

# Neuron Management Suite

INSTALLATION AND CONFIGURATION GUIDE

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Corporate Headquarters  
Halcyon Monitoring Solutions  
800 Bellevue Way NE,  
Suite 400  
Bellevue, WA 98004, USA

Tel: 416-932-4600  
Fax: 416-932-4711  
Email: [info@HalcyonInc.com](mailto:info@HalcyonInc.com)  
URL: [www.HalcyonInc.com](http://www.HalcyonInc.com)

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Tel: 416-932-4647  
Fax: 416-932-4711

## Technical Support

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Tel: 1-416-932-4666 (International)  
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# 1 Preface

## 1.1 Purpose of the Document

The purpose of this document is to present the reader with all necessary information in order to install and configure the Neuron Management Suite.

## 1.2 Intended Audience

This guide is written for the following type of audience:

**Table 1.2-1: Intended Audience**

Role	Usage
Administrators	The Installation and Configuration Guide is intended for system administrators responsible for installing the product. This guide describes how to install the Neuron Management Suite.

## 1.3 Related Documents

This solution is composed of a series of underlying products. For further information regarding the configuration, the usage and administration of the products, please refer to the following documents.

These documents may be located in the doc folder of the solution distribution or on the website ([www.halcyoninc.com/docs](http://www.halcyoninc.com/docs)).

**Table 1.3-1: Related Documents**

Component Name	Related Documents
Neuron Management Server	<ul style="list-style-type: none"> <li>▪ Neuron Management Server Release Notes</li> </ul>
Neuron Event Manager	<ul style="list-style-type: none"> <li>▪ Neuron Event Manager Release Notes</li> <li>▪ Neuron Event Manager User's Guide</li> </ul>
Neuron Inventory Manager	<ul style="list-style-type: none"> <li>▪ Neuron Inventory Manager Release Notes</li> <li>▪ Neuron Inventory Manager User's Guide</li> </ul>
Neuron Configuration Manager	<ul style="list-style-type: none"> <li>▪ Neuron Configuration Manager Release Notes</li> <li>▪ Neuron Configuration Manager User's Guide</li> </ul>
Neuron Health Manager	<ul style="list-style-type: none"> <li>▪ Neuron Health Manager Release Notes</li> <li>▪ Neuron Health Manager User's Guide</li> </ul>
Neuron Performance Manager	<ul style="list-style-type: none"> <li>▪ Neuron Performance Manager User's Guide</li> <li>▪ Neuron Performance Manager Release Notes</li> </ul>

## 1.4 Conventions

**Table 1.4-1: Conventions**

Typeface/Font	Usage
<b>bold</b>	Names of screens, windows, tabs, dialog boxes, options, buttons
<i>Italic</i>	Document Name, New terms, book titles, emphasis, variables in tables or body text
Courier	Computer output, command references within text
<b>Courier (bold)</b>	Computer output, important questions to the user
<b>Courier (bold, blue)</b>	User input
Symbol	Usage
%	C shell prompt
\$	Bourne/Korn shell prompt
#	Superuser prompt (for all shells)

## 1.5 Definitions

**Table 1.5-1: Definitions**

Term	Definition
Installation Host	The host where the Halcyon Neuron Management Suite is to be installed.
BASEDIR	<p>The base directory where the Halcyon Neuron Management Suite was installed. The default value is /opt/HMF. To determine the value of BASEDIR, run one of the following commands.</p> <p>On a Solaris host (for Solaris 10+ zoned environment, this must be a non-sparse root zone):</p> <pre># pkgparam HALhmfcom BASEDIR</pre> <p>On a Linux host:</p> <pre># rpm -q --queryformat '%{INSTALLPREFIX}\n' HALhmfcom</pre>
LOCALDIR	<p>The configuration and logfile directory of the Halcyon Neuron Management Server. By default this is /var/opt/HMF. To determine LOCALDIR, run one of the following commands:</p> <p>On a Solaris host (for Solaris 10+ zoned environment, this must be a non-sparse root zone):</p> <pre># pkgparam HALhmfcom LOCALDIR</pre> <p>On a Linux host:</p> <pre># cat [BASEDIR]/globalInstallVariables   grep LOCALDIR</pre>

## 2 Planning Your Installation

It is necessary that you plan your installation and make sure you have all that is required in order to have a successful installation. This section will cover the installation prerequisites and the information you need to have in hand before you perform the installation.

