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Setup DR365V-HA Guide Veeam-readyBackup & Disaster Recovery Cluster Appliance



1U Storage Concentrator



24-bay 4U Expansion Array

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Table of Contents

Table o	f ContentsError! Bookmark not defined.
1.1	Introduction
1.1.1	Icons
1.1.2	System diagram and description7
1.1.3	Product Registration
1.1.4	Contacting StoneFly for Help
2.1	Mounting the Equipment10
2.1.1	1U Storage Concentrator Rack Installation Instructions10
2.1.2	HA RAID Storage Expansion Array / HA Expansion Unit Rack Installation Instructions 15
2.2	Safety Reminders
3.1 Cab	ling the Equipment
4.1	HA RAID Storage Expansion Array IP Address Configuration
4.1.1	Serial port setup
4.1.2	Web GUI IP Address setup
4.2	Configuring IPMI KVM
4.3	VMware Management Network Configuration
4.4	Steps to Configure SCVM Management Port
4.5	Configuring the SCVM
4.6	Configuring the Veeam Management VM58
4.6.1	Assigning a Static IP Address to the Veeam Management VM
4.6.2	Enabling RDP on the Veeam Management VM62
4.6.3	Accessing Windows Server hosting Veeam

Chapter-1: Introduction

1.1 Introduction

This document is aimed for system administrators who would like to know how to get started with StoneFly DR365V-HA Appliance. It describes initial steps for launching the appliance.

The StoneFly DR365-HA combines high availability with backup and disaster recovery to ensure hyper-availability for enterprise mission-critical workloads. Leverage StoneFly's battle-tested technology and consolidate all of your server and backup systems into one easy to manage, simple-to-use and highly available appliance.

This guide gives an overview of the product, rack mounting instructions and initial installation procedure. Information for using the features of the StoneFusion software is found in the Storage Concentrator User Guide on the included CD.

StoneFly Resource Library:

https://stonefly.com/resources

The StoneFly SCVM[™] Webpage:

https://stonefly.com/hyper-converged/scvm-virtual-storage-appliance

Veeam Backup & Replication User Guide for VMware:

https://helpcenter.veeam.com/docs/backup/vsphere/overview.html?ver=95u4

Each StoneFly DR365V-HA comes preconfigured with VMware vSphere on each cluster node, a StoneFly SCVMTM Virtual Storage Controller on each cluster node, and Veeam's Backup Engine running on a second VM. Additional Virtual Machines can be installed on the DR365V-HA as needed as long as adequate processing cores and system memory are available to support those VMs. Contact your StoneFly sales representative for details.

StoneFly DR365V-HA is made of three or more parts: Two Hyperconverged StoneFly Storage Concentrator (SC) appliances and one or more StoneFly HA RAID Storage Expansion Arrays.

StoneFly DR365V-HA supports the following SC cluster appliances:

- Dual 1U Storage Concentrator Cluster, Quad 12Gb SAS Connection
- Dual 2U Storage Concentrator Cluster, Quad 12Gb SAS Connection
- Dual 1U Storage Concentrator Cluster, Quad 16Gb FC Connection
- Dual 2U Storage Concentrator Cluster, Quad 16Gb FC Connection



DR365V-HA 1U Storage Concentrator (with bezel)

The StoneFly DR365V-HA can be configured with the following StoneFly HA RAID Storage Expansion Arrays:

- 12-bay / 2U 12Gb SAS HA RAID Storage Expansion Array (12 x 3.5" SAS drives)
- 16-bay / 3U 12Gb SAS HA RAID Storage Expansion Array (16 x 3.5" SAS drives)
- 24-bay / 4U 12Gb SAS HA RAID Storage Expansion Array (24 x 3.5" SAS drives)
- 24-bay / 2U 12Gb SAS HA RAID Storage Expansion Array (24 x 2.5" SAS drives)
- 12-bay / 2U 16Gb FC HA RAID Storage Expansion Array (12 x 3.5" SAS drives)
- 16-bay / 3U 16Gb FC HA RAID Storage Expansion Array (16 x 3.5" SAS drives)
- 24-bay / 4U 16Gb FC HA RAID Storage Expansion Array (24 x 3.5" SAS drives)
- 24-bay / 2U 16Gb FC HA RAID Storage Expansion Array (24 x 2.5" SAS drives)

StoneFly HA RAID Storage Expansion Arrays can be connected to the following StoneFly HA Expansion Units:

- 12-bay / 2U 12Gb SAS HA Expansion Unit (12 x 3.5" SAS drives)
- 16-bay / 3U 12Gb SAS HA Expansion Unit (16 x 3.5" SAS drives)
- 24-bay / 2U 12Gb SAS HA Expansion Unit (24 x 2.5" SAS drives)
- 60-bay / 4U 12Gb SAS HA Expansion Unit (60 x 3.5" SAS drives one drawer)
- 60-bay / 4U 12Gb SAS HA Expansion Unit (60 x 3.5" SAS drives two drawers)



24-bay / 4U 12Gb SAS HA RAID Storage Expansion Array

1.1.1 Icons

Icon	Туре	Description
	Note	Special instructions or information
	Warning	Risk of system damage or a loss of data

1.1.2 System diagram and description

The figure below is a network interconnection diagram for the StoneFly DR365V-HA appliance. It consists of two StoneFly hyperconverged Storage Concentrator (SC) cluster nodes. The diagram also includes shared a StoneFly HA RAID Storage Expansion Array with dual active-active hardware RAID controllers with failover and failback.



1.1.3 Product Registration

To initiate StoneFly customer service for your product, you must first register the appliance. Send us an email with the following information:

Model Number: ______

Serial Numbers: Your appliance serial numbers start with D500 and are located on the rear of each chassis.

1.1.4 Contacting StoneFly for Help

Please have the following information available when contacting StoneFly technical support for assistance:

Model Number: _____

Serial Number(s): D500 ____

Software Version:

Initiators: _____

Storage: _____

To contact StoneFly call 510.265.1616 (Select support from the menu). Our technical support is available 24 hours a day and 7 days a week. You can also contact us via email at support@stonefly.com

Chapter-2: Initial Installation

2.1 Mounting the Equipment

The DR365V-HA appliance is comprised of at least two StoneFly hyperconverged SCs and one HA RAID Storage Expansion Array. Depending on which model you purchased, the interconnects between the SCs and the HA RAID Storage Expansion Array will be either SAS or FC. The SAS cables connecting the SCs with the HA RAID Storage Expansion Arrays and optional HA Expansion Units are short. When mounting the units, you should make sure that the units are rack mounted close to each other.

