blacksands

Receiver Deployment Manual

Blacksands Inc.
Version 1.4

© Blacksands inc. 2020

© Copyright 2020 Blacksands, Inc. All rights reserved. Contents and terms are subject to change by Blacksands without prior notice. Reproduction or transmission of this publication is encouraged.

Trademarks

Copyright© 2020 Blacksands, Inc. All rights reserved. Blacksands® and certain other marks are registered trademarks of Blacksands, Inc., in the U.S. and other jurisdictions, and other Blacksands names herein may also be registered and/or common law trademarks of Blacksands. All other product or company names may be trademarks of their respective owners. Performance and other metrics contained herein were attained in internal lab tests under ideal conditions, and actual performance and other results may vary. Network variables, different network environments and other conditions may affect performance results. Nothing herein represents any binding commitment by Blacksands, and Blacksands disclaims all warranties, whether expressed or implied, except to the extent Blacksands enters a binding written contract, signed by Blacksands authorized executive with a purchaser that expressly warrants that the identified product will perform according to certain expressly-identified performance metrics and, in such event, only the specific performance metrics expressly identified in such binding written contract shall be binding on Blacksands. For absolute clarity, any such warranty will be limited to performance in the same ideal conditions as in Blacksands' internal lab tests. In no event does Blacksands make any commitment related to future deliverables, features or development, and circumstances may change such that any forward-looking statements herein are not accurate. Blacksands disclaims in full any covenants, representations, and guarantees pursuant hereto, whether express or implied. Blacksands reserves the right to change, modify, transfer, or otherwise revise this publication without notice, and the most current version of the publication shall be applicable.

Please report errors or omissions in this or any Blacksands technical document to techdoc@blacksandsinc.com.

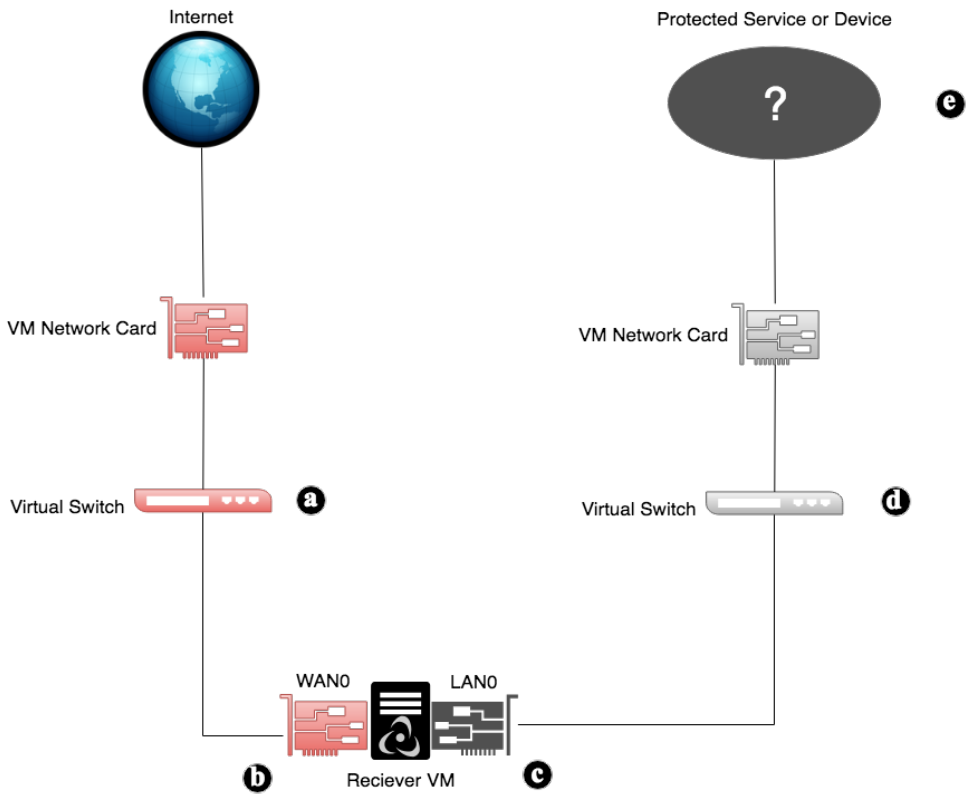
1. Receiver Deployment 4
1.1. Customer Readiness Worksheet 4
Customer to Complete Prior to Installation Start 4
1.2. Network Requirements 5
1.3. Acquiring Receiver Appliance 6
1.4. VMware Requirements 6
1.5. VMWare Deployment of Blacksands Receiver OVA 6
1.6. Registering the Blacksands Receiver 8
1.7. Accessing Console Tools 8
1.8. Setting Up Networking 9
1.9. Viewing Network Adapters 9
1.10. Registering Receiver 10

