



MAY, 24TH 2017

FLEX2N ARCHITECTURE OVERVIEW

INFRA CLOUD.CO.UK

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FLEXVPC S.L.

Revision history

Date	FX System	Document revision	Description of change
May 2017	Gen 1.0	1.0	Gen 1.0 release
May 2017	Gen 1.1	1.1	Update configurations
June 2017	Gen 1.2	1.2	Project plan update and Delivery Fotos and Deliver notes
June 2017	Gen 1.3	1.3	Add IP's and credential missing DNS from customer

Response terms and confidentiality

The information in the proposal is personal to the recipient and is strictly confidential. This proposal is subject to survey, credit check and to the terms of any final contract.

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1 Introduction
































This document describes the high-level design of FlexVPC System. This document also describes the hardware and software components that Flex2N includes in the system.

The target audience for this document includes sales engineers, field consultants, advanced services specialists, and customers who want to deploy a Backup infrastructure using FlexVPC as a Service.

The Flex2N Glossary provides terms, definitions, and acronyms that are related to Flex2N Systems. Refer to [Accessing Flex2N documentation](#).

To suggest documentation changes and provide feedback on this book, send an e-mail to info@flexvpc.com. Include the name of the topic to which your feedback applies.

2 Project plan from May 2017 of Juni 2017 First Version

	 Task Mode	Task Name	Duration	Start	Finish	Resource Names	Predecessors
1		Infracloud Backup Solution #Start	20 days	Mon 22/05/17	Fri 16/06/17		
2		Hardware Technical	1 day	Tue 23/05/17	Tue 23/05/17	FC staff	
3		Installation #1	19 days	Tue 23/05/17	Fri 16/06/17	FC staff	
4		Physical installation servers	1 day	Tue 23/05/17	Tue 23/05/17		
5		Physical Networking Installation	1 day	Tue 23/05/17	Tue 23/05/17		
6		Physical installation storage	1 day	Wed 24/05/17	Wed 24/05/17		4
7	 	Network Data Settings	1 day	Thu 25/05/17	Thu 25/05/17	FC staff	
8		Network Management	1 day	Wed 24/05/17	Wed 24/05/17	FC staff	5
9		Firewall management configuration	1 day	Wed 24/05/17	Wed 24/05/17		5
10		Installation # 2 complied	0 days	Thu 25/05/17	Thu 25/05/17		6;7;9;8
11		Testing #2	3 days	Wed 25/03/15	Fri 27/03/15	FC staff	10
12	 	Remote Access Testing	0,5 days	Fri 26/05/17	Fri 26/05/17		10
13		Testing Vembu	0,5 days	Fri 27/03/15	Fri 27/03/15		14
14		Testing different Agent	1 day?	Thu 26/03/15	Thu 26/03/15		
15		Testing #3 complied	2 days	Thu 26/03/15	Fri 27/03/15		
16		InfraCloud to do #3	16 days	Mon 22/05/17	Mon 12/06/17	InfraCloud	10
17	 	Subdomani creation like Backup.infracloud.co.uk	1 day	Tue 23/05/17	Tue 23/05/17	InfraCloud	
18		provide 10 Public IP	20 days	Mon 12/06/17	Fri 07/07/17	InfraCloud	19
19		Printscreen on DataCenter	0 days	Mon 12/06/17	Mon 12/06/17	InfraCloud	
20	 	optional provide SSL Certification	15 days	Tue 23/05/17	Mon 12/06/17	InfraCloud	
21		Landing page creation	15 days	Tue 23/05/17	Mon 12/06/17	InfraCloud	
22		Delivery to UK #4	6 days	Mon 29/05/17	Mon 05/06/17	FC staff	10
23	 	Deliver to UK	6 days	Mon 29/05/17	Mon 05/06/17		10
24		FlexVPC Team are in UK	5 days	Mon 12/06/17	Fri 16/06/17		
25		InfraCloud #End					