The following installation process describes how you can mount two 1U SC appliances and a standard 2U HA RAID Storage Expansion Array.

To ensure proper installation and functionality of the StoneFly appliance, please observe the following warnings:

- Wear an anti-static wristband before and during the installation procedure.
- It is recommended to plug the system into two different power sources (eg. into a power outlet and another into a UPS).
- Ensure the rack which the enclosure will be mounted onto has proper grounding and over-current protection.
- Do not obstruct ventilation openings; provide 20cm of free space at the front and back of the enclosure for air circulation; keep the ambient temperature below 35 degrees Celsius.

2.1.1 **1U Storage Concentrator Rack Installation Instructions**

This section provides information on installing the 1U Hyperconverged Storage Concentrator appliance(s) into a rack or cabinet with the rails provided. There are a variety of rack/cabinet units on the market, which may mean that the assembly procedure will differ slightly. You should also refer to the installation instructions that came with the rack unit you are using.

NOTE: This rail will fit a rack/cabinet between 25.6" and 33" deep.

Identifying the Sections of the Rack Rails

The StoneFly appliance chassis package includes two sets of rack rails, one set for the right side of the chassis and one for the left. Each set consists of an inner rail that is pre-attached to the chassis, an outer rail that attaches to the rack, and a middle rail that slides forward in the outer rail.



Identifying the Sections of the Rack Rails

Installing the Outer Rails onto the Rack

Each end of the assembled outer rail includes a bracket with square pegs to fit into your rack holes. If you have an older rack with round holes, these brackets must be removed, and you must use screws to secure the rail to the rack.

Outer Rail Installation

- Align the square pegs on the front end of the rail with the square holes on the front of the rack (C). Push the rail into the rack until the quick release bracket snaps into place, securing the rail to the rack. Keep the rail horizontal.
- 2. Adjust the rail to reach just past the full depth of your rack.
- 3. Align the square pegs on the rear end of the rail to the holes on the rack (D) and push the rail into the rack until the quick release bracket snaps into place, securing the rail to the rack.



Installing the Outer Rails to the Rack

Note: The figure above is for illustrative purposes only. Always install servers at the bottom of the rack first.



Stability Hazard: The rack stabilizing mechanism must be in place, or the rack must be bolted to the floor before you slide the unit out for servicing. Failure to stabilize the rack can cause the rack to tip over.

Installing the Chassis into a Rack

Once rails are attached to the chassis and the rack, you can install the server.

- 1. Pull the middle rail out of the front of the outer rail and make sure that the ball bearing shuttle is locked at the front of the middle rail.
- 2. Align the rear of the chassis rails with the middle rails and then push evenly on both sides of the chassis until it clicks into the fully extended position.
- 3. Depress the locking tabs on both sides of the chassis and push the chassis fully into the rack. The locking tabs should "click".
- 1. Thumb screws may be used to secure the front of the chassis to the rack.



Installing the Chassis into a Rack

Note: Keep the ball bearing shuttle locked at the front of the middle rail during installation.

Note: Figure is for illustrative purposes only. Always install servers to the bottom of a rack first.

Removing the Chassis from the Rack

Caution! It is dangerous for a single person to off-load the heavy chassis from the rack without assistance. Be sure to have sufficient assistance supporting the chassis when removing it from the rack. Use a lift.

If necessary, loosen the thumb screws on the front of the chassis that hold it in the rack.

Pull the chassis forward out the front of the rack until it stops.

Press the release latches on each of the inner rails downward simultaneously and continue to pull the chassis forward and out of the rack.



Removing the Chassis from the Rack

2.1.2 HA RAID Storage Expansion Array / HA Expansion Unit Rack Installation Instructions

Rack Ear Mount Kit

The following table shows all accessories that came with the rack ear mount kit.

Kit Contents

ltem	Description	Quantity
01	Mounting bracket assembly, left-side	1
02	Mounting bracket assembly, right-side	1
03	Hexagon washer screws #6-32mm	8
04	Truss head screws M5 x 9.0mm	4
05	M5 cage nuts	4
06	M5 x 25mm	4
07	M6 x 25mm	4
08	#10-32 x 25.4mm	4



Installation Procedure

The installation begins with determining the installation position and M5 cage nut (9) insertion locations.



Install the fixed rack ear mount to the rear posts and secure them using truss head screws (4).



With the assistance of another person holding the enclosure at the installation height, the other person can place four M5 x 25mm (6) at the front of the enclosure and eight #6-32 screws (3), four on each side, to secure the enclosure into the rack.



Front rack post

Slide Rail Kit

The following table shows all accessories that came with the slide rail kit.

Kit Contents

ltem	Description	Quantity
01	Mounting bracket assembly, left-side	1
02	Mounting bracket assembly, right-side	1
03	Inner glides	2
04	Flathead screws #6-32 L4	6
05	Truss head screws M5 x9.0mm	8
06	M5 cage nuts	4
07	M5 x 25mm	4
08	M6 x 25mm	4
09	#10-32 x 25.4mm	4



The installation begins with determining the installation position (front and rear rack positions) and M5 cage nut (5) insertion location.



9

Adjust the length by loosening the four screws on the slide rail. Secure the slide rails to front and rear posts using truss head screws. Tighten the four screws on the slide to fix the length.



Attach the inner glides to BOTH sides of the enclosure using flathead screws #6-32 (8).



With the assistance of another person, lift and insert the enclosure onto the slide rail. Make sure the inner glides on both sides of the enclosure meets the inner glide rail. Secure the enclosure with M5 or M6 screws from the front.



2.2 Safety Reminders

If you must relocate the enclosure after installation

- Cease all input / output transactions, shut down the system, disconnect all the cables (please refer to the User Manual for details).
- Empty all drive bays (hard drives + hard drive trays) and transport them separately in safe packaging.
- Modules came installed within the enclosure need not be removed.
- Follow the instructions provided in the StoneFly Getting Started Guide.

When the system is in operation

- Module and drive bays must not be empty! They must have a dummy cover / plate in place to stabilized internal airflow!
- Should a module fail, leave it in its place until you have the replacement item on-hand to take its place.
- Allow at least 18~20cm of clearance space at the rear of the enclosure for ventilation.
- Avoid touching the PCB and gold-finger connections.

