

## Instructions for MacOS Manual Deployment of SAP GUI

### SAP GUI Installation: Software Prerequisites

### Prepare the Mac OS by installing the following software

#### HARDWARE

- Hardware according to the requirements of the OS X version.

#### JAVA SOFTWARE

- [Oracle Java SE 8 \(update 40 or newer\)](#) or [SapMachine 11](#) and [OpenJFX 11](#)  
To run SAP GUI for Java as stand alone application, the installation of the JDK is required.

- **Recommended** (tested) approach is to use **Oracle Java SE 8** (v.40 or newer) which has the JavaFX SKD bundled and no additional setup is required if this version is the default version on the Mac OS  
<https://www.oracle.com/technetwork/java/javase/downloads/index.html>

- If user prefer to run Java 11, please follow the instructions below

#### Installation Instructions for SapMachine 11 + OpenJFX 11

- Download versions 11 LTS (for both) from the links above
- Just unpack the Java VM distribution package and the OpenJFX distribution package below  
`/Library/Java/JavaVirtualMachines`
- To test/verify, use the command:  
`/usr/libexec/java_home -V`
- Then make sure that this is the default Java version or set the path to the JDK bundle with the OS X user defaults system for domain `com.sap.platin` and key `JDKPATH`.
- The module path to load the JavaFX modules will then be  
`/Library/Java/JavaVirtualMachines/javafx-sdk-11/lib`

#### OPERATING SYSTEM VERSION

- macOS Sierra 10.12
- macOS High Sierra 10.13.2 and newer

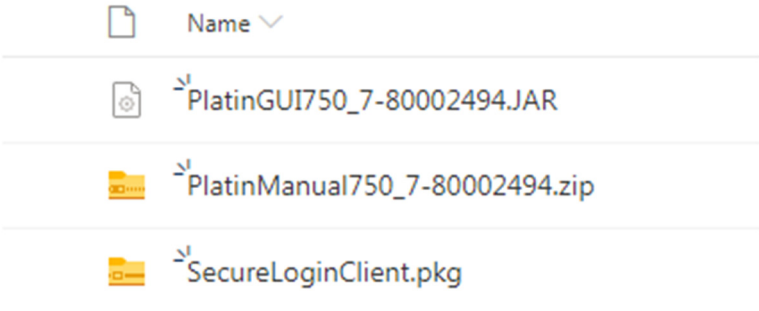
With macOS High Sierra older than 10.13.2 there is an issue with the Mac menus.

- macOS Mojave 10.14

However, there are some known issues (check at the end of this document).

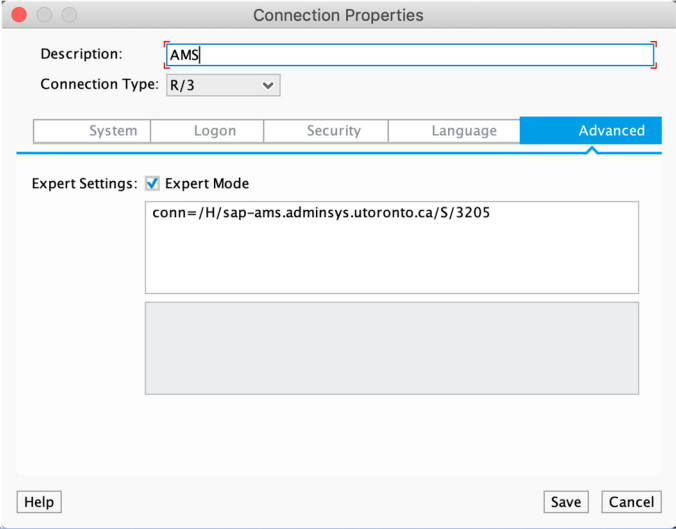
- It might run fine on older versions as well, but this is neither tested nor officially supported.

