HP Server Automation

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Whitepaper

SA Patch Importer for Oracle Enterprise Linux

Document Release Date: February 19, 2014

Contents

Document Change Note

Date	Description of Change
6/8/2012	Original release of the whitepaper.
2/19/2014	Page 15: When specifying a sample channel to enable via the command line, the text referred to the "-D" switch, which should be "-E". This has been corrected as follows: You may enable one or more disabled channels at runtime by using the –E or –enable option. For example, `/opt/opsware/patch_importer/bin/uln_import -E el5_u5_x86_64_patch el5_u5_i386_patch`

The HPSA Patch Importer for Oracle Enterprise Linux (OEL)

The HPSA Patch Importer for Oracle Enterprise Linux allows users to import packages for the subscribed channels from the Oracle Unbreakable Linux Network (ULN) and automatically create the corresponding software policies for each imported channel in HPSA. It can be run from the command line manually, or can be part of a `cron` job which performs the import on a recurring basis.

Prerequisites

The following prerequisites must be met before using HPSA Patch Importer for Oracle Enterprise Linux.

- Purchase a support license from the Oracle Unbreakable Linux Store to obtain a valid CSI (Customer Support Identifier). See https://linux.oracle.com for more details.
- Register with the Oracle Unbreakable Linux Network (ULN) to obtain the username/password for single sign-on.
- At least 100GB of free disk space is required on the system in which this tool will be used.

Depending on the type of support license purchased from Oracle, you may be able to subscribe to any channels that Oracle is currently supporting. However, the HPSA Patch Importer will only import packages for the platforms that HPSA supports.

Limitations

The HPSA Patch Importer for Oracle Enterprise Linux is intended to run on HPSA Core platforms only.

Importer File Locations

Binaries	`/opt/opsware/patch_importer/bin/`
Configuration File	`/etc/opt/opsware/patch_importer/uln_import.conf`
Log File	`/var/log/opsware/patch_importer/patch_importer.log`
Package Download Directory (where the downloaded packages will be temporarily stored). Make sure you have at least 100 GB of free disk space on the file system.	`/var/opt/opsware/patch_importer/`
Libraries	`/opt/opsware/patcher_importer/patch_importer/`

Quick Start

Using HPSA Patch Importer for Oracle Enterprise Linux encompasses the following tasks:

1. Edit the configuration file, `/etc/opt/opsware/patch_importer/uln_import.conf`, to provide the requirement information.
2. Register the system with the ULN.
3. Log on to the ULN to subscribe the channels.
4. Import the packages.

The first three tasks should be done once, or infrequently. The forth task, importing the packages, can be scheduled on a recurring basis.

IMPORTANT: This tool must be run as `root` user on a core host.

Edit the Configuration File

The configuration file for HPSA Patch Importer for Oracle Enterprise Linux is located in `/etc/opt/opsware/patch_importer/uln_import.conf`. It is divided into various sections. It has two mandatory sections, `[main]` and `[system_id]`, and zero or more optional sections. The optional sections are used to control channel-specific behaviors.

The following tables describe the various configuration sections.

[main] Section

The [main] section has the general configuration options.

Property Name	Expected Values	Description
username	String (in the form of email)	ULN username
password	String	ULN password
CSI	String (a sequence of numbers)	Oracle Customer Support Identifier
hide_passwords	1, 0 (Default: 1)	Indicates whether to obfuscate the passwords. If set to 1, all the passwords in this file will be obfuscated the very first time the tool is used. Once a password is obfuscated, it will remain obfuscated, there's no way to de-obfuscate it. If the password has changed, you can simply re-enter the clear text password and it will be obfuscated on the next run, assuming `hide_passwords` is still set to 1. You may also use the `--hide_passwords` command line option to obfuscate the passwords. If `--hide_passwords` option is specified at the command line, it will be used instead of the one from the configuration file.
server_uri	A valid URI (Default: `https://linux-update.oracle.com/XMLRPC`)	URI to the ULN RPC server. It points to the default ULN instance. We do not support a server list for live failover at this point. If the primary server is down, you have to manually change it to point to one of the mirrors.
system_id	A valid file path. (Default: `/var/opt/opsware/oel_import/system_id`)	The location to store the `system_id`. Once the system is registered with the ULN. **Warning**: Please do not remove or change the location of this file. Otherwise, you will have to re-register with the ULN.
proxy_host	`<FQHN>:[<port>]`	If HTTP proxy is used, specify it here.
proxy_user	String	If HTTP proxy authentication is required, specify the proxy username. It will be ignored if `proxy_host` is not specified.

Property Name	Expected Values	Description
proxy_pass	String	If HTTP proxy authentication is required, specify the proxy user password. It will be ignored if `proxy_host` is not specified.
proxy_agent	String	If HTTP proxy authentication is required, you may optionally specify the `proxy_agent` HTTP header for identification purposes.
opsware_user	String	You may elect to import the packages in the context of an HPSA user. If so, specify the username here. If `opsware_user` is omitted, package import will be run in the context of a system (internal) user.
opsware_pass	String	Password for the HPSA user. It will be ignored if `opsware_user` is not specified.
continue_on_error	1, 0 (Default: `1`)	This option is for not supported.
import_threads	Number (Default: `10`)	Maximum number of import threads. Setting this to an unreasonable value may cause service outage since some source networks may not be capable of supporting heavy load.
limit_policy_description	1, 0 (Default: `1`)	This option is not supported

channels	An explicit list of channels may be given separated by spaces and/or newlines:
	channels:
	`LABEL1`
	`LABEL2`
	`LABELn`
		If the `channels` option is not specified, then all HPSA supported top-level (parent) channels are enabled, plus any channels that have their own `[channel]` sections in this configuration file.

package_path	A valid directory path. (Default: `/ULN/Packages/$channel_name`)	The folder in which the package will be uploaded for a given channel. "`$channel_name`" is a special placeholder. It will be replaced by the channel at runtime. Packages can be quarantined to prevent their use until they are approved. Note that you must ensure that the permissions on the Unapproved folder limit the servers that can access it. You can configure `package_path` to a special folder for this purpose. For example: `package_path=/ULN/Packages/Unapproved/$channel_name`
channel_path	A valid directory path. (Default: `/ULN/Channels/$channel_name Policy`)	The folder in which the channel software policies will be created for a given channel. "`$channel_name`" is a special placeholder. It will be replaced by the channel at runtime.

