# Heap Space Memory Management How to guide

## Contents

## 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 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 Usuage

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