#### OTHER SOFTWARE

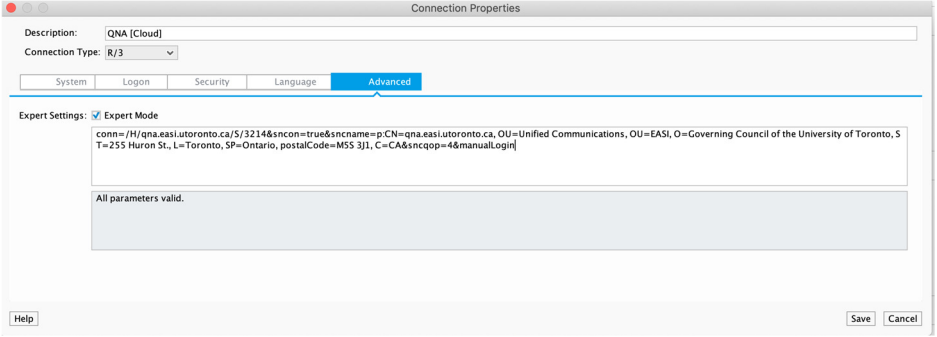
	<ul style="list-style-type: none"> <li>Download and install the SafeNet Authentication client and CISCO Anyconnect VPN  <a href="https://secure.sis.utoronto.ca/">https://secure.sis.utoronto.ca/</a></li> </ul>
<p><b>SAP GUI for Java Installation</b></p>	<p>Download the SAPGUI for Java software  <a href="https://utoronto.sharepoint.com/:f:/s/its-ams-software/Eh05mM9nzNhNn0dIQD0aAZQBO6RoERkIFkhkys33sC_FAQ?e=swRh2M">https://utoronto.sharepoint.com/:f:/s/its-ams-software/Eh05mM9nzNhNn0dIQD0aAZQBO6RoERkIFkhkys33sC_FAQ?e=swRh2M</a></p> <p>SAP &gt; SAP GUI for MacOS</p>  <p>1. Extract the ZIP file and run the PlatinumGUI installer (for example the PlatinGUI750_7-80002494.JAR file)</p> <p>2. Extract and install the <b>SAP Secure Login Client</b> Package called "SecureLoginClient.pkg"</p>
<p><b>Adding New Systems</b></p> <p>Following the guide provided above, please repeat the steps 9 to 12 for the required systems from the following list</p>	<p>1. Launch SAPGUI  <i>Local Mac Root Drive (example: Macintosh HD) ▶ Applications ▶ SAP Clients ▶ SAPGUI 7.50rev7</i></p> <p>2. In the SAP GUI for Java window that opens, if there are no connections listed, Click the <b>New icon</b> (a page with a + at the top right) and select tab <b>Advanced</b>. Check off <b>Expert mode</b> and create the required connections:</p> <p>3. Examples:</p> <ul style="list-style-type: none"> <li>a. Description: AMS</li> <li>b. conn=/H/sap-ams.adminsys.utoronto.ca/S/3205</li> </ul>

	<p>c. Description: AMS [Cloud]</p> <p>d. conn=/H/ams.easi.utoronto.ca/S/3205&amp;sncon=true&amp;sncname=p:CN=ams.easi.utoronto.ca, OU=Unified Communications, OU=EASI, O=Governing Council of the University of Toronto, ST=255 Huron St., L=Toronto, SP=Ontario, postalCode=M5S 3J1, C=CA&amp;sncqop=4&amp;&gt;manualLogin</p> <p>4. Repeat for all systems (listed below in this guide)</p>
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**Example screenshot for SAP System AMS**



**Example screenshot for SAP System QNA [Cloud] – with SNC enabled**



Note that the GUI Entry will have a “Lock” displayed next to its name

QNA  
 QNA [Cloud]

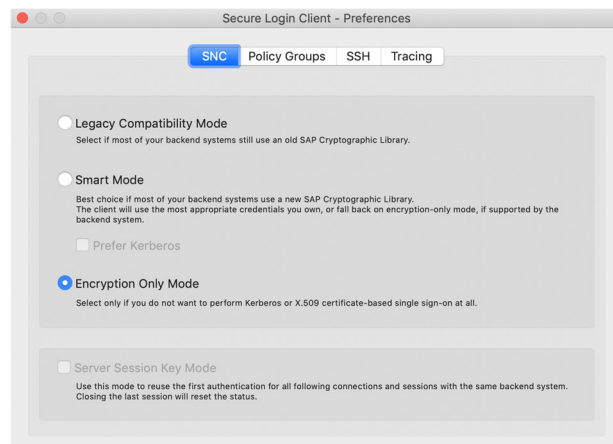
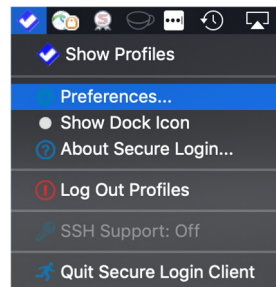
**Additional Systems List**