Chapter-3: Cabling Connections & Power Up

3.1 Cabling the Equipment

The following description shows the steps for two Storage Concentrators, and one HA RAID Storage Expansion Array. Please make sure that you've securely mounted the appliances in the rack/cabinet before beginning the cabling. It's also important to note that the power is connected AFTER all of the data/network connections have been made.



Spanning Tree Protocol (STP) must be disabled on your network switch when using bonded data ports on the StoneFly DR365V-HA appliance.

Note: Follow the labels for each port as marked on your appliance(s).

SAS Interconnects – Standard Configuration

Connect the two included Mini-SAS HD cables between each SC and the HA RAID Storage Expansion Array, as shown below:



SAS Interconnects - Multipath Connections (Optional Upgrade)

If you have purchased the optional StoneFly Multipathing Kit, then you will be able to connect each SC to both RAID controllers on the HA RAID Storage Expansion Array.

The four Mini-SAS HD cables will be connected between each SC and the HA RAID Storage Expansion Array, as shown below (optional multipathing configuration):



Network Connections

Connect SFP+ cables to the data ports on each SC, and Ethernet cables to each of the Management ports (MGMT) on all three units as shown below. For best practices, split the connections between at least two switches for each type of port.



Power Connections

Note: Make sure to make all the connections for both SCs as described above before connecting the power cords to the system.



Once you've made all the connections and made sure that there are no loose cords, press the power button to turn on the system.

Chapter-4: Software Configuration

4.1 HA RAID Storage Expansion Array IP Address Configuration

You can configure the IP address for the HA RAID Storage Expansion Array via either the Serial port or Ethernet port on the rear of the unit.

Serial port: A Y-cable is provided in the package. (NOTE: null modem may be required if you are using a third-party cable).

The serial port's defaults are:

Baud Rate	38400
Data Bit	8
Parity	None
Stop Bit	1
Flow Control	Hardware

For TCP/IP connection and firewall configuration with a management station running the storage array's web interface, please refer to storage array web interface online help or User's Manual. If your network environment is not running DHCP server protocols, a default IP address of <10.10.1.1> can be used to access the unit for the first time.

Use the Ethernet management port for management purposes only, i.e., storage array web interface or telnet console. This Ethernet management port is not used for I/O transactions.

Management network ports are boxed in red, serial ports are boxed in blue. This is an example controller, controllers do vary from configuration to configuration.



4.1.1 Serial port setup

When setting up via the serial port, enter the settings as shown below:



🔀 PuTTY Configuration	1	×
Category:		
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About		<u>)</u> pen <u>C</u> ancel



Hit **ESC** to view next screen.



Select PC Graphic (ANSI Mode) then hit enter.

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' view and edit logical	Volumes	-				
- view and edit Host lu	13	-				
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³ v° Host-side Parameters			
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Select Communication Parameters and hit enter.

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	CB	M: ++++		
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" view and edit logica	1 Volumes	3		
' view and edit Host I	uns	-		
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³ v ^o H ³ RS−232 Port Co	nfiguration	3		
ÀÀÀ° Dª Internet Proto	col (TCP/TP)	3		
° D' Network Protoc	ol Support	з		
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° C³ View and edit	trunk group set	ting ³		
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Arrow Keys:Move Cursor	Enter:Select	Esc:Exit C	Ctrl+L:Refresh	Screen 😽

Select Internet Protocol (TCP/IP) and hit enter.

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Arrow Keys:Move Cursor	Enter:Select	Esc:Ex:	it Ct	rl+L:Refr	esh Scre	een	~

Select **lan0** and hit enter, then select **static** and enter the IP address as needed.

4.1.2 Web GUI IP Address setup

When setting up via the Ethernet port/web GUI, follow the instructions as shown below:



The default Password is blank. Just click on the **Login** button.

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Device 05 1024	Subsystem informati	on		_	_	
Chansis	Catal Education	Model: IP Address: Service ID: Controller ID: Firmware Version:	DS 1024REB2 100.100.100.12 9015702 (0x899196) 627094 (0x89196) 6.61LD3		Status: Recent Events:	Good No Event
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	- Controller Parameters		T SNTP Configuration	-
	Controllor Name		- SNTP IF List	
	Unique Identifier (HEX)	99196	Add	
	Timetate (GMT)	+00000 •	Delete	
	Date	09/17/2018		
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Select Management Port then click on the Configure button.

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	DC Careil
	DK Exect Apply Boost Contract Contract Of The Part of

Select Static then enter your network information. Click OK when completed.

4.2 Configuring IPMI KVM

The Intelligent Platform Management Interface (IPMI) KVM configuration allows for **Remote Management** and **Power Control** of the StoneFly DR365V-HA system. This configuration is optional to perform, but recommended. These steps must be performed on both SC.

To configure the IPMI module, connect a Keyboard and Monitor to the System. Power on the system and press the "Del" key to enter the BIOS setup.



On the BIOS screen, navigate to the **Advanced** tab and select **IPMI Configuration**. The IPMI configuration screen will be displayed.

Redirection Viewer[10.10.63.83] 18 fps	
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BIOS SETUP UTILITY Advanced	
IPMI Configuration Status Of BMC Working IPMI Firmware Revision 1.38 • View BMC System Event Log Clear BMC System Event Log • Set LAN Configuration IPMI NMI Function [Disabled]	InPut for Set LAN Configuration command. See IPMI 1.5 Spec, table 19.1 NOTE:- Each question in this group may take considerable amount of
	 ↔ Select Screen ↑↓ Select Item Enter Go to Sub Screen F1 General Help F10 Save and Exit ESC Exit
v02.68 (C)Copyright 1985-2009, American Meg	atrends, Inc.
Keyboard, Video and Mouse redirection	

Select LAN Configuration. The network settings will be displayed.