3 Project plan from May 2017 of Juni 2017 Second Version

		Task Mode	Task Name	Duration	Start	Finish	Resource Names	Predecessors	Add New Colu
1			▾ Infracloud Backup Solution #Start	20 days	Mon 22/05/17	Fri 16/06/17			
2			▾ Hardware Technical	1 day	Tue 23/05/17	Tue 23/05/17	FC staff		
3			▾ Installation #1	19 days	Tue 23/05/17	Fri 16/06/17	FC staff		
4			Physical installation servers	1 day	Tue 23/05/17	Tue 23/05/17			
5			Physical Networking Installation	1 day	Tue 23/05/17	Tue 23/05/17			
6			Physical installation storage	1 day	Wed 24/05/17	Wed 24/05/17		4	
7			Network Data Settings	1 day	Thu 25/05/17	Thu 25/05/17	FC staff		
8			Network Management	1 day	Wed 24/05/17	Wed 24/05/17	FC staff	5	
9			Firewall management configuration	1 day	Wed 24/05/17	Wed 24/05/17		5	
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11			▾ Testing #2	3 days	Wed 25/03/15	Fri 27/03/15	FC staff	10	
12			Remote Access Testing	0,5 days	Fri 26/05/17	Fri 26/05/17		10	
13			Testing Vembu	1 day	Thu 01/06/17	Fri 02/06/17		14	
14			Testing different Agent	1 day	Thu 01/06/17	Thu 01/06/17			
15			Testing #3 complied	1 day	Thu 01/06/17	Thu 01/06/17			
16			▾ InfraCloud to do #3	16 days	Mon 22/05/17	Mon 12/06/17	InfraCloud	10	
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25			InfraCloud #End						

4 Overview

4.1. FlexVPC system overview

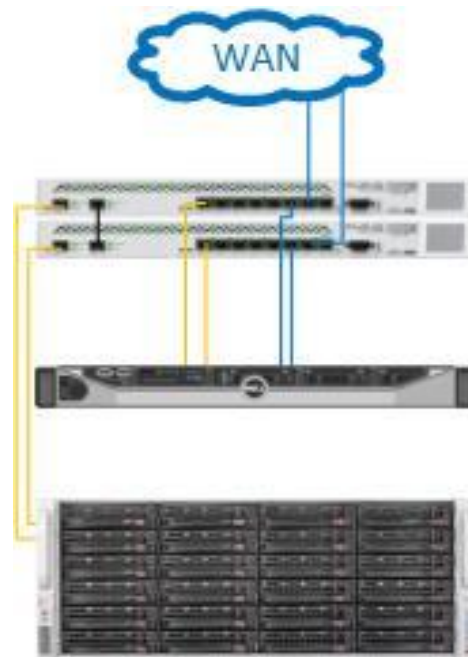
Each FlexVPC Backup System model contains the following key hardware and software components:

Resource	Components
Flex2n System management	<ul style="list-style-type: none"> Vembu BDR Suit 3.7 powered by FlexVPC
Virtualization and management	<ul style="list-style-type: none"> Hyper-V Windows 2012 R2
Backup Server	Backup Server Supermicro Products SuperStorage Servers 4U 6048R-E1CR36N

The following illustration provides a high-level overview of the components in the Fortresscloud architecture:



4.2. Architecture Overview



4.3. FX Standart Hardware Rear and Front view

4.3.1. Mikrotik Firewalls

2 x Mikrotik CCR1036-8G-2Splus



2x Mikrotik CLOUD CORE Router CCR-1036
 36 core networking CPU (1.2Ghz per core)
 New 64bit processor – ARM
 2x 10Gig SFP+
 4Gb RAM
 High speed encryption engine
 All ports directly connected to CPU
 Max Power consumption 78W

NOTE: Especification for each independent device.

8 x Gigabit Ethernet ports
 3,5 Millions Concurrent sessions
 1U Rackmount case
 22 Gigabit throughput with 25 IP Filter Rules
 15 Million Packets Per Second on Fast-Path
 8 Million Packets Per Second on Standard-Path

