bloxScheduler Installation and User Guide

Copyright Statements

For Open Source Copyright information, see *Appendix E, "Open Source Copyright and License Statements",* on page 845 in the InfobloxSystem Administration Guide.

Trademark Statements

Company Information

Infoblox is located at:
4750 Patrick Henry Drive
Santa Clara, CA 95054-1851, USA

Web: *www.infoblox.com*
support.infoblox.com

Phone: 408.625.4200
Toll Free: 888.463.6259
Outside North America: +1.408.716.4300
Fax: 408.625.4201

Product Information

Hardware Models: Infoblox-250, -250-A, -550, -550-A, -1050, -1050-A, -1550, -1550-A, -1552, -1552-A, -1852-A, -2000, and -2000-A.

Document Number: 400-0401-000 Rev. A

Document Updated: October 13, 2011

Warranty Information

Your purchase includes a 90-day software warranty and a one year limited warranty on the Infoblox appliance, plus an Infoblox Warranty Support Plan and Technical Support. For more information about Infoblox Warranty information, refer to the Infoblox Web site, or contact Infoblox Technical Support.

Preface

This preface describes the document conventions of this guide, and provides information about how to find additional product information, including accessing Infoblox Technical Support. It includes the following sections:

Document Overview

This guide describes how to configure and manage bloxTools . It was last updated on October 13, 2011.

Documentation Conventions

The text in this guide follows the following style conventions.

Style	Usage
bold	• Indicates anything that you input in the user interface, by clicking, choosing, selecting, typing, or by pressing on the keyboard. • Indicates the field names in the user interface.
`input`	Signifies command line entries that you type.
variable	Signifies variables typed into the user interface that you need to modify specifically for your configuration. These can be command line variables, file names, and keyboard characters. Indicates the names of the wizards, editors, and dialog boxes in Grid Manager, such as the *Add Network* wizard or the *DHCP Network* editor.

Variables

Infoblox uses the following variables to represent values that you type, such as file names and IP addresses.

Variable	Value
a_record	A record
aaaa_record	AAAA record
admin_group	Name of a group of administrators
admin_name	Name of the appliance administrator
addr_range	IP address range
dhcp_template	DHCP template
domain_name	Domain name
directory	Directory name
failover_association	Failover association
filter_name	Name of a DHCP filter
fixed_address	Fixed address
fixed_address_template	Fixed address template
grid	Grid name
grid_master	Grid Master
grid_member	Grid Member
hostname	Host name of an independent appliance
host_record	Host record

Variable	Value
ifmap_client	IF-MAP client
ip_addr	IPv4 address
lease	IP address of a lease
mac_filter	Name of a MAC filter
match_rule	Name of a match rule
member	Grid member name
ms_server	Microsoft server
netmask	Subnet mask
network	IP address of a network
network_access_server	Name of a NAS
network_template	Network template
network_view	Network view
option_space	DHCP option space
policy	Name of a policy on RADIUSone
policy_group	Name of a Policy Group
port	Number of a port; predefined for certain protocols
ptr_record	PTR record
reservation	Reservation
roaming_host	Roaming host
scheduled_task	Scheduled task
server_group	Name of a group of servers
shared_network	Shared network
service	One of the services available from Grid Manager
template	DHCP template
dns_view	DNS view
zone	DNS zone

Navigation

Infoblox technical documentation uses an arrow "->" to represent navigation through the user interface. For example, to edit a fixed address, the description is as follows:

From the Data Management tab, select the DHCP tab -> Networks tab -> Networks -> *network* -> *fixed_address* check box, and then click the Edit icon.