© Blacksands inc. 2020

1. Receiver Deployment

1.1. Customer Readiness Worksheet

Customer to Complete Prior to Installation Start



(a) Name of virtual switch: _____

(b) WAN/Public IPv4 address: _____ (Must be static IP)

(c) LAN0 Private IPv4: _____

(d) Name of virtual switch: _____

© Blacksands inc. 2020

blacksands

1.2. Network Requirements

Customer to set the following edge firewall rules as follows

Firewall Requirements

Direction	From	To	DST Port	Protocol
In	67.225.220.203 [2]	Receiver wan0	22	TCP
In	ALL	Receiver wan0	443	TCP
Out	Receiver wan0	ubuntu.com	80	TCP
Out	Receiver wan0	ubuntu.com	443	TCP
Out	Receiver wan0	ubuntu.com	123	UDP
Out	Receiver wan0	canonical.com	80	TCP
Out	Receiver wan0	canonical.com	443	TCP
Out	Receiver wan0	canonical.com	123	UDP
Out	Receiver wan0	smtp.gmail.com [1]	587	TCP
Out	Receiver wan0	67.225.220.131 [2]	5680	TCP
Out	Receiver wan0	67.225.220.110 [2]	443	TCP

[1] Please note during the registration of the Blacksands Receiver, outgoing TLS SMTP connection to smtp.gmail.com over port 587 is required. After device registration this requirement can be turned off.

[2] Blacksands Private Cloud

© Blacksands inc. 2020

1.3. Acquiring Receiver Appliance

Go to https://s3.amazonaws.com/bsi-release/www/index.html and click on the "*Download Receiver Appliance".* Once downloaded please perform a file integrity check using the following commands:

Linux :	shasum -a 256 BlacksandsReceiver_v{version}.ova
OSX :	shasum -a 256 BlacksandsReceiver_v{version}.ova
Windows :	sha256sum.exe BlacksandsReceiver_v{version}.ova

The output of the above commands will render a 64 character alpha numeric string, please verify this string with the *"Secure Hash Algorithm"* from the above download page.

1.4. VMware Requirements

(a) VMWare 6.0+
(b) Four(4)+ Processors / Sockets
(c) Four(4)+ GB (4096 MB) RAM
(d) Eighty(80) GB Storage

1.5. VMWare Deployment of Blacksands Receiver OVA

(a) Select Create / Register VM, select Deploy a virtual machine from OVF or OVA files then click Next (see Diagram 1.)