4.4. Flex2N overview



Code	Description	QTY
	Mod. 201700132 24022017-HD-INTRA-UK	
C-SERVER4U	SERVER 4U/TORRE/WK BAREBONE SERIES: MOD-201700132	1
SSG6046RE1C	BACKUP SERVER SUPERMICRO 4U XEON E5-2600 V4 36 hot-swap 3.5" 24 DIMMs DDR 2400 MHz* reg. ECC, 2 (x16) PCI-E 3.0 and 3 (x8) PCI-E 3.0 4 10 Gbe, IPMI, 1280W Redundant Platinum	1
E5-2699V4	PROCESOR INTEL XEON 22 CORES 2,2 Ghz 55MB Cche 145W	2
DDR4S352016	DDR4 32GB 2400Mhz ECC Reg 1.20V	16
HD10TBSASAL	HARDISK 10TB SAS 12GB/S HELIUM HE10 256M 4KN ISE	12
SSDDCS352016	SSD DC S3520 Series INTEL 1.6TB, 2,5" SATA 6Gb/s, 16nm, mlc 7mm	2
RAID	RAIS 1 SSD STSTEM RAID 60 DATA	1
MCP220847010	ADAPTER FOR HDD INTERNAL 3.5"	1
CBALSACOD	CABLE SATA IDE ACODADO	2

Flex2N disk shelf configurations

The following illustration shows the disk shelf configuration available on the Flex2n the Supermicro | SuperStorage | 4U | 6048R-E1CR36N

RAID1

- Raw Storage: 3.2 TB
- Usable Storage: 1.45 TB (After VMFS Formatting)
- RAID1 Mirrors your data from one disk to the other disk for redundancy (2 Disks Maximum)).

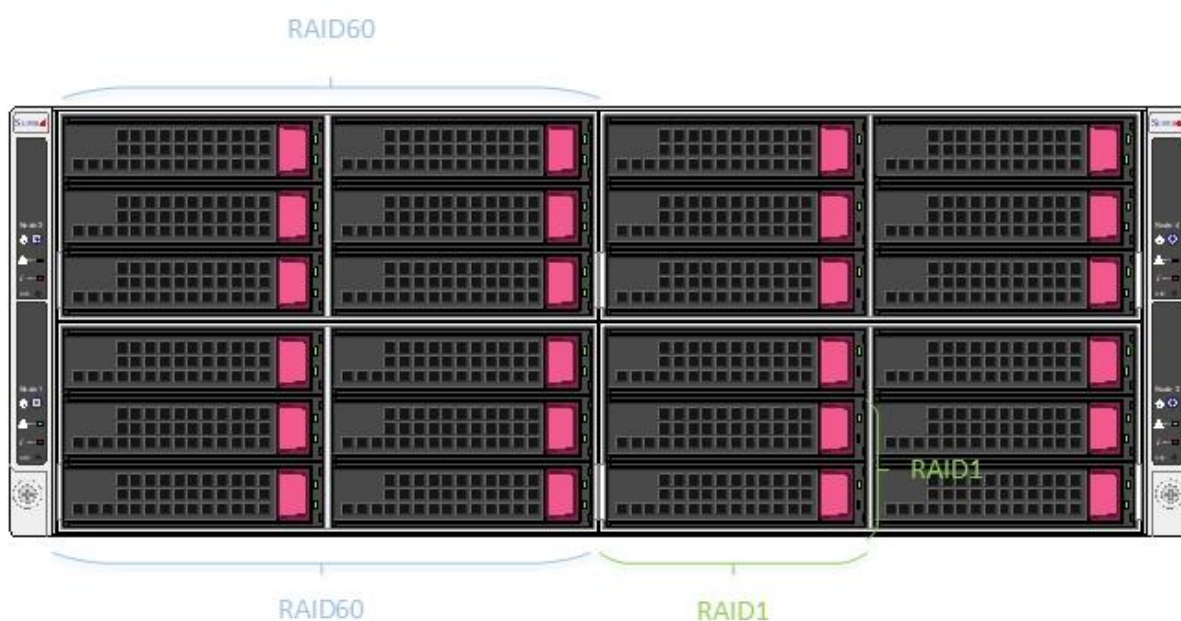
RAID1

- Raw Storage: 20 TB
- Usable Storage: 9.9 TB (After VMFS Formatting)
- RAID1 Mirrors your data from one disk to the other disk for redundancy (2 Disks Maximum)).