Property Name	Expected Values	Description
erratum_path	A valid directory path. (Default: `/ULN/Errata/$erratum_type Policies/$erratum_name`)	The folder in which the erratum software policies will be created for the given channel. "`$erratum_type`" and "`$erratum_name`" are special placeholders. They will be replaced by erratum type and erratum name respectively at runtime. Instead of creating a roll-up policy by channel, you might choose to create it by month For example, `errata_path=/ULN/Errata/$Y-$m Advisory Roll-Up Policy` Notice that "`$Y`" and "`$m`" are special placeholders for year and month respectively. This configuration is currently not being used.
errata_path	A valid directory path. (Default: `/ULN/Errata/$channel_name Advisory Roll-Up Policy`)	The folder in which the errata software policies will be created for the given channel. "`$channel_name`" is a special placeholder. It will be replaced by the channel at runtime. This configuration is currently not being used.

package_search_path	An explicit list of directory paths may be given separated by spaces and/or newlines:
	channels:
	`PATH1`
	`PATH2`
	`PATHn`
	Default:
	`/Package Repository/OS Media/$opsware_platform`
	`/Package Repository/All Red Hat Linux/$opsware_platform`
	`/Migrated/Package Repository/Customer Independent/$opsware_platform`
		The paths to search for previously uploaded packages.
		"`$opsware_platform`" is a special placeholder. It will be replaced by the platform name at runtime.

[system_profile] Section

This section is used to specify the properties for the system profile. The information is used to register with the ULN. Typically, before downloading packages, the system must first register with the ULN. A system profile is created, which contains OS and hardware information, upon registration. Once the system is registered, the ULN will automatically assign the default channels associated with the platform in which the system is running. However, since HPSA can be run on a non-OEL system, this essentially generates a pseudo system profile.

The system profile is created using the information from the `[system_profile]` section:

Property Name	Expected Values	Description
profile_name	String (Default: FQDN of the system where the tool is run)	Name of the profile. Typically it is the Fully Qualified Domain Name of the host where the tool is run.
os_release	Number (Default: 5)	Oracle Enterprise Linux OS release number.
release-name	String (Default: `enterprise-release`)	Oracle Enterprise Linux OS release name.
architecture	X86 or x86_64 (Default: `x86_64`)	OS architecture. We only support x86 and x86_64 right now.
uuid	String	UUID. Will be generated in runtime. **Warning**: Do not modify this property unless you are not certain of how it will affect your system. Misuse of this property can break the import tool and require you need to re-register.
rhnuuid	String	RHN UUID. Will be generated in runtime. **Warning**: Do not modify this property unless you are not certain of how it will affect your system. Misuse of this property can break the import tool and require you to re-register.

Channel-specific Sections

Here is an example of a channel specific section. In this case, it enables the Oracle Enterprise Linux 5 Update 6 Patch channel, creating a policy composed of all the packages in that channel. Note that this section is enabled by default as long as the 'channels' option is not specified in the [main] section. If the 'channels' option is specified in the [main] section, then it must be explicitly enabled via the "enabled" option. Also, `channel_path` is defined here only as we don't wish to create channel policies for top-level channels

```
[ol5_u6_x86_64_patch]
; enabled=1
# You may wish to import all versions of each packages in the channel. By
# default, only the latest version of each package is imported. Note that
# when importing all versions, it is recommended that packages_only=1 also
be
# used since it is not useful to have a policy with more than one version of
# each package.
; which_packages=all
# You may wish to download the packages for this channel only and then
# create the policies manually. Also useful in combination with
# which_packages=all:
; packages_only=1
# To locate a child channel's packages next to the corresponding policy in
# the library, use a path such as the following:
; package_path=/ULN/Channels/$channel_name Packages
```

