shellcommands - Feature #4002
webservices plugin support

11/13/2012 11:46 AM - CDuv

Status:	Closed	**Start date:**	11/13/2012
Priority:	Normal	**Due date:**	
Assignee:	tsmr	**% Done:**	100%
Category:	General	**Estimated time:**	0.00 hour
Target version:	1.6.1		

Description

It would be nice to be able to run the *shellcommands*' commands remotely: One could then use a remote script/software to ask GLPI to execute configured commands on it's inventory, exactly as if he were in front of GLPI web interface.
GLPI already as a plugin to deal with remote interaction: project:webservices plugin that creates an XMLRPC, a REST and a SOAP server. I'm proposing to add project:webservices support into project:shellcommands.

Feature list

- Expose the list of commands and their associated asset types
- Run any *shellcommand* on any asset element (computer, printer, networkequipment, etc.).
- Command to run should be specified via either ID or name
- Asset element should be specified via either ID or name

Associated revisions

Revision 136 - 05/22/2014 05:12 PM - tsmr

Add patch from CDUV (thanks) webservices plugin support. see #4002

Revision 137 - 05/22/2014 05:14 PM - tsmr

Add patch from CDUV (thanks) webservices plugin support. fix #4002

Revision 139 - 08/05/2014 10:09 AM - tsmr

Add patch from CDUV (thanks) webservices plugin support. see #4002

Revision 140 - 08/05/2014 10:09 AM - tsmr

[0.85] Add patch from CDUV (thanks) webservices plugin support. see #4002

History

#1 - 11/13/2012 06:17 PM - CDuv

- File shellcommands_-_webservices_plugin_support___4002__patch.7z added

Here is my implementation proposal.

Description

- Plugin setup's method plugin_init_shellcommands() adds a plugin hook for plugin *webservices* named *plugin_shellcommands_registerMethods*. This hook is implemented by plugin_shellcommands_registerMethods() method which declares the two following *webservices* methods (methods that can be called remotely):
  - shellcommands.list: Implements the feature of listing every *shellcommands* available (done by PluginShellcommandsWebservice::methodList())
  - shellcommands.run: Implements the feature of running a given *shellcommand* on a given target from the inventory (done by PluginShellcommandsWebservice::methodRun())

Code evolution done for implemenation

- For easinessI've created a class constant PluginShellcommandsShellcommand_Item::WOL_COMMAND_NAME containing the name of the special built in Wake on LAN *shellcommand*.
- I've moved the command execution algorithm from PluginShellcommandsShellcommand_Item::lauchCommand() to the new methods:
  - PluginShellcommandsShellcommand_Item::getCommandLine(): Creates the command line
  - PluginShellcommandsShellcommand_Item::execCommand(): Actually executes the command
- I've cloned the process of resolving the value of link paramater (eg. *[NAME]*, *[IP]*, etc.) from PluginShellcommandsShellcommand_Item::showPluginFromItems() into a new method that only deals with it, without printing any text or HTML code: PluginShellcommandsShellcommand_Item::resolveLinkOfCommand()

Methods documentation

Method shellcommands.list

https://forge.indepnet.net/svn/webservices/authenticated.pngThis method is only accessible by authenticated users

Lists available *shellcommands*.

Method input

This method accepts an hastable of options:

Option name	Option description
help	Option to get usage information (Optional)

Method return

This method returns an hashtable of hashtables. Each sub-hashtable corresponds to a *shellcommand*.
Structure of an *shellcommand* hashtable:

Key name	Value description
id	The ID of the shellcommand
name	The name of the shellcommand
targets	An hashtable of target types this shellcommand can be run onto (eg. Computer, Printer)

Call example

```
$ php testxmlrpc.php --host=glpi.server.tld --url=plugins/webservices/xmlrpc.php --session=abcdef123456 --method=shellcommands.list
+ Calling 'shellcommands.list' on http://glpi.server.tld/plugins/webservices/xmlrpc.php?session=abcdef123456
+ Response: Array
(
    [0] => Array
        (
            [id] => 5
            [name] => etherwake
            [targets] => Array
                (
                    [0] => Computer
                )

        )

    [1] => Array
        (
            [id] => 6
            [name] => Nslookup IP
            [targets] => Array
                (
                    [0] => Computer
                    [1] => NetworkEquipment
                    [2] => Printer
                )

        )
    [2] => Array
        (
            [id] => 4
            [name] => Nslookup NAME
            [targets] => Array
                (
                    [0] => Computer
                    [1] => NetworkEquipment
                    [2] => Printer
                )

        )

    [3] => Array
        (
            [id] => 1
            [name] => Ping
            [targets] => Array
                (
                    [0] => Computer
                    [1] => NetworkEquipment
                    [2] => Printer
                )

         )

    [4] => Array
        (
            [id] => 2
            [name] => Tracert
            [targets] => Array
                (
                    [0] => Computer
                    [1] => NetworkEquipment
                    [2] => Printer
                )

        )

    [5] => Array
        (
            [id] => 3
            [name] => Wake on Lan
            [targets] => Array
                (
                    [0] => Computer
                )

         )

)
```