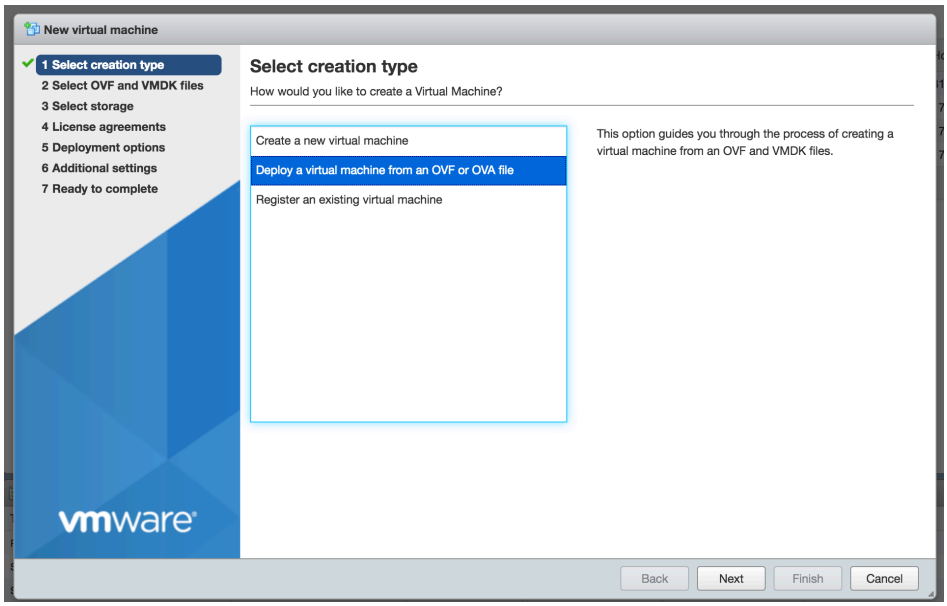


Diagram 1

© Blacksands inc. 2020

(b) Add Name and drag the BlacksandsInc_Receiver_vXX.ova into the blue box and click Next (see Diagram 2). Select Storage and click Next.

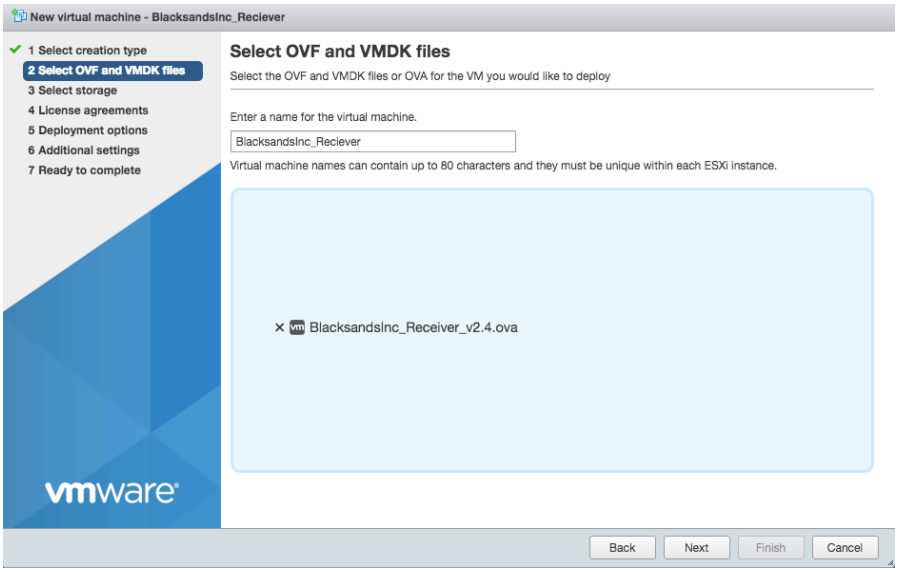


Diagram 2

(c) Select Deployment Options and click Next.
(d) Review the settings and click ***Next*** at ***Ready to complete*** (see Diagram 3).