### 2.1 General Prerequisites

This section is your primary source of installation prerequisites. Please ensure that all the prerequisites are met before you begin your installation.

**Table 2.1-1: Installation Prerequisites**

#	Type	Prerequisites
1	Supported Platforms	SPARC Solaris 2.9-2.10 x86/x64 Solaris 2.10 Red Hat Enterprise Linux 5.5-6.1 (64-bit) Oracle Enterprise Linux 5.5-6.1 (64-bit)
2	Minimum System Prerequisites (Testing and Evaluation)	Memory: 1 GB of RAM Hard Disk: 5 GB free in LOCALDIR Swap: 1 GB CPU: 1 x 1GHz (alternate: T-series with 4 cores)
3	Recommended System Prerequisites	Memory: 2 GB of RAM Hard Disk: 15 GB free in LOCALDIR NOTE: This is based on a projection of 100 Agents. Each additional 100 Agents requires and additional 10GB of disk space up to 500 Agents. NOTE: Disk space requirements can be halved if data collection is disabled (i.e. only alarms are being handled) Swap: 2 GB CPU: 2 x 2GHz (alternate: T-series with 8 cores)
4	Web Browsers	Mozilla Firefox 3.0-5.0 Microsoft Internet Explorer 7-8
5	Adobe Flash	10.0.12.36 or later

## 2.2 Planning Event Management (Optional)

It is important that you have certain information on hand when you begin configuring your installation to ensure proper planning of your integration.

### 2.2.1 Enterprise Integration

In order to integrate your events with the framework of your choice, you must have the following information in hand:

- Know the hostname or IP address of the host where your <framework name> is located.
- Know the port of the host where your <framework name> is located.
- In order to send SNMP traps to your <framework name>, you must know which version of SNMP should be used (v1 or v2).

For more information on setting up Enterprise Integration, please refer to the *README.config* in the root folder of the solution distribution.

### 2.2.2 Script Execution

The Neuron Management Suite allows you to execute custom scripts on fault events. This will allow you to run a corrective action for every event captured. Scripts should be placed in the [LOCALDIR]/bin directory.

For more information on setting up Script Execution, please refer to the *Creating New Rules* section of the *README.EventManager* file in the root folder of the solution distribution.

### 2.2.3 Email Notification

The Neuron Management Suite allows you to send alarm notifications via email in which you can embed hyperlinks to your web pages containing troubleshooting information. In order to use this feature, you will need the following:

- The email format in which emails will be sent out (either html or text).
- The header of the email. By default, emails will be sent as "Halcyon Email Adapter".
- An email or alias that will be used to receive the event notifications.

For more information on setting up Email Notification, please refer to the *Creating New Rules* section of the *README.EventManager* file in the root folder of the solution distribution.

## 3 Installation and Configuration

### 3.1 Purpose

The purpose of this section is to install and configure the Neuron Management Suite packages on the installation host. The installation will require the user to determine the installation and run-time directories.

### 3.2 Prerequisites

When installing Neuron Management Suite on Red Hat Enterprise Linux 6 or Oracle Enterprise Linux 6 the following RPMs must be installed (these can be found on the Linux distribution media):

```
glibc-2.12 (i686)
nss-softokn-freebl-3.12 (i686)
libuuid-2.17.2 (i686)

compat-readline5-5.2 (x86_64)
compat-libtermcap-2.0.8 (x86_64)
```

### 3.3 Extract the Distribution File

The Halcyon Neuron Management Suite distribution file must be extracted on a UNIX host before any packages can be installed. For example, assume that the distribution file has been copied to the /var/tmp directory, in which case the procedure for extracting the distribution will be:

**Table 3.3-1: Extract the Distribution File**

#	Action
1	Go in the directory where your distribution file is located: # cd /var/tmp/
2	Extract the distribution file: # gunzip Halcyon_Neuron_Management_Suite_[OS]_1.16.0.tar.gz # tar xvf Halcyon_Neuron_Management_Suite_[OS]_1.16.0.tar where OS is Solaris or Linux.

