler2	Compressed Oops: reduce size of compiled methods
6710654	hotspot	compiler2	SAJDI failures with Compressed Oops
6711083	hotspot	compiler2	64bit JVM crashes with Internal Error (type.cpp:763) - ShouldNotReachHere() with enabled COOPs
6711701	hotspot	compiler2	disable compressed oops by default
6712835	hotspot	compiler2	Server compiler fails with assertion (loop_count < K,"infinite loop in PhaseIterGVN::transform")
6714406	hotspot	compiler2	Node::dominates() does not always check for TOP
6714694	hotspot	compiler2	assertion in 64bit server vm (store->find_edge(load) != -1,"missing precedence edge") with COOPs
6715633	hotspot	compiler2	when matching a memory node the adr_type should not change
6716441	hotspot	compiler2	error in meet with +DoEscapeAnalysis
6717150	hotspot	compiler2	improper constant folding of subnormal strictfp multiplications and divides
6726504	hotspot	compiler2	handle do_ifxxx calls in parser more uniformly
6730192	hotspot	compiler2	expression stack wrong at deoptimization point
6730716	hotspot	compiler2	nulls from two unrelated classes compare not equal
6731641	hotspot	compiler2	assert(m->adr_type() == mach->adr_type(),"matcher should not change adr type")
6732154	hotspot	compiler2	REG: Printing an Image using image/gif doc flavor crashes the VM, Solsparc
6732312	hotspot	compiler2	Switch off executing Escape Analysis by default

BugId	Category	Subcategory	Description
6732698	hotspot	compiler2	crash with dead code from compressed oops in gcm
6732732	hotspot	compiler2	CTW with EA: assert(n != 0L, "Bad immediate dominator info.")
6736417	hotspot	compiler2	Fastdebug C2 crashes in StoreBNode::Ideal
6738933	hotspot	compiler2	assert with base pointers must match with compressed oops enabled
6741738	hotspot	compiler2	TypePtr::add_offset() set incorrect offset when the add overflows
6743188	hotspot	compiler2	incomplete fix for 6700047 C2 failed in idom_no_update
6743900	hotspot	compiler2	frequency based block layout
6744422	hotspot	compiler2	incorrect handling of -1 in set_jump_destination
6746892	hotspot	compiler2	Register Allocator does not process a data phi with one unique input correctly
6746907	hotspot	compiler2	Improve implicit null check generation
6747051	hotspot	compiler2	Improve code and implicit null check generation for compressed oops
6753795	hotspot	compiler2	HotSpot crash in strlen() when JVMTI is used
6754519	hotspot	compiler2	don't emit flag fixup for NaN when condition being tested doesn't need it
6761594	hotspot	compiler2	framesize rounding code rounds using wrong units leading to slightly oversized frames
6764622	hotspot	compiler2	IdealGraphVisualizer fixes
6766316	hotspot	compiler2	assert(!ncreate, "Cannot build a phi for a block already parsed.")
6771309	hotspot	compiler2	debugging AD files is difficult without #line directives in generated code
6772368	hotspot	compiler2	REGRESSION:tomcat crashed twice with JDK 7
6775880	hotspot	compiler2	EA +DeoptimizeALot: assert(mon_info->owner()->is_locked()), "object must be locked now")
6788347	hotspot	compiler2	C2Compiler crash 6u7
6791132	hotspot	compiler2	bad control in autobox split code
6793828	hotspot	compiler2	G1: invariant: queues are empty when activated
6795362	hotspot	compiler2	32bit server compiler leads to wrong results on solaris-x86
6798785	hotspot	compiler2	Crash in OopFlow::build_oop_map: incorrect comparison of 64bit pointers
6805522	hotspot	compiler2	Server VM fails with assertion (block1->start() != block2->start()), "successors have unique bcis")
6805724	hotspot	compiler2	ModLNode::Ideal() generates functionally incorrect graph when divisor is any (2^k-1) constant.
6807084	hotspot	compiler2	AutoBox elimination is broken with compressed oops
6812721	hotspot	compiler2	Block's frequency should not be NaN
6824463	hotspot	compiler2	deopt blob is testing wrong register on 64-bit x86
6362677	hotspot	garbage_collector	Change parallel GC collector default number of parallel GC threads.
6564247	hotspot	garbage_collector	assert(bb->_end_bci + bc_len == bb[1]._bci, "unmatched bci info in basic block") fails
6577184	hotspot	garbage_collector	G1: SIGSEGV in ~BufferBlob::Interpreter after a full GC
6578152	hotspot	garbage_collector	fill_region_with_object has usability and safety issues
6604422	hotspot	garbage_collector	G1: re-use half-promoted regions