Redirection Viewer[10.10.63.83] 19 fps	
<u>V</u> ideo <u>K</u> eyboard Mo <u>u</u> se M <u>e</u> dia <u>H</u> elp	
BIOS SETUP UTILITY	
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LAN Configuration.	Options
Channel Number[01] Channel Number Status: Channel number is OK	Static DHCP
IP Address Source IStaticl IP Address [010.010.063.083] Subnet Mask [255.255.090] Gateway Address [010.010.063.001] McC Address [00.010.063.001]	
	 ↔ Select Screen 14 Select Item ← Change Option F1 General Help F10 Save and Exit ESC Exit
v02.68 (C)Copyright 1985-2009, American Meg	jatrends, Inc.
Kevboard. Video and Mouse redirection	

Adjust the following as needed:

- 1. IP Address Source Choose "Static"
- 2. IP Address Must be on the same subnet as DR365V-HA's Management port
- 3. IP Subnet Mask Same as DR365V-HA's Management port
- 4. Default Gateway Same as DR365V-HA's Management port
- 5. Update LAN Settings Yes



Press the ESC key to exit. Navigate to the Exit tab and select Save Changes and Exit.

Note: The system will require power to be removed before IPMI IP Address will take effect.

Start a browser and navigate to the configured IP address.

C http://10.10.63.83/pa	ge/login.html - V	(indows Internet E	xplorer				
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			Manage last in th				
			Please log in to	access the device.			
			Username				
			Password				
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0.000					C Inter		- # 100% ×

Enter the following information in the login screen:

- Username: ADMIN
- Password: ADMIN



Select **Remote Control** tab to access system console.

			Ľ	lost Identification Server: SMCC User:	n 003048F14 ADMIN	36F (10.10 (Admini	.63.81) istrator)	
System Information Serv	er Health	Configuration	Remote Contr	ol Maintenan	ce Misc	cellaneous	Language	
	Remo This secti launching	te Control on allows you to pe the remote consol	erform various re le.	mote operations	on the serv	rer, such as		
Options	Options							
Remote Control Remote Console 		Launch Console	Lau	nch the remote co	onsole via .	Java or Active	eX (Internet Exp	lorer only) viewers.
Launch SOL		Launch SOL	Lau	nch the SOL cons	sole			
 Server Power Control Virtual Media 		Power Control	See	the server power	state and	perform pow	er control funct	iions.
🚽 🔂 Refresh Page		Virtual Media	This 1.44	option allows yo MB.This image w	u to share : /ill be emul	a image file ated to the h	with a maximu lost as USB de	m size of vice.
🛃 Logout								

Select Launch Console to open system console.

👍 Java iKVM Viewer v1.69	r14 [100.100.100.2 SSL]	- Resolution 1024 X	768 - FPS 30		
Virtual Media Record	Macro Options	User List Capt	ure Power Control	Exit	
VMware ES)	i 6.5.0 (VMKern		1d 59693830		
Supernicro					
2 x Intel(31.7 GiB M	R) Xeon(R) Silv enory				
Download t http://win	ools to nanage -gseaa4hnv8o/				
http://186					
<pre><f2> Custonize S</f2></pre>	ysten/View Logs			<f12> Shut D</f12>	онn/Restart

The system user console screen will appear.

4.3 VMware Management Network Configuration

This section describes configuration of the ESXi Management Network. *IP Addresses* and *Hostnames* used in this section are for example only.

Connect to System console. Attach a keyboard and monitor or use system IPMI KVM.



Press the "F2" key to customize system. Then enter **Login Name** and **Password** and hit the "Enter" key to continue. The default Login information is as follows:

- Log in Name: root
- Password: stonefly



Select Network Adapters and press the "Enter" key.

👍 Java iKMM Viewer v1.69 r14 (100.10	0.100.2 SSL) - Resoluti	ion 1024 X 768 - FPS 29		
Virtual Media Record Macro	Options User Li	st Capture Power Contro	I Exit	
Configure Management N	letaork		Network Adapters	
Network Adapters				
EPv4 Configuration IPv6 Configuration DMS Configuration Custom DMS Suffixes			The adapters listed here provide the d connection to and from this host. Alber are used, connections will be fault-to traffic will be load-balanced.	efault network η (wo or nore adapters Herant and outgoing
	Network Adap Select the a connection. Toad-balanci	o ters dapters for this hos Use two or more adap ng.	t's default nanagement network ters for fault-tolerance and	
	Device M [] vmnic0 [] vmnic1 [X] vmnic2 [] vmnic3	lane Hardware Label Intel Ether Chassis slo CPUI Slot3 Chassis slo	IRAC Address) Status Ca.Ob.Bcd(3) Discaracisted , Dislike(3) Connected () C22:76:fe) Connected C22:76:ff) Disconnected	
	(D) View Deta	ils (Space) loggle	Selected (Enter) DK (Esc) Cancel	
				Œsc> Exit
	V 1	Mware ESXI 6.5.8 (VM	Kernel Release Build 5969383)	

Select the **vmnic** to use for the management network for ESXi and press the "Enter" key. Press the "Esc" key when changes are complete.



Select **IPv4 Configuration**, then hit the "Enter" key.

Java KVM Viewer v1.69 r14 [100.1	00.100.2 S3L1 - Resolution 1024 X 768 - FPS 21	101	
Virtual Media Record Macro	Options User List Capture Powe	r Control Exit	
Metwork Adapters			
PLAN Configuration IPv6 Configuration IPv6 Configuration DMS Configuration Custon DMS Suffixes		1Pv4 Address: 100.100.100.203 Subwet Mask: 255.255.255.0 Default Gateway: 100.100.153	
		This host can obtain an IPv4 address and other network parameters automatically if your network includes a DB server. If not, ask your network administrator for the appropriate settings.	ling ICP t
	IPv4 Configuration		
	includes a DHCP server. If specified: Disable IPM configurat Use dynamic IPM addres Disable Static IPM address IPM Address	It does not, the following settings must be ion for nanagement network s and network configuration and network configuration (109,100,100,200)	
	Default Gateway	[255.255.255.8] [100.100.100.153]	
	- መµ/Doun> Select (Space) የአ	wik Selected Genter> OK (Esc) Cancel	

Select **Set static IPV4 address and network configuration**. Enter the IP Addresses as needed, then hit the "Esc" key to return.



Select IPv6 Configuration, then hit the "Enter" key.