## 3.4 Installation Steps

To install and configure the Neuron Management Suite packages on the installation host, do the following:

**Table 3.4-1: Installation Steps**

#	Action
1	Become the "root" user on the installation host: <pre>% su -</pre>
2	Run the install script in the extracted Neuron Management Suite directory (i.e. /var/tmp/Halcyon_Neuron_Management_Suite_[OS]_1.16.0): <pre># ./Halcyon_Neuron_Management_Suite-install.sh</pre>

During the installation, when prompted, enter the base install directory (BASEDIR) and the run-time directory (LOCALDIR) or accept the defaults.

### Sample Output: Installation Steps

```
*****
*           WELCOME TO HALCYON'S INSTALLER           *
*****

The list of components to be installed is:

    1. Halcyon Neuron Management Suite

Do you want to continue with this install session [y]? y
.
.
***** Halcyon Neuron Management Suite Installation Directory *****

Enter the base directory for the package [/opt/HMF]: [?,q] /opt/HMF

Enter the location for run-time files [/var/opt/HMF]: [?,q] /var/opt/HMF

Package installation directory: /opt/HMF
Run-time file directory:      /var/opt/HMF

Are these parameters correct [y]? [y,n,?,q] y
```

Installation will run through to completion with no further need for user input.

## 3.5 Post-Install Messages

Once the installation is complete, the script will display a post-install message similar to the following:

### Sample Output: Post-Install Messages

```

Postinstall Messages
=====

Copying README Files to a Permanent Location
-----

README files are located in /var/opt/HMF/install/Halcyon_Neuron_Management_Suite

Updating Uninstall Files
-----

Uninstall files are located in /var/opt/SUNWsymon/uninstall /var/opt/HMF/uninstall

Postinstall Instructions
=====

Server
-----

To start the Halcyon Neuron Management Suite, please issue the following command:
/var/opt/HMF/start

To access the Halcyon Neuron Management Portal, please use the following address:
https://columbian:8443/portal/

To access the Halcyon Neuron Performance Manager, please use the following address:
https://columbian:8443/perfmgr/

Use /opt/HMF/bin/UserManager for setting up users. See section 4 User Management of
the Neuron Management Server User's Guide.

```

## 3.6 Starting and Stopping

Once the installation is complete, the Halcyon Neuron Management Suite can be started by executing the following:

```
% su -
# [LOCALDIR]/start
```

There is also a stop command that can be similarly executed:

```
% su -
# [LOCALDIR]/stop
```

These commands can be used on either Solaris or Linux installations.

### 3.6.1 Solaris Service

On Solaris versions that support the Service Management Facility (SMF) Neuron Management Suite installs its start-stop script as a service. The Fault Managed Resource Identifier (FMRI) is `application/management/neuroncore`.

When Neuron Management Suite is started or stopped it enables or disables the service, respectively. If Neuron Management Suite was running and the host is rebooted Neuron Management Suite will be started by the SMF master restarter.

The regular commands for enabling or disabling the service can be used alongside the Neuron Management Suite script. Execute the following commands to enable or disable the Neuron Management Suite service:

```
% su -
# svcadm enable application/management/neuroncore
or
# svcadm disable application/management/neuroncore
```

Output of the SMF command and the Neuron Management Suite script can be found at:

```
/var/svc/log/application-management-neuroncore:default.log
```

## 3.7 Neuron Status

Similar to the Start and Stop commands, the Neuron Management Suite also has a Status command. This command will indicate whether or not Neuron is running, and if so, what its pid is. It will also provide other details such as where it is installed, where the logs are and the URLs for accessing the user interfaces (Neuron Management Portal and Neuron Performance Manager).

The Status command can be executed as follows:

```
% su -
# [LOCALDIR]/status
```

## 3.8 Verify the Installation

This section will describe the necessary steps that can be performed in order to verify the Neuron Management Suite has been installed and running properly.

### 3.8.1 Login to the Product

In order to verify that your installation has been successful, login to the Neuron Management Portal using the URL provided at the end of the installation:

```
https://<hostname>:<port>/portal
```

The hostname is the name of the host that the Neuron Management Suite was installed.

