

# Heap Space Memory Management How to guide

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## Overview

**NOTE: This article is only relevant to version 2 appliances. Please do not refer to it when trying to manage memory in later appliances. Please contact [supportdesk@swivelsecure.com](mailto:supportdesk@swivelsecure.com) for further information**

This document outlines how to configure how much memory is used within Apache Tomcat. It may be useful when running multiple instances of Swivel.

## Prerequisites

Swivel 3.x

Apache Tomcat

## PINsafe Appliance

Login to the Command line through the [CMI](#) and verify the memory being used with the command *top*

The heap space value should be set already, but you can verify and if necessary set the values, see [WinSCP How To Guide](#).

To increase the Heap Space of a Swivel appliance you need to edit catalina.sh in the /usr/local/apache-tomcat-5.5.20/bin folder Add the line at the start of the file after the comments

```
JAVA_OPTS="$JAVA_OPTS "-Xmx192m
```

You should be able to keep adding heap. We have tested over half a Gb of heap (-Xmx512m)

## Additional Commands

### Memory Usage

```
cat /proc/meminfo
```

### Freeing up Memory Cache

frees up page cache, dentries and inodes:

```
sh -c "sync; echo 3 > /proc/sys/vm/drop_caches"
```

## Testing

## Known Issues

## Troubleshooting