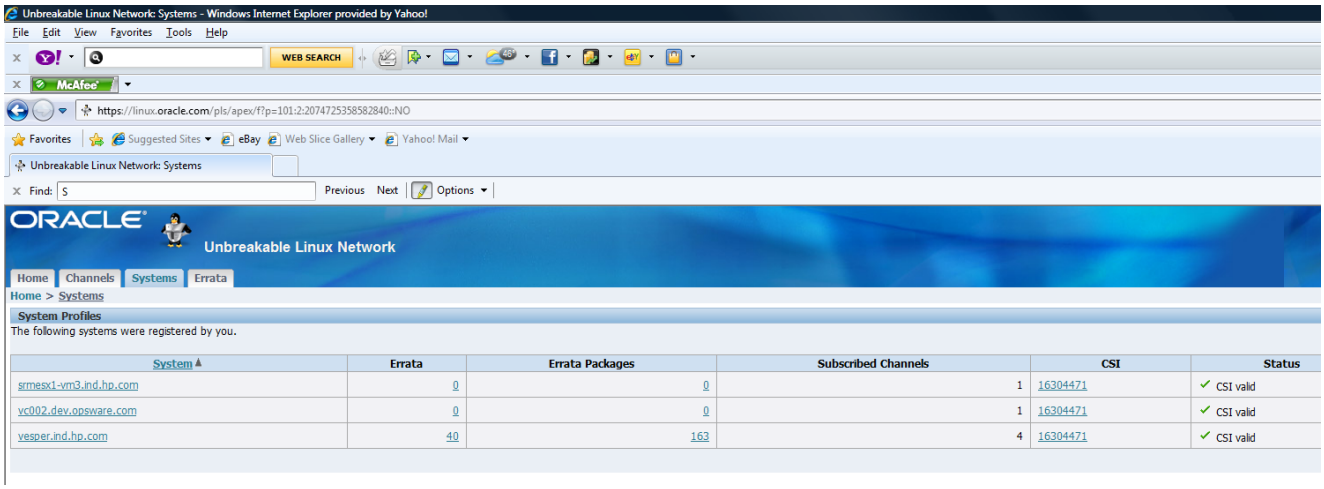
Register the System with the ULN

After editing the configuration file, you are now ready to register the system with the ULN. This is done by running `/opt/opsware/patch_importer/bin/uln_import` with the `–show_conf` option. This option has two main purposes. It shows your current configuration as well as registering the system if the system has not been previously registered with the ULN.

```
[root@vc002 patch_importer]# /opt/opsware/patch_importer/bin/uln_import --
show_conf
********** Configuration For ULN **********
Retrieving platform information from SA
Retrieving channel information from Oracle ULN
|
[system_profile]
rand_key_path        : /var/opt/opsware/crypto/wordbot/.randkey-rhn_import
package_path         : /var/opt/opsware/patch_importer/packages
which_packages       : latest
server_uri           : https://linux-update.oracle.com/XMLRPC
cache_path           : /var/opt/opsware/oel_import/cache
dbg_random_fail      : 0
erratum_path         : /$network_name/Errata/$erratum_type
Policies/$erratum_name
download_server_uri  : http://linux-update.oracle.com/XMLRPC
package_search_path  :
            /Package Repository/OS Media/$opsware_platform
            /Package Repository/All Red Hat Linux/$opsware_platform
            /Migrated/Package Repository/Customer
Independent/$opsware_platform

packages_only        : False
errata_path          :
/$network_name/Errata/$parent_channel_name/$channel_name Advisory Roll-Up
Policy
hide_passwords       : 1
import_threads       : 5
show_config_only     : 0
tmp_path             : /var/opt/opsware/patch_importer
system_id            : /etc/opt/opsware/patch_importer/system_id
mode                 : all
continue_on_error    : 1
channel_path         :
/$network_name/Channels/$parent_channel_name/$channel_name Policy

[main]
rand_key_path        : /var/opt/opsware/crypto/wordbot/.randkey-rhn_import
erratum_path         : /ULN/Errata/$erratum_type Policies/$erratum_name
which_packages       : latest
package_path         : /ULN/Packages/$channel_name
download_server_uri  : http://linux-update.oracle.com/XMLRPC
package_search_path  :
/Package Repository/OS Media/$opsware_platform
/Package Repository/All Red Hat Linux/$opsware_platform
/Migrated/Package Repository/Customer Independent/$opsware_platform
packages_only        : False
csi                  : 1234567
proxy_host           : abc.acme.com:8080
errata_path          : /ULN/Errata/$channel_name Advisory Roll-Up Policy
import_threads       : 10
tmp_path             : /var/opt/opsware/patch_importer
system_id            : /etc/opt/opsware/patch_importer/system_id
channel_path         : /ULN/Channels/$channel_name Policy
continue_on_error    : 1
username             : test@hp.com
server_uri           : https://linux-update.oracle.com/XMLRPC
cache_path           : /var/opt/opsware/oel_import/cache
dbg_random_fail      : 0
password             : (Hidden)
```

```
hide_passwords       : 1
show_config_only     : 1
mode                 : all

<Configuration For Channel: ol5_x86_64_latest>

  Enabled          : True
  Packages Only    : False
  Which Packages   : latest
  Package Path     : /ULN/Packages/$channel_name


*****************************************
```

Once the system is registered, you should be able to view it under the **Systems** tab at the ULN: https://linux.oracle.com. By default, the ULN automatically assigns the latest platform channel to the newly registered system.



A `system_id` file is created in `/etc/opt/opsware/patch_importer/uln/`. If you are unable to register with the ULN, you can check the log file at `/var/log/opsware/patch_importer/patch_importer.log` for possible errors. You can also run `oel_import` in debug mode if necessary.

```
/opt/opsware/patch_importer/bin/uln_import --show_conf –v
```

If you need to register with the ULN, make sure to remove the old `system_id` and delete the registered system from the ULN before doing so.

```
rm –rf /etc/opt/opsware/patch_importer/uln/system_id
/opt/opsware/patch_importer/bin/uln_import –show_conf
```

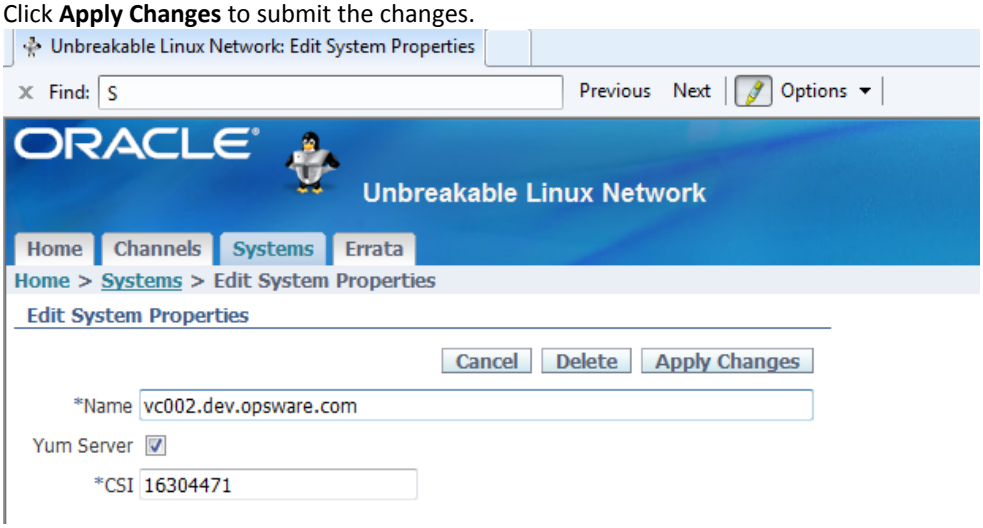
Subscribing & Unsubscribing Channels from the ULN

Subscribing and unsubscribing channels must be done with the ULN.

