Department of Veterans Affairs

Automated Surgical Risk Calculator (ASRC)

Installation Guide



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| 09/03/2015 | 0.05 | Updated post installation instructions for the VistA Patch Installation section. | J. Swesky | S. Ambrose | 09/07/2015 |
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# Introduction

This document provides installation and setup steps for the Prototype Automated Surgical Risk Calculator (ASRC). It includes steps for both the Java-based Web Application and the supporting Veterans Health Information Systems and Technology Architecture (VistA) patch. It is intended for software developers and system administrators.

## Additional Resources

The complete ASRC documentation is provided in the project’s GitHub repository (<https://github.com/VHAINNOVATIONS/ASRCM>).

# Pre-requisites

The ASRC requires both an Application Server to run the Java Web Application and an instance of VistA. The pre-requisites for both servers are included below.

## Application Server Pre-requisites

The Application Server requires a Windows 2012 server with 2 Gigabytes (GiB) of free space available on the C: drive.

The ASRC installation requires Administrator privileges on the Windows Server.

## VistA Server Pre-requisites

The VistA Server requires a Linux server with a VistA database current with all nationally released VistA patches. The server requires VistALink and an active Remote Procedure Call (RPC) Broker port.

The ASRC Kernel Installation and Distribution System (KIDS) build installation requires user access to the KIDS menu options.

# Application Server Installation

## Pre-installation Tasks

### Installation Parameters Table

The following table contains installation parameters referenced throughout this document. Please fill it out before performing the installation.

Table 1 - Installation Parameters Table

| Parameter | Example Value | Actual Value |
| --- | --- | --- |
| Installation Files Directory | C:\Users\jsmith\Downloads\ASRCM‑0.1 |  |
| Server Domain Name Service (DNS) Name | asrcdev.myhost.com |  |

### Install Microsoft .NET Framework 3.5

If the Microsoft .NET Framework 3.5 is not installed on the Windows Application Server, install it using standard Microsoft tools (e.g., Server Manager Roles and Features).

### Download Installation Files

Please follow the below steps to download all necessary files for the installation.

1. Download the desired release zip file from the project’s GitHub repository (<https://github.com/VHAINNOVATIONS/ASRCM/releases/>).
2. Extract the zip file to the *Installation Files Directory* from the Installation Parameters Table.
3. Download the latest Windows x64 Java SE Development Kit 7 from Oracle (<http://www.oracle.com/technetwork/java/javase/downloads/jdk7-downloads-1880260.html>) and place it in the install directory within the *Installation Files Directory*.
4. Download the Glassfish 3.1.2.2 installer from Oracle (<http://dlc.sun.com.edgesuite.net/glassfish/3.1.2.2/release/glassfish-3.1.2.2-web-windows.exe>) and place it in the install directory within the *Installation Files Directory*.
5. Download the MySQL 5.6.21 installer from Oracle (<http://dev.mysql.com/downloads/file.php?id=454044>) and place it in the install directory within the *Installation Files Directory*.

### Create Deployment-Specific Configuration Files

The installer uses two files that are specific to a particular deployment of the ASRC:

* Gov.va.med.vistalink.connectorConfig.xml, the VistALink configuration file. See the VistALink System Management Guide for guidance on creating this file.
* Insert\_initial\_models.sql, a Structured Query Language (SQL) script to populate the database with initial risk models. A blank file is provided with the release for convenience, but populating it is beyond the scope of this guide.

Place these files in the *Installation Files Directory* under install\resources.

### Build srcalc.war

Refer to the Developer Guide for instructions on assembling the Web Application Archive, srcalc.war. Transfer srcalc.war to the install directory within the *Installation Files Directory*.

## Installation Procedure

Please follow the below steps to install the ASRC on the Windows Application Server.

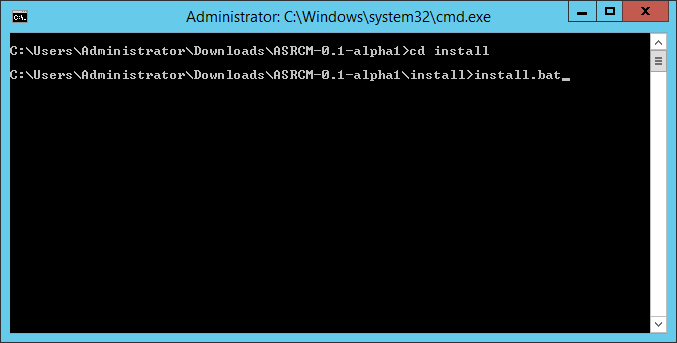
1. Run the Java SE Development Kit installer downloaded in Section 3.1.3 above. You may accept all the default configuration options.
2. Add a system Environment Javariable JAVA\_HOME pointing to the Java Development Kit (JDK) installation directory (e.g., C:\Program Files\Java\jdk1.7.0\_40).
3. Run the MySQL installer manually before proceeding. If the installer is not run before the install.bat file is run, the MySQL installer will fail during the automatic installation.
4. Open an Administrator Command Prompt in the *Installation Files Directory*.
5. Change directory to the install directory.
6. Run install.bat.  
   