Please use the table at the end of this document, which contain all connection strings

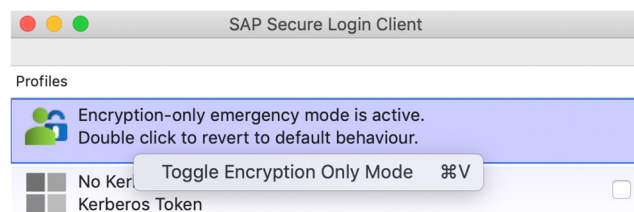
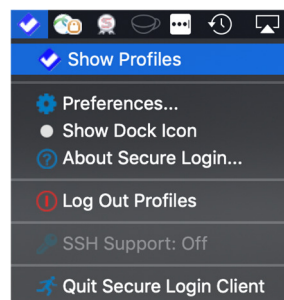
**Troubleshooting**

In case of SNC connection does not open, please check if any of the following steps is applicable

1. Check if SAP Secure Client is running in Encryption Only Mode (Menu bar > Preferences > SNC tab)



2. Check if SAP Secure Client Profile "Encryption-only mode". (Menu bar > Show Profiles > Select "Encryption-only Profile")  
If not, double-click to toggle the modes



3. SAP Secure Client has to start **prior** SAP Gui for Java.  
If not, completely close SAP Gui for Java and reopen in **after** SAP Secure Client is already running

## Known Issues

RELEASE 7.50 REV 7 (JULY 19, 2019)

The following problems are already known and are currently being investigated:

- Since SAP GUI for Java is not yet supporting Gatekeeper, it might be required to explicitly exempt it from Gatekeeper in order to be allowed to launch the SAP GUI for Java application. Please refer to [Apple's knowledge base article referring Gatekeeper for details](#).
- **Browser Only: Digital Certificate Only Valid Until July 09, 2020:** The digital certificate used to sign the browser applet has a limited validity. When running in the browser, choose 'Grant always' in the security dialog before that date and it will continue to run after the expiration date. Standalone usage is not affected at all. Please refer also to the SAP Note 501229 and [Technical Background, Signed Applets](#).
- **Browser Only: "Incompatible Certificates":** Running a newer version installed on the client than that provided on the web server does not work if the certificates of the two versions are not exactly the same. 7.40 versions have an older certificate. Therefore having a 7.40 version on the web server and a 7.50 version installed on the client means that the newer version will not be permitted to run as an applet from that web server. This means that for running a 7.50 version as an applet, it is required to have a 7.50 version on the Web Server.
- **HTML Control:**
  - Text input fields in HTML forms appear wider than in the SAPGUI for Windows. This is because the average character width is calculated differently. This may cause some transactions to look confused (for example, SE80), but it does not have an impact on the functionality.
  - The clipboard content in the context of inputfields in html forms and in the context outside the html control are not in sync. This has been [reported to Oracle and in the meantime, a fix is available as part of Java 8 update 77 or newer](#).
  - Usage of the HTML Control in some Java runtime versions seems to randomly trigger a crash of the whole process caused by a bug in the native part of the JavaFX layer part of the JRE. This has been reported to Oracle and is expected to be fixed for 64-bit in Java 8 update 161.
  - OS X only:
    - When running as an applet in Safari, instantiating the html control fails. This has been [reported to Oracle and in the meantime, the fix is included in Java 8 update 40 or newer](#). However, DropDown ListBoxes in html forms can't be used by mouse.
    - On Macs with Retina Display, it can happen, that the html control displays the some content twice. This has been [reported to Oracle and in the meantime, a fix is available as part of Java 8 update 40 or newer](#).
  - Linux only: DropDown ListBoxes in html forms can't be used by mouse. This is a known issue in Java 8 and is fixed in Java 8 update 40.
- **Image Control:**
  - Cannot handle bitmap files (BMP) with a color resolution of 8 bits using RLE compression.
- **Chart Control**
  - The print and print preview are not yet fully functional.