A Java iKVM Wewer v1.69 r14 [101.1	18.180.2 SSL] - Resolution 1824 X 768 - FPS 38		
Virtual Media Record Macro	Options User List Capture Power Control I	Exit	
Configure Management M	fetuorik	IPv6 Configuration	
Metwork Adapters VLAM (optional) IPv4 Configuration IPv6 Configuration DMS Configuration Custom DMS Suffixes		IPvG is disabled. This host can be configured to support the host will be required to enable or	IPvG. A restart of disable IPvG.
	IPv6 Canfiguration This hast can obtain metwork settin supports Stateless Address Antocom DMCPV6 server. If it does not, stat (a) Disable IPv6 (restart required) () Use dynamic IPv6 address and met I Due DMCPv6 () Set static IPv6 address and met Static address #1 [gs automatically if your metwork igaration (SLAAC) or includes a is settings wust be specified: twork configuration work configuration	
	Static address #2 I Static address #3 I Default gateway I (Up/Down> Select (Space> Mark Selec	1]] ted	
<up down=""> Select</up>			
	VMware ESXI 6.5.8 (VMKer	nel Release Build 5969383)	

On the following screen, select Disable IPv6 (restart required), then press the "Esc" key.



Select **DNS Configuration**, then press the "Enter" key.

🛃 Java (KVM Viewer v1.69 r14 [188.100.1	08.2 SSL] - Resolution 1024 X 768	FPS 28	
Virtual Media Record Macro	Options User List Capture	Power Control Exit	
Configure Nanagement Net			
Network Adapters VLAM (optional)		Manual Primaru DMS Server:	
IPv4 Configuration IPv6 Configuration DNS Configuration Configuration		100.100.151 Alternate DMS Server: 100.100.155	
Custon Dhs Suffixes		Hostname win-gseaa4hnv8o	
_		If this host is configured using	DHCP. DNS server addresses
1	DNS Configuration		or the appropriate
	() Obtain DMS server () Obtain DMS server () Use the following Primary DMS Server Alternate DMS Server Hostname (Up/Down) Select (Spoo	addresses and a hostname automatically addresses and hostname: UNS server addresses and hostname: (100,100,100,15) (100,100,15) (100,100,15) (100,100,15) (100,100,15) (100,100,15) (100,100,15) (100,100,15) (100,100,15) (100,15)	e1
(Up/Down) Select			
	Whene ESX	6.5.8 (VMKernel Release Build 5969383)	

Enter information for DNS server and Hostname as needed then hit the "ESC" key to return.



Select **Custom DNS Suffixes**, then hit the **ESC** key to return.

👍 Java iKVM Viewer v1.69 r14 (108.100.)	10.2 SSL] - Resolution 1024 X 768 - FPS 30	×
Virtual Media Record Macro	Options User List Capture Power Control Exit	
Configure Management Net		
Network Adapters VLAN (aptional) IPv4 Configuration	dhfearp.com When using short, unqualified names, DMS queries will attempt to locate the specified bast by appending the	
IPv6 Configuration DMS Configuration Custon DMS Suffixes	suffixes listed here in the order shown until a match is found or the list is exhausted.	
	If no suffixes are specified here, a default suffix list derived from the local domain name.	
	Custan DHS Suffixes	
	DNS queries will attempt to locate hosts by appending the suffixes specified here to short, unqualified names.	
	Use spaces or commas to separate multiple entries.	
	Suffixes: Ednfcorp.com	
	(Enter) DK (Esc) Cancel	
Select		
	VMware FSKi 5.5.8 (VMKernel Release Build 5959383)	

Enter DNS **Suffixes** as needed, then hit the **ESC** key to return.



Select **Restart Management Network** to complete configuration of settings. Hit the "ESC" key to log out.

4.4 Steps to Configure SCVM Management Port

You will need to configure a computer located on the same subnet as the StoneFly DR365V-HA appliance to allow it to remotely manage the StoneFly DR365V-HA. Open a web browser on the remote system and in the address bar type in the IP address set in previous section "http://DR365V_IP_ADDRESS" and press the **Enter** key. You will see a screen like the one shown below:



Click on the **Download vSphere Client** link. This will guide you to download and install the vSphere Client which will allow you to access your StoneFly DR365V-HA via its VMware ESXi hypervisor.

After the VMware vSphere Client is installed, it will create an icon on your desktop. Doubleclick on the "vSphere Client icon" to launch the Client. Use the same credentials to log in to the system:

IP address / Name: <IP address you configured for the DR365V-HA>

Username: root

Password: stonefly

You will see a screen like the one shown below:

	a 12 😅 🗟	• (•)							
H 192.168.151.230	SESEVM Getting Started	Summary Site	aurce Alocation N Perfor	marce E	untă Corsole Permissoră				
	General				Resources			-	
	Guest OS: WM Version: CPU: Memory: Memory: DNS Name: DNS Name: DNS Name: State: Host: Addresses: Decord/Replay Alarm actions: Commands Decord Sector	Red Hat 4 2 vCPU 1024 MI 1024 MI Not insta Powered kcahost Status: Inactive Disabled	Enterprise Linux 5 (32-bit) Re Red Cff Joc aldonian		Consumed Host CF Consumed Host M Active Guest Meno Provisioned Storage Used Storage: Detastore I detastore Metwork Science Withuel Machines	UL enory: styl et 228.75 68 ine N	Pefresh Storage Usage 21.00 GB 20.00 GB 20.00 GB Free Last Updain 207.57 G 4/28/2000 -		
	Annotations								
	Notes:	StoneFly Virtu http://www.sl	al Storage Concentrator. onefly.com	<pre>/ Edk</pre>				-	
Recent Tasks								×	
		Tacast	Chalker	Datale	TANKING NO.	The Requested Start To	A Stat Tasa	Come	

The screenshot above shows one SCVM is already installed. If you want to access the user interface for that particular SCVM, click on that SCVM first and then click on the **Console** Tab. You will see a screen like the one shown below:



Steps to enable the StoneFly SCVM:

The SCVM management network interface is preconfigured with the default IP address of 192.168.0.254. This must be changed to a valid address for your LAN network. Login to the "SC Service" console using the VMware "Virtual Console" for the SCVM by doing the following:

- a. Press Enter to display the login prompt.
- b. At the User ID prompt type **console** and hit **Enter**.
- c. At the password prompt type **coni100o** and hit **Enter**. Note that the User ID and password are case sensitive.

Using the SC Service menu, configure the management network by selecting option 2, for 2 -Network.



The default settings are shown below. Adjust settings as needed then save the changes.



Adjusted settings are shown below. Enter \mathbf{q} at the command prompt to exit back to the service menu. Enter \mathbf{q} again to exit out of the user console service.