1. If you have different flavors of Enterprise Linux deployed in your environment, check the **Yum Server** box in the **Edit System Properties** tab of your registered system in order to subscribe to all the available channels.

   IMPORTANT: It is important to select the **Yum Server** box. If it is not selected, the ULN will restrict the channels to only those that are relevant to the registered system's platform. By designating the registered system as a **Yum Server**, the ULN will allow it to subscribe to any currently available channels.

2. Click **Apply Changes** to submit the changes.



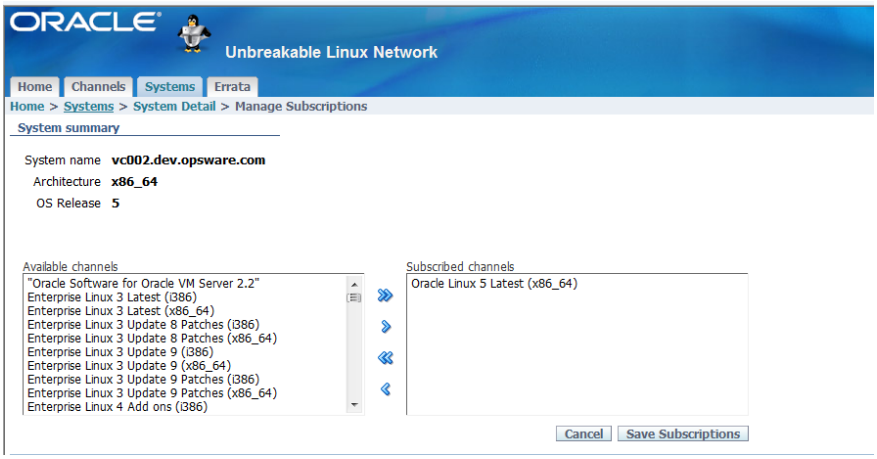
Once the registered system is designated as a **Yum Server**, it is capable of subscribing any channels currently available.

To subscribe/unsubscribe channels:

1. Navigate to the **Manage Subscriptions** tab of the registered system.

   Keep in mind that some channels do not contain any updates. They are just base RPMs from the ISO or the release media. Some channels are superset of others. Also, unlike the RedHat network, the ULN has no concept of "parent channels."

2. Select the desired channels
   a. To subscribe to a channel, move it from the **Available channels** column to the **Subscribed channels** column.
   b. To unsubscribe, move it from the **Subscribed channels** column to the **Available channels** column.
3. Click **Save Subscriptions**.



4. Once you subscribe to the desired channels from the ULN, you may want to verify it by running `/opt/opsware/patch_importer/bin/uln_import` with the `–show_conf` option to make sure the channels are enabled.

```
[root@vc002 bin]# /opt/opsware/patch_importer/bin/uln_import --show_conf
********** Configuration For ULN **********
Retrieving platform information from SA
Retrieving channel information from Oracle ULN
|
[system_profile]
rand_key_path        : /var/opt/opsware/crypto/wordbot/.randkey-rhn_import
package_path         : /var/opt/opsware/patch_importer/packages
which_packages       : latest
```

```
server_uri           : https://linux-update.oracle.com/XMLRPC
cache_path           : /var/opt/opsware/oel_import/cache
dbg_random_fail      : 0
erratum_path         : /$network_name/Errata/$erratum_type
Policies/$erratum_name
download_server_uri  : http://linux-update.oracle.com/XMLRPC
package_search_path  :
            /Package Repository/OS Media/$opsware_platform
            /Package Repository/All Red Hat Linux/$opsware_platform
            /Migrated/Package Repository/Customer
Independent/$opsware_platform

packages_only        : False
errata_path          :
/$network_name/Errata/$parent_channel_name/$channel_name Advisory Roll-Up
Policy
hide_passwords       : 1
import_threads       : 5
show_config_only     : 0
tmp_path             : /var/opt/opsware/patch_importer
system_id            : /etc/opt/opsware/patch_importer/system_id
mode                 : all
continue_on_error    : 1
channel_path         :
/$network_name/Channels/$parent_channel_name/$channel_name Policy

[main]
rand_key_path        : /var/opt/opsware/crypto/wordbot/.randkey-rhn_import
erratum_path         : /ULN/Errata/$erratum_type Policies/$erratum_name
which_packages       : latest
package_path         : /ULN/Packages/$channel_name
download_server_uri  : http://linux-update.oracle.com/XMLRPC
package_search_path  :
/Package Repository/OS Media/$opsware_platform
/Package Repository/All Red Hat Linux/$opsware_platform
/Migrated/Package Repository/Customer Independent/$opsware_platform
packages_only        : False
csi                  : 12345678
proxy_host           : test.acme.com:8080
errata_path          : /ULN/Errata/$channel_name Advisory Roll-Up Policy
import_threads       : 10
tmp_path             : /var/opt/opsware/patch_importer
system_id            : /etc/opt/opsware/patch_importer/system_id
channel_path         : /ULN/Channels/$channel_name Policy
continue_on_error    : 1
username             : abc@hp.com
server_uri           : https://linux-update.oracle.com/XMLRPC
cache_path           : /var/opt/opsware/oel_import/cache
dbg_random_fail      : 0
password             : (Hidden)
hide_passwords       : 1
show_config_only     : 1
mode                 : all

<Configuration For Channel: el5_u5_i386_patch>

  Enabled         : True
  Packages Only   : False
  Which Packages  : latest
  Package Path    : /ULN/Packages/$channel_name


<Configuration For Channel: el5_u5_x86_64_patch>

  Enabled         : True
  Packages Only   : False
  Which Packages  : latest
  Package Path    : /ULN/Packages/$channel_name
```

```
*****************************************
```

NOTE: Keep in mind that HPSA will filter out the channels for the platforms that it does not currently support. For example, you may subscribe to Enterprise Linux 3 channels, but they will be ignored by HPSA.