- Saving changes of customization data is incomplete.
- **Unix Only: X colors** are wrong (green/blue) when using an X-Server with a color depth > 8 bit and a color byte order different from the client platform (this is a Java Runtime bug occurring on most Unix platforms).
- **Linux only:**
  - When SUSE Linux Enterprise Server 11 64-bit version is running as VMWare guest OS, SAP GUI for Java crashes as soon as the first HTML Control is called. This is caused by incompatibilities in the underlying native rendering libraries. As a workaround, a 32-bit Java runtime can be used to run SAP GUI for Java, Please be informed, that according to [Oracle's support statements](#), [VMware is not a certified hypervisor](#).
  - There is an issue with automatic scrolling while dragging, which is caused by a bug in the Java runtime. More information can be found in the [bug report at Oracle](#).
- **OS X only:**
  - Using the Apple Magic Mouse, it can happen that double clicks sometimes are not handled. There are still discussions, whether this is an issue in the Java runtime or in macOS.
  - On macOS High Sierra up to 10.13.1, there is an issue with the Mac menus when running in a different language than English. Please use 10.13.2 or newer.
  - On macOS Mojave the window titlebars are displayed in light appearance also when Dark Mode has been activated. Running on Java 11, wrong fonts might be used in Html Control.
  - When running the installer or SAP GUI for Java on OS X with Turkish language, there is a problem related to launching external processes. This is a [known issue in Java 8 and is fixed in Java 8 update 40](#).
  - Thai glyphs in some cases are not rendered correctly. This has been [reported to Oracle but there is no information yet, when this is going to be solved](#). As a workaround, the fonts should be set to [Monospaced or Ayuthaya](#).
  - The implementation for running applets in the browser is not mature and has various issues. Unless the scenario enforces usage of applets, it is recommended to run SAP GUI for Java on OS X as a stand-alone application for now.
  - Third party software using accessibility API can cause the Java VM to crash with a SIGSEGV/SIGABRT in AppKit-Thread because the software is calling some API in the JDK which causes the crash. There are various [bug reports related to this issue at Oracle and is fixed in Java 8 update 60](#). For latest news and possible workarounds, please refer to [SAP note 2134851](#).

### SAP GUI for Java Connection strings (Advanced mode)

Description	SAP Gui for Java Connection Entry ("Conn=" value)
AMS	conn=/H/sap-ams.adminsys.utoronto.ca/S/3205
AMS [Cloud]	conn=/H/ams.easi.utoronto.ca/S/3205&sncon=true&sncname=p:CN=ams.easi.utoronto.ca, OU=Unified Communications, OU=EASI, O=Governing Council of the University of Toronto, ST=255

	Huron St., L=Toronto, SP=Ontario, postalCode=M5S 3J1, C=CA&sncqop=4&>manualLogin
ATC	conn=/H/sap-atc.adminsys.utoronto.ca/S/3226
ATC [Cloud]	conn=/H/atc.easi.utoronto.ca/S/3226&sncon=true&sncname=p:CN=atc.easi.utoronto.ca, OU=Unified Communications, OU=EASI, O=Governing Council of the University of Toronto, ST=255 Huron St., L=Toronto, SP=Ontario, postalCode=M5S 3J1, C=CA&sncqop=4&>manualLogin
DBW	conn=/H/sap-dbw.adminsys.utoronto.ca/S/3258
DBW [Cloud]	conn=/H/dbw.easi.utoronto.ca/S/3258&sncon=true&sncname=p:CN=dbw.easi.utoronto.ca, OU=Unified Communications, OU=EASI, O=Governing Council of the University of Toronto, ST=255 Huron St., L=Toronto, SP=Ontario, postalCode=M5S 3J1, C=CA&sncqop=4&>manualLogin
DFM	conn=/H/sap-dfm.adminsys.utoronto.ca/S/3268
DFM [Cloud]	conn=/H/dfm.easi.utoronto.ca/S/3268&sncon=true&sncname=p:CN=dfm.easi.utoronto.ca, OU=Unified Communications, OU=EASI, O=Governing Council of the University of Toronto, ST=255 Huron St., L=Toronto, SP=Ontario, postalCode=M5S 3J1, C=CA&sncqop=4&>manualLogin
DGW	conn=/H/sap-dgw.adminsys.utoronto.ca/S/3254
DGW [Cloud]	conn=/H/dgw.easi.utoronto.ca/S/3254&sncon=true&sncname=p:CN=dgw.easi.utoronto.ca, OU=Unified Communications, OU=EASI, O=Governing Council of the University of Toronto, ST=255 Huron St., L=Toronto, SP=Ontario, postalCode=M5S 3J1, C=CA&sncqop=4&>manualLogin
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HRS	conn=/H/sap-hrs.adminsys.utoronto.ca/S/3203
HRS [Cloud]	conn=/H/hrs.easi.utoronto.ca/S/3203&sncon=true&sncname=p:CN=hrs.easi.utoronto.ca, OU=Unified Communications, OU=EASI, O=Governing Council of the University of Toronto, ST=255 Huron St., L=Toronto, SP=Ontario, postalCode=M5S 3J1, C=CA&sncqop=4&>manualLogin
LRN	conn=/H/sap-lrn.adminsys.utoronto.ca/S/3211
LRN [Cloud]	conn=/H/lrn.easi.utoronto.ca/S/3211&sncon=true&sncname=p:CN=lrn.easi.utoronto.ca, OU=Unified Communications, OU=EASI, O=Governing Council of the University of Toronto, ST=255 Huron St., L=Toronto, SP=Ontario, postalCode=M5S 3J1, C=CA&sncqop=4&>manualLogin
PBW	conn=/H/sap-pbw.adminsys.utoronto.ca/S/3208
PBW [Cloud]	conn=/H/pbw.easi.utoronto.ca/S/3208&sncon=true&sncname=p:CN=pbw.easi.utoronto.ca, OU=Unified Communications, OU=EASI, O=Governing Council of the University of Toronto, ST=255