BugId	Category	Subcategory	Description
6621144	hotspot	garbage_collector	CMS: assertion failure "is_cms_thread == Thread::current()->is_ConcurrentGC_thread()"
6621728	hotspot	garbage_collector	Heap inspection should not crash in the face of C-heap exhaustion
6634032	hotspot	garbage_collector	CMS: Need CMSInitiatingPermOccupancyFraction for perm, divorcing from CMSInitiatingOccupancyFraction
6642862	hotspot	garbage_collector	Code cache allocation fails with large pages after <a href="#">6588638</a>
6652160	hotspot	garbage_collector	G1: assert(cur_used_bytes == _g1->recalculate_used()), "It should!") at g1CollectorPolicy.cpp:1425
6659981	hotspot	garbage_collector	+ParallelRefProcEnabled crashes on single core platform
6660681	hotspot	garbage_collector	Incrementally reserve pages on win server 2003 for better large page affinity
6668743	hotspot	garbage_collector	CMS: Consolidate block statistics reporting code
6672698	hotspot	garbage_collector	mangle_unused_area() should not remangle the entire heap at each collection.
6673975	hotspot	garbage_collector	Disable ZapUnusedHeapArea to reduce GC execution times of debug JVM's.
6680687	hotspot	garbage_collector	G1: reduce remembered set updating during GC pauses
6683653	hotspot	garbage_collector	Fastdebug build with UseNUMA fails assertion on amd64 at initialization.
6684395	hotspot	garbage_collector	Port NUMA-aware allocator to linux
6684579	hotspot	garbage_collector	SoftReference processing can be made more efficient
6687581	hotspot	garbage_collector	Make CMS work with compressed oops
6688799	hotspot	garbage_collector	Second fix for Guarantee failure "Unexpected dirty card found"
6694340	hotspot	garbage_collector	G1: deadlock in concurrent marking phase when stack overflow occurs
6694351	hotspot	garbage_collector	G1: add concurrent marking verbosity when -verbosegc or -XX:+PrintGCDetails are set
6697534	hotspot	garbage_collector	Premature GC and invalid lgrp selection with NUMA-aware allocator.
6710665	hotspot	garbage_collector	G1: guarantee(_cm->out_of_regions() && _cm->region_stack_empty() && _task_queue->size() == 0, ...)
6716466	hotspot	garbage_collector	par compact - remove VerifyParallelOldWithMarkSweep code
6718086	hotspot	garbage_collector	CMS assert: _concurrent_iteration_safe_limit update missed
6718283	hotspot	garbage_collector	existing uses of *_FORMAT_W() were broken by <a href="#">6521491</a>
6720130	hotspot	garbage_collector	NUMA allocator: The linux version should search for libnuma.so.1
6722113	hotspot	garbage_collector	CMS: Incorrect overflow handling during precleaning of Reference lists
6723229	hotspot	garbage_collector	NUMA allocator: assert(lgrp_num > 0, "There should be at least one locality group")
6724367	hotspot	garbage_collector	par compact could clear less young gen summary data
6725697	hotspot	garbage_collector	par compact - rename class ChunkData to RegionData
6728271	hotspot	garbage_collector	G1: Cleanup G1CollectedHeap::get_gc_alloc_regions()
6728478	hotspot	garbage_collector	Assertion at parallel promotion from young to old generation
6729594	hotspot	garbage_collector	par compact - remove unused block table implementation
6730514	hotspot	garbage_collector	assertion failure in mangling code when expanding by 0 bytes
6736341	hotspot	garbage_collector	PermGen size is insufficient for jconsole
6740923	hotspot	garbage_collector	NUMA allocator: Ensure the progress of adaptive chunk resizing