🕢 100.100.250.10 - vSphere Clier	ant .	-	×
File Edit View Inventory Ad	idministration Plug-ins Help		
C C A Home D	Inventory b 👹 Inventory		
-	8 8 8 B 6 5		
			_
Image: State	Consol Remain Resource Allocation Performance Reverts Consol Remained System Name: SC-192-168-76-76 IP: 192.168.76.76 Version: 8.8.2.14 Storage Concentrator Service->Network 		

Note: the browser access to the SCVM Management GUI is blocked while the "SC Service" menu is active. Also note that there can be a short delay before the SCVM GUI becomes available.

At this point, it should be possible to log into the SCVM Management GUI by browsing to the management IP address that you have configured. Next step is to configure the SAN data network settings.

4.5 Configuring the SCVM

Launch a browser then navigate to https://<configured IP address>.

		STON	VEFLY		
	Username				
	Password				
		Lo	gin		
		Lice	nsing		
System Name		System UUID	2		Vendor Serial Number
SC-192-168-100-33		564D9DAC-C	0C9-8B8C-B12C	-80F5BA2E4D12	00:0C:29:2E:4D:12
Licensed Feature Name				License Key	
StoneFusion Base OS		SC-192-168-10	0-33	Subscr #1 - 369 da	ys left
		SC-192-168-10	0-33		
		SC-192-168-10	0-33	U-XXXJ6-GQP5A-X	2TQS-XALO2-369-001
		Undo	Submit		
		License /	Activation		
		Product Key	X0000X-X0000X-X00	00X-X000X-X000X-X000X	x
			Update		

DR365V-HA Login Screen

In the User ID field type: admin

In the Password field type: M@n4g1ng

Click **Submit**. The Home Page screen will appear.

Click System.

Click Admin.

stonefly Administration								
	General	(58.5	Auto Save	Rentore	failOver U	censing System Mo	nitoring NAS Server	DHS Server
2 ⁴ Expand All				Auto Save to	Remote FTP Serve	a.		
Darkhourd					Enable Auto S	ave to Remote FTP Serv	er	
				IF Add	ness			
SAN .								
-				User Na	me			
THE NAS				Passa	erd			
Resources								
				Direct	inty [-			
System				Transfer I	Passive			
Admin					= Non Passive			
@ General				364	nus nos			
S Asto Save				Auto Save	e to Local Device			
C Restore					Enable Auto	Save to Local Device		
 A FailOver 				Des	vice USB Flash Disk			
System Monitoring								
III NAS Server				Sta	tus N/A			
DNS Server				5	ubreti / Backup	Backup For Upgrade	e and Shutdown	
C Diagnostics								
A Notifications				Copyright/D 2002-2018 S	StoneFly, Inc. All Right	s Reserved.		
1 defitions								

Click Auto Save. The Auto Save screen will appear.

Select the method(s) of saving the database. A USB Flash drive must be inserted into the USB port prior to Enabling. Checkmark **Enable Auto Save to Local Device** and select **USB Flash Disk** from the dropdown menu. Click **Submit**. For **Auto Save to Remote FTP Server** create a directory for each Storage Concentrator. Fill in the IP Address, User Name, Password and directory. Select **Passive** or **Non Passive** and click **Submit**. Both methods can be used, but at least one should be configured to ensure recovery if needed.

Navigate to Admin > General. The system admin screen will appear.



Enter a system name for the *DR365V-HA*.

Enter the number of log records for the database in the Max number of logs field.



The default number of log records is 2000, which is sufficient for most installations.

Click Submit.

Navigate to **Network > Data Port**. The Local iSCSI Data Port Settings screen will appear with the current system (factory) settings. Most fields are blank.

	Local ISCSI Data P	ort Ma	nagement Port Routin	9						
2 Expand All				Local iSCSI D	ata Port Sett	ings				
Cuthered				Use Jumbo Trans						
Cashoord				Local Host iSCSI Listening Po	3260					
SAN				Local Hust GbE IP Addres						
NAS				Net Mar	a 255.255.2	55.0				
Resources					Advanced:	Network/Broa	dcast			
System				Undo	Submit					
Admin				Networ	k Interfaces					
T Data Port	ld	Port	IP Address / Network	MAC Address	Lok	Cur Speed	Dupl	Тури	Max Speed	State
Management Port		1		00:0c:29:55:ad:9b	Down			e1000	1Gb/s	State
C Diagnostics									1941	_
A Notifications	- A.			Ping	Address					
Users	Ping Address					Court 5				•
-										

Enter the **IP** Address for the Local iSCSI Data Port.

Enter the **NetMask** setting for the Local iSCSI Data Port.

Click Submit.

Click **OK** to continue when the confirmation dialog box appears. The *DR365V-HA* automatically configures the Network and Broadcast settings based on the IP address and Netmask settings. Click on the **Advanced: Network/Broadcast** link to view or modify the Network and Broadcast settings. For more information, see "Chapter 2: Administrative Interface" in the Storage

Concentrator User's Guide.

Review the status of all SAN Network Interfaces to select which ports will be used. It is not necessary to select all available ports. All ports selected must have cables attached to them to maintain the proper cluster configuration and operation. The **Id** button is used to flash the link light on a specific port. Select a port by clicking on the box in the **Bond** column. Changes are not enforced until the next reboot. At first power up a default configuration is presented. Changing the default settings requires a reboot of the Storage Concentrator. Navigate to the **System** > **Admin** > **General** screen and click on **Reboot**. If no changes are desired continue to the next step to configure the Management Port.

STONEFLY	INFORMATION ADM		WORK DIAG	NOSTICS NOTIFIC	ATIONS	UPS US	ERS			• Help
adonni greator	Local (SCSI Data Port	Manageme	ent Part R	outing						
₽ [®] Expand All					Default Ga	iteway				
🚯 Dashboard				Defaul	t Gateway	192.168.1.1				
> SAN				Man	agement Po	ort Settings				
					Use DHCP	3				
E NAS					P Address	192.168.1.254				
) 🚯 Resources					Net Mask	255.255.255.0				
🖌 🖵 System					A	dvanced: Networ	k/Broadcast			
Information Admin Metwork					Indo	Submit				
T Data Port Management Port				М	letwork Int	erfaces				
all Routing	ld	Port	IP Address	MAC Address	Link	Cur Speed	Duples	Type	Max Speed	Stats
Diagnostics A Notifications Uses	in the	0	192.168.1.254	00:0c:29:55ad:91	Up	1Gb/s	Full	e1000	1Gb/s	Stats
b 🚰 Users					Ping Add	iress				
Reports	Ping Address					Count 5				Ping

Click on Management Port. The Management Port Settings screen will appear.