	Huron St., L=Toronto, SP=Ontario, postalCode=M5S 3J1, C=CA&sncqop=4&>manualLogin
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PFM [Cloud]	conn=/H/pfm.easi.utoronto.ca/S/3276&sncn=true&sncname=p:CN=pfm.easi.utoronto.ca, OU=Unified Communications, OU=EASI, O=Governing Council of the University of Toronto, ST=255 Huron St., L=Toronto, SP=Ontario, postalCode=M5S 3J1, C=CA&sncqop=4&>manualLogin
PGW	conn=/H/sap-pgw.adminsys.utoronto.ca/S/3250
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PPA [Cloud]	conn=/H/ppa.easi.utoronto.ca/S/3246&sncn=true&sncname=p:CN=ppa.easi.utoronto.ca, OU=Unified Communications, OU=EASI, O=Governing Council of the University of Toronto, ST=255 Huron St., L=Toronto, SP=Ontario, postalCode=M5S 3J1, C=CA&sncqop=4&>manualLogin
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QGW	conn=/H/sap-qgw.adminsys.utoronto.ca/S/3252
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RPT	conn=/H/sap-rpt.adminsys.utoronto.ca/S/3210
RPT [Cloud]	conn=/H/rpt.easi.utoronto.ca/S/3210&sncn=true&sncname=p:CN=rpt.easi.utoronto.ca, OU=Unified Communications, OU=EASI, O=Governing Council of the University of Toronto, ST=255 Huron St., L=Toronto, SP=Ontario, postalCode=M5S 3J1, C=CA&sncqop=4&>manualLogin
SGW	conn=/H/sap-sgw.adminsys.utoronto.ca/S/3228
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SRQ [Cloud]	conn=/H/srq.easi.utoronto.ca/S/3243&sncon=true&sncname=p:CN=srq.easi.utoronto.ca, OU=Unified Communications, OU=EASI, O=Governing Council of the University of Toronto, ST=255 Huron St., L=Toronto, SP=Ontario, postalCode=M5S 3J1, C=CA&snccqop=4&manualLogin
SRR	conn=/H/sap-srr.adminsys.utoronto.ca/S/3241
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TNG	conn=/H/sap-tng.adminsys.utoronto.ca/S/3209
TNG [Cloud]	conn=/H/tng.easi.utoronto.ca/S/3209&sncon=true&sncname=p:CN=tng.easi.utoronto.ca, OU=Unified Communications, OU=EASI, O=Governing Council of the University of Toronto, ST=255 Huron St., L=Toronto, SP=Ontario, postalCode=M5S 3J1, C=CA&snccqop=4&manualLogin