Importing the Packages

By default, the HPSA Patch Importer will create a software policy for each channel, unless users elect not to do so by specifying the `–package_only` option.

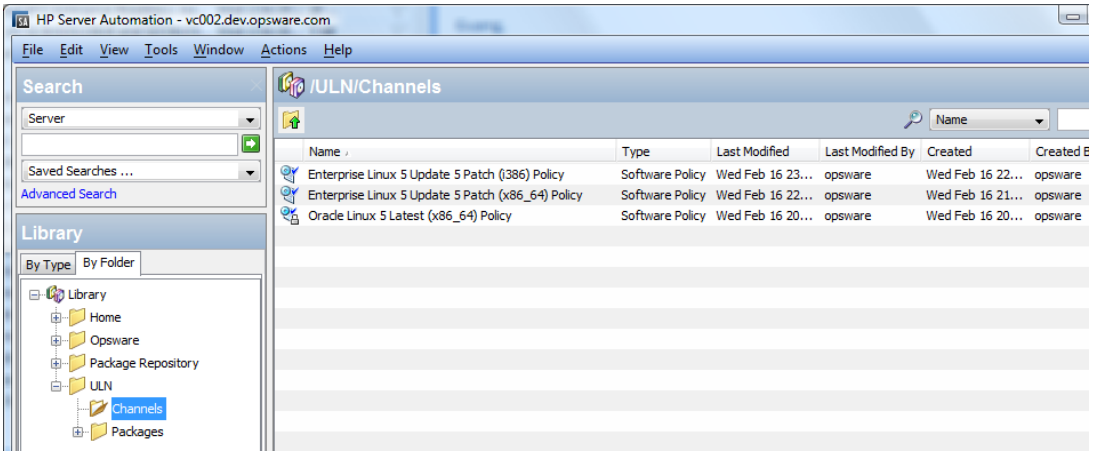
To import the packages :

1. Run `/opt/opsware/patch_importer/bin/uln_import`

```
[root@vc002 bin]# /opt/opsware/patch_importer/bin/uln_import
********** Importing Packages From ULN **********
Retrieving platform information from SA
Retrieving channel information from Oracle ULN
Processing package information
|

***** Import Phase *****

Importing 649 packages for channel Enterprise Linux 5 Update 5 Patch
(x86_64)
|============================================================| 100%
00:00:00
Elapsed Time: 912 seconds

Importing 530 packages for channel Enterprise Linux 5 Update 5 Patch (i386)
|============================================================| 100%
00:00:00
Elapsed Time: 978 seconds

ULN Import Completed

***********************************************
```

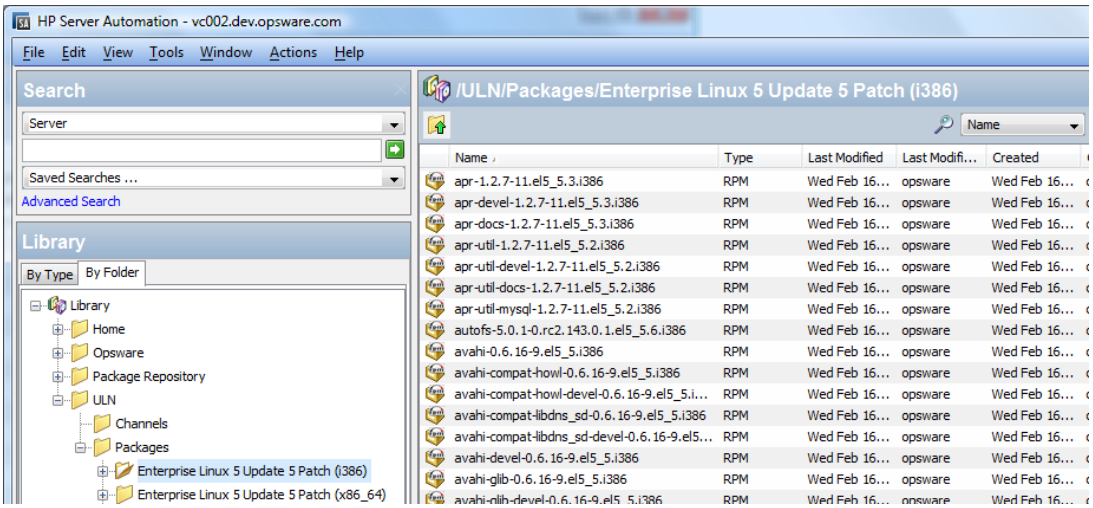
2. When the import process is complete, you can logon to the HPSA Java Client to view the newly created policies.
    a. By default, the policies are created in the `/ULN/Channels/` folder and will be named, `<Channel Name> Policy`, where `<Channel Name>` is the name of the channel. For example: `/ULN/Channels/Enterprise Linux 5 Update 5 Patch (i386) Policy`.

    NOTE: 'Read' (or greater) permission to the `/ULN/Channels/` folder is required to view the newly created policies.



b. By default the packages are imported into the `/ULN/Packages/<Channel Name>/` folder, where `<Channel Name>` is the name of the channel. For example: `/ULN/Packages/Enterprise Linux 5 Update 5 Patch (i386)/`

NOTE: 'Read' (or greater) permission to the channel folder is required to view the newly imported packages.



