

#	Source		Pattern	
	Original	Modified	Original	Modified
1	<pre> LeafQueue leafQueue = ...; -synchronized (leafQueue) {      57 LOC  } </pre>	<pre> LeafQueue leafQueue = ...; +try { +  leafQueue.getReadLock().lock();     57 LOC +} finally { +  leafQueue.getReadLock().unlock(); } </pre>	<pre> synchronized (obj) {     ... } </pre>	<pre> try {     lock.lock();     ... } finally {     lock.unlock(); } </pre>
2	<pre> -Lock readlock = -  classLoaderContainerMapLock.readLock(); -try { -  readlock.lock(); -  result = classLoaderContainerMap.get(tccl); -} finally { -  readlock.unlock(); -} -if (result == null) { -  Lock writelock = -  classLoaderContainerMapLock.writeLock(); -  try { -    writeLock.lock(); -    result = classLoaderContainerMap.get(tccl); -    if (result == null) { -      result = new ServerContainerImpl(); -      classLoaderContainerMap.put(tccl,result); -    } -  } finally { -    writeLock.unlock(); -  } } </pre>	<pre> +synchronized (classLoaderContainerMapLock) {      result = classLoaderContainerMap.get(tccl);     if (result == null) { -      result = new ServerContainerImpl(); -      classLoaderContainerMap.put(tccl,result);     } } </pre>	<pre> try {     readLock.lock();     read operations } finally {     readLock.unlock(); } try {     writeLock.lock();     write operations } finally {     writeLock.unlock(); } </pre>	<pre> synchronized {     all operations } </pre>
3	<pre> private static final Object lock = new     Object(); private Map&lt;...&gt; count = new HashMap&lt;&gt;(); -synchronized (count) { -  Pair&lt;Job, String&gt; key = -    new ImmutablePair&lt;&gt;(jobID, name);  -  if (count.containsKey(key)) { -    count.put(key, count.get(key) + 1); -  } else { -    count.put(key, 1); -  } } </pre>	<pre> private static final Object lock = new     Object(); private Map&lt;...&gt; count = new HashMap&lt;&gt;(); +synchronized(lock) +  if (!jobCounts.containsKey(jobID)) { +    jobCounts.put(jobID, new HashMap&lt;&gt;()); +  } +  Map&lt;String, Integer&gt; count = +    jobCounts.get(jobID); +  if (count.containsKey(name)) { +    count.put(name, count.get(name) + 1); +  } else { +    count.put(name, 1); +  } } </pre>	<pre> synchronized (obj1) {     ... } </pre>	<pre> synchronized (obj2) {     ... } </pre>
4	<pre> -public boolean isAccessed() {     return this.accessed; } </pre>	<pre> +public synchronized boolean isAccessed() {     return this.accessed; } </pre>	<pre> void foo() {     ... } </pre>	<pre> synchronized void foo() {     ... } </pre>
5	<pre> -synchronized (this.channelLookup) { -  try{ -    lookupResponse = AkkaUtils. &lt;JobManagerMessages.ConnectionInformation&gt;ask(ch annelLookup, new JobManagerMessages.LookupConnectionInformation(c onnectionInfo, jobID, sourceChannelID), timeout).response(); -  }catch(IOException ioe) { -    throw ioe; -  } -} </pre>	<pre> lookupResponse = AkkaUtils. &lt;JobManagerMessages.ConnectionInformation&gt;ask( channelLookup, new JobManagerMessages.LookupConnectionInformation ( connectionInfo, jobID, sourceChannelID), timeout).response(); </pre>	<pre> synchronized (obj) {     ... } </pre>	<pre> ... </pre>
6	<pre> synchronized (buffers) {     if (...) { -      if (spillWriter != null) { -        spillWriter.close(); -      } -      isFinished = true;     } } </pre>	<pre> synchronized (buffers) {     if (...) {         isFinished = true;     } } +if (spillWriter != null) { +  spillWriter.close(); +} </pre>	<pre> synchronized (obj) {     statements1     statements2 } </pre>	<pre> synchronized (obj) {     statements2 } statements1 </pre>
7	<pre> -public synchronized void reset() {      map.clear();     members = EMPTY_MEMBERS;  } </pre>	<pre> +private final Object membersLock = new +  Object(); +public void reset() { +  synchronized (membersLock) { -    map.clear(); -    members = EMPTY_MEMBERS; +  } } </pre>	<pre> synchronized void foo() {     ... } </pre>	<pre> void foo() {     synchronized (obj) {         ...     } } </pre>