Related Documentation

Other Infoblox appliance documentation:

- *Infoblox CLI Guide*
- *Infoblox API Documentation*
- *Infoblox IBOS Administrator Guide*
- *Infoblox-500, Infoblox-1000 and Infoblox-1200 Quick Start*
- *Infoblox User Guide for the Infoblox-1050, 1550, and 1552 Appliances*
- *Infoblox User Guide for the Infoblox-500, -550 Appliance*
- *Infoblox Installation Guide for the Infoblox-550, -1050, -1550, and -1552 Appliances*
- *Infoblox Installation Guide for the Infoblox-550-A, -1050-A, -1550-A, and -1552-A Appliances*
- *Infoblox Installation Guide for the Infoblox-1852-A Appliance*
- *Infoblox Installation Guide for the Infoblox-250 Appliance*
- *Infoblox Installation Guide for the Infoblox-250-A Appliance*
- *Infoblox Installation Guide for the Infoblox-2000 Appliance*
- *Infoblox Installation Guide for the Infoblox-2000-A Appliance*
- *Quick Start Guide for Installing vNIOS Software on Riverbed Services Platforms*
- *Quick Start Guide for Installing vNIOS Software on Cisco Application eXtension Platforms*
- *Quick Start Guide for Installing vNIOS Software on VMware Platforms*
- *Quick Start Guide for Installing vIBOS Software on VMware Platforms*
- *Infoblox Safety Guide*

To provide feedback on any of the Infoblox technical documents, please e-mail *techpubs@infoblox.com*.

Customer Care

This section addresses user accounts, software upgrades, licenses and warranties, and technical support.

User Accounts

The Infoblox appliance ships with a default user name and password. Change the default `admin` account password immediately after the system is installed to safeguard its use. Make sure that the NIOS appliance has at least one administrator account with superuser privileges at all times, and keep a record of your account information in a safe place. If you lose the `admin` account password, and did not already create another superuser account, the system will need to be reset to factory defaults, causing you to lose all existing data on the NIOS appliance. You can create new administrator accounts, with or without superuser privileges. For more information, see *Managing Administrators* on page 77 in the InfobloxSystem Administration Guide.

Software Upgrades

Software upgrades are available according to the Terms of Sale for your system. Infoblox notifies you when an upgrade is available. Register immediately with Infoblox Technical Support at http://www.infoblox.com/en/support/product-registration.html to maximize your Technical Support.

Technical Support

Infoblox Technical Support provides assistance via the Web, e-mail, and telephone. The Infoblox Support web site at http://www.infoblox.com/en/support/support-center-login.html provides access to product documentation and release notes, but requires the user ID and password you receive when you register your product online at: http://www.infoblox.com/en/support/product-registration.html.

Chapter 1 Introduction

This chapter describes the bloxScheduler Snapin features and requirements.

bloxScheduler Snapin Overview

The bloxScheduler Snapin schedules automated, repetitive actions such as report generation. The scheduled actions are defined in Perl scripts you create and upload to the bloxTools server.

The script should be a Perl script that uses the NIOS API to get or set values on the grid. You do not need to install the PERL API libraries. They are already present on the bloxTools server.

Requirements

snapInstall must be installed and functional on the bloxTools server. You use snapInstall to install all other snapins. For information about snapInstall, see the document *bloxTools Installation and User Guide*.

Chapter 2 Setting Up the bloxScheduler Snapin

This chapter describes how to set up the bloxScheduler Snapin . This chapter includes the following sections:

SET UP THE BLOXSCHEDULER SNAPIN

Use the snapInstaller to install the bloxScheduler Snapin.

To Install the bloxScheduler Snapin

1. Download the bloxScheduler Snapin. Open a browser and go to *https://www.bloxtools.com*.
2. Select the Downloads tab.
3. In the bloxScheduler section, click Download, and then click Download on the next page.
4. Accept the agreement, and then save the file to your local machine.
5. In a browser, go to:

   `<`*bloxTools server IP*`>:444/snapinstall/`

   The snapInstall GUI appears.