BugId	Category	Subcategory	Description
6753547	hotspot	garbage_collector	NUMA allocator: Invalid chunk size computation during adaptive resizing
6758633	hotspot	garbage_collector	G1: SEGV with GCOld on Linux
6765745	hotspot	garbage_collector	par compact - allow young gen spaces to be split
6765804	hotspot	garbage_collector	GC "dead ratios" should be unsigned
6765954	hotspot	garbage_collector	par compact - stress mode for splitting young gen spaces
6770608	hotspot	garbage_collector	G1: Mutator thread can flush barrier and satb queues during safepoint
6774607	hotspot	garbage_collector	SIGSEGV or (!is_null(v),"oop value can never be zero") assertion when running with CMS and COOPs
6778647	hotspot	garbage_collector	snap{,_policy}() should be renamed setup{,_policy}()
6779436	hotspot	garbage_collector	NUMA allocator: libnuma expects certain size of the buffer in numa_node_to_cpus()
6782457	hotspot	garbage_collector	CMS: Livelock in CompactibleFreeListSpace::block_size().
6784849	hotspot	garbage_collector	par compact - can fail when to_space is non-empty
6786188	hotspot	garbage_collector	par compact - "SplitALot" stress mode should fill to_space
6804746	hotspot	garbage_collector	G1: guarantee(variance() > -1.0,"variance should be >= 0") (due to evacuation failure)
6806226	hotspot	garbage_collector	Signed integer overflow in growable array code causes JVM crash
6810698	hotspot	garbage_collector	G1: two small bugs in the sparse remembered sets
6812428	hotspot	garbage_collector	G1: Error: assert(!ret    obj_in_cs(obj),"sanity")
6814467	hotspot	garbage_collector	G1: small fixes related to concurrent marking verbosity
6815683	hotspot	garbage_collector	G1: SEGV during marking
6816154	hotspot	garbage_collector	G1: introduce flags to enable/disable RSet updating and scanning
6817419	hotspot	garbage_collector	G1: Enable extensive verification for humongous regions
6819098	hotspot	garbage_collector	G1: reduce RSet scanning times
6820321	hotspot	garbage_collector	G1: Error: guarantee(check_nums(total, n, parts),"all seq lengths should match")
6824570	hotspot	garbage_collector	ParNew: Fix memory leak introduced in 6819891
6829013	hotspot	garbage_collector	G1: set the default value of G1VerifyConcMarkPrintReachable to false
6707485	hotspot	hybrid_interpreter	bytecodeInterpreterWithChecks.xml is malformed
6453355	hotspot	jvmti	new No_Safepoint_Verifier uses fail during GC
6667089	hotspot	jvmti	multiple redefinitions of a class break reflection
6700114	hotspot	jvmti	Assertion (_thread->get_interp_only_mode() == 1,"leaving interp only when mode not one")
6800721	hotspot	jvmti	JavaThread::jvmti_thread_state() and JvmtiThreadState::state_for() robustness
6805864	hotspot	jvmti	Problem with jvmti->redefineClasses: some methods don't get redefined
6653214	hotspot	monitoring_management	MemoryPoolMXBean.setUsageThreshold() does not support large heap sizes
6474243	hotspot	runtime_system	suspicious jvmti code that uses oop unsafely across GC point
6549844	hotspot	runtime_system	Wording problems in "An unexpected error has been detected by Java Runtime Environment"
6603919	hotspot	runtime_system	Stackwalking crash on x86 -server with Sun Studio's collect -j on
6608862	hotspot	runtime_system	segv in JvmtiEnvBase::check_for_periodic_clean_up()