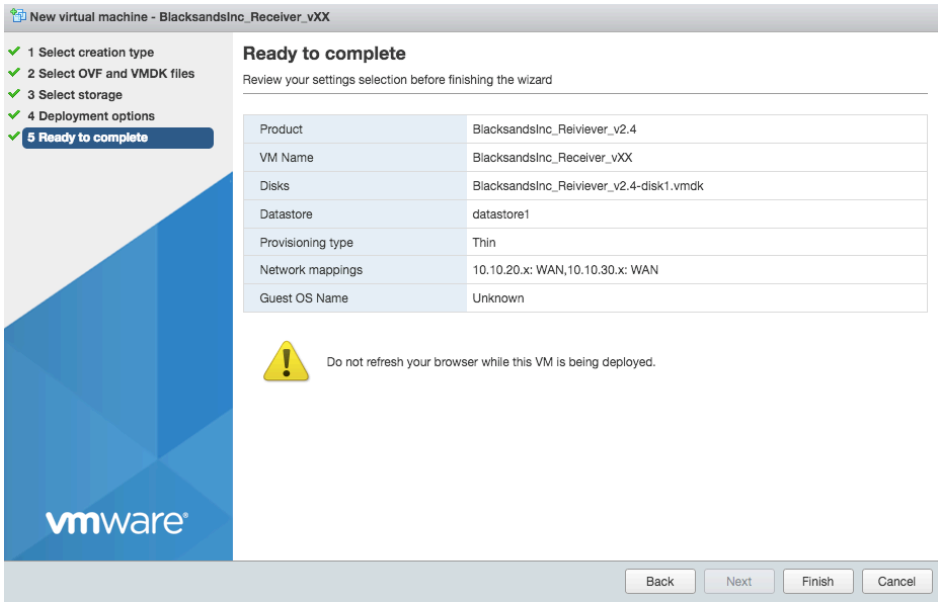


Diagram 3

© Blacksands inc. 2020

1.6. Registering the Blacksands Receiver

(a) ***Power On*** the newly created VM.
(b) Start a ***console*** to the VM.
(c) Logging on the Blacksands' Receiver (Console).
Username = ***bsiuser***
Password = ***1234567890***
Blacksands terminal user from the VMWare console window log into the Blacksands console with the above information. You will be immediately forced to change the default password. (See Diagram 4).

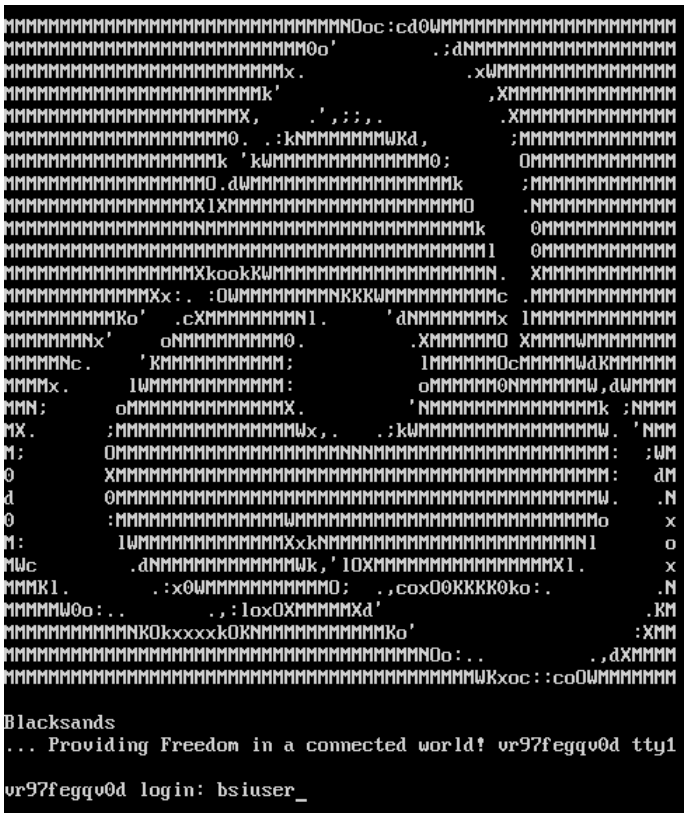


Diagram 4

1.7. Accessing Console Tools

(a) Hit 'TAB' a couple of times to see a list of available tools. (adapters, arp, registration, restart, set, shutdown, speedtest)

Diagram 5

© Blacksands inc. 2020

1.8. Setting Up Networking

(a) The initial settings are WAN0 - DHCP and LAN0-LAN3 DISABLED
(b) The first change will be to setup networking for WAN0
(c) Type ‘set’ and then hit ‘TAB’ . This will provide you with the the different ‘set’ functions available (see diagram 6).

```
bsiuser@config:~# set
lan0  lan1  lan2  wan0
```

Diagram 6

(d) Type ***set wan0***

```
bsiuser@config:~# set wan0
Please select dhcp or static or off
[dhcp/static/off/back]: static
IPv4 Address: [redacted]
IPv4 Subnet Mask: 255.255.255.248
IPv4 Gateway: [redacted]
Please enter DNS seperated by spaces
IPv4 DNS: 8.8.8.8
```

Diagram 7

(e) Then input the appropriate networking information including; Address, Subnet, Gateway, and DNS.
(f) You can also set one of the LAN interfaces for the internal network in the same way.
(g) Anytime you adjust networking on the Receiver, the device will need to be restarted for the changes to take effect.
(h) Type ‘restart’ in order to force the rebooting of the Receiver. You will be required to confirm this request.