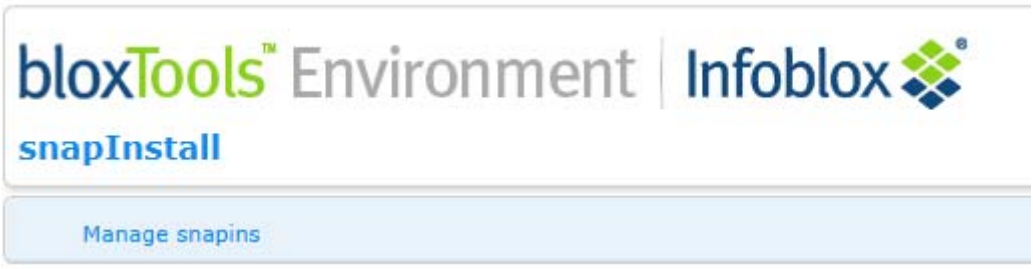

Figure 2.1 snapInstall GUI

6. Click Manage snapins. Enter the username and password for an account on the NIOS grid. This account MUST be a local account and either be a 'superuser', a member of the group 'admin-group', or a member of the group 'snapinstall'.

Note: This login is NOT the same as the FTP credentials!

7. Upload the bloxScheduler *.snap* file. Click Browse and navigate to the directory with the *.snap* file you want to upload.
8. Select the bloxScheduler *.snap* file and then click Open. The path to the bloxScheduler *.snap* file appears in the Select a snap file box.

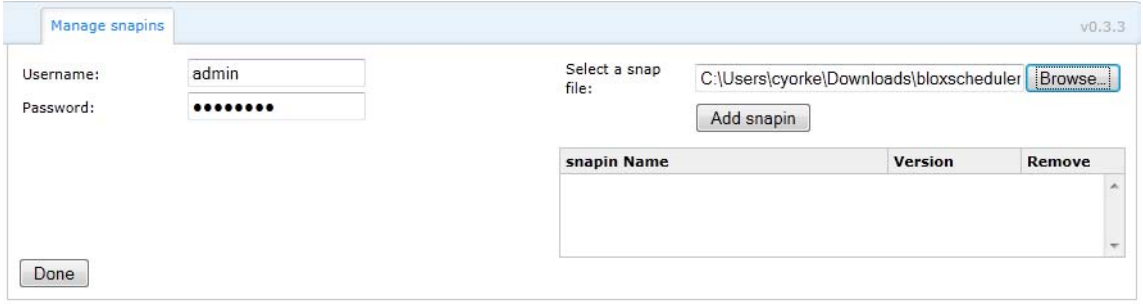

Figure 2.2 Manage snapins dialog box

9. Click Add Snapin.The progress bar for the install appears.

10. When the install is finished, the bloxScheduler Snapin appears in the list of installed Snapins. snapInstall restarts the service. .