BugId	Category	Subcategory	Description
6610420	hotspot	runtime_system	Debug VM crashes during monitor lock rank checking
6615981	hotspot	runtime_system	JVM class file parser incorrectly rejects class files with version < 45.2
6618726	hotspot	runtime_system	Introduce -XX:+UnlockExperimentalVMOptions flag
6618886	hotspot	runtime_system	Anonymous objects can be destructed immediately and so should not be used
6619271	hotspot	runtime_system	The -Xprintflags causes the VM to segv
6622385	hotspot	runtime_system	Accessing protected static methods
6629727	hotspot	runtime_system	assertion in set_trap_state() in methodDataOop.hpp is too strong.
6639341	hotspot	runtime_system	sometimes contended-exit event comes after contended-entered on another thread
6666698	hotspot	runtime_system	EnableBiasedLocking with BiasedLockingStartupDelay can block Watcher thread
6673124	hotspot	runtime_system	Runtime.availableProcessors / os::active_processor_count wrong if unused processor sets exist
6679422	hotspot	runtime_system	networkStream::connect() in ostream.cpp is not 64-bit clean
6679708	hotspot	runtime_system	No_Safepoint_Verifier and BacktraceBuilder have uninitialized fields
6689523	hotspot	runtime_system	max heap calculation for compressed oops is off by MaxPermSize
6689685	hotspot	runtime_system	Hotspot crash error message should include libraries version
6690122	hotspot	runtime_system	Provide a mechanism for specifying Java-level USDT-like dtrace probes
6695506	hotspot	runtime_system	JVM should accept classfiles with classfile version 51
6695819	hotspot	runtime_system	verify_oop: rax: broken oop in decode_heap_oop
6696264	hotspot	runtime_system	assert("narrow oop can never be zero") for GCBasher & ParNewGC
6699669	hotspot	runtime_system	Hotspot server leaves synchronized block with monitor in bad state
6714758	hotspot	runtime_system	hotspot: provide an entry point to the BootStrap Class loader
6716785	hotspot	runtime_system	implicit null checks not triggering with CompressedOops
6719149	hotspot	runtime_system	Wrong "java/lang/String should not be loaded yet" assertion in fastdebug bits with UseStringCache
6719981	hotspot	runtime_system	Update Hotspot Windows os_win32 for windows XP 64 bit and windows 2008
6721093	hotspot	runtime_system	-XX:AppendRatio=N not supported
6739363	hotspot	runtime_system	Xcheck_jni doesn't check native function arguments
6741004	hotspot	runtime_system	UseLargePages + UseCompressedOops breaks implicit null checking guard page
6744783	hotspot	runtime_system	HotSpot segfaults if given -XX options with an empty string argument
6755845	hotspot	runtime_system	JVM_FindClassFromBoot triggers assertions
6756528	hotspot	runtime_system	Bytecodes::special_length_at reads past end of code buffer
6760773	hotspot	runtime_system	UseCompressedOops is broken with UseParNewGC
6761092	hotspot	runtime_system	jvm crashes when CDS is enabled
6784100	hotspot	runtime_system	getTimeNanos - CAS reduction
6800586	hotspot	runtime_system	-XX:+PrintGCDateStamps is using mt-unsafe localtime function
6821003	hotspot	runtime_system	Update hotspot windows os_win32 for windows 7
6306922	hotspot	tools	Dump dump created by +HeapDumpOnOutOfMemoryError should include stack traces for stack roots
6625846	hotspot	tools	Export system property java.version via jvmstat

BugId	Category	Subcategory	Description
6667042	hotspot	tools	PrintAssembly option does not work without special plugin
6718125	hotspot	tools	SA: jmap prints negative value for MaxNewSize
6731726	hotspot	tools	jmap -permstat reports only 50-60% of permgen memory usage.
6731958	hotspot	tools	Include all the SA classes into sa-jdi.jar
6743339	hotspot	tools	Enable building sa-jdi.jar and sawindbg.dll on Windows with hotspot build
6277781	idl	serialization	Serialization of Enums over IOP is broke.
6773533	idl	transport	Regression in the IOP stack that produces either IOE or JVM crash
4457181	java	classes_2d	Unicode Combining Diacritics are not rendered
6357932	java	classes_2d	JDK 1.5 : printing is incorrectly scaled on HP 6122, 6127 Epson R200 and likely others
6491273	java	classes_2d	Print and Page dialogs are shown in the taskbar, on Windows
6635462	java	classes_2d	D3D: REGRESSION: XOR rendering is extremely slow
6658726	java	classes_2d	ColorConvertOp causes JVM to abort
6735296	java	classes_2d	Regression: Common print dialog does not show the correct page orientation
6762511	java	classes_2d	Translucency is not working on Linux using Metacity
6785424	java	classes_2d	SecurityException locating physical fonts on Windows Terminal Server
6795060	java	classes_2d	VM crash on Linux in ICU layout library when processing \u0DDD (Sinhalese)
6800846	java	classes_2d	REGRESSION: Printing quality degraded with Java 6 compared to 5.0
6836720	java	classes_2d	Update fontconfig.OpenSolaris.properties to find Korean font on 2008.11 and later.
6488834	java	classes_awt	REG: An extra icon is created on the taskbar when a native dialog is opened, Win32
6610244	java	classes_awt	modal dialog closes with fatal error if -Xcheck:jni is set
6709453	java	classes_awt	Screen flickers when a JFrame switches to fullscreen mode
6723941	java	classes_awt	Crash in sun.awt.windows.WToolkit.eventLoop()
6730447	java	classes_awt	Support for high resolution mouse wheel is still incomplete. AWT panel needs to be supported
6770457	java	classes_awt	Using ToolTips causes inactive app window to exhibit active window behavior
6776743	java	classes_awt	Lightweight components must be counted as opaque rectangles for the purposes of hw/lw mixing
6779670	java	classes_awt	Recursive procedures in the HW/LW Mixing code must traverse parent containers
6785058	java	classes_awt	Parent dn't get the focus after dialog is closed if security warning is applied
6801620	java	classes_awt	JPasswordField broken on JDK 6
6834358	java	classes_awt	Drag&Drop doesn't work for JTextComponent
6799230	java	classes_lang	Lazily load java.lang.annotation.Annotation class
6807702	java	classes_lang	Integer.valueOf cache should be configurable
6622432	java	classes_math	RFE: Performance improvements to java.math.BigDecimal
6799689	java	classes_math	Make sun.misc.FloatingDecimal.hexFloatPattern static field initialized lazily
6670408	java	classes_net	testcase panics 1.5.0_12&_14 JVM when java.net.PlainSocketImpl trying to throw an exception