3. After you verify the newly created software policies, you may start remediating the OEL servers.

NOTE: You must have the proper permissions to perform remediation tasks. See the *SA User Guide: Software Management* for more information on software remediation.

Using the HPSA Patch Importer for Oracle Enterprise Linux

The HPSA Patch Importer for Oracle Enterprise Linux can be run from the command line, or can be part of a `cron` job, which runs the import on the recurring basis. By default, the importer will import the packages for the subscribed channels from the ULN and create the corresponding software policies for each of the imported channels.

A full set of command line options gives you full control over the import action. For example, you can:

- selectively enable or disable one or more channels at runtime
- decide whether to import the packages without creating the corresponding software policies
- add new channels to a supported platform
- remove channels from a supported platform
- view supported channels for the supported platforms
- do a dry run on the import to see what actions will be performing

The following table describes the command line options for `uln_import`:

Option	Description
--version	Show the version number of this program and exit.
-h, --help	Show this help message and exit.

Option	Description
-E LABEL [LABEL...], --enable=LABEL [LABEL...]	Enable a previously disabled channel; multiple labels may be provided; use 'all' to enable all configured channels. A channel can be disabled by setting the 'enabled=0' in the channel section in the configuration file, /etc/opt/opsware/patch_importer/uln_import.conf. Use this option to dynamically enable it at run time.
-D LABEL [LABEL...], --disable=LABEL [LABEL...]	Disable a previously enabled channel at run time; multiple labels may be provided; use 'all' to disable all configured channels. Using 'all' will effectively disabled all channels, which means no channels will be imported. It's as good as running a no-op. This option does not permanently disabled channels; it only disables the given channels for this particular run.
-m MODE, --mode=MODE	Import mode: 'channel', 'erratum', 'errata', 'all' [default: all]
--source=SUPPORTED_SOURCES	Source: 'uln', 'all' [default: all]
-c FILE, --conf=FILE	Configuration file [default: none] Use this option to specify an alternative configuration file.
--packages_only	Don't create policies, download packages only.
-n, --preview	Show what would be done (dry-run).
-s, --silent	Display errors only.
-v, --verbose	Debug mode. Debug messages are available in the log file.
--show_conf	Show configuration settings and exit.
--show_labels	Show available channel labels and exit.
--hide_passwords	Rewrite the configuration file hiding any plain-text passwords and exit.
--manual	Show manual page and exit
--show_platform_labels	List the platforms and their supported channel labels; may use the --platform_name option to filter the platforms to be displayed.
--add_platform_label	Add channel labels to a given platform; must use the --platform_name option to specify a platform, along with the labels to be added.

Option	Description
--remove_platform_label	Remove channel labels from a given platform; must use the `--platform_name` option to specify a platform, along with the labels to be removed.
--platform_name=PLATFORM_NAME	Specify the platform name; when used with `--show_platform_labels` option, it will be used as a name filter; when used with `--add_platform_label` option, it must be an exact match; when used with `--remove_platform_label` option, it must be an exact match.

Disabling Channels at Runtime

By default, a subscribed channel is enabled if it meets the following conditions:

1. It is one of the supported channels of a supported HPSA agent platform.
2. It has no `[<Channel Label>]` section the configuration file `/etc/opt/opsware/patch_importer/uln_import.conf`.
3. It has a `[<Channel Label>]` section the configuration file `/etc/opt/opsware/patch_importer/uln_import.conf` and it has "`enabled=1`" specified.

You may disable one or more channels at runtime by using the `–D` or `–disable` option. For example,

```
/opt/opsware/patch_importer/bin/uln_import -D el5_u5_x86_64_patch
el5_u5_i386_patch
```

NOTE: This option does not permanently disable channels. It merely disables the given channels for this particular run.

Enabling Channels at Runtime

By default, a subscribed channel is disabled if it meets the following condition:

It has a `[<Channel Label>]` section the configuration file `/etc/opt/opsware/patch_importer/uln_import.conf` and it has "`enabled=0`" specified.

You may enable one or more disabled channels at runtime by using the `–E` or `–enable` option. For example,

```
/opt/opsware/patch_importer/bin/uln_import -E el5_u5_x86_64_patch
el5_u5_i386_patch
```

NOTE: This option does not permanently enabled channels. It merely enables the given channels for this particular run.

Limitations: You can only use this option to enable channels for platforms that SA supports. You cannot use it to enable channels for platforms that SA does not support.

Importing Packages without Creating the Corresponding Software Policies

By default, HPSA will create the corresponding software policy for a given channel *unless* one of the following conditions is true:

1. "`packages_only=1`" exist in the [main] section of the configuration file `/etc/opt/opsware/patch_importer/uln_import.conf`.
2. It has a `[<Channel Label>]` section the configuration file `/etc/opt/opsware/patch_importer/uln_import.conf` and it has "`packages_only=1`" specified.

However, you may choose to override the default behavior by specifying the `–packages_only` option at runtime. For example:

```
/opt/opsware/patch_importer/bin/uln_import –packages_only
```

Like other runtime options, this option does not cause permanent changes in the configuration file.