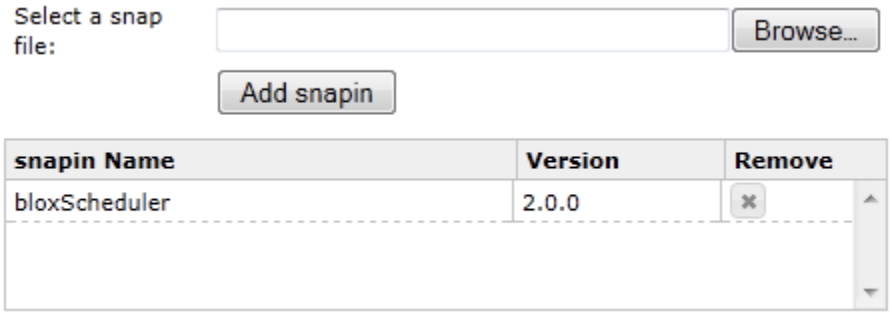

Figure 2.3 Snapin Added screen

11. On the snapInstaller GUI, click Done. The bloxScheduler Snapin is listed.

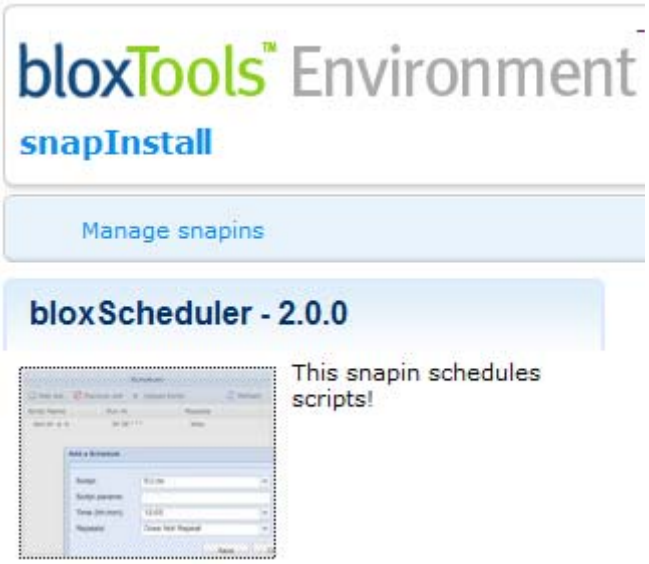

Figure 2.4 snapInstall GUI with bloxScheduler thumbnail

12. Click on the bloxScheduler Snapin image to go to bloxScheduler.

Test the Installation

This section describes how to use the script `test.sh` to verify the bloxScheduler installation. test.sh is built in to bloxScheduler.

1. In a browser, go to:

   `<bloxTools server IP>:444/scheduler/`
2. Log in with an account with superuser privileges on the NIOS system. The *`Scheduler`* screen appears.

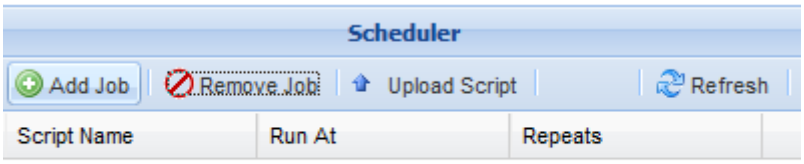

Figure 2.5 Scheduler screen

3. Click Add Job. The *Add a Schedule* dialog box appears.

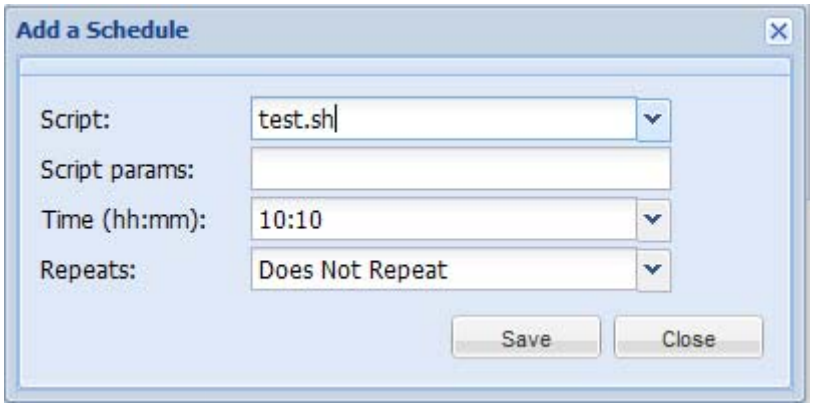

Figure 2.6 Add a Schedule dialog box

4. Set the following options:
   - Script: Choose **test.sh**
   - Script params: leave blank
   - Time: Set the time for when you want the script to run. it should be some time after the current time on the appliance.

   The time is based on the time set on the appliance, not the time in your current location.

Note: Check the timezone setting on the bloxTools member. This can affect when a job will be scheduled to run.

   - Repeat: Choose Does Not Repeat
5. Click Save.
6. After a few seconds, the *Scheduler* screen displays `test.sh` in the job list.
7. The script runs at the scheduled time and sends the result to *<bloxTools server IP>*`:444/scheduler/test.txt`

Configure the bloxScheduler Snapin

There is nothing to directly configure with the bloxScheduler Snapin. The user accounts have the same requirements as 'snapinstall': superuser, or member of 'snapinstall' group.

Time Zone Conflicts

Be aware of the timezone that is set on your grid, and check to see if it is different from the local timezone. If you have a timezone conflict, you must account for the difference in any schedules you set.