DR365V-HA Management Port Settings Screen

Enter the **Default Gateway** setting.

Enter the IP Address for the Management port.

Enter the **NetMask** setting for the Management port. It is not necessary to select a Management Port as on the Local iSCSI Port screen. There is only one port assigned for this purpose.

The *DR365V-HA* automatically configures the Network and Broadcast settings based on the IP address and Netmask settings. Click on the **Advanced: Network/Broadcast** link to view or modify the Network and Broadcast settings. For more information refer to "Chapter 2: Administrative Interface" in the Storage Concentrator User's Guide.



Changing the IP address of the Management port will cause your browser to

lose its connection to the *DR365V-HA*. To access the *DR365V-HA*, set your browser's URL to point to the new IP address.

Click **Submit**. The following popups will appear.



Depending on the speed of your browser connection, you may not see this screen. Your changes will still take effect, however you will need to manually set your browser's URL to point to the new IP address.

192.168.100.81 says:		×
Automatically calculated values: Network = 192.168.100.0 Broadcast = 192.168.100.255 If other values are required, please use the advanced feature.		
	ОК	
192.168.100.81 says:		×
The Management LAN and iSCSI SAN IP addresses are on the network. This is not recommended. iSCSI SAN traffic should normally be the LAN. The SAN should be a small, secure, and self container with SAN specific high speed network interfaces. Allowing iSCSI traffic to flow on the LAN may impact performat destabilize both the LAN and SAN. There are cases (e.g. no true LAN network exists) where this co can make sense. Note that SC Failover Clusters are currently not supported in the configuration. Do you wish to continue?	same e kept off of d network ance of, and onfiguration his network Cancel	
192.168.100.81 says:		×
This changes access to the system. Are you sure you want to continue?		
If so, please give the system a few moments to complete the update before trying to re-access the system.		
The new address to access the system is at https://192.168.100).81	
ОК	Cancel	
System Management LAN Port Change	ge screen	<u>l</u>

Click on **OK** on each popup screen to continue.

Click on the new IP address to confirm the change to the Management Port setting.

Setting up Routing

To access a host on other networks, routing information to those networks must be configured in the System Management Network Routing screen. A route must be added if the host has a network setting that is different from the one listed in the iSCSI Host LAN Port Settings screen.

For example, if the *DR365V-HA* network setting is 26.34.128.50 and the host network setting is 106.39.212.6, a route to the host must be configured.

To configure the routing information, use the steps that follow:

1. Navigate to **System > Network > Routing**. The Routing screen will appear.

STONEFLY	INFORMATION ADMIN	ORK DIAGNOSTICS	NOTIFICATIONS UPS US	ERS		Ø He
ADMINISTRATION	Local ISC SI Data Port Management Po	art Routing				
✓ Expand All			Current Route Settings			
A Dashboard	Route	Network	Net Mask	Gateway	Device	Add / Delete
	1	192.168.1.0	255.255.255.0		LAN	N/A
SAN .	2	default	0.0.0.0	192.168.1.1	LAN	N/A
NAS	Add New Route				SAN	🗆 Add
Resources			Undo Submit			
System			Ping Address			
Information Admin Admin	Ping Address		Count 5		•	Ping
Network Tota Port Management Port ad Routing Dispositios		Copyright® 200	2-2018 StoneFly, Inc. All Rights Reserved	L.		
L UPS						

DR365V-HA System Management Network Routing screen

In the Add New Route fields, enter the Network, Netmask, and Gateway settings for the new route.

Click the **Add** check box.

Click Submit.

Navigate to Admin > General. The System Admin screen will appear. The DR365V must be

rebooted for the new routing settings to be recognized.

Click **Reboot**.

Confirming Setup

To confirm that the *DR365V-HA* is configured properly, do the following:

Launch your web browser. In the URL address field, type the IP address you set up for the Management LAN port during the configuration process. Be sure to include **https:**// in the address.

The browser will display an alert regarding the security certificate for the site. This occurs because the IP address for the *DR365V-HA* was changed from the factory default to one appropriate for your network.

Follow the screen prompts to accept the certificate. The number of screens will vary depending on which browser you are using. When the security certificate is accepted, the *DR365V-HA* administrative interface login screen will appear.

Click on **System** and then **Network** to confirm the network settings.

Click on **Data Port** and confirm the settings.

Click on Management Port and confirm the settings.

Click on **Routing** and confirm the settings.

Now that you have completed all of the steps on the Primary Storage Concentrator, return to Section 4.2 on page 36 and repeat all of the same steps on the Secondary Storage Concentrator.

4.6 Configuring the Veeam Management VM

The Windows VM that will be used for Veeam Management cannot exist until the initial cluster is configured and a datastore provided. Your StoneFly engineer will walk you through the process.

Once you've configured the IPMI, SCVM, VMware, and cluster, you can create the Windows server VM that will run the Veeam Backup & Replication management software on the DR365V-HA appliance. Your StoneFly engineer will walk you through the process during initial setup. Once the Windows VM is created, you must perform the following three step process:

- Setting a static IP address on the Veeam Management VM.
- Enabling RDP (Remote Desktop Protocol) on the Veeam Management VM.
- Accessing the Veeam Management VM using RDP.

4.6.1 Assigning a Static IP Address to the Veeam Management VM

Log into the Veeam Management Virtual Machine (VM) using **VMware remote console** and click on the **Start** button. Open the **Control Panel** from the taskbar.



In the **Control Panel**, click on **View Network Status and tasks** under the **Network and Internet** applet.



Find and click on Change Adapter Settings in the menu on the left.

Control Panel Home	View your basic network information and set up connections					
Change adapter settings	View your active networks					
Change advanced sharing settings	Network Public network	Access type: Internet Connections: 🔋 Ethernet				
	Change your networking settings —					
	Set up a new connection or Set up a broadband, dial-up	network 9, or VPN connection; or set up a router or access point.				
	Troubleshoot problems Diagnose and repair networ	rk problems, or get troubleshooting information.				