The port number can be found in the managementPortal.config file located in the [LOCALDIR]/conf directory.

**NOTE:** You can also find the URL by running the status command (see section 3.7).

Please note that during installation the default user *admin* is set up with a secure password. When you first access the Neuron Management Portal you will be asked to update the *admin* user's password.

In order to add, remove, or update users use the *User Manager* utility. Please refer to the *Neuron Management Server User's Guide's* "User Management" Section.

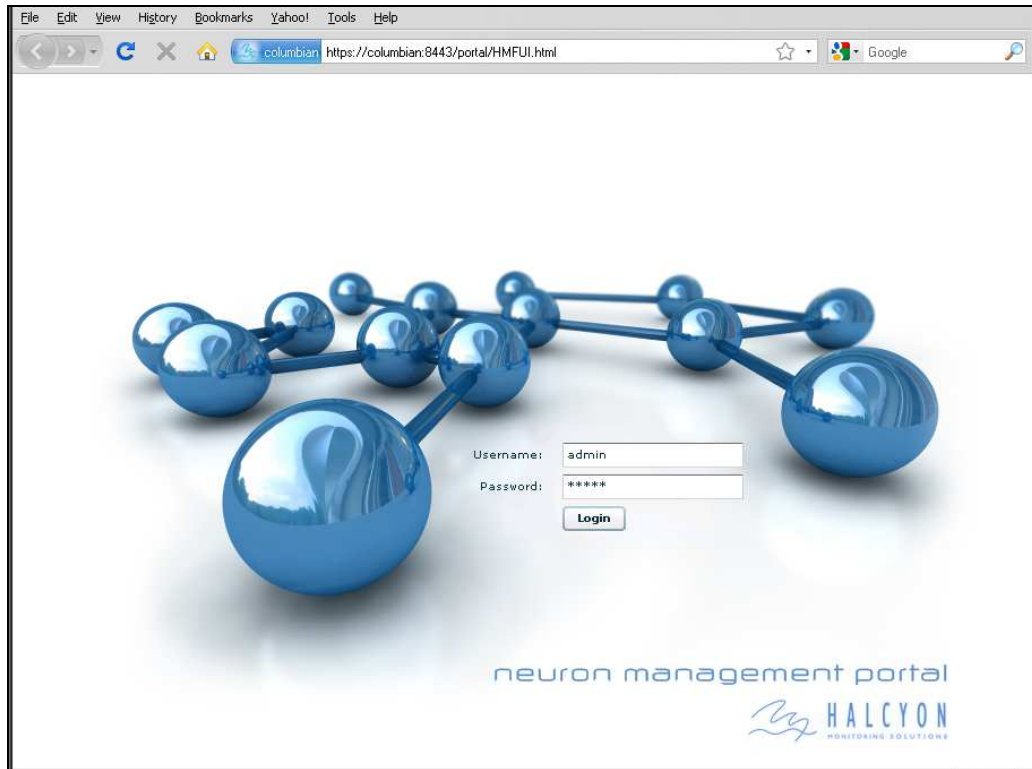


Figure 3.8-1: Neuron Management Portal Login Screen

### 3.8.2 Verify Licensing

After logging into the Neuron Management Portal, license information can be accessed by selecting the Control Agent in the Neuron Topology and clicking on the "Licensing" tab. A table will display all products that are installed along with their license expiration.

### 3.8.3 Verify Processes

If you run `ps` and look for `HALhmfjre`, you should see a process running with a `base.dir` flag of `[BASEDIR]` under the `halcyon` user:

```
# ps -ef | grep HALhmfjre
halcyon 16144 3190  0 12:15:53 ?        5:56 /opt/HMF/HALhmfjre/bin/java -Xms128m -
Xmx256m -Dbase.dir=/opt/HMF -Dcontainer.c
```