For instance, if the grid timezone is set to GMT, and you and your server are physically in PST, a job scheduled for now+5 minutes won't work since GMT is 8 hours ahead of PST. To make this job run at now+5 minutes, you would set the scheduler to now+8 hours +5 minutes.

Chapter 3 Using the bloxScheduler Snapin

This chapter describes how to use the bloxScheduler Snapin to upload scripts, schedule jobs, and remove jobs. This chapter includes the following sections:

How to Upload a Script

This section describes how to upload a script to the bloxScheduler Snapin.

To Upload a Script

1. (*Go to Step 3 if bloxScheduler is present in a browser*) In a browser, go to bloxScheduler: ‹*bloxTools server IP*›:444/scheduler/
2. Log in with an account with superuser privileges on the NIOS system. The *Scheduler* screen appears.

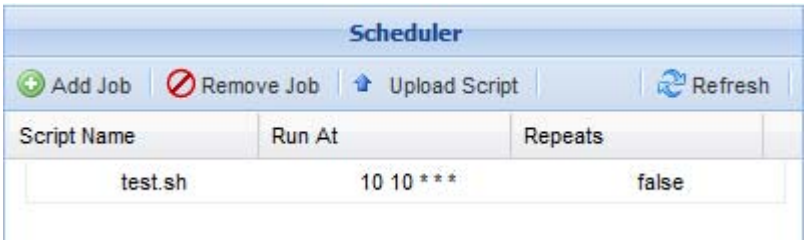

Figure 3.1 Scheduler screen

3. Click Upload Script. The *Upload a Script* dialog box appears.

Note: The script should be a Perl script that uses the NIOS API to get or set values on the grid.You do not need to install the PERL API libraries. They are already present on the bloxTools server.

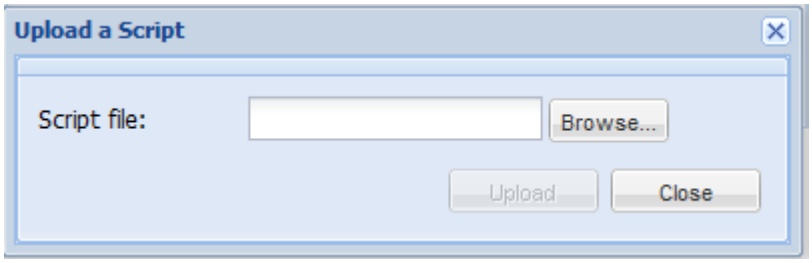

Figure 3.2 Upload a Script dialog box

4. Click Browse and navigate to your script.
5. Select the script and click Open, and then click Upload.

How to Schedule a Job

This section describes how to schedule a job in bloxScheduler. A job in bloxScheduler is an automated action such as generating report at a scheduled time. You define the job in a Perl script you write and upload to bloxScheduler.

To Schedule a Job

Note: In this example, we use the script **`test.sh`.**

1. (*Go to Step 3 if bloxScheduler is present in a browser*) In a browser, go to bloxScheduler: ‹*bloxTools server IP*›:444/scheduler/
2. Log in with an account with superuser privileges on the NIOS system. The *Scheduler* screen appears.