BugId	Category	Subcategory	Description
6737819	java	classes_net	sun.misc.net.DefaultProxySelector doesn't use proxy setting to localhost
6739920	java	classes_net	java 6u4~ use larger C heap if there are many threads
6771432	java	classes_net	createSocket() - smpatch fails using 1.6.0_10 because of "Unconnected sockets not implemented"
6807602	java	classes_net	Increase MAX_BUFFER_LEN and MAX_HEAP_BUFFER_LEN on 64-bit Solaris and Linux
6817246	java	classes_net	Redundant call to set InetAddressCachePolicy to FOREVER if not set during initialization
6819122	java	classes_net	DefaultProxySelector should lazily initialize the Pattern object and the NonProxyInfo objects
6497734	java	classes_nio	(dc) assert "JNI handle should not be null" under Java_sun_nio_ch_FileDispatcher_preClose0()
6769976	java	classes_nio	(fc) FileChannelImpl.isAMappedBufferField not used
6799037	java	classes_nio	(fs) MappedByteBuffer.load crash with unaligned file-mapping (sol)
6643094	java	classes_security	Test on keytool -startdate forgets about December
6787645	java	classes_security	CRL validation code should permit some clock skew when checking validity of CRLs
6819110	java	classes_security	Lazily load Sun digest provider for jar verification
6495408	java	classes_swing	REGRESSION: JTabbedPane throws ArrayIndexOutOfBoundsException
6523638	java	classes_swing	NPE in BasicTableHeaderUI it incorrectly assumes presence of JTable
6550847	java	classes_swing	Action events not firing in JComboBox's selected item
6559589	java	classes_swing	Memory leak in JScrollPane.updateUI()
6625450	java	classes_swing	javax.swing.border.TitledBorder.getBaseline() doesn't throw IAE when width is < 0
6683775	java	classes_swing	Painting artifacts is seen when panel is made setOpaque(false) for a translucent window
6698013	java	classes_swing	JFileChooser can no longer navigate non-local file systems.
6729405	java	classes_swing	Java with GTK L&F freezes(slowly down repeatedly) when embedding Mozilla/XulRunner
6739756	java	classes_swing	JToolBar leaves space for non-visible items under Nimbus L&F
6741392	java	classes_swing	libmawt.so crash at Java_com_sun_java_swing_plaf_gtk_GTKEngine_nativeFinishPainting+0x4f
6760148	java	classes_swing	Certain fonts are not correctly soft wrapped when using JTextComponent.print()
6777378	java	classes_swing	NullPointerException in XPDefaultRenderer.paint()
6788484	java	classes_swing	NPE in DefaultTableCellHeaderRenderer.getColumnSortOrder() with null table
6792401	java	classes_swing	Windows LAF: ActiveWindowsIcon should not be greedy with fallback icon
6794836	java	classes_swing	BasicSliderUI throws NullPointerException when JSlider maximum is Integer.MAX_VALUE
6818229	java	classes_swing	Nimbus LookAndFeel does not paint alternate row colors
6792400	java	classes_text	Avoid loading of Normalizer resources for simple uses
6476425	java	classes_util	(fmt) java.util.Formatter.print() throws IllegalArgumentException on large BigDecimal
6544471	java	classes_util_i18n	LocaleISOData.java is incomplete and not up-to-date
6627549	java	classes_util_i18n	ISO 3166 code addition: Saint Barthelemy and Saint Martin