1.9. Viewing Network Adapters

In order to view WAN0, LAN0-3 you can view the current adapter settings.
Type ‘adapters show’ and it will list the current settings.

```
bsiuser@config:~# adapters show
+------+---------+---------------+---------------+---------------+----------+--------+------+
| Name | Setting | IP            | NetMask       | Gateway       | Speed    | Duplex | Link |
+------+---------+---------------+---------------+---------------+----------+--------+------+
| lan0 | dhcp    | 192.168.1.15  | 255.255.255.0 | proto         | 10000Mb/s | Full   | yes  |
| lan1 | manual  | Not Set       | Not Set       | Not Set       | 10000Mb/s | Full   | yes  |
| lan2 | manual  | Not Set       | Not Set       | Not Set       | 10000Mb/s | Full   | yes  |
| wan0 | static  | 108.203.128.68 | 255.255.255.248 | 108.203.128.70 | 10000Mb/s | Full   | yes  |
+------+---------+---------------+---------------+---------------+----------+--------+------+
```

Diagram 8

© Blacksands inc. 2020

1.10.Registering Receiver

(a) Type ‘registration start’. You will be prompted to confirm the registration of this Receiver. Note, that this resets the Receiver in the system. This also REQUIRES proper networking. We suggest utilizing some of the other networking tools prior to Registering the Receiver (i.e. ‘arp’, ‘speedtest’, ‘adapters’)

Diagram 9

(b) You will be asked for two emails. The first is an ‘Admin Email’. This is a member of your organization that is already a valid Blacksands’ Administrator. He/she will receive an email requesting approval of this Registration process for your organization.

The second email is your email (the person installing the Receiver). This email address will be used to report on any changes to the Blacksands’ Receiver. These 2 email addresses may be the same for a given organization.

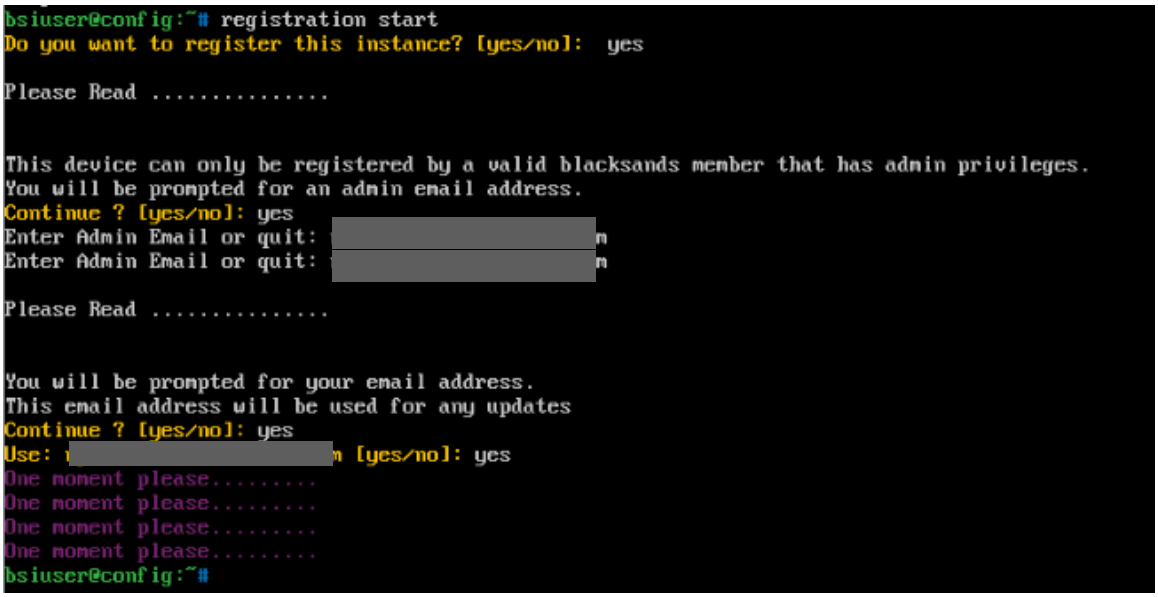


Diagram 10

(c) You will receive an email that the registration is complete. The registration process may take a few minutes.

(d) At the console type ***registration complete.*** If you receive a ‘Could not retrieve the package, exiting’ error. Wait a few minutes and try again.

Diagram 11

© Blacksands inc. 2020