Also, running `ps` and looking for `HALhmfpgd` will show the postgres database processes that are running under the `halcyon` user:

```
# ps -ef | grep HALhmfpgd
halcyon 6725 16168  0 12:30:00 ?        0:00 /opt/HMF/HALhmfpgd/db/postgresql-
8.4.0/bin/postgres -D /var/opt/HMF/db/data/HMF
halcyon 6661 16168  0 13:30:01 ?        0:00 /opt/HMF/HALhmfpgd/db/postgresql-
8.4.0/bin/postgres -D /var/opt/HMF/db/data/HMF
halcyon 6728 16168  0 12:30:00 ?        0:01 /opt/HMF/HALhmfpgd/db/postgresql-
8.4.0/bin/postgres -D /var/opt/HMF/db/data/HMF
halcyon 16174 16168  0 12:15:54 ?        0:03 /opt/HMF/HALhmfpgd/db/postgresql-
8.4.0/bin/postgres -D /var/opt/HMF/db/data/HMF
halcyon 13842 16168  0 13:15:01 ?        0:00 /opt/HMF/HALhmfpgd/db/postgresql-
8.4.0/bin/postgres -D /var/opt/HMF/db/data/HMF
halcyon 24251 16168  0 13:00:01 ?        0:00 /opt/HMF/HALhmfpgd/db/postgresql-
8.4.0/bin/postgres -D /var/opt/HMF/db/data/HMF
.....
.....
```

## 3.9 Updating Server Ports

The Neuron Management Server determines the ports on which it listens for incoming connections during installation. In order to change these ports from their default values perform the following steps:

- Log into the Neuron Management Portal (see section 3.8.1).
- Select “Neuron Topology” from the topology panel’s (left panel) drop-down header.
- Select the “Control Agent”.
- Select the “Server Configuration” tab.
- Select the “Tomcat Service” in the “Service” group and click “Edit”.
- Update the HTTP and/or HTTPS ports by modifying the “httpPort” and “httpsPort” entries.
- The Neuron Management Server can be configured to listen on additional ports for incoming HTTP requests. The default value of the “additionalPorts” entry is set to -1, indicating that no additional ports are used. Enter one or more comma separated HTTP ports.

If you have deployed Neuron Agents before and then change the HTTP port the connection to the Neuron Management Server from these agents will fail. However, you can provide the port on which these agents connect to the server as part of the “additionalPorts” entry.

- Once you have made the changes click on Apply. A popup will appear informing you that the Tomcat server needs to be restarted. As a result you will be forwarded to the new Tomcat port.

## NOTES

The Neuron Management Server runs under the privileges of the “halcyon” user and “halcyon” group. If any of the configured ports is below 1024 you need to give this user the appropriate rights for listening on these ports. Please consult your operating system’s documentation on how to do this.

If the Tomcat server fails to restart due to being unable to bind to the updated ports or other errors forwarding to the new Tomcat port will fail. The previous configuration will be restored in the database. However, it is necessary to restart the Neuron Management Server.

## 3.10 Configuring the Product

To further configure the product, please refer to the *README.config* file in the root folder of the solution distribution.

## 4 Upgrade and Downgrade Strategies

---

### 4.1 Upgrade Strategy

To upgrade the Neuron Management Suite, please refer to the Release Notes document for any special instructions.

### 4.2 Downgrade Strategy

To downgrade the Neuron Management Suite to a previous release, please perform the following steps:

- Backup data in  
    # /var/opt/HMF
- Uninstall the product:  
    # /var/opt/HMF/uninstall/HALUninstall.sh
- Delete data in:  
    # /var/opt/HMF
- Install the product  
    # /var/tmp/Halcyon\_Neuron\_Management\_Suite\_1.16.0/  
    Halcyon\_Neuron\_Management\_Suite-install.sh
- Configure the product

Please note that all data and configuration options will be lost.

## 5 Software Removal

This section explains how to uninstall the Neuron Management Suite.

### 5.1 Uninstall the Product

In general, the uninstall script can be used with no arguments to uninstall any Halcyon product. This will list all the products currently installed and you can select what you want to uninstall.

**Table 5.1-1: General Uninstall**

#	Action
1	Become the "root" user on the installation host: % su -
2	Run the uninstall script: # [LOCALDIR]/uninstall/HALUninstall.sh

To mark individual components to be uninstalled, enter the component number or enter "m" to mark all displayed components. To continue with the uninstall, enter "c".