Figure 1 - Install.bat

1. Wait for the installer to complete. Installation is automatic.
2. Optional: the installer creates a Glassfish Administrative user called “admin” with a password of “AsrcAdminGf”. If desired, you may change this password now using the admin console running at <http://localhost:4848/>.
3. If necessary, create a Windows Firewall rule to allow inbound traffic on port 80.

## Post-installation

After installation, open a web browser and browse to <http://[servername]/srcalc/>, replacing [server name] with the *Server DNS Name* from the Installation Parameters Table. If the installation has succeeded, you should be presented with a login screen to the ASRC.

## Uninstall or Roll-back

As a brand-new prototype application, no roll-back procedure is applicable.

To uninstall the application, perform the following steps:

1. Run the following command: C:\asrc\glassfish3\uninstall.exe -j "C:\Program Files\Java\jdk1.7.0\_71"
2. Uninstall *MySQL Server 5.6* and *MySQL Connector J* using Windows *Programs and Features*.

# VistA Patch Installation

## Pre-Installation Instructions

1. This patch may be installed during normal business hours.
2. This patch may be installed with the users on the system.
3. This patch should take less than five (5) minutes to install.

## Installation Instructions

1. Transfer the host file for ZZASRC\*1.0\*1 to desired VistA server.
2. From the KIDS Menu in VistA, select the Installation Menu. From this menu, select Load a Distribution and enter the path and host file name to load.
3. From the Installation Menu, you may elect to use the following options. When prompted for the INSTALL enter the patch ZZASRC\*1.0\*1 :
4. Backup a Transport Global - This option will create a backup message of any routines exported with this patch. It will not backup any other changes such as DDs or templates.
5. Compare Transport Global to Current System - This option will allow you to view all changes that will be made when this patch is installed. It compares all components of this patch (routines, DDs, templates, etc.).
6. Verify Checksums in Transport Global - This option will allow you to ensure the integrity of the routines that are in the transport global.
7. From the Installation Menu, select the Install Package(s) option and choose the patch to install.
8. If prompted 'Want KIDS to Rebuild Menu Trees Upon Completion of Install? NO//' Answer NO.
9. When prompted 'Want KIDS to INHIBIT LOGONs during the install? NO//' Answer NO.
10. When prompted 'Want to DISABLE Scheduled Options, Menu Options, and Protocols? NO//’ Answer NO.
11. If prompted "Delay Install (Minutes): (0 - 60): 0// respond 0.

## Post-Installation Instructions

1. The new menu option SR ASRC (ASRC RPC MENU) needs to be added as a Secondary Menu Option in the New Person file (#200) for all users who will need to assess to the ASRC. This can be granted within the “Edit an Existing User” option under the “User Management” menu.

Note: Being that all Computerized Patient Record System (CPRS) users are expected to have access to the ASRC Tool once introduced to production, the production version of the Surgery VistA patch containing the VistA portion of the ASRC software can be designed with a post-installation routine that will automatically added the SR ASRC menu as a Secondary Menu option to all existing users who already have the OR CPRS Graphical User Interface (GUI) CHART menu option set as either their Primary or Secondary Menu option. After the release and installation of the ASRC VistA patch, any new CPRS user added to the New Person file would have to have the SR ASRC menu manually added as their Secondary Menu option.

1. The new web Uniform Resource Locator (URL) for the ASRC tool needs to be added to the CPRS GUI TOOLS parameter in VistA. To do so, access the CPRS Manager Menu in VistA, select CPRS Configuration Information Resources Management (IRM), and then the General Parameter Tools option. From the General Parameters Tools menu, select the Edit Parameter Values option.

When prompted for PARAMETER DEFINITION NAME, enter CPRS GUI TOOLS MENU. For the next prompt, enter “4” or “System.”

Enter the sequence number for where the ASRC link needs to be displayed under the CPRS Tools Menu. Then enter the label and URL for ASRC, which should be similar to the following string:

Name=Command: Automated Surgical Risk Calculator=

<http://asrcuat.vaftl.us/srcalc/newCalc?patientDfn=%DFN>

For additional information on adding entries to the CPRS Tools Menu, please refer to the CPRS Technical Manual: GUI Version.

Note: Please replace the URL listed above with the actual URL being used in your development environment for accessing the ASRC web tool.

# Additional Information

## Acronym Glossary

Table 2 - Acronym Glossary

| Acronym | Meaning |
| --- | --- |
| ASRC | Automated Surgical Risk Calculator |
| ASRCM | Automated Surgical Risk Calculator for Mortality |
| CPRS | Computerized Patient Record System |
| DNS | Domain Name Service |
| GiB | Gigabytes |
| GUI | Graphical User Interface |
| IRM | Information Resources Management |
| JDK | Java Development Kit |
| KIDS | Kernel Installation and Distribution System |
| RPC | Remote Procedure Call |
| SQL | Structured Query Language |
| URL | Uniform Resource Locator |
| VistA | Veterans Health Information Systems and Technology Architecture |

## Contact Information

The following developers may be contacted to assist with installation:

* David Tombs, Java Developer, 321.608.0919, [David@libertyITS.com](mailto:David@libertyITS.com)
* Jeff Swesky, VistA Developer, 904.207.8560, [Jeff.Swesky@hp.com](mailto:Jeff.Swesky@hp.com)