Method shellcommands.run

https://forge.indepnet.net/svn/webservices/authenticated.pngThis method is only accessible by authenticated users

Run a given available *shellcommand* on a specified target

Method input

This method accepts an hastable of options:

Option name	Option description
command_id	One or more ID of shellcommand(s) to run (incompatible with command_name)
command_name	One or more name of shellcommand(s) to run (incompatible with command_id)
target_type	Type of the target to run the shellcommand(s) on
target_id	One or more ID of inventory element(s) on which run the

	shellcommand(s) (incompatible with target_name)
target_name	One or more name of inventory element(s) on which run the shellcommand(s) (incompatible with target_id)
help	Option to get usage information (Optional)

Method return

This method returns an hashtable given results on the shellcommand execution.
Structure of an *shellcommand* hashtable:

Key name	Value description
callResults	Raw output of the shellcommand(s)
invalidCommands	ID or name(s) of unknown specified shellcommand(s) (therefore not run)
invalidTargets	ID or name(s) of unknown specified inventory element(s) (therefore not impacted)

Call examples

Trying to run *shellcommand* named *Nslookup NAME* on Computer named *myfileserver*:

```
$ php testxmlrpc.php --host=glpi.server.tld --url=plugins/webservices/xmlrpc.php --session=abcdef123456 --method=shellcommands.run
--command_name="Nslookup NAME" target_type=Computer target_name=myfileserver
+ Calling 'shellcommands.run' on http://glpi.server.tld/plugins/webservices/xmlrpc.php?session=abcdef123456
+ Response: Array
(
    [callResults] => Server:          192.168.0.1
Address:        192.168.0.1#53

Non-authoritative answer:
Name:   myfileserver.mycompany.tld
Address: 192.168.0.42
    [invalidCommands] => Array
        (
        )

    [invalidTargets] => Array
        (
        )

)
```

Trying to run invalid *shellcommand* of ID -1:

```
$ php testxmlrpc.php --host=glpi.server.tld --url=plugins/webservices/xmlrpc.php --session=abcdef123456 --method=shellcommands.run
--command_name=-1 target_type=Computer target_name=myfileserver
+ Calling 'shellcommands.run' on http://glpi.server.tld/plugins/webservices/xmlrpc.php?session=abcdef123456
+ Response: Array
(
    [callResults] =>
    [invalidCommands] => Array
        (
            [0] => -1
        )

    [invalidTargets] => Array
        (
        )

)
```

#2 - 03/04/2014 11:48 PM - CDuv

- Status changed from New to Feedback

One year later, proposed code didn't make it to release. Is there a problem with that feature or the implementation?

#3 - 05/22/2014 05:14 PM - tsmr

- Status changed from Feedback to Resolved

- % Done changed from 0 to 100

Applied in changeset r137.

#4 - 05/22/2014 05:17 PM - tsmr

- Category set to General

- Assignee set to tsmr

- Target version set to 1.6.1

#5 - 05/24/2014 03:42 AM - CDuv

- File shellcommands_-_webservices_plugin_support___4002__patch2-based_on_r137.diff added

- Status changed from Resolved to Feedback

As discussed with tsmr on IRC, I've looked on r137 for bugs (original patch #4002#note-1 was quite aged and based on now old project:glpi version).
Attached are the following fixes (all related to GLPI changes):

- mysql_real_escape_string() replaced by $DB->escape()
- Now looks for IP addresses in glpi_ipaddresses table (was using glpi_networkports)
- No longer reads internal IP and MAC addresses of network equipment (because there is no more such things with recent GLPI releases)

I've also refactored the IP and MAC tag => address process: now using a loop on theses tags, avoids code duplication.

Now works with GLPI version glpi:version:0.84.5 and WebServices version webservices:version:1.4.2.

#6 - 08/05/2014 01:27 AM - CDuv

Any chance this gets merged?

#7 - 08/05/2014 10:11 AM - tsmr

- Status changed from Feedback to Closed

Files

shellcommands_-_webservices_plugin_support___4002__patch.7z	4.38 KB	11/13/2012	CDuv
shellcommands_-_webservices_plugin_support___4002__patch2-based_on_r137.diff	7.03 KB	05/24/2014	CDuv