#### Sample Output: Uninstall the Product

```

Installed Modules
=====

Neuron Management Suite Components:
 35. nms - Neuron_Management_Suite

Other Options:
  c. Continue with Uninstall
  m. Mark All Displayed Components
  s. Show All 8 Installed Components
  S. Show Server Layer Components Only
  A. Show Sun MC Agent Layer Components Only
  C. Show Console Layer Components Only
  N. Show Neuron Agent Components Only
  P. Show PrimeAlert Layer for Sun MC Components Only
  F. Show Neuron Framework Components Only
  q. Quit Program

* - Indicates a module that has been marked for uninstallation.
   Select a marked module to unmark it for uninstallation.

Select number of module to mark/unmark for uninstallation, or
select other option: m

```

## 5.2 Install & Uninstall Logs

All Halcyon install and uninstall log files can be found in the following directories:

[LOCALDIR]/install  
[LOCALDIR]/uninstall/log

### Installation Log

The name of the installation log for this product is the following:

Halcyon\_Neuron\_Management\_Suite-install\_[YYYYMMDD]-[HHMMSS].log

### Uninstall Log

The following is the generic uninstall log file:

uninstall.log.[YYYYMMDD]-[HHMMSS]

## 6 Understanding Files and Directories

### 6.1 Runtime Directory Structure

If needed, all configuration, log, and data files can be found in the [LOCALDIR] folder, where LOCALDIR is typically /var/opt/HMF.

The contents of this folder are as follows:

**Table 6.1-1: Configuration Directory Structure**

Folder Name	Content of the Folder
bin	Store for runnable scripts
conf	Configuration files
lib	Store for additional library files
logs	Log files
mibs	Store for mibs supported by Neuron Management Server

### 6.2 Configuration Files

Configuration files are located in the [LOCALDIR]/conf directory as well as the service and module subdirectories. The following configuration files are most likely to require modification:

**Table 6.2-1: Configuration Files**

File Name	Description
container.xml	General configuration parameters for the Halcyon Neuron Management Server, including the path to service related configuration files
logging.xml	Configuration parameters for the message logging service
security.xml	Security related configurations.
users.xml, groups.xml, domains.xml	Access control list for the Halcyon Neuron Management Server.

## 6.3 Log Files

Log files are located in the [LOCALDIR]/logs directory as described above. The following files are the most relevant log files:

**Table 6.3-1: Log Files**

Log File	Description
messageLogger.log	Contains a dump of all messages that have been sent to the Halcyon Neuron Management Server
NeuronServer.log	General log file for the Halcyon Neuron Management Server; all internal logging information is sent to this log file.
RequestAction.log	Contains a listing of all Rule Actions that have been executed (please see <i>Neuron Event Manager User's Guide</i> for more information about Rules and Actions).
revisionHistory.cmdb.log	Contains a history of changes made to the cmdb and the user that made those changes (as logged into the Neuron Management Portal UI).
revisionHistory.mibdb.log	Contains a history of changes made to the mibdb and the user that made those changes (as logged into the Neuron Management Portal UI).
SnmpService.log	Contains a listing of all snmp traps that have been received by the Neuron Management Server.

# Appendices

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## Appendix A – Acknowledgements

Halcyon Neuron Management Server uses the SNMP4J software developed by Frank Fock and Jochen Katz from SNMP4J.org. The object code can be found in the extracted Neuron Management Suite distribution:  
./packages/PLATFORM/HALhmfcon/reloc/lib/snmp4j/SNMP4J.jar

SNMP4J is covered under the terms of the Apache License, Version 2, January 2004. A copy of the license can also be found in the same directory as the extracted Neuron Management Suite distribution.

Halcyon Neuron Management Server uses the FUSE Message Broker developed by Progress Software Corporation.

FUSE Message Broker is covered under the terms of the FUSE Message Broker v. 5.3 License (based on the Apache License, Version 2, January 2004). A copy of the license can also be found in the same directory as the extracted Neuron Management Suite distribution.

Halcyon Neuron Management Server uses the Apache XBean, Apache Commons IO, Apache Commons FileUpload, Apache FOP, Apache XML Graphics Commons, Apache Batik, Apache Avalon and Apache Tomcat software all developed by The Apache Software Foundation.