RAID60

- Raw Storage: 100.0 TB
- Usable Storage: 73 TB (After VMFS Formatting)
- RAID6+0 strips two RAID6 arrays providing increased performance and extra redundancy (4 Disk Parity) and requires at least eight drives to be used.

*Usable storage is the actual post-format amount where kilo = 1024, not 1000



Network Connection Details

Local network

Network Connection Details:

Property	Value
Connection-specific DNS ...	
Description	Microsoft Network Adapter Multiplexor Driv
Physical Address	0C-C4-7A-8E-C5-31
DHCP Enabled	No
IPv4 Address	192.168.100.15
IPv4 Subnet Mask	255.255.255.0
IPv4 Default Gateway	192.168.100.1
IPv4 DNS Servers	8.8.8.8 8.8.4.4
IPv4 WINS Server	
NetBIOS over Tcpi... Yes	

Virtual Network for Hyper-V enviroment:

Network Connection Details:

Property	Value
Connection-specific DNS ...	
Description	Hyper-V Virtual Ethernet Adapter #2
Physical Address	0C-C4-7A-8E-C5-30
DHCP Enabled	No
IPv4 Address	192.168.100.14
IPv4 Subnet Mask	255.255.255.0
IPv4 Default Gateway	192.168.100.1
IPv4 DNS Servers	8.8.8.8 8.8.4.4
IPv4 WINS Server	
NetBIOS over Tcpi... Yes	
Link-local IPv6 Address	fe80::5c28:9954:58aa:b6e7%22
IPv6 Default Gateway	
IPv6 DNS Server	

5 Platform Credential's:

Windows Server 2012 R2 DC

Local IP: 192.168.100.15
Public IP: 78.109.174.254
Remote Desktop: 78.109.174.254:**6666**
User: Flex2nserver\adminflex2n
Password: ;#8wEd9R

Vembu Server

Local Link: <https://192.168.100.15:6061>
Public Link: <https://78.109.174.254:6061> Or <https://Domaine:6061>
User: admin
Password: admin
(advise please change the password)

Vembu Portal

Link: <https://portal.vembu.com/index.html>
User: support@intracloud.co.uk
Password: fYt6JEd3qa
(advise please change the password)

5nine Manager Datacenter Console

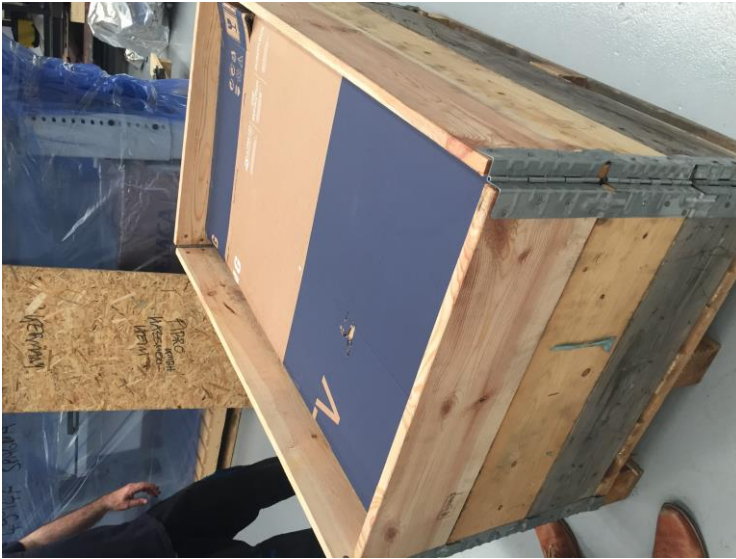
Local Link: <https://localhost:16080>
Public Link: <https://78.109.174.254:16080> Or <https://Domaine:16080>
User: admin
Password: admin
(advise please change the password)

6 Delivery information

Fotos before delivering.









ENABLING Private Cloud as a Service

FlexVPC – Corporate Social Responsibility

Our environment

At FlexVPC we believe in reducing the negative effects of our business and expanding the positive contributions our people and products can make to a sustainable future. We are committed to projects that are both good for Fortress Cloud and good for the environment and communities in which we operate.

We comply with all relevant legislation in the countries in which we operate and we closely monitor our compliance with the European Union Environmental Directive.

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