In the window that appears, right-click on your network connection and click on Properties.



This should open the Ethernet Properties window.

Remove the checkmark for Internet Protocol Version 6 (TCP/IPv6) to disable it.



Select Internet Protocol Version 4 (TCP/IPv4) by left-clicking it once and then click on Properties.

	nect using: Microsoft Hyper-V Network	Adapter		
			Configur	e
This	connection uses the following	g items:		
•	Elient for Microsoft Netw	orks		~
	Tile and Printer Sharing f	or Microsoft Ne	tworks	
	Level 2005 Packet Scheduler			
	Internet Protocol Version	4 (TCP/IPv4)	1/0.0.1	
	Link-Layer Topology Dis	covery Mapper	Destagel	
T	Microsoft LLDP Protocol	Driver	TOLOCOI	
<		Dilver		>
	Install Unir	nstall	Propertie	es
	escription		/	
- De			ol. The defa	ult

Select **Use the following IP address** and assign a custom IP address to this server, the Network Mask, Default Gateway, and the DNS IP address.

Internet Protocol Version 4 (TCP/IPv4)	Properties X
General	
You can get IP settings assigned autom this capability. Otherwise, you need to for the appropriate IP settings.	natically if your network supports ask your network administrator
Obtain an IP address automatical	у
Use the following IP address:	
IP address:	192.168.1.2
Subnet mask:	255.255.255.0
Default gateway:	192.168.1.1
Obtain DNS server address autom	atically
• Use the following DNS server addr	resses:
Preferred DNS server:	8.8.8.8
Alternate DNS server:	8.8.4.4
Validate settings upon exit	Advanced
	OK Cancel

4.6.2 Enabling RDP on the Veeam Management VM

Open the Server Manager on the Windows VM. By default, the Server Manager should open when you log in to the GUI. You can also select it from the taskbar.

In the **Server Manager** window, click **Local Server** in the left pane. This may take several minutes to open the desired window.

Once the window opens, you should see that the **Remote Desktop** (RDP) is disabled.

🔁 Server Manager			_	
Server Ma	nager • Local Se	rver - 🕑 I	Manage <u>T</u> ools <u>Y</u>	<u>V</u> iew <u>H</u> elp
Dashboard	For WIN-LV2BNP3L9VO		Т	ASKS 💌
Local Server All Servers File and Storage Services ▷	Computer name Workgroup	WIN-LV2BNP3L9VO WORKGROUP	Last installed updates Windows Update Last checked for updates	^
	Windows Firewall Remote management Remote Desktop NIC Teaming Ethernet0	Public: On Enabled Disabled Disabled IPv4 address assigned by DHCP, IPv6 enabled	Windows Defender Windows Error Reporting Customer Experience Improven IE Enhanced Security Configura Time zone Product ID	nent Pro tion
	Operating system version Hardware information	Microsoft Windows Server 2016 Technical Preview 4 VMware, Inc. VMware Virtual Platform	Processors Installed memory (RAM)	×

Click on **Disabled**, this should open the **System Properties** window. Left-click on the **Remote** tab and check the **Allow remote connections to this computer** option.

Also uncheck the Allow connections only from computers running Remote Desktop with Network Level Authentication (recommended).

System Propertie	25					×
Computer Name	Hardware	Advanced	System Prote	ection	Remote	
Remote Assist	ance					
Allow Rem	ote Assistan	ce connectio	ns to this com	outer		
				Ad <u>v</u>	anced	
Remote Deskt	ор					
Choose an op	tion, and the	n specify wh	can connect			
○ <u>D</u> on't allow	remote con	nections to th	nis computer			
Allow remo	te connectio	ns to this cor	nputer			
Allow co Desktop	onnections o o with <u>N</u> etwo	nly from com nk Level Autl	puters running nentication (re	Remote commen	e ided)	
				Color		- 1
Help me choo	se			<u>3</u> elec	a users.	
		OK	C	nool		ook
		UK	La	incel	<u> </u>	фріу

When you select the **Allow remote connections to this computer** option, a warning message should appear, as shown in the image below. Select **OK** to proceed.

Remote [Desktop Connection	\times
Â	Remote Desktop Firewall exception will be enabled You chose to enable Remote Desktop Connection for all network connections on this computer.	
	To enable it for selected network connections, open Windows Firewall with Advanced Security	
	ОК	

You can now create specific user groups with permissions to connect to the server via Remote Desktop. To do so, click on **Select Users** and type in the relevant credentials of the users.

After you've enabled **Remote Desktop**, the **Server Manager** might still display **Disabled**. Refresh the window and wait a few minutes, it should change to **Enabled**.

4.6.3 Accessing Windows Server hosting Veeam

On any Windows machine, search **Remote Desktop Connection** in the taskbar and click on **Remote Desktop Connection**. This should open a window like this:

Remote Desktop	Connection	
Remote Desktop Connection)	
Example: computer.fabrikam	.com 🗸	
None specified		
r name field is blank. Enter a fu	Il remote computer	
otions	Connect	Help
	Remote Desktop Remote Desktop Connection	Remote Desktop Connection Remote Desktop Connection Example: computer.fabrikam.com None specified r name field is blank. Enter a full remote computer ptions Connect

In the **Computer** text field, type in the IP address you specified in Section 2.8.1 for the IP address of Veeam Management VM and click **Connect.**

The system should prompt you for a username and password. Type in the credentials you created in the last section and click **OK** to start the RDP session.

These crede	Ir credentials intials will be used to connect to 192.168.1.146.
8	User name Password
Re	Domain: member my credentials

Once the RDP connection is established, you should be able to access the Veeam management software by double-clicking the **Veeam Backup & Replication** icon.



Additional Configuration and System Management

For additional information regarding the configuration and use of the StoneFly Storage Concentrator Virtual Machine, please consult the StoneFly Storage Concentrator User Guide from the included documents CD.

For additional information regarding the configuration and use of the Veeam Backup & Replication software, please consult the Backup, Replication and Data Recovery User Guide from the included documents CD or follow the link below:

https://helpcenter.veeam.com/docs/backup/vsphere/overview.html?ver=95u4

For additional information regarding the configuration and use of the VMware vSphere Hypervisor, please consult the VMware website.

Technical Support

For further support, please call technical support at 1-510-265-1616 option 3. Or send email to technical support at <u>Support@StoneFly.com</u>.



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