Apache XBean, Apache Commons IO, Apache Commons FileUpload, Apache FOP, Apache Batik, Apache Avalon and Apache Tomcat are covered under the terms of the Apache License, Version 2, January 2004. A copy of the license can also be found in the same directory as the extracted Neuron Management Suite distribution.

Halcyon Neuron Management Server uses the Drools software developed by JBoss. The object code can be found in the extracted Neuron Management Suite distribution:  
./packages/PLATFORM/HALhmfcon/reloc/lib/drools/

Drools is covered under the terms of the Apache License, Version 2, January 2004. A copy of the license can also be found in the same directory as the extracted Neuron Management Suite distribution.

Halcyon Neuron Management Server uses the Ehcache software developed by Luck Consulting Pty Ltd. The object code can be found in the extracted Neuron Management Suite distribution:  
./packages/PLATFORM/HALhmfcon/reloc/lib/ehcache/

Ehcache is covered under the terms of the Apache License, Version 2, January 2004. A copy of the license can also be found in the same directory as the extracted Neuron Management Suite distribution.

Halcyon Neuron Management Server uses the BlazeDS software developed by Adobe Systems Inc (<http://opensource.adobe.com/wiki/display/blazeds/BlazeDS/>)  
The source code can be found here:

<http://www.halcyoninc.com/products/OpenSource/>

BlazeDS is covered under the terms of the GNU Lesser General Public License (LGPL), Version 3. A copy of the license can also be found in the same directory as the extracted Neuron Management Suite distribution.

Halcyon Neuron Management Server uses the JFreeChart software developed by Object Refinery Limited (<http://www.jfree.org/jfreechart/download.html>)

The source code can be found here:

<http://www.halcyoninc.com/products/OpenSource/>

JFreeChart is covered under the terms of the GNU Lesser General Public License (LGPL), Version 3. ). A copy of the license can also be found in the same directory as the extracted Neuron Management Suite distribution.

Halcyon Neuron Management Server uses the Hibernate Core, Hibernate Entity Manager and Hibernate Annotations software developed by Red Hat Middleware (<http://www.hibernate.org/6.html>).

The source code can be found here:

<http://www.halcyoninc.com/products/OpenSource/>

Hibernate Core, Hibernate Entity Manager and Hibernate Annotations are covered under the terms of the GNU Lesser General Public License (LGPL), Version 2.1. A copy of the license can also be found in the same directory as the extracted Neuron Management Suite distribution.

Halcyon Neuron Management Suite uses the Envers Easy Entity Auditing/Versioning software developed by Adam Warski from JBoss Inc (<http://www.jboss.org/envers/>).

The source code can be found here:

<http://www.halcyoninc.com/products/OpenSource/>

Envers Easy Entity Auditing/Versioning is covered under the terms of the GNU Lesser General Public License (LGPL), Version 2.1. A copy of the license can also be found in the same directory as the extracted Neuron Management Suite distribution.

Halcyon Neuron Management Suite uses the j-Interop software (<http://www.j-interop.org/download.html>)

The source code can be found here:

<http://www.halcyoninc.com/products/OpenSource/>

j-Interop is covered under the terms of the GNU Lesser General Public License (LGPL), Version 3. A copy of the license can also be found in the same directory as the extracted Neuron Management Suite distribution.

Halcyon Neuron Management Server uses the JMXMP Connector software developed by Sun Microsystems as part of the Project OpenDMK (<https://opendmk.dev.java.net/download/index.html>)

The source code can be found here:

<http://www.halcyoninc.com/products/OpenSource/>

JMXMP Connector is covered under the terms of the Common Development and Distribution License (CDDL). A copy of the license can also be found in the same directory as the extracted Neuron Management Suite distribution.

Halcyon Neuron Management Server uses the Mibble software developed by Per Cederberg (<http://www.mibble.org>). Halcyon Neuron Management Server runs the Mibble as a separate executable, and is only loosely coupled with it. The source code can be found here:  
./packages/PLATFORM/HALhmfmb/install/mibble-2.8-application-src.tar.bz2

The Mibble is covered under the terms of the GNU General Public License, Version 2, June 1991 (<http://www.gnu.org/copyleft/gpl.html>). A copy of the license can also be found in the same directory as the extracted Neuron Management Suite distribution.