BugId	Category	Subcategory	Description
6834474	java	classes_util_i18n	(tz) Support tzdata2009g
4893408	java	imageio	JPEGReader throws IllegalArgumentException when setting the destination to BYTE_GRAY
6687968	java	imageio	PNGImageReader leaks native memory through anInflater.
6791502	java	imageio	IOException "Invalid icc profile" on jpeg after update from JDK5 to JDK6
6793818	java	imageio	JpegImageReader is too greedy creating color profiles
6752085	java	install	offline wrapper installers should have version tab
6768003	java	install	new_pluging files installed differer from os/bit/version
6775670	java	install	Need to send unique ping and exit gracefully when user cancels install via FilesInUse
6779997	java	install	cruft left over when uninstalling JDK in some cases
6822203	java	install	Auto-update should not specify -nocache when requesting the map and version XML files
6755037	java	localization	There are extra empty line/spacing on French and Italian rtf license files
6789931	java	localization	extra comma in resource file
6810254	java	other	Lazily instantiate the shared secret access objects
6676840	java	sunservicetags	Service Tag Creation for Windows JRE
6775029	java_deployment	configuration	Unify Plugin and Webstart JRE setting under one Java Dialog in Java Control Panel
6729238	java_deployment	deployment_toolkit	deployment toolkit mimetype is already used by mozilla - javascript changes only
6688675	java_deployment	download	IBM applet is very slow on JRE6 due to repeated JAR file downloads w/ no HTTP header 'last-modified'
6742564	java_deployment	general	Webstart hangs reporting error on extension
6785446	java_deployment	general	Java caches JAR files loaded w/URLConnection, then denies access to the cache
6791245	java_deployment	general	Tune handling of LAP files
6791250	java_deployment	general	Tune cache index files
6814874	java_deployment	general	StringQuoteUtil can throw NPE
6827175	java_deployment	general	fix for 6704074 breaks application unnecessarily
6708508	java_deployment	kernel	LogManager.readConfiguration() throws an exception
6793694	java_deployment	kernel	Applications using JPEG images cannot be executed by kernel JRE.
6804925	java_deployment	networking	JNLPCachedJarURLConnection.getContentLength() may cause unneeded network requests for cached jars
6742114	java_deployment	security	Add black list support to JDK
6809110	java_deployment	security	JRE behavior unexpected when pre-trusting certificates (user or system)
6789865	java_plugin	misc	Java Plugin isInNet implementation returns incorrect value in some cases
6827651	java_plugin	misc	With 1.6.0_13 JNLP files cannot specify to run with j2se version 1.4*
6719011	java_plugin	ocx	Applet isn't started when it's outside of the visible area of a browser window
6769734	java_plugin	plugin2	AppletContext.showStatus fails to work on IE7 under some scenarios
6776473	java_plugin	plugin2	JavaScript calling Java timing issue
6784299	java_plugin	plugin2	All-permissions jnlp applet execution bails out if user cancel certificate dialog