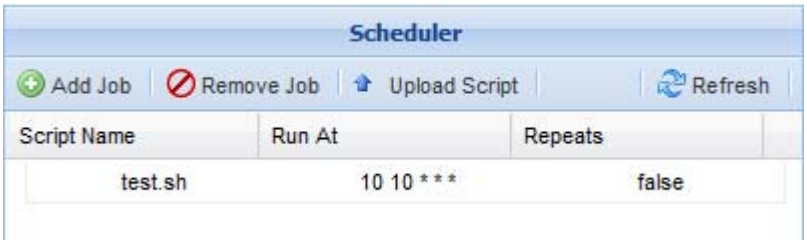

Figure 3.3 Scheduler screen

3. Click Add Job. The *Add a Schedule* dialog box appears.

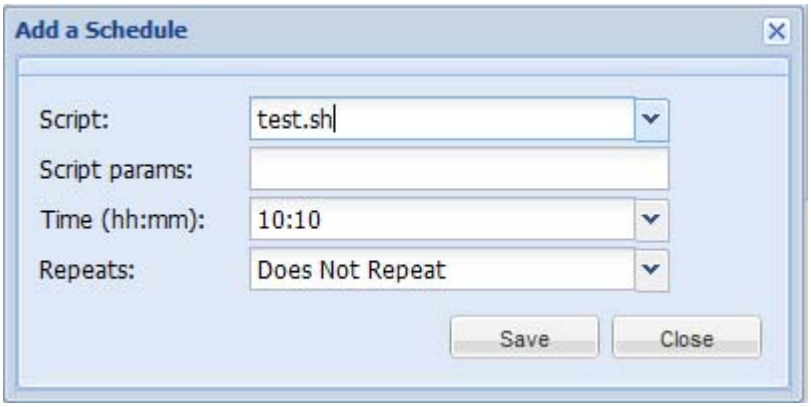

Figure 3.4 Add a Schedule dialog box

4. Set the following options:

— Script: Choose **`test.sh`**

— Script params: Leave blank

— Time: Set the time for when you want the script to run. it should be some time after the current time on the appliance. The time is based on the time set on the appliance, not the time in your current location.

Note: Check the timezone setting on the bloxTools member. This can affect when a job will be scheduled to run.

— Repeat: Choose Does Not Repeat

5. Click Save.
6. After a few seconds, the *Scheduler* screen displays `test.sh` in the schedule list.
7. The script runs at the scheduled time and sends the result to *‹bloxTools server IP›:444/scheduler/test.txt*

How to Remove a Job

This section describes how to remove a job from the schedule in bloxScheduler.

To Remove a Job

1. (*Go to Step 3 if bloxScheduler is present in a browser*) In a browser, go to bloxScheduler: ‹*bloxTools server IP*›:444/scheduler/
2. Log in with an account with superuser privileges on the NIOS system. The *Scheduler* screen appears.

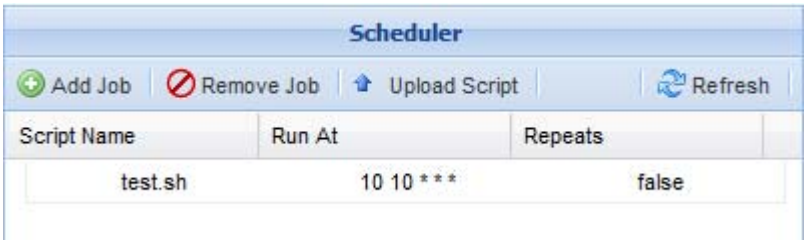

Figure 3.5 Scheduler dialog box

3. Select a job from the list of jobs, and then click Remove Job.

Examples of Common Jobs to Schedule

This section has example screenshots of how to schedule the standard maintenance and reporting schedules.