Viewing the Enabled Channel Information

You can view the enabled channels information by specifying the –show_labels option. For example:

```
[root@vc002 bin]# /opt/opsware/patch_importer/bin/uln_import --show_labels
********** Supported Channels For ULN **********
Retrieving platform information from SA
Retrieving channel information from Oracle ULN
Processing package information

Supported Labels: ['el5_u5_x86_64_patch', 'el5_u5_i386_patch']

---------- Channels Details ----------

Channel Label       : el5_u5_x86_64_patch
Channel Name        : Enterprise Linux 5 Update 5 Patch (x86_64)
Channel Description : Updated packages published after release of Enterprise
Linux 5 Update 5 (x86_64)
Channel Version     : 20110111133047
Number of Packages  : 649

Channel Label       : el5_u5_i386_patch
Channel Name        : Enterprise Linux 5 Update 5 Patch (i386)
Channel Description : Updated packages published after release of Enterprise
Linux 5 Update 5 (i386)
Channel Version     : 20110111125211
Number of Packages  : 530

**********************************************
```

Viewing the Supported Channels for the Agent Platforms

You can view the list of channels HPSA currently support, along with its corresponding platform, by specifying the –show_platform_labels option. For example:

```
[root@vc002 bin]# /opt/opsware/patch_importer/bin/uln_import --
show_platform_labels
Retrieving platform information from HPSA
|
---------- Channel Label ----------     ---------- Platform Name ----------
el5_exadata_i386_latest                 Oracle Enterprise Linux 5
el5_exadata_x86_64_latest               Oracle Enterprise Linux 5 X86_64
el5_ga_i386_base                        Oracle Enterprise Linux 5
el5_ga_i386_patch                       Oracle Enterprise Linux 5
el5_ga_x86_64_base                      Oracle Enterprise Linux 5 X86_64
el5_ga_x86_64_patch                     Oracle Enterprise Linux 5 X86_64
el5_i386_addons                         Oracle Enterprise Linux 5
el5_i386_lsb4                           Oracle Enterprise Linux 5
el5_i386_ocfs2                          Oracle Enterprise Linux 5
el5_i386_oracle                         Oracle Enterprise Linux 5
el5_i386_oracle_addons                  Oracle Enterprise Linux 5
el5_rds_i386_latest                     Oracle Enterprise Linux 5
el5_rds_x86_64_latest                   Oracle Enterprise Linux 5 X86_64
el5_u1_i386_base                        Oracle Enterprise Linux 5
el5_u1_i386_patch                       Oracle Enterprise Linux 5
el5_u1_x86_64_base                      Oracle Enterprise Linux 5 X86_64
el5_u1_x86_64_patch                     Oracle Enterprise Linux 5 X86_64
el5_u2_i386_base                        Oracle Enterprise Linux 5
el5_u2_i386_patch                       Oracle Enterprise Linux 5
el5_u2_x86_64_base                      Oracle Enterprise Linux 5 X86_64
el5_u2_x86_64_patch                     Oracle Enterprise Linux 5 X86_64
el5_u3_i386_base                        Oracle Enterprise Linux 5
el5_u3_i386_patch                       Oracle Enterprise Linux 5
el5_u3_x86_64_base                      Oracle Enterprise Linux 5 X86_64
el5_u3_x86_64_patch                     Oracle Enterprise Linux 5 X86_64
el5_u4_i386_base                        Oracle Enterprise Linux 5
el5_u4_i386_patch                       Oracle Enterprise Linux 5
el5_u4_x86_64_base                      Oracle Enterprise Linux 5 X86_64
```

```
el5_u4_x86_64_patch                    Oracle Enterprise Linux 5 X86_64
el5_u5_i386_base                       Oracle Enterprise Linux 5
el5_u5_i386_patch                      Oracle Enterprise Linux 5
el5_u5_x86_64_base                     Oracle Enterprise Linux 5 X86_64
el5_u5_x86_64_patch                    Oracle Enterprise Linux 5 X86_64
el5_unsupported_i386_latest            Oracle Enterprise Linux 5
el5_unsupported_x86_64_latest          Oracle Enterprise Linux 5 X86_64
el5_x86_64_addons                      Oracle Enterprise Linux 5 X86_64
el5_x86_64_lsb4                        Oracle Enterprise Linux 5 X86_64
el5_x86_64_ocfs2                       Oracle Enterprise Linux 5 X86_64
el5_x86_64_oracle                      Oracle Enterprise Linux 5 X86_64
el5_x86_64_oracle_addons               Oracle Enterprise Linux 5 X86_64
ol5_i386_latest                        Oracle Enterprise Linux 5
ol5_u5_x86_64_patch                    Oracle Enterprise Linux 5 X86_64
ol5_u6_i386_base                       Oracle Enterprise Linux 5
ol5_u6_i386_patch                      Oracle Enterprise Linux 5
ol5_u6_x86_64_base                     Oracle Enterprise Linux 5 X86_64
ol5_u6_x86_64_patch                    Oracle Enterprise Linux 5 X86_64
ol5_x86_64_latest                      Oracle Enterprise Linux 5 X86_64
redhat-advanced-server-i386            Red Hat Enterprise Linux AS 2.1
redhat-ent-linux-i386-es-2.1           Red Hat Enterprise Linux ES 2.1
redhat-ent-linux-i386-ws-2.1           Red Hat Enterprise Linux WS 2.1
rhel-i386-as-3                         Red Hat Enterprise Linux AS 3
rhel-i386-as-4                         Red Hat Enterprise Linux AS 4
rhel-i386-client-5                     Red Hat Enterprise Linux Desktop 5
rhel-i386-es-3                         Red Hat Enterprise Linux ES 3
rhel-i386-es-4                         Red Hat Enterprise Linux ES 4
rhel-i386-server-5                     Red Hat Enterprise Linux Server 5
rhel-i386-ws-3                         Red Hat Enterprise Linux WS 3
rhel-i386-ws-4                         Red Hat Enterprise Linux WS 4
rhel-ia64-as-3                         Red Hat Enterprise Linux AS 3 IA64
rhel-ia64-as-4                         Red Hat Enterprise Linux AS 4 IA64
rhel-ia64-es-3                         Red Hat Enterprise Linux ES 3 IA64
rhel-ia64-es-4                         Red Hat Enterprise Linux ES 4 IA64
rhel-ia64-server-5                     Red Hat Enterprise Linux Server 5
IA64
rhel-ia64-ws-3                         Red Hat Enterprise Linux WS 3 IA64
rhel-ia64-ws-4                         Red Hat Enterprise Linux WS 4 IA64
rhel-x86_64-as-3                       Red Hat Enterprise Linux AS 3 X86_64
rhel-x86_64-as-4                       Red Hat Enterprise Linux AS 4 X86_64
rhel-x86_64-client-5                   Red Hat Enterprise Linux Desktop 5
X86_64
rhel-x86_64-es-3                       Red Hat Enterprise Linux ES 3 X86_64
rhel-x86_64-es-4                       Red Hat Enterprise Linux ES 4 X86_64
rhel-x86_64-server-5                   Red Hat Enterprise Linux Server 5
X86_64
rhel-x86_64-ws-3                       Red Hat Enterprise Linux WS 3 X86_64
rhel-x86_64-ws-4                       Red Hat Enterprise Linux WS 4 X86_64
```