BugId	Category	Subcategory	Description
6786180	java_plugin	plugin2	Plugin2 does not honor "mandatory" flag deployment.config for a system level configuration
6786860	java_plugin	plugin2	plugin2 : fairly large applet exits with "JVM instance exiting due to no heartbeat reply"
6788906	java_plugin	plugin2	Applet is freezed when JSObject.getWindow()/call() is used with a large amount of string data
6789085	java_plugin	plugin2	Applet Deadlock During Initialization
6804500	java_plugin	plugin2	A web page fails to load with JRE 6u11 and 6u12 with FF3 on windows
6810893	java_plugin	plugin2	JVM args always mismatch on Vista
6818125	java_plugin	plugin2	plugin2 : needs better performance data logging
6824647	java_plugin	plugin2	Document.createElementNS() is not working with Plugin2
6830676	java_plugin	plugin2	AppletContext.showDocument(URL u, String target) does not work with update 13
6713144	javawebstart	app_mgr	PIT:Double entries in Java Cache Viewer/Applications for javaws -import install_demo.jnlp
6537987	javawebstart	general	improve javaws.exe native parser to handle <java> element
6719502	javawebstart	general	NullPointerException while uninstalling appln from system cache and the user cache is readonly
6764455	javawebstart	general	Avoid network requests if everything is cached and JNLP has <update check="background">
6783308	javawebstart	general	Browser certificates should not be loaded unless needed
6814234	javawebstart	general	jnlp_file/appletDesc/index.html#misc fails starting from jdk 6u13 b02
6809125	javawebstart	install	Desktop short-cut doesn't work for java application after installation of 6u12
6649371	javawebstart	jnlp_api	JNLP Association (per-user) does not work in Vista
6786213	javawebstart	jnlp_file	Regression : ico files specified for shortcuts in jnlp files are not getting downloaded in 6u12b02
6818278	javawebstart	jnlp_file	sunmc console when started with javaws does not communicate with the firewall port range
6807187	javawebstart	maintenance	Improve performance monitoring in javaws
6803688	jax-ws	other	Integrate latest JAX-WS (2.1.6) in to JDK 6u14
6790700	jax-ws	server-runtime	When WS messages contain nil elements the received payloads are not well formed
6660724	jaxp	dom	Lock Contention in SAX2DOM()
6506304	jaxp	other	java.net.MalformedURLException: unknown protocol: c
6767959	jaxp	other	Catalog resolver transient memory usage high
6518733	jaxp	sax	Regression: SAX not correctly handling attributes with newlines
6536111	jaxp	sax	SAX parser throws OutOfMemoryError
6809409	jaxp	sax	jaxp Issue 56 SAXException doesn't do the exception chaining properly
6498139	jaxp	stax	Buffer allocations in SJSXP introduce large constant factors
6467424	jaxp	validation	javax.xml.validation.Validator does not augment.
6708840	jaxp	validation	JAXP validation throws null pointer exception with StAXSource
6583301	jaxp	xslt	Reduce allocation overhead in JAXP XML XSLT translation
6652519	jaxp	xslt	JAXP issue 48 : Performance Issue with Xalan Transformer

BugId	Category	Subcategory	Description
6682459	jaxp	xslt	Lock contention due to debug print
4898461	jce	pkcs11_csp	Support for ECB and CBC/PKCS5Padding
4898484	jce	pkcs11_csp	Cipher should optimize cases where only one buffer is a DirectBuffer
6725987	jets	other	ORB.destroy() does not cleanup correctly and ORB object instances are not garbage collected.
6796140	jets	other	Further ORB changes after <a href="#">6725987</a>
6714797	jndi	cosnaming	InitialContext.close does not close NIO socket connections
6748156	jndi	ldap	add an new JNDI property to control the boolean flag WaitForReply (JDK5)

### Java VisualVM Specific Bug Fixes

Issue Number	Description
26	Options window lacking some functionality
82	Improve Visual GC integration into VisualVM
128	NPE while getting information from remote JVM
133	Liveness comparison tab : Go to source option is useless
131	Wrong dialog message on exit
146	No tooltips for buttons in Visual GC tab
147	no Help information available
170	Add Compare Memory Snapshots action to context menu
184	SysTray: doubleclick on tray icon doesn't work for JDK 7
186	Add the CPU usage from JConsole
188	MBean graphs don't resize well
191	MBeans Plugin: sorting attribute values while editing causes
195	Do not rely on .hprof extension
196	allow to open application with commandline switch
197	allow to open heap dump and snapshots from commandline
201	Cannot profile different JDK than the VisualVM is running
204	Allow to copy/save information in About dialog
209	UI frozen due to connection delay -- AWT was thread blocked.
210	Improve JDK 7 detection
211	DataSourceDescriptor.setPreferredPosition() breaks Applicati
212	Launcher changes current-working-directory
216	No profiling results available
218	Add Table view to Threads tab
222	Selection not updated for right click on windows.
225	API for adding applications defined by JMX connection
226	Commandline option for adding applications defined by JMX co
227	Incorrect display name of coredump

Issue Number	Description
237	Utils.getFilteredSet Concurrent Modifications Exception
240	NetBeans 7.0 dev not recognized
242	CPU percentage on CPU graph is wrong for multicore machines
244	Incomplete system properties for coredump
249	'UnsupportedOperationException: DataSource already in reposi
258	[GTK] Application title disappears when the application fini
261	Add versioning information to visualvm.exe
86777	Focus lost when going back to heap dump view
121805	[heapwalker] toggling toolbar buttons works wrong
124286	NullPointerException at org.netbeans.lib.profiler.ui.charts.
131730	NPE of Find in memory results
144821	Incomplete system properties



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