Once Per Day

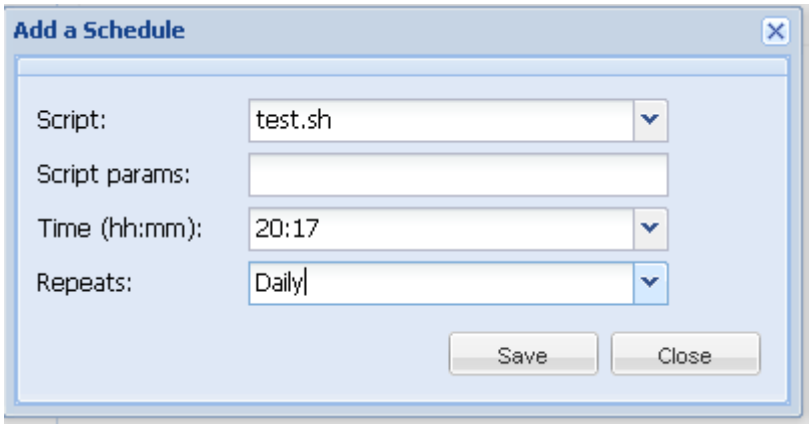

Figure 3.6 Add a Schedule dialog box: Once per Day

Once Per Week

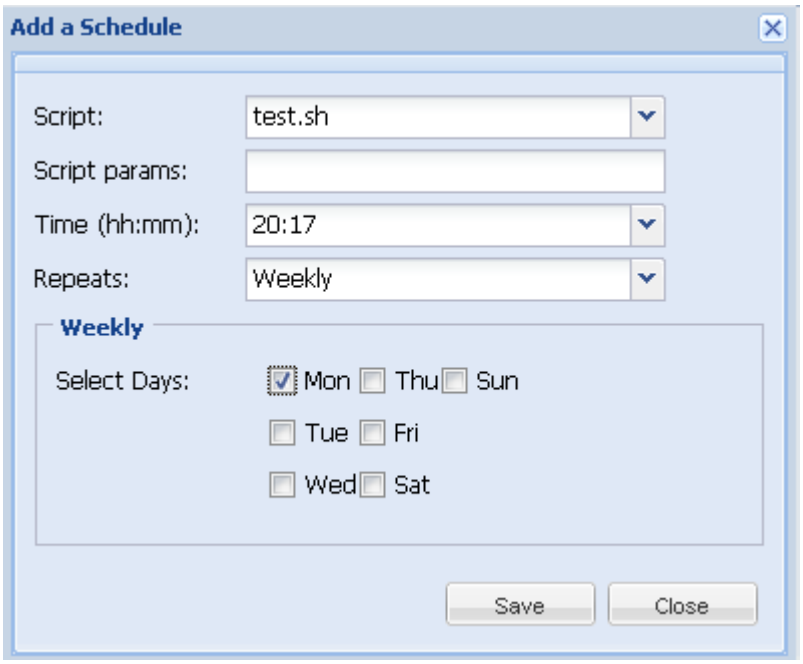

Figure 3.7 Add a Schedule dialog box: Once per Week

3 Times a Week (M, T, W)

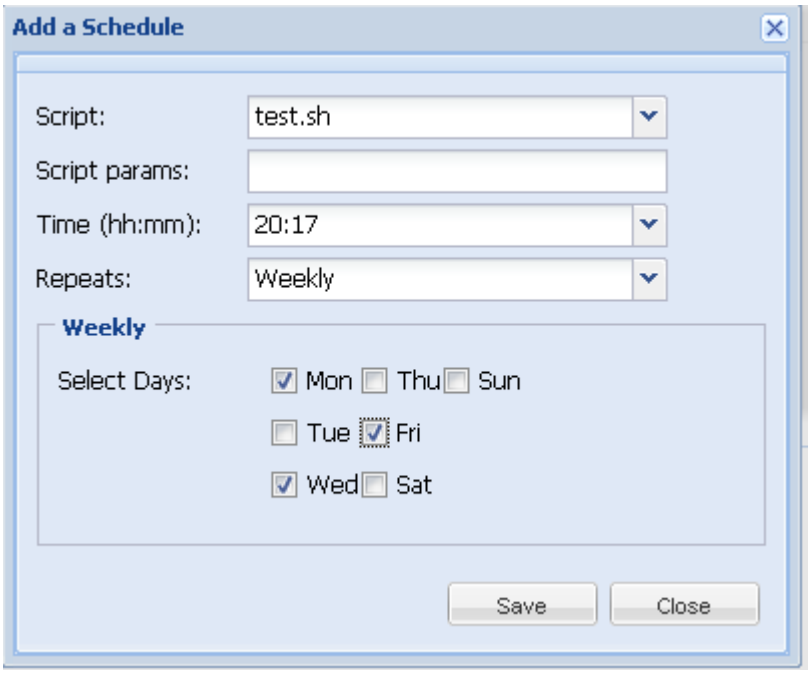

Figure 3.8 Add a Schedule dialog box: 3 Times a Week

Once Per Month on the 20th

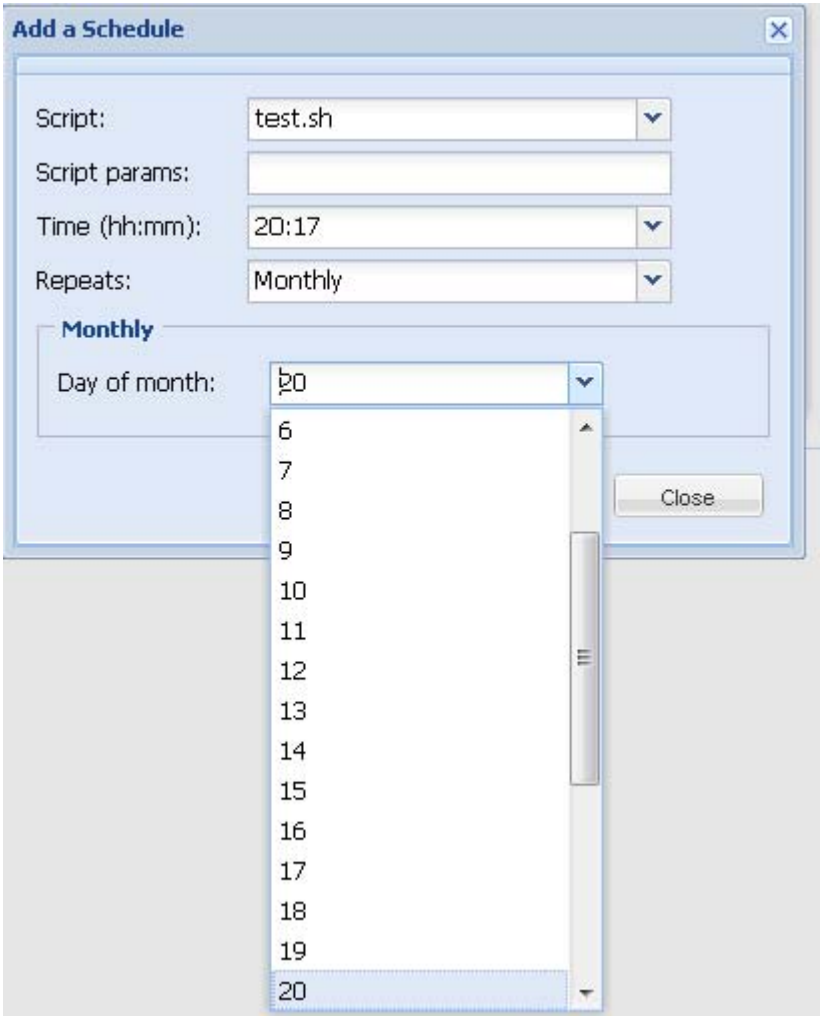

Figure 3.9 Add a Schedule dialog box: Once per Month

Chapter 4 bloxScheduler Troubleshooting

This chapter describes various troubleshooting tasks in bloxScheduler Snapin. This chapter includes the following sections:

Logins Don't Work

Check that you are a LOCAL user with the correct user-group.

Job Doesn't Run

Check the timezone of the appliance. You should set jobs for at least 2 minutes in advance.

Can't See The Output

Check the script. Scheduler scripts can only write to the bloxTools server, so they have to write to a directory that can be viewed from the HTTP connection. If you haven't set up your own *snapin.conf* file (see the developer notes) then any script should send its output to */portal/scheduler/htdocs/*

Script Can't Read Other Files

Check where your script is getting the data, and use ABSOLUTE paths. scheduler scripts always start with a 'chdir' to '/', instead of starting in '*/portal/scheduler/scripts*', so you need an absolute path to the file, or do a 'chdir()' first.

Can't Set A Job To Run Every 15 Minutes

To run a job every 15 minutes, create 4 jobs, each one to run 'hourly' at different time intervals.

Can't Set An Hourly Job

When you schedule a job to run every hour, you select ‘hourly’ in the *Repeats* section. This setting ignores the hour field in the *Time (hh:mm)* section, and only reads the minute field, so a time of '11:45' runs hourly at 45 minutes past every hour.