You can also filter the platforms by using the `–platform_name` option. This is a case-sensitive partial match. For example, to display only platforms with the string "`Oracle`" in their name:

```
[root@vc002 bin]# /opt/opsware/patch_importer/bin/uln_import --
show_platform_labels --platform_name Oracle
Retrieving platform information from HPSA
|
---------- Channel Label ----------     ---------- Platform Name ----------
el5_exadata_i386_latest                Oracle Enterprise Linux 5
el5_exadata_x86_64_latest              Oracle Enterprise Linux 5 X86_64
el5_ga_i386_base                       Oracle Enterprise Linux 5
el5_ga_i386_patch                      Oracle Enterprise Linux 5
el5_ga_x86_64_base                     Oracle Enterprise Linux 5 X86_64
el5_ga_x86_64_patch                    Oracle Enterprise Linux 5 X86_64
el5_i386_addons                        Oracle Enterprise Linux 5
el5_i386_lsb4                          Oracle Enterprise Linux 5
el5_i386_ocfs2                         Oracle Enterprise Linux 5
el5_i386_oracle                        Oracle Enterprise Linux 5
el5_i386_oracle_addons                 Oracle Enterprise Linux 5
```

```
el5_rds_i386_latest                    Oracle Enterprise Linux 5
el5_rds_x86_64_latest                  Oracle Enterprise Linux 5 X86_64
el5_u1_i386_base                       Oracle Enterprise Linux 5
el5_u1_i386_patch                      Oracle Enterprise Linux 5
el5_u1_x86_64_base                     Oracle Enterprise Linux 5 X86_64
el5_u1_x86_64_patch                    Oracle Enterprise Linux 5 X86_64
el5_u2_i386_base                       Oracle Enterprise Linux 5
el5_u2_i386_patch                      Oracle Enterprise Linux 5
el5_u2_x86_64_base                     Oracle Enterprise Linux 5 X86_64
el5_u2_x86_64_patch                    Oracle Enterprise Linux 5 X86_64
el5_u3_i386_base                       Oracle Enterprise Linux 5
el5_u3_i386_patch                      Oracle Enterprise Linux 5
el5_u3_x86_64_base                     Oracle Enterprise Linux 5 X86_64
el5_u3_x86_64_patch                    Oracle Enterprise Linux 5 X86_64
el5_u4_i386_base                       Oracle Enterprise Linux 5
el5_u4_i386_patch                      Oracle Enterprise Linux 5
el5_u4_x86_64_base                     Oracle Enterprise Linux 5 X86_64
el5_u4_x86_64_patch                    Oracle Enterprise Linux 5 X86_64
el5_u5_i386_base                       Oracle Enterprise Linux 5
el5_u5_i386_patch                      Oracle Enterprise Linux 5
el5_u5_x86_64_base                     Oracle Enterprise Linux 5 X86_64
el5_u5_x86_64_patch                    Oracle Enterprise Linux 5 X86_64
el5_unsupported_i386_latest            Oracle Enterprise Linux 5
el5_unsupported_x86_64_latest          Oracle Enterprise Linux 5 X86_64
el5_x86_64_addons                      Oracle Enterprise Linux 5 X86_64
el5_x86_64_lsb4                        Oracle Enterprise Linux 5 X86_64
el5_x86_64_ocfs2                       Oracle Enterprise Linux 5 X86_64
el5_x86_64_oracle                      Oracle Enterprise Linux 5 X86_64
el5_x86_64_oracle_addons               Oracle Enterprise Linux 5 X86_64
ol5_i386_latest                        Oracle Enterprise Linux 5
ol5_u5_x86_64_patch                    Oracle Enterprise Linux 5 X86_64
ol5_u6_i386_base                       Oracle Enterprise Linux 5
ol5_u6_i386_patch                      Oracle Enterprise Linux 5
ol5_u6_x86_64_base                     Oracle Enterprise Linux 5 X86_64
ol5_u6_x86_64_patch                    Oracle Enterprise Linux 5 X86_64
ol5_x86_64_latest                      Oracle Enterprise Linux 5 X86_64
```

Adding a Channel Label to a Platform

Sometime vendors may add channel labels to a given platform. HPSA must be aware of the new labels before the new channels can be supported.

To add the new labels to the HPSA's supported list:

```
[root@vc002 bin]# /opt/opsware/patch_importer/bin/uln_import --
add_platform_label --platform_name "Oracle Enterprise Linux 5" el5_new_label
Adding channel label el5_new_label for platform Oracle Enterprise Linux 5
Done
```

Removing a Channel Label from a Platform

Sometime a channel is obsolete and can be removed from HPSA's supported list.

To remove an obsolete channel from the supported list:

```
[root@vc002 bin]# /opt/opsware/patch_importer/bin/uln_import --
remove_platform_label --platform_name "Oracle Enterprise Linux 5"
el5_new_label
Removing channel label el5_new_label for platform Oracle Enterprise Linux 5
